The Inequitable Access of Knowledge: The Use of Federally Funded Intermediary Organizations as Knowledge Brokers

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Abstract

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Teaching, Learning, and Curriculum

This study explores the mechanisms through which intermediary organizations (IOs) shaped knowledge use during the development of states' plans to reduce the inequitable distribution of excellent educators. Employing the conceptual framework of Campbell and Petersen's "knowledge regimes," this study uses methods of critical policy analysis to explore the organizational and operational machinery behind policy ideas. The first article explores the knowledge base promoted by the IOs and used in states' plans. The second article explores the role of tools and resources developed by IOs to assist state education agencies. The third article describes the mechanisms used by IOs to support state education agencies and experiences of that support. Findings support the role of federally funded IOs in advancing policy ideas in line with tenets of new managerialism over other reforms like improving the conditions in which teachers work or emphasizing teacher professionalism and autonomy in the contested field of teacher quality.

Dedication

For Elliette and Jane.

Acknowledgements

There are a number of people who offered their ears, eyes, minds, and time to this project. Thank you…Christie Barchenger, Pat Delmore, Connie Lambert, Tim Slekar, and Gary Sykes. Thank you to those family members who supported me in this work, who offered kind words of encouragement, and who asked how the work was coming along … Jim Hollar, Corinne Hollar, Ned and Valerie Roebuck, Ruth and Fred Roessle, and Barbara Roebuck. And of course, thank you to Ken Zeichner, Wayne Au, Nancy Beadie, Ana Elfers, and Gail Stygall for their counsel, guidance and support along the way. This work is stronger because of you.

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Note on Dissertation Format

To those who may come across this dissertation on ProQuest, the structure of this dissertation is unique in that the analysis is included in three chapters (chapters three, four, and five) written as standalone articles. The introduction, chapter one and chapter two set the stage for the analyses to come by providing an overview of the context and a larger literature review. The final chapter (chapter six) acts like a bookend to the project, bringing the three strands of analysis together. As such, the analysis chapters feature a similar literature review and overview of the problem to the information presented in chapter one and chapter two. My advice would be to review the literature review chapter as a whole and then skim the literature reviews in the "standalone chapters". A more detailed description of the structure of what is included in each chapter is provided at the end of the introduction.

INTRODUCTION

The inequitable distribution of teachers in the United States disproportionately impacts poor and minority students (Adamson & Darling-Hammond, 2012; Ingersoll, Hoxby, & Scurpski, 2004; Peske & Haycock, 2006). Students of color in low income schools are more likely to be taught by teachers who are uncertified, inexperienced, or teaching outside of their field of expertise (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004). Schools with high minority populations and schools in communities impacted by poverty suffer from higher levels of teacher turnover and attrition (Esch et al., 2005; Ingersoll, 2004). Difficult-to-staff urban schools in communities impacted by poverty and with large numbers of minority students also face the greatest number of out-of-field teachers (Horng, 2009; Ingersoll et al., 2004; Jerald & Ingersoll, 2002). Similarly, teacher credentials are unevenly distributed among students with different racial and socioeconomic statuses (Clotfelter, Ladd, & Vigdor, 2005). And, even within schools, classrooms with low-achieving, minority, and poor students are more likely to have novice teachers (Kalogrides & Loeb, 2013).

The No Child Left Behind Act of 2001 (NCLB) required each state to develop a teacher equity plan aimed at resolving the inequitable distribution of teachers. In general, the teacher equity plans required by law under NCLB were ineffective at reducing the disproportionate number of low income and minority students taught by inexperienced, unqualified, or out-of-field teachers. In part, this was due to an initial decision by the U.S. Department of Education (U.S. DOE) not to require the plans to be officially reviewed and approved (Loeb & Miller, 2009). This sharply contrasted with NCLB's punitive accountability requirements for student achievement. As a consequence, most states prioritized the development of plans for student achievement goals and paid little attention to resolving the inequitable distribution of teacher quality.

In 2014, the U.S. Department of Education announced the Excellent Educators for All Initiative, which required state education agencies to submit an updated plan for how to ensure equitable access to excellent educators. The Excellent Educators for All Initiative was comprised of three parts. First, state education agencies (SEAs) were required to submit new Equitable Access Plans to "ensure every student had effective educators" (U.S. Department of Education, 2014a). Second, funding was allocated to intermediary organizations to support SEAs in developing the Equitable Access Plans. Third, data on equity gaps in each state was publicly reported. The U.S. DOE published "Educator Equity" profiles for states to identify gaps in access to quality teaching and shine a spotlight on places where "high-need schools [were] beating the odds and successfully recruiting and retaining effective educators" (U.S. Department of Education, 2014a).

In launching the initiative, then U.S. Secretary of Education Arne Duncan submitted a letter to chief state school officers with directions for how to develop an equitable access plan. Each state's Equitable Access Plan needed to detail the state's specific equity gaps around teacher inexperience and teacher qualifications, including out-of-field teaching. State Equitable Access Plans also needed to identify the root causes contributing to equity gaps and propose strategies to resolve the inequitable distribution of unqualified, inexperienced, and out-of-field teachers.

Official guidance from the U.S. Department of Education provided recommended definitions for "inexperienced," "unqualified," "out-of-field" and "excellent" teachers. The recommended definition of "excellent educators" provided by the U.S. Department of Education reads as follows:

> The Department encourages SEAs to define an excellent educator as an educator who has been rated effective or higher by educator evaluation and support systems. (U.S. Department of Education, 2014b, p. 10)

The U.S. Department of Education also clarified for state education agencies that equity gaps related to teacher effectiveness could supplement equity gaps related to inexperience, qualifications, and out-of-field teaching. Thus, if a state education agency chose to do so, it could "define 'unqualified' educators as educators who have been rated ineffective by educator evaluation and support systems" (U.S. Department of Education, 2014b, p. 14). Additionally, while a state education agency could define "inexperience" based on its own context and data, the U.S. Department of Education encouraged "an SEA to define 'inexperienced' educators as those educators who are in their first year of practice because research demonstrates that the greatest increase in educator effectiveness occurs after one year on the job" (U.S. Department of Education, 2014b, p. 14).

In other words, state education agencies were technically free to define excellent, inexperienced, and unqualified educators on their own. However, because the U.S. Department of Education provided recommended definitions and issued the final approval of states' equitable access plans, at the very least, the recommended definitions provided a glimpse into the U.S. Department of Education's vision for the equitable access plans.

By the end of 2015, the U.S. Department of Education had approved equity plans developed by all fifty states, the District of Columbia, and Puerto Rico. Similar to the original NCLB provision, this new requirement for teacher equity plans appeared to be designed explicitly around a mission of educational equity with respect to teacher quality. That is, the intent in asking states to design equitable access plans for approval by the federal department of education was to ask what states were doing and planned to do to ensure that low-income and minority children had access to "excellent educators" to the same degree as relatively wealthier and whiter children.

In its mission, this policy prescription seemed well intended. After all, it *is* an inequity that children of color and children impacted by poverty are taught by less experienced and less qualified teachers. On the surface, the road map laid out for state education agencies to craft their equitable access plans suggested that policymakers at the state level operated rationally in their approach to policymaking. For example, the U.S. Department of Education's "Frequently Asked Questions" document establishes a five-step process to guide state policymakers in developing the equitable access plans (U.S. Department of Education, 2014b). These five steps are as follows: (1) seek consultation and input from stakeholders; (2) use data to identify existing equity gaps; (3) strive to determine and explain the root causes for the existing equity gaps; (4) identify and select strategies (i.e. policy solutions) to employ to address inequitable access to excellent educators; (5) determine processes for measuring and reporting progress and improving the plan (U.S. Department of Education, 2014b).

But as Deborah Stone points out, rational approaches are rarely rational: "the rationality project misses the point of politics," as politics is messy, foolish, and often paradoxical (Stone, 2012, p. 10). Such purportedly rational aims "worship objectivity and seek modes of analysis that will lead to the objectively best results for society" (Stone, 2012, p. 10). In other words, though it may strive to be objective, the policymaking process cannot be divorced from politics, which is subjective, messy, and often contradictory.

The mere act of identifying causes and solutions is loaded with irrationality that privileges some causes and solutions at the expense of others. As Stone writes, "to identify a cause in the polis is to place burdens on one set of people instead of another. It is also to tell a story in which some people are oppressors and others are victims" (Stone, 2012, p. 207). Again, Stone: "in politics, we look for causes not only to understand how the world works, but to assign responsibility for problems" (Stone, 2012, p. 206). The policymaking process can become a process of "politics" by which some individuals, organizations or institutions are absolved of responsibility and others – whether deserving of it or not – are burdened. Inevitably, by acknowledging and elevating a cause or causes above other equally valid causes the proposed solutions to those causes will privilege some and disregard others.

In calling attention to the inequitable distribution of teachers, rather than to the inequitable distribution of other resources such as funding, high quality mentoring, supportive and engaging working conditions, or release time for continued professional growth, the burden of solving such inequitable distribution falls those who are tasked with preparing, hiring, managing, and monitoring teachers.

When the burden of solving the inequitable distribution of the teaching workforce falls to managers of human capital or talent, conversations about the strategies to resolve the inequitable distribution turn to how to recruit, retain, and develop teachers and how to better determine who to hire and when to fire. Rather than attending to other "inequitable distributions," perseverating on the inequitable distribution of teachers enables irrational thinking that pits the social justice agenda and deregulation agenda against the professionalization agenda (Zeichner, 2009).

Now, licensing and preparation become perceived barriers that prevent talented individuals from becoming teachers and exclude people of color from the teaching profession. Such irrational thinking enables state actors to endorse licensing and certification deregulation and the expansion of alternative routes to teaching as strategies to combat existing teacher shortages and diversify the workforce all the while claiming to be strategies aimed at resolving the inequitable distribution of teachers. Rather than attend to the larger issues of why teachers choose to teach, where they choose to teach, and why they choose remain teachers, which include factors such as compensation and working conditions, managing educator talent becomes an easy “oppressor,” creating new victims along the way.

Author Positionality

I developed an interest in this work after being asked to serve on a working group for Washington State around redesigning the state’s alternate routes to teacher certification. The Alternative Route Redesign Work Group was charged with discussing the future direction of Washington’s alternative routes to certification and providing guidance for future design strategies for alternative route programs (“Alternative Route to Teaching Certification Redesign Work Group,” 2015).

Alternate routes to teaching are not new methods of preparing teachers for initial licensure (Fraser, 2007). In the 1980s, alternative certification programs in New Jersey and elsewhere enabled individuals with a bachelor’s degree to receive an alternative certification or complete a program of study to become certified to teach. Since then, alternative routes into teaching have proliferated.

Simply comparing alternative routes to traditional routes into the teaching profession establishes a false binary. There are a number of different approaches to alternate teacher preparation, which include college-recommending (university-based post-BA or post baccalaureate programs), fast-track or early-entry (characterized by a short period of training followed by teaching as the teacher of record in a school), and teacher residency models (Grossman & Loeb, 2008). Within these approaches, there are good alternate route programs just as there are good university and college preservice teacher preparation programs. There are also poor alternate route programs just as there are poor university and college preservice teacher preparation programs. In fact, there is more variation within program types than between them with respect to quality (Zeichner & Conklin, 2005). That being said, expanding alternative routes into teaching is a common political strategy aimed at preparing more teachers for the field or more teachers of color for the field faster in an effort to stem teacher labor shortages.

The bulk of state legislation and programs endorsing alternative routes to teacher certification were responses to perceived and actual shortages in the teaching workforce. Washington State's legislation regarding alternative routes to teacher certification is no different. Washington's alternative routes to teacher certification were created in 2001 in direct response to shortages of teachers for rural areas, teachers of English language learners, and teachers of mathematics, science, and special education. In Washington State, there are four approved alternative routes to obtain a teaching license, and one of those routes supports early-entry programs that allow teacher candidates to work as the teacher of record in a classroom while they make progress toward initial certification. Such routes are most popular in hard-to-staff schools impacted by poverty and in schools with majority minority populations.

The narrative around the teacher shortage is used again and again to justify expansion of alternative routes. For instance, in a document from May 2016, Alternative Routes to Teacher Certification are explained in part as efforts to "end the teacher shortage, diversify the current teacher workforce, and make Washington State a leader in addressing new Federal education policy (ESSA)" via its academies provision (Professional Educator Standards Board, 2016, p. 1). Here, Washington State lauded the expansion of alternative routes as a strategy that responded to teacher labor markets, calls to diversify the workforce, and new federal legislation.

Serving on the work group was a learning experience, and I was struck by how many of our conversations failed to end up in final work group recommendations. Additionally, when Washington State's Equitable Access Plan for Excellent Teachers was unveiled, I was surprised to see the alternative route work group listed as the key stakeholder group representing Institutions of Higher Education (IHEs). Though the Alternative Route Redesign Work Group was composed of representatives from Institutions of Higher Education, including the University of Washington, Western Washington University, Pacific Lutheran University, Central Washington University, and Western Governor's University, the work group also included representatives from public school districts, the Office of Superintendent of Public Instruction, the Professional Educator Standards Board, educational service districts, Teach for America and the newly formed Seattle Teacher Residency program – organizations not considered to be IHEs.[1] It would be disingenuous to suggest that this Alternative Route Redesign Work Group was solely composed of institutions of higher education or even focused entirely on their input related to alternative route redesign or issues of equitable access in the state.

Washington's equitable access plan makes it clear that input from a key stakeholder group representing IHEs was solicited. However, no such solicitation or input around the root causes of the inequitable distribution of experienced, in-field, and qualified educators occurred (Washington Office of Superintendent of Public Instruction, 2015, p. 21). At the time of our work group meetings, participants were not informed that this work group was considered a stakeholder group for the development of Washington State's equitable access plan and even less so a stakeholder group representing the voices of all IHEs. In fact, in a review of the meeting notes from our meeting sessions, the equitable access plan was neither mentioned nor included in the agenda items. If the voices of stakeholder groups apparently solicited for input never actually provided such input, from where did the knowledge that informed the development of Washington State's equitable access come?

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[1] Meeting notes provided on Professional Educator Standards Board Website: http://pathway.pesb.wa.gov/innovation/work-groups/alternative-route-redesign

One of the key strategies within Washington State's plan to reduce the inequitable distribution of excellent educators was to invest in multiple pathways into the teaching profession, including the increase and expansion of Alternative Routes to Teacher Certification (Washington Office of Superintendent of Public Instruction, 2015). Rather than believing that increasing and expanding such alternative routes to teacher certification were the panacea, a considerable portion of the input from the Alternative Route Redesign Working Group was concerned with how to improve the existing routes rather than expanding and increasing the existing routes or program providers. How was it that my experience serving in this work group was so disconnected from the root causes, strategies, and proposals laid out in the equitable access plan? Indeed I had participated in this work, but my voice and undoubtedly the voices of others on similar work groups were not represented in the actual plans submitted for federal approval.

When I began exploring other states' plans to ensure equitable access to excellent educators I noticed root causes, strategies, and resources common to many Equitable Access Plans. Often, states' plans referred to talent development or human capital management alongside educator evaluation and educator preparation. How was it states with different contexts, histories, structures of schooling, and stakeholders could end up with such overlap in their plans? Upon further exploration not only was there overlap, but some of the strategies proposed to counteract the root causes named in the plans failed to directly address them.

At its core, this project explores how certain knowledge became prominent in policies around equitable access to excellent educators. Broadly, this project is concerned with what Ellen Lagemann terms “the politics of knowledge” (2005). The politics of knowledge is a politics invested in securing control over who has the authority to produce knowledge for the polity and over which knowledge is viewed as legitimate and valuable. This is a politics that uses various mechanisms to secure, accumulate, and disseminate knowledge.

Such diffusion of knowledge is a mode of governance, influencing and shaping public policy design. Consequently, this project is also concerned with the ways in which knowledge came to “govern” state education agency personnel tasked with designing policies around equitable access to excellent educators. In so doing, it seeks to uncover the processes and mechanisms through which knowledge is shared, mobilized, and disseminated so that it makes sense to policymakers.

These puzzles focus on the function of government funded intermediary organizations as knowledge brokers. This uncovers a third level of inquiry: the degree to which federally funded intermediary organizations supported a federal teacher quality policy agenda. This third level explores the mechanisms through which the federal government may govern “out of sight” (Balogh, 2009) when it comes to state teacher quality reforms.

In this study, I adopt Stake’s (2000) definition of case study where “a case study is not a methodological choice but a choice of what is to be studied” (p. 435). Here then, I have chosen to study the case of federally funded intermediary organizations’ involvement in the development of states’ Equitable Access Plans.

My selection of the Excellent Educators for All Initiative was deliberate. This initiative came toward the end of the Obama Administration and just prior to the reauthorization of the

Elementary and Secondary Education Act, passed in early 2016 as the Every Student Succeeds Act (ESSA). The reauthorization of ESEA was viewed as a victory for state governments and applauded by individuals of the opinion that No Child Left Behind gave too much authority and oversight to the federal government for education policy (Balingit & St. George, 2016). As such, ESSA is perceived to be a rolling back of what was seen by some to be federal overreach in the domain of education. Thus, federal financial support for, use of, and reliance on intermediary organizations to support state education agencies creates an interesting case within which to examine the role of intermediary organizations operating as a government "out of sight" (Balogh, 2009), as tentacles of the federal department of education, and/or as advocacy organizations concerned with promoting specific discourses of reform with impunity. In this instance, the case I have selected is a way of encapsulating a growing phenomenon – the use of intermediary organizations (IOs) in knowledge mobilization.

Unlike the physical boundaries of a school district or geographical boundaries of an individual state, examining knowledge use and the role of intermediary organizations in brokering knowledge can easily broaden in scope. In this work, the "case" includes 52 Equitable Access Plans approved by the U.S. Department of Education in 2015 to ensure equitable access to excellent educators. It also includes two federally funded intermediary organizations, the Center on Great Teachers and Leaders (GTL Center) and the Equitable Access Support Network (EASN), tasked with supporting states to develop their equitable access plans.

Structure of the Dissertation

This dissertation is broken into six chapters, three of which were written as standalone articles. The first chapter presents an overview of the policy context that sets the groundwork for state policy around equitable access to excellent educators. The second chapter reviews the relevant literature. This chapter is concerned with reviewing some of the mechanisms through which knowledge is received and used by policymakers. As such, the bodies of literature important to situating this research study include the literature on knowledge use for policymaking, knowledge mobilization, knowledge brokering, and intermediary organizations. The final section within chapter three introduces the theoretical framework of knowledge regimes that cuts across all three standalone articles.

The first standalone article (chapter 3) explores knowledge use within states' equitable access plans by conducting a bibliometric analysis of the research and resources used by federally funded intermediary organizations and cited in twenty-three states' equitable access plans.[2] The second article (chapter 4) explores the procedural tools and resources developed by intermediary organizations and provided to states for their use in developing the equitable access plans. Within this article, twenty-four states are used for analysis.[3] The third article (chapter 5) describes the mechanisms used by intermediary organizations to support state education agencies (SEAs) in the development of their equitable access plans, and twenty-four SEA staff members' experiences with those mechanisms.[4] Figure 1 provides a visual depiction that describes the organization of this project.

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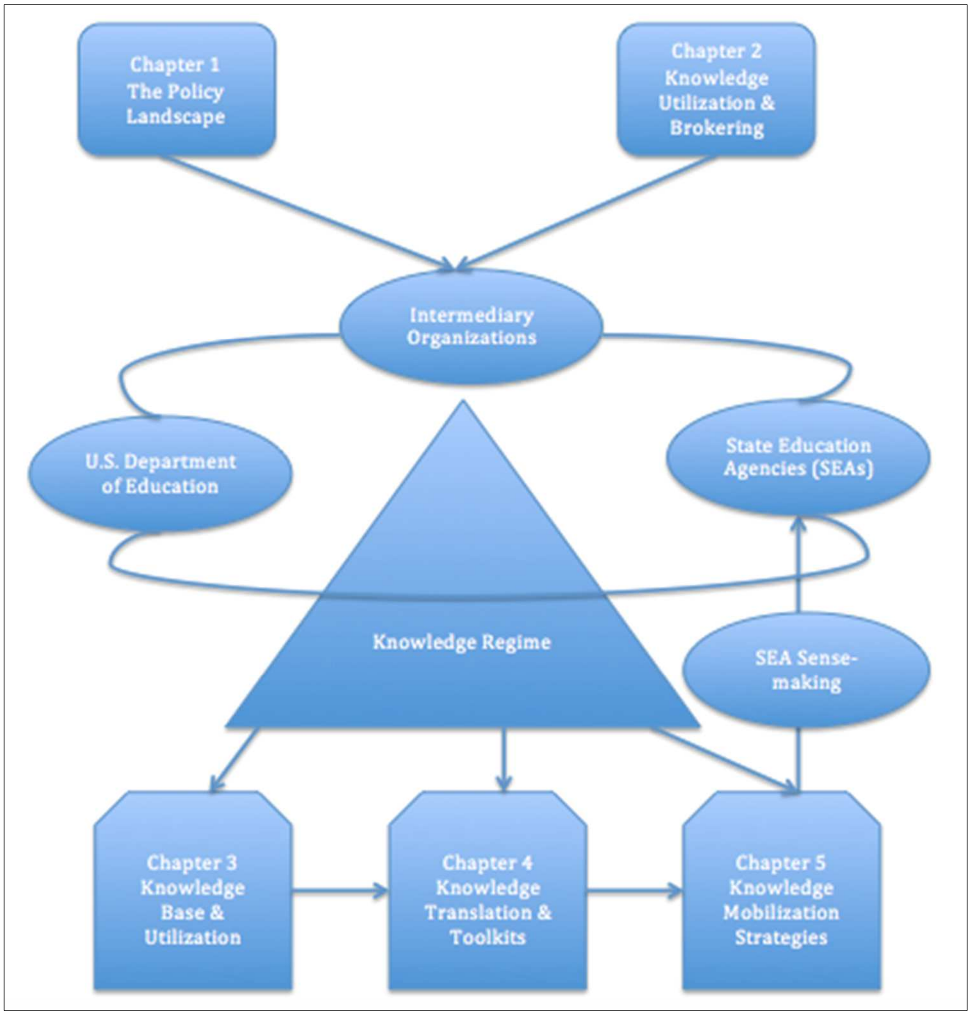
[2] AZ, CA, CT, D.C., DE, FL, GA, IA, MA, MD, MI, MN, MO, MS, NM, NY, OH, OK, RI, TN, VA, WA, and WV

[3] AL, CO, CT, FL, HI, IL, IN, KY, MD, ME, MO, MT, NE, NC, NM, NV, OR, SD, TX, UT, VT, WA, WI, and WY

[4] AR, CT, CO, D.C., DE, FL, ID, LA, MA, MD, ME, MI, MN, MO, MS, NC, NE, NH, OK, RI, TN, VT, WA, and WI



Chapter 1
The Policy
Landscape
Chapter 2
Knowledge
Utilization &
Brokering
Intermediary
Organizations
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of Education
State Education
Agencies (SEAs)
Knowledge Regime
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Toolkits
Chapter 5
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Mobilization
Strategies

Figure 1. Organization of the Dissertation.

A final chapter address conclusions that cut across all three articles and sheds light on the nature of this particular knowledge regime around issues of equitable access. Additionally, ideas for future research are proposed.

Central to my research on knowledge utilization and mobilization in education policymaking is a commitment to surfacing the power dynamics inherent to the policy process. The strategies selected by states to ensure equitable distribution of excellent teachers and leaders impact nearly every aspect of teaching and learning in today's public education system. To uncover the processes through which these strategies were determined is to do right by public educators and principals, teacher educators, and their students who deserve to know how such policies – which trickle down to impact teaching and learning in local communities – are decided upon, by whom, and for what purpose. To uncover these processes is an endeavor to make the policymaking process more transparent and democratic.

CHAPTER 1: OVERVIEW OF THE CONTEXT

> *This month marked the official end of the No Child Left Behind era and the start of a state education policy paradigm. Under the newly minted Every Student Succeeds Act, signed into law by President Obama, states will have wide latitude to set their own goals, will be able to use a broader set of indicators to assess school quality and will be able to determine the interventions that will work best for their struggling schools. But the dirty little secret may be that this isn't quite the radical shift some would have you believe. In fact, because of [U.S. DOE Arne Duncan's] leadership and through his policies, [shifting power to the states] has already begun.* (Martin, 2015)[5]

In 1986, the state of North Carolina faced a teacher shortage. To increase the supply of teachers in North Carolina, the state legislature authorized funding to create the North Carolina Teaching Fellows program. The program incentivized high school juniors and seniors to enter teaching by offering them a subsidized postsecondary education in return for commitment to teach in North Carolina's public schools. By multiple accounts, this program was a success. Teaching Fellow graduates were shown to have significantly higher academic qualifications than non-Teaching Fellows; they taught in schools with greater concentrations of higher performing and lower poverty students; they increased student achievement; and they had strong retention rates (Henry, Bastian, & Smith, 2012). The retention rates of North Carolina Teaching Fellows are notable: "after five years, 7% of Teach for America teachers remained teaching in North Carolina compared to 73% of the [North Carolina Teaching Fellows]" (Winerip, 2011). Despite these successes, the North Carolina General Assembly restricted funding for the Teaching Fellows program in 2011. Funding for the program ended completely on March 1, 2015. At the same time, the general assembly established an alternative certification program called the North Carolina Teacher Corps (NCTC). In 2013, $6 million in recurring funds were allocated to Teach for America for expansion, management, and oversight of the NCTC (North Carolina Department of Public Instruction, 2015). Despite a retention rate significantly higher in the North Carolina Teaching Fellows program than Teach for America, the Teaching Fellows program was replaced with a program administered by Teach for America.

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[5] Carmel Martin is a distinguished senior fellow at the Center for American Progress. Prior to her work at CAP, she served as an assistant secretary for policy and budget at the U.S. Department of Education under U.S. Department of Education Secretary Arne Duncan and President Barack Obama.

North Carolina's Equitable Access Plan was approved in 2015 and lists the development of the North Carolina Teacher Corps with Teach for America as its managing organization as a key strategy for resolving the inequitable distribution of quality teachers, citing low teacher supply and low enrollment in teacher preparation programs between 2010 and 2014 (North Carolina Department of Public Instruction, 2015). While North Carolina's Equitable Access Plan acknowledges that its strategies to recruit more teachers must be coupled with efforts to reduce new teacher attrition and increase teacher retention, it is surprising that North Carolina would list the expansion of Teach for America as a strategy – considering Teach for America's poor track record on new teacher attrition (Donaldson & Johnson, 2011; Vasquez Heilig & Jez, 2014).

As in the case of North Carolina, a number of other states' equitable access plans advance seemingly disconnected or disingenuous strategies for improving the inequitable distribution of teachers. Delving into the policies states proposed as solutions for the inequitable distribution of teachers raises new questions about influences on the education policymaking process. Why are many states' equitable access strategies similar? How were states supported in developing their plans? Which knowledge was valued and at what expense?

New policy contexts are often outgrowths, iterations, or rejections of preceding policy contexts. Consequently, before delving into the articles that explore the questions above, the current policy context must first be discussed and situated in the teacher quality policy context preceding it.

Federal Teacher Quality Policy Context (1950-2016)

Contrary to many industrialized countries, education in the United States is marked by a notable decentralization (Furhman, Goertz, & Weinbaum, 2007). As such, responsibility for policies around teacher quality, teacher preparation, and education more broadly has traditionally been left to state and local governments. When teacher preparation policy has been addressed at the federal level, attention and funding has usually been small and limited – often categorical and marginally related to school improvement (Cohen-Vogel, 2005; Earley, 2000; Earley & Schneider, 1996). Earley (2000) and Phillips and Kanstoroom (1999) argue that rather than being the central focus of sustained federal programming, teacher preparation has at best received adjunct attention, which has undermined comprehensive education reform efforts.

Federal policies related to teacher policy tend to be uncoordinated and focus on either accountability or market-based deregulation. Tangential to education reform efforts, teacher preparation has been scapegoated as a "culprit" (Earley, 2000) or used as a policy instrument toward more central policy goals (Cohen-Vogel, 2005). For instance, as a "culprit," teacher preparation was given heightened attention after the launch of Sputnik, and this continued over concerns that the K-12 population was lagging behind other nations in academic achievement (Akiba, 2017). As a "policy instrument" the Higher Education Act of 1965 authorized the creation of the National Teacher Corps as a direct response to a teacher shortage (Earley, 2000).

This relative lack of focus on policies around teacher preparation should not lead one to conclude that the federal government has been inactive in federal teacher policy, including teacher preparation, over the past fifty years. In their fifty year appraisal of federal teacher policy, Sykes and Dibner (2009) note that the federal government has taken a concerted interest in teacher policy, which includes teacher recruitment, preparation, and development. Over the last decade, there has been a marked increase in accountability policies that target efforts to recruit, prepare and develop teachers (Sykes & Dibner, 2009).

In particular, federal interest in teacher preparation began to shift in the 1990s. The rise of the standards and accountability movement led to increased attention on teacher preparation as a policy target (Cohen-Vogel, 2005; Plecki & Loeb, 2005). In part, this was the result of focusing efforts on outcomes and accountability at the K-12 level. By extension, attention to outcomes in K-12 education resulted in additional attention to outcomes and accountability in teacher preparation, and to the ways in which teachers are prepared (Cohen-Vogel, 2005). With increased calls for comprehensive school reform, the federal government correspondingly increased its efforts to shape policies related to teacher quality (note, in contrast to teach*ing* quality) – of which teacher preparation is one slice.

In the 1990s to the early 2000s, the federal government used formal mechanisms like legislation to induce states to focus their policy efforts on teacher quality. Legislative inducements increased the power of state education agencies to regulate educational programs and policies (Superfine, Gottlieb, & Smylie, 2012). At the same time, as Earley (2000) notes: “because much oversight of teacher education is vested in state governments, members of Congress had to grapple with how far the federal government could tread into areas of authority held by states” (p. 32). Thus, to avoid charges of federal encroachment on state power, three key pieces of legislation – the Improving America’s Schools Act (IASA), the Higher Education Act (HEA), and No Child Left Behind (NCLB) – focused state priorities around teacher quality through competitive grant making. From the perspective of nonprofit organizations, foundations, and governments, competitive grant making, sometimes termed strategic grantmaking or venture philanthropy, is a more intentional method of ensuring funding and investment is effective

(Orfield, Lipson, & Hoag, 2015). However, competitive grant making also gives the power to determine funding criteria and application expectations to the funder (government or foundation). Thus, by applying for a competitive grant, state education agencies must make the grant application appeal to the goals and aims of the funders. This has had the intended effect of inducing states to change their teacher and teacher education policies to be more in line with federal priorities (Crowe, 2011).

These federal pieces of education policy legislation differed in their policy goals and instruments. For instance, the intent of the Improving America's Schools Act (IASA) was to upgrade teachers' existing skills through instructional support and professional development. Essentially, IASA served as an "enabler" of teacher preparation whereas Title II of HEA and NCLB were targeted at transforming the teaching profession at its core (Earley, 2000). "Teacher Quality Enhancement Grants" in Title II of HEA offered competitive grants to institutional partnerships working to advance teacher quality. It coupled this grant funding with mandatory accountability requirements for states and institutions of higher education. As a result of Title II in HEA, states receiving federal dollars through HEA were required to assemble and report data on teacher preparation standards and licensure procedures (Earley, 2000). Additionally, if a teacher preparation program lost program approval, it became ineligible to receive federal funds and rendered students ineligible to receive federal student aid (Earley, 2000). While No Child Left Behind (NCLB) also attempted to transform the teaching profession at its core, it relied on accountability mechanisms rather than providing financial support for professional development or competitive grant funding for institutional partnerships (Sykes & Dibner, 2009).

In addition to accountability requirements for K-12 schools and districts, the highly qualified provisions in No Child Left Behind opened the door to transform teacher preparation.

Initially, states could define for themselves what constituted a “highly-qualified teacher”; the only requirement was that highly qualified teachers needed to be certified. Through later rule making and amendment insertions, based on the support of a number of early-entry teacher training institutions who used research out of context to support their arguments, the definition of a highly-qualified teacher was broadened to include teachers of record who were enrolled in but had not yet completed an approved teacher preparation program (Affeldt, 2012; Zeichner & Conklin, 2016). Essentially the HQT amendment as it came to be known endorsed alternate routes into teaching as a viable and often equivalent mode of entry through which individuals could be considered highly qualified to teach.

Under this construct of “highly-qualified,” NCLB permitted uncertified teachers who were in the process of completing a preparation program, as was often the case for Teach for America teachers, to be considered highly qualified. This cemented the presumption that teachers with content knowledge but limited pedagogical knowledge were of equal quality to fully-licensed and traditionally prepared teacher candidates (Kaplan & Owings, 2003). This was controversial. In 2010, the U.S. Court of Appeals for the Ninth Circuit ruled that the “highly qualified teacher” (HQT) amendment was unconstitutional in *Renee v. Duncan.* This ruling was upheld two years later, arguing that teachers-in-training did not meet the intent of the initial provisions of highly qualified in the law. Still, Congress and the U.S. Department of Education disregarded the ruling by issuing a waiver to the policy in two continuing spending resolutions designed to keep the government operating. The highly qualified requirements ended with the reauthorization of the Elementary and Secondary Education Act under the new moniker the Every Student Succeeds Act (ESSA).

Increasingly, policies around teacher quality tend to focus on the following one or more areas such as teacher recruitment, induction, retention, certification, and compensation (Plecki & Loeb, 2005). This focus on human workforce development particular to teacher quality resonates with business and organizational thinking around comprehensive human resource management (Superfine et al., 2012; Odden, 2013). The federal focus on increasing teacher quality through the technical lens of human resource management continues today.

The Race to the Top Initiative

When the American Reinvestment and Recovery Act was signed into law in February 2009, $4.35 billion of the roughly $100 billion cash infusion into the American Economy was earmarked for the Race to the Top competition. The Race to the Top (RTTT) initiative spearheaded by President Obama and the U.S. Department of Education represented a shift from the notorious unfunded mandates of No Child Left Behind to a new form of federal influence in state policy.

Using competitive grant making, the Race to the Top competition encouraged states to adjust their policies in a bid to make their state competitive applicants for funding. For state legislatures and state education departments across the country in fiscal distress, $4.35 billion dollars for education innovation and reform served as a catalyst for policy changes in state education policy. After three rounds of competitive grant funding under RTTT, forty of the fifty states submitted applications for RTTT funding.

To be awarded the grant, states needed to align their plan for education innovation and reform with the federal vision for education reform. For example, one of the requirements for states to be competitive in their application was to permit non-university pathways into teaching. This caused states, such as Washington, to change their policies around alternative routes into teaching in order to appear more competitive. Prior to the launch of Race to the Top, Washington State did not allow Teach for America to operate within its borders. In an effort to make its RTTT application more competitive, Washington State relaxed this policy and opened its doors to Teach for America (Peters, 2011).

Additionally, in the priority category of Great Teachers and Leaders, the federal vision included providing high-quality pathways for aspiring teachers and principals; improving teacher and principal effectiveness based on performance; ensuring equitable distribution of effective teachers and principals; improving the effectiveness of teacher and principal preparation programs; and providing effective support to teachers and principals (U.S. Department of Education, 2009, p. 9-10). Notably, more than a quarter of the possible points that a state application could "attain […] was earned in the Great Teachers and Leaders section of the applications" (Superfine et al., 2012).

The impact of the RTTT competition had a residual effect on state education policy in many ways. For instance, each winning state proposed modifications to data collection systems, including linking individual teachers to student performance data (Superfine et al., 2012). Chief among these effects is that RTTT supported the creation of a state education policy infrastructure aligned with federal education policy goals to an extent that did not exist before Race to the Top (Crowe, 2011). With policy ideas aligned at the state and federal levels, federal policymakers were now free to claim that the Every Student Succeeds Act returned power over education to the states.

The groundwork for returning policy to the states began under Race to the Top. Consequently, while ESSA appears to return power over education policy back to the states and responds to the criticism of federal overreach in No Child Left Behind, it does little more in terms of differentiating itself from NCLB than to indicate that at this point, the federal government does not *need* to "overreach" in education policy. With the help of Race to the Top, the alignment of state and federal education policy remains strong.

Race to the Top marked a new kind of policy activism on the part of the U. S. DOE to streamline policies that represented the P-20 continuum of comprehensive school reform and facilitate swift alignment of state policy to federal policy goals. One indisputable policy instrument employed to incentivize states to adopt federal policy goals was federal funding to states during the Great Recession (2008-2012) and in an era of fiscal retrenchment in education.

The transformation of federal teacher policy around equitable access and teacher quality is based on five assumptions: 1) teacher quality matters (Finn & Achilles, 1999; National Commission on Teaching & America's Future, 1996; Rivkin, Hanushek, & Kain, 2005); 2) new teachers enter classrooms without the requisite skills to increase student achievement (Harris & Sass, 2007; Wayne, 2000); 3) teacher quality is inequitably distributed throughout the nation's schools (Ingersoll, 1996); 4) traditional teacher preparation programs are inadequate (U.S. Department of Education, 2011); and 5) increased student achievement constitutes an effective teacher (Hanushek & Rivkin, 2012).

In a nation that considers the dialectical relationship between state and federal governance a point of pride, the increased influence of the federal government in setting the agenda for state teacher quality policy provides pause. As Rahn (1995) notes, "when a state or locality defines their education systems' problems and solutions in the same way a national organization defines the education systems' problems and solutions there is more impetus to collaborate" (p. 159). From a more cynical perspective, if the federal government is defining the problems and solutions for state policymakers, the import of deliberative debate in the democratic policymaking process – indeed the very idea that there is something to debate – is obscured. In effect, the federal government has already defined the problem and its de facto solutions for states. This itself is a problem because one of the most central tenets of our education system is the ability of the system to incorporate local decision-making processes that respond to the needs of children, parents, and communities.

Ensuring Equitable Access to Excellent Teachers

Teacher Distribution

It is well documented that the inequitable distribution of fully prepared professional and experienced teachers disproportionately impacts poor and minority students (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004; Peske & Haycock, 2006). Students of color in low-income schools are more likely to be taught by teachers who are uncertified, inexperienced, or teaching outside of their field of expertise (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004). Additionally, schools with high minority populations and schools in communities impacted by poverty suffer from higher levels of teacher turnover and attrition (Esch et al., 2005; Ingersoll, 2004). As a result, some of these difficult-to-staff urban schools in communities impacted by poverty and with large numbers of minority students also face the greatest number of out-of-field teachers (Horng, 2009; Ingersoll et al., 2004; Jerald & Ingersoll, 2002). Similarly, teacher credentials are unevenly distributed among students with different racial and socioeconomic statuses (Clotfelter, Ladd, & Vigdor, 2005). And, even within schools, classrooms with low-achieving, minority, and poor students are more likely to have novice teachers (Kalogrides & Loeb, 2013).

The inequitable distribution of teacher quality in education has proven to be somewhat of a "wicked problem" (Rittel & Webber, 1973) for those seeking to craft policy solutions. No single factor contributes to the inequitable distribution of inexperienced, unqualified, and out-of-field teachers, and like most complex problems, the influence of specific factors is contingent on the unique social, political, and historical contexts and structures of schooling in regions, states, districts, and communities.

Ultimately, the location and conditions in which teachers prefer to work (in other words, teachers' preferences) drive the ability of high-minority schools and schools in poverty-impacted communities to recruit and retain excellent teachers. In general, teachers prefer to teach in schools close to where they grew up and familiar to them or schools resembling those they themselves attended (Boyd, Lankford, Loeb, & Wyckoff, 2005; Cannata, 2010; Loeb & Reininger, 2004; Reininger, 2012). When considering that the teacher workforce is still largely white and female, high minority schools tend to look different than the schools these teachers attended, and by consequence, such schools are at a competitive disadvantage when it comes to attracting the majority of the teacher workforce.

In addition, teachers prefer to be well paid. Because teacher compensation is one factor influencing where teachers prefer to work, funding disparities serve as a root cause for the inequitable distribution of workforce talent. Hard-to-staff schools are often unable to offer competitive teacher salaries, which in turn impacts teacher recruitment in school that serve communities impacted by poverty (Horng, 2009; Levin & Quinn, 2003).

Teachers also prefer to work where they are treated as professionals; they prefer competitive compensation; they appreciate opportunities to complete high quality professional development. With this in mind, district and school hiring practices, such as hiring timelines, have also been shown to contribute to the ability of a school district to recruit and equitably distribute its staff (Engel & Cannata, 2015; Goldring, Porter, Murphy, Elliott, & Goldring, 2009;

Grissom & Loeb, 2011; Horng, Klasik, & Loeb, 2010; Ingersoll et al., 2004; Liu & Johnson, 2006). Consequently, in some cases, hiring timelines and policies contingent on student enrollment and federal or state funding disproportionately impact the ability of high-minority schools and schools serving communities impacted by poverty to recruit credentialed teachers at the beginning of the hiring season.

Once a teacher begins working in a school, the school climate influences a teacher's decision to remain teaching in the current climate, move to another school or district, or leave teaching entirely. As scholars have noted, when teachers working in high-poverty and high-minority schools have the opportunity to do so, they tend to move to low-poverty and low-minority schools (Clotfelter, Ladd, Vigdor, & Wheeler, 2006). Thus, a school or district must be able to retain quality teachers. The inability of high-poverty schools to retain excellent teachers contributes to inequitable distribution (Boyd et al., 2011; Sass, Seal, & Martin, 2011).

Even if high minority and high-poverty schools were to streamline district hiring practices in order to compete with other school districts to attract the best teachers, high-minority and high-poverty schools also happen to often be low-performing schools. In many of these schools, external accountability policies and onerous testing requirements have led to a de-professionalization of teachers' skills and the adoption of scripted curricula (Burch, 2006; Margolis, Meese, & Doring, 2016). Since teachers prefer to work in schools where they are treated as professionals and valued for their professional judgment, by removing the working conditions in which teachers prefer to work from high-poverty and high-minority schools, the same schools remain at a competitive disadvantage in attracting and retaining excellent teachers.

School climate includes such factors as work intensification, lack of time, class size, school facilities, classroom intrusion, school leadership and administrative support, access to induction support, and high quality professional development or career growth ladders (Clotfelter et al., 2006; Horng, 2009; Ingersoll et al., 2004; Ingersoll, 2001; Johnson, 2006; Smith & Ingersoll, 2004). All have been shown to impact teachers' decisions to remain in teaching. When it comes to creating a strong school climate that reflects teachers' preferred work environments, funding disparities again shape the underlying working conditions of schools (Adamson & Darling-Hammond, 2012; Imazeki, 2005). Schools unable to fund strong professional development programs, collaboration time, well-trained administrators and mentors, well-resourced classrooms, and robust wraparound services are less likely to retain their teaching staff. Unfortunately, high-minority schools and schools serving communities impacted by poverty also receive less total school funding when compared to their wealthier and whiter counterparts. This is true for both schools between and within districts (Adamson & Darling-Hammond, 2012; Baker & Weber, 2015; Baker, Sciarra, & Farrie, 2015; Heuer & Stullich, 2011; Ushomirsky & Williams, 2015). If schools are unable to provide adequate working conditions for their staff and students, it necessarily follows that the burden of the inequitable distribution of teacher talent will fall unfairly upon those same schools.

Teachers prefer to be, or at least prefer to feel, fully prepared to teach students in the schools in which they work. High-minority schools and schools serving communities impacted by poverty are often the school settings in which teachers feel as if they have been underprepared. Some researchers have critiqued teacher preparation as a root cause of the inequitable distribution of excellent teachers and have pointed to a lack of direct teacher preparation for the needs of high-poverty and high-minority schools as a factor leading to high beginning teacher attrition (Ballou & Podgursky, 1999; Haberman, 1980, 2007; Wilson, Floden, & Ferrini-Mundy, 2002). Along this line of thinking, if teacher preparation programs are inadequately preparing beginning teachers for the realities of teaching in high-minority schools and schools serving communities impacted by poverty, teachers may decide to leave for another school or leave the profession entirely. This revolving door of beginning teachers once again unduly burdens high-poverty schools and schools serving communities impacted by poverty.

Remote rural communities also typically have problems attracting and retaining teachers. Beginning teachers, especially younger teachers who may have completed a university-based teacher preparation program in a more urban setting do not necessarily prefer to work in hard-to-reach schools. Additionally, since teachers prefer to work close to where they grew up or went to school, or in schools that resemble those they themselves attended, schools with rural, geographic locations often struggle to attract teachers (Monk, 2007). Even in rural communities, schools serving more advantaged students have more applicants for open positions than schools serving less advantaged students (Monk, 2007). Consequently, schools districts compete with neighboring districts for a smaller number of teacher applicants, and school districts that serve high-minority and/or high-poverty populations are often the schools and districts left with a lower quality talent pool from which to recruit and select new teachers.

There is some debate in the literature around whether teachers prefer to work in schools that serve certain types of students (i.e. high-income, white, and high-performing), or whether it is the working conditions of the schools that attract or detract teachers rather than the characteristics of the students themselves. A number of scholars have documented that teachers tend to avoid working in schools with large concentrations of low-income, minority, and low-performing students (Carroll, Reichardt, Guarino, & Mejia, 2000; Lankford, Loeb, & Wyckoff, 2002; Rivkin et al., 2005; Scafidi, Sjoquist, & Stinebrickner, 2007; Steele, Pepper, Springer, & Lockwood, 2015). However, some researchers are careful to qualify these earlier findings related to the characteristics of students. They suggest instead that school conditions (e.g. leadership, culture, resources, accountability, etc…) are more determinative of where teachers prefer to work than the characteristics of the students who attend them (Darling-Hammond, 2010; Horng, 2009; Johnson, Kraft, & Papay, 2012). It is often the case that the worst working conditions for teachers, and presumably for their students, happen to be in schools serving high-minority populations and students impacted by poverty.

While it is diverse and diffuse, the research on the underlying causes of the inequitable distribution of teachers suggests that there is no single contributing factor or easy solution. For instance, the inequitable distribution of excellent teachers in Alaska may be due more to its rural geography when compared with other more populous states like New Jersey. In other states with large urban centers, such as New York and Pennsylvania, or in states with large immigrant populations, such as California, the root causes of the inequitable distribution of excellent teachers and the corresponding strategies to resolve the inequitable distribution may look very different. Policy contexts and the unique characteristics of states, schools and their districts, and the communities and students served by public schools cannot be ignored when considering education reforms around teacher distribution. The question then, of course, is how state education agencies should determine policy to fix this “wicked problem” (Rittel & Webber, 1973) of inequitable access to excellent teachers.

Since 2002, the federal department of education has attempted to tackle the inequitable distribution of teachers. In 2002, federal education policy required each state to develop a teacher equity plan aimed at resolving the inequitable distribution of teachers. The No Child Left Behind Act of 2001 (NCLB) stipulated that state teacher equity plans needed to describe the steps that would be taken to ensure that low income and minority students are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers (DeBray, 2006; No Child Left Behind [NCLB], 2002; Rebell & Wolff, 2008). However, this component was given little attention by the U.S. Department of Education in the first four years of NCLB's implementation, and it was only in May 2006 that the department "required states to have detailed written equity plans in order to demonstrate a coherent approach to ensuring an equitable distribution of teacher quality" (Loeb & Miller, 2009, p. 215). Only three states were said to have written plans, so the department extended a deadline, stipulating that states needed to require teacher quality plans by the end of the 2006-2007 school year. Within the requirements of the teacher quality plans as mandated by the U.S. Department of Education, the sixth and final requirement of the teacher quality plan was the "inclusion of the state's written equity plan" (Loeb & Miller, 2009, p. 225). These equity plans need to identify inequities in the distribution of inexperienced, unqualified and out-of-field teachers, delineate strategies for addressing the inequities, provide evidence of the probable success of these strategies, and include how the state would monitor local education authorities (LEAs) with respect to the identified inequities (p. 212).

The teacher equity plans were due to the department in July 2006, but by August 2006 only seven states had met the requirement to include a written "equity plan" (Loeb & Miller, 2009). Another fourteen states had partially met this requirement, and thirty had not met it. The most common criticism regarding the "equity plans" was the lack of data included in the plans. This hindered the ability of state departments of education to determine the extent of the inequitable distribution of teachers in the state and to provide evidence of the probable success of their proposed strategies. A 2006 report by *The Education Trust* concluded that the "overwhelming majority of states should be required to start over, with clearer guidance and more assistance from the Department of Education, to get this process moving in the right direction" (Peske & Haycock, 2006, p. 1). Still, by the end of 2006, teacher quality plans with their associated "equity plan," were approved for all but four states. In May 2007, Hawaii was the last state to receive approval (Loeb & Miller, 2009).

In general, the teacher equity plans required by law under NCLB were ineffective at reducing the disproportionate number of low income and minority students taught by inexperienced, unqualified, or out-of-field teachers. In part, this was due to an initial decision by the U.S. Department of Education not to require that the plans be officially reviewed and approved (Loeb & Miller, 2009). This sharply contrasted with NCLB's punitive accountability requirements for student achievement. As a consequence, most states prioritized the development of plans for student achievement goals, and paid little attention to the inequitable distribution of teacher quality. Even after the U.S. Department of Education stepped up proactive oversight by reviewing and approving the state developed teacher equity plans, there was limited data, nonstandardized evaluation protocols, and nonuniform teacher equity plan formats, making it difficult for states and the federal government to promote effective policies around teacher quality (Loeb & Miller, 2006). Still, the desire to encourage states to enact their equity plans has not ended there.

Excellent Educators for All Initiative (2014)

In July 2014, eight years after the 2006 state equity plan submission deadline, U.S. Department of Education appears to have heeded The Education Trust's 2006 advice. The U.S. Department of Education announced a new initiative geared toward ensuring all students have equal access to a quality education.

U.S. Secretary of Education Arne Duncan submitted a letter to chief state school officers requiring each state to develop a teacher equity plan that detailed the state's equity gaps around teacher inexperience and teacher qualifications, identified root causes contributing to equity gaps in teacher distribution, and proposed strategies to resolve the inequitable distribution of highly-qualified, inexperienced, and out-of-field teachers. Dubbed "Excellent Educators for All," the initiative was designed to "help states and school districts support great educators for the students who need them most" (U.S. Department of Education, 2014a).

From the press release, it is clear that the U.S. Department of Education believes states and school districts need help supporting great educators. While touting the excellent work and deep commitment of principals and teachers, Secretary Duncan states, "we have to do better" and then launches into the U.S. Department of Education's vision for the initiative (U.S. Department of Education, 2014a). In so doing, Secretary Duncan acknowledges the history of local control around teacher quality by claiming, "local leaders and educators will develop their own innovative solutions" (U.S. Department of Education, 2014a). He then undercuts the professional judgment of local leaders and educators by issuing a call to action that reads, "but we must work together to enhance and invigorate our focus on how to better recruit, support, and retain effective teachers and principals" (U.S. Department of Education, 2014a). The second part to his statement reiterates that the U.S. Department of Education's envisions state and federal education policy alignment. It reads: "we" – federal, state, and local education leaders "must work together to enhance and invigorate our focus" (U.S. Department of Education, 2014a). Here, Secretary Duncan suggests that the "innovative solutions" developed by local leaders and educators will need to be enhanced and invigorated with a focus on the recruitment, support, and retention of effective teachers and principals. Implicit in this statement is the claim that states' solutions will be enhanced and invigorated by cooperating with the federal government's focus around the recruitment, support, and retention of effective teachers and leaders.

In essence, Secretary Duncan has stated that local efforts are not focused enough and will be enhanced only by working with federal education leaders and the supports they provide around issues of how to manage educator talent, including the use of teacher effectiveness measures and improved recruitment, support, and retention of effective teachers.

Additionally, while the initiative is titled "Excellent Educators for All," it might as well have been titled "Effective Educators for All" as the language used throughout the rest of the press release supplants excellent with effective. Excellent is used as an adjective to describe educators only twice in the press release while effective is the adjective of choice, being used six times throughout the press release. From this, it is clear that the U.S. DOE is discursively equating "excellent educator" with "effective educator". Though it does not define for states what it means to be "effective," references to North Carolina, Tennessee, and Louisiana's educator evaluation and effectiveness systems suggests that student growth measures obtained from value-added metrics are a significant component as all three states have incorporated value-added measures into their educator effectiveness systems. Despite cautions against the validity of using value-added measurement to rate teachers as effective or ineffective (American Statistical Association, 2014; Polikoff & Porter, 2014), it appears at least in this construct that value-added measures are endorsed by the U.S. Department of Education as a means to determine educator effectiveness.

While "excellent" and "effective" are falsely equated here, it is important to note that to be an effective teacher as measured by one's ability to raise standardized test scores, one need not be an excellent teacher. And a teacher can be an excellent teacher without proof that he/she can raise standardized test scores. To some communities, an excellent teacher is able to connect with his/her students and engender within the student a lifelong curiosity to learn. To other communities, an excellent teacher strives to correct injustice through education. For others, an excellent teacher prepares his/her students to assume their expected role in society as productive and disciplined citizens. By claiming that an effective teacher and excellent teacher are one and the same, the importance of debating the definition of an excellent teacher becomes obscured.

The belief that an effective teacher is effective because the teacher can raise test scores is a reductive neologism of teacher quality. This is not new, and it is not without critics (e.g. Cochran-Smith, 2001; Earley, 2000; Engel, 2000), who argue that policies and policy recommendations emphasizing teachers' valued-added scores represent narrow and impoverished conceptions of teaching and learning, which fail to account for the complexities inherent to public education. As Cochran-Smith writes, "policies intended to improve teaching quality can only be as good as the underlying conceptions of teaching, learning, and schooling on which they are based" (Cochran-Smith, 2003, p. 4). Thus, if underlying conceptions of teaching quality envision effective teaching as the ability to raise test scores, then the outcome of such policies prescriptions applied under these constructs will remain equally narrow and "mistake reductionism for clarity, myopia for insight" (Cochran-Smith, 2003, p. 4). In a recent article looking at the impact of educator evaluation systems that use new parameters, including combinations of value-added measures and principal observations, Kraft and Gilmour (2017) write, "systems that ask, 'how is a teacher effective?' rather than 'how effective is a teacher?' would recognize the full range of teachers' strengths and weaknesses and, in doing so, provide a more precise picture of teacher effectiveness" (p. 243). As Kraft and Gilmour note, the best means through which to precisely measure teacher effectiveness remains elusive. At the same time, teacher effectiveness, as currently defined by federal and state policymakers, assumes there is consensus around the purposes of schooling, around whose knowledge and values matter, and of what counts as evidence of effectiveness. This definition fails to acknowledge intricacy, complexity, and institutional reality.

While states' Equitable Access Plans have been approved by the U.S. Department of Education for state implementation, many of the strategies adopted for implementation within these plans fail to ensure poor and minority children are not taught at higher rates by inexperienced, out-of-field, or unqualified teachers, but may in fact exacerbate inequities in teaching quality. The most recently approved plans propose a litany of strategies to solve the inequitable distribution of teachers. However, when one looks at the strategies advanced to solve root causes contributing to the teacher equity gap, a number of the identified root causes and strategies appear to be anything but rational. For instance, a number of the plans advocate the expansion of non-university teacher certification programs in order to attend to shortage areas. However, as Sykes and Dibner (2009) note, "the federal government has sponsored recruitment policies for shortage areas for over 50 years, but there is no body of evidence to supply authoritative guidance in policy design" (p. 2). Expanding alternative routes to teaching as a strategy to combat the inequitable distribution of teachers may appear rational to policymakers who believe that preparing more teachers faster may resolve areas of teacher shortage; however, Redding and Smith (2016) argue that alternatively certified teachers remain more likely to leave the teaching profession than traditionally certified teachers. Adopting a strategy of expanding alternative routes to certification acts instead like plugging one hole in a sieve and expecting it to stop leaking.

Others advocate the expansion of distance learning options adopting the belief that doing so will provide students in rural areas access to qualified teachers; however, a distance-learning format is not necessary indicative of high quality instruction. While inequities around teacher quality may be reduced, the instructional delivery format and methods may not correspondingly increase student achievement.

In the majority of the state teacher equity plans, policy solutions include the adoption of more stringent external accountability mechanisms for teacher and principal preparation programs, including provisions that tie program graduates' valued-added scores to the effectiveness of the preparation program. Again, as Sykes and Dibner (2009) note, "[this] current emphasis on accountability and incentives overlooks the importance of teacher working conditions as a powerful factor in shaping the teacher workforce" (p. 3). This accountability strategy as a policy "solution" may have the unintended consequence of discouraging teacher education programs from engaging in deliberate community work and partnerships with high-poverty schools in largely minority communities and rather reinforce systems that encourage teacher preparation and job placement in what are already high performing schools. In addition, the majority of the state teacher equity plans adopt similar strategies to resolve the inequitable distribution of teachers despite notes from stakeholder meetings that indicate additional strategies were discussed.

State policymakers and stakeholders could have used the teacher equity plan as an opportunity to dive down into the structures and systems of society and schools to discover solutions, yet in the majority of cases, it appears that state policymakers have decided to present strategies in line with the broader accountability paradigm (Mehta, 2013) and market-based solutions to social problems. For instance, state policymakers and stakeholders could have visited schools with high teacher retention and job satisfaction and identified the variables supporting teachers in those environments. State policymakers could have included stakeholders from the communities affected by the inequitable distribution of teachers and listened to not only what they felt were the root causes of the problem, but asked community members for solutions. In the cases where working conditions were identified as problems, state policymakers could have revisited school funding formulas and proposed substantial changes to school funding. In schools impacted by high teacher turnover, state policymakers could have invited recent "leavers" to the table to discuss reasons for leaving but also to ask what might have influenced them to stay.

However, as Deborah Stone remarks, "in the world of policy, there is always choice about which causal factors in the lineage to address, and different choices locate the responsibility and burden of reform differently" (2012, p. 225). Clearly, this rational approach to policymaking within the teacher equity plans is not the approach state policymakers used, even though they appear to have followed the five-step process as outlined by the U.S. Department of Education.

Situating the Research

The informal mechanisms and instruments used to redesign state education reform efforts in alignment with federal education policy goals have not been explored. However, shining a light on these mechanisms of support is integral to understanding why strategies in states' equitable access plans were not accompanied by vigorous public debate.

Since the federal funding allocated for the Excellent Educators for All Initiative was distributed to technical assistance providers rather than directly to state departments of education, the role of these technical assistance providers in shaping states' plans cannot be overlooked.

The basis for this inquiry is a working hypothesis that one of the informal instruments the federal government employs is intermediary organizations as technical assistance providers to strategically influence state teacher quality policy. A central argument of this project is that the technical assistance providers hold considerable symbolic and overt power to signal and frame arguments around teacher quality in the state education policymaking process.

Narratives and causal beliefs are not conjured; they are manufactured, but who works to manufacture these ideas? Once created, narrative frames and causal beliefs act as powerful lenses through which policymakers and stakeholders consider solutions (Fischer & Forester, 1993; Stone, 2012). Causal beliefs and policy solutions function as arguments and as such, are

> intimately involved with relations of power and the exercise of power, including the concerns of some and excluding others, distributing responsibility as well as causality, imputing praise and blame as well as efficacy and employing particular political strategies of problem framing and not others. (Fischer & Forester, 1993, p. 7)

In my line of inquiry, I advance and test three hypotheses. They are as follows: (1) Technical assistance providers, while offering voluntary support to state departments of education served a vital function as knowledge brokers between the U.S. Department of Education and state education agencies; (2) Through tools, templates, and knowledge sharing, technical assistance providers legitimated construction of the ideas (causal beliefs) around equitable distribution; and (3) the federal government's sponsorship and support for technical assistance providers role effectively limited the menu of alternative solutions available to policymakers.

CHAPTER 2: KNOWLEDGE UTILIZATION, BROKERS, AND INTERMEDIARY ORGANIZATIONS

Knowledge utilization is a field within social science that seeks to understand and improve upon the ways in which knowledge is used in policy and practice. Chiefly, knowledge utilization "is concerned with understanding and improving the utilization of scientific and professional knowledge in settings of public policy and professional practice" (Dunn, Holzner, & Zaltman, 1985, p. 2831). While there is a robust body of literature discussing knowledge utilization, the field suffers from poorly operationalized terms including what knowledge means and how to define 'use' (Rich, 1997). That aside, the field has been broadly impacted by Rogers's work on the diffusion of innovations (Rogers, 1962) and also by the work of Carol Weiss (1979, 1999, 1977), Rich (1979) and Havelock (1969) on knowledge utilization (Estabrooks et al., 2008).

It is broadly understood that there are multiple forms of knowledge in circulation at any given time, and all are competing for the ear of policymakers (Weiss, 1999). Social science research based in empirical analysis is but one type of knowledge in the policymaking sphere. Knowledge also includes personal experiences, media reports, evaluation studies, advocacy briefs, and printed reports produced by governmental organizations, think tanks, advocacy organizations, academics, and others. All of these types of knowledge vie for attention and inform decisions. But which knowledge has proven to be the most influential for policymakers?

Personal experience and/or familiarity with the topic through interactions in both informal and formal social networks is often more influential than social science research (Galway & Sheppard, 2015; Nutley, Walter, & Davies, 2007). In a study of the use of education research at the provincial and local school district levels, Galway and Sheppard (2015) concluded that policy decisions were governed more by personal and professional beliefs, values, and experiences than by any empirical research. While in-house research and political and pragmatic factors played some role, education research received short shrift. Competing knowledge vies for attention in the policy sphere, and social science research is typically not the most influential agent in policy decisions when compared with personal experiences and social interactions. As a consequence, it is important to understand how social science research *is* used when it makes its way onto policymakers' radar.

Uses of Research in Policy Making

There are many ways research is used in the policy arena. Scholars have developed a number of different frameworks and typologies for thinking about research use (Farkas, Jette, Tennstedt, Haley, & Quinn, 2003; Greenberg & Mandell, 1991; Knott & Wildavsky, 1980; Weiss, 1979). One of the most frequently referenced typologies of research use is Weiss's (1979) work that proposes six models for how research is utilized in policymaking. They are as follows: knowledge-driven, problem solving, interactive, political, tactical, and enlightenment. Over the past few decades, Weiss's six original types of research use have been consolidated to three. These three types of research use are referred to as instrumental, symbolic (though this is sometimes referred to as political use (see Daviter, 2015), and conceptual (Estabrooks, 1999; Sudsawad, 2007). In this construct, instrumental use refers primarily to the first three of Weiss's models (knowledge-driven, problem-solving, and interactive); symbolic and/or political use refers to the next two models (political and tactical), and conceptual use refers to the enlightenment model.

One can envision research use as a continuum beginning with instrumental use and moving along the continuum to symbolic use and finally, conceptual use (Nutley, Walter &

Davies, 2007). See figure 1 for a visual depiction of this continuum (adapted from Nutley, Walter, & Davies, 2007).

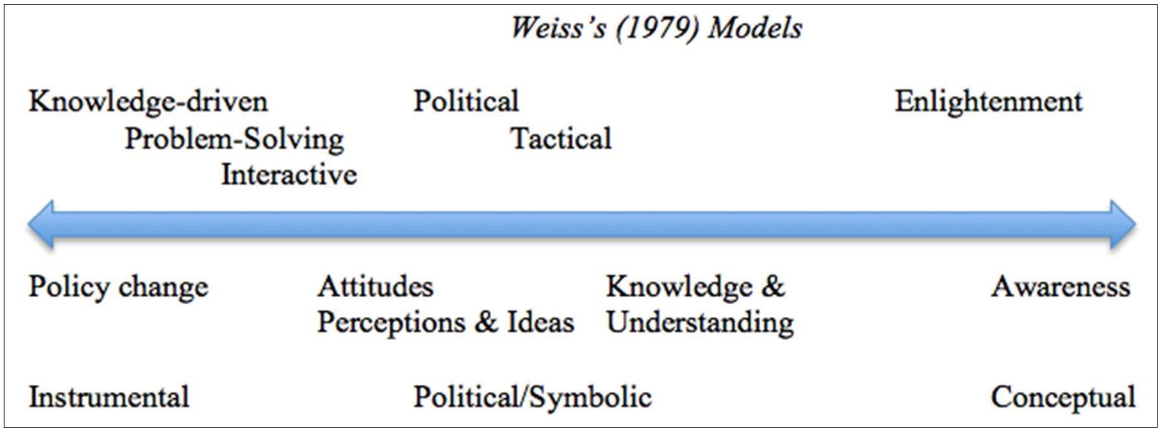
Weiss's (1979) Models
Knowledge-driven
Problem-Solving
Interactive
Political
Tactical
Enlightenment
Policy change
Attitudes
Perceptions & Ideas
Knowledge &
Understanding
Awareness
Instrumental
Political/Symbolic
Conceptual

Figure 1. Continuum of Models of Research Utilization, adapted from Nutley, Walter, and Davies (2007)

Most often it is assumed that research will be used instrumentally, in that the findings and policy recommendations of the research will directly influence policy implementation. Instrumental use then is the concrete application of research in direct and specific ways (Beyer, 1997; Estabrooks, 1999b). In practice, however, instrumental use of research is rare. Instead, research is used subtly and indirectly in a number of different ways (Court & Young, 2003; Nutley et al., 2007). Symbolic or political use of research helps to legitimize predetermined policy decisions (Estabrooks, 1999). Research is used at other times to indirectly influence policymakers' thinking. When research is used as an indirect, influencing element, its use is considered to be conceptual (Lindblom & Cohen, 1979; Rich, 1979). Conceptual use shapes and helps frame the ways in which policymakers come to think about a policy problem and its associated solutions. It may change thinking but not necessarily action (Estabrooks, 1999). In this way, while the conceptual use of research may eventually come to influence policy change – by altering the array of viable policy options, for example – it can be considered to be different from instrumental use whose goal is to directly influence policy action, without correspondingly changing policymakers' conceptual understanding or thought behind the policy change itself.

In studies of knowledge utilization, scholars have concluded that research does influence policymaking (Biddle & Anderson, 1991; Weiss & Bucuvalas, 1980). It can influence policymaking instrumentally, resulting in direct changes to policy and practice. For instance, Shavelson and Berliner (1991) speak to the specific, more instrumental use of education research studies on education practices, including research on effective schools and cooperative learning.

However, most social science research is used conceptually. That is, social science research rarely initiates sweeping policy changes, but results more frequently in policymakers' enlightenment. This "enlightenment" is "the percolation of new information, ideas, and perspectives into the arenas where decisions are made" (Weiss, 1999, p. 471). With enlightenment, social science research seeps into the policy sphere, "puncturing old myths," changing how issues are framed, and altering the array of viable policy options (Weiss, 1999). Since social science research does influence policymaking, though in often subtle, indirect, and conceptual and/or symbolic ways, what determines which research and knowledge will catch a policymaker's ear?

"Two Communities" Thesis

Caplan (1979) proposed what has come to be called the "two communities" thesis. This thesis hypothesizes that policymakers and researchers reside in two different "communities" in that they are motivated by different incentives, they follow different timelines, they speak a different language, they communicate to different audiences, and they have different priorities (Mead, 2015; Mitton, Adair, McKenzie, Patten, & Perry, 2007; Nelson, Roberts, Maederer, Wertheimer, & Johnson, 1987; Rose, 1977). In essence, "the direct use of policy research by decision makers is unlikely because of the competing world views and belief systems of policy researchers and policymakers" (Lester & Wilds, 1990, p. 314). Thus, it is supposed, getting researchers to produce policy-relevant knowledge and having policymakers attend to social science research more than to other types of knowledge is a rather tall order.

Education research and policymaking has faced its own "two communities" problem. As Henry Levin explains, despite investments both nationally and internationally in education research, skepticism about the practical and applied nature of education research for policymakers remains. There is a belief that education research "does not address the most important policy questions as well as the demands for more prescriptive answers from the researchers on major educational dilemmas" (Levin, 1991, p. 71). For instance, there are conflicting needs of research and policy with respect to education, one of which is the propensity to treat education dilemmas such as illiteracy with technical solutions provided via education research when in fact the dilemmas are not technical in nature but political (Levin, 1991, p. 78). This mismatch between education research and education policy illustrates the veracity of the two communities thesis in the field of education. But this does not mean that enthusiasm around efforts to increase the effect of education research on the policymaking community has been dampened.

Faith in Research and Data to Improve Education

Just as during the Progressive Era (1890-1920), there is renewed interest today in increasing the use of research knowledge and data, which is now frequently termed evidence-based policy and practice (Davies, Nutley, & Smith, 2000; Nutley et al., 2007; Tseng, 2012). For instance, No Child Left Behind contained more than 100 references to "scientifically-based research" and required states to incorporate such research into decisions (Tseng, 2012). Furthermore, emerging definitions of "scientifically-based research" is shaping education research (Mason, 2013). So-called "gold standard" education studies use experimental or quasi-experimental research designs, their results can be replicated, and their policy prescriptions can be brought to scale (Mason, 2013). Additionally, in 2002, the What Works Clearinghouse was created to share what are presumed to be best practices gleaned from research studies. The funding and promotion of large-scale quantitative studies reflects Lagemann's (2005) assertions about the politics of knowledge. In prioritizing such studies, other perhaps equally or more valuable studies are dismissed either through disinvestment or reverse incentives. Thus, certain types of research (i.e. quantitative, quasi-experimental, easily scalable) are more likely to be promoted in the policymaking arena than qualitative, conceptual, contextualized, or small-scale studies.

The drive to incentivize research that fits the operating definition of "scientifically-based research" did not end with the Bush Administration. Federal funding has continued to flow to National Centers tasked with producing research knowledge. These centers include the National Center for the Analysis of Longitudinal Data in Education Research (CALDER). Though CALDER is discussed in more detail in chapter four, CALDER has become a focal point for research on the teacher labor market, particularly as it seeks to address ways to improve the management of school personnel through attention to students outcomes via teachers' value-added (Odden, 2013).

Additionally, the research elevated by the Race to the Top competition and the Investing in Innovation (i3) and Teacher Incentive Fund (TIF) initiatives includes analysis of teacher and student outcomes, performance, and longitudinal data – largely statistical analyses – instead of more qualitative analyses. Funding trends corroborate this point. In 2009-2010, just over $10 billion in discretionary funding to the Institute of Education Sciences (IES) from the American Reinvestment and Recovery Act (ARRA) was pumped into the education economy to develop statewide data systems, and support research, development, and dissemination (Mason, 2013). Funding is "targeted toward applied research, development of national and state data systems, and research and evaluation that prioritizes rigorous analysis of student outcomes" (p. 213).

Evidence-based policy and practice continues to forge ahead in many policy arenas both within and outside the United States though it is not without its critics (see Holmes, Murray, Perron, & Rail, 2006; Trinder & Reynolds, 2000). Most recently, the Every Student Succeeds Act (ESSA) also requires that policies be drawn from rigorous research, including requirements that state and district decisions and interventions using federal funds be "evidence-based".

This is not to say that increased investment in efforts to use social science research in policymaking or even increased research production will lead to consensus around how to solve social problems. In fact, increased social science research may do just the opposite:

> For the most part, the improvement of research on social policy does not lead to greater clarity about what to think or what to do; instead, it usually tends to produce a greater sense of complexity. This result is endemic to the research process. For what researchers understand by improvement in their craft leads not to greater consensus about research problems, methods, and interpretation of results, but to more variety in the ways problems are seen, more divergence in the way studies are carried out, and more controversy in the ways results are interpreted. It leads also to a more complicated view of problems and solutions, for the progress of research tends to reveal the inadequacy of accepted ideas about solving problems. (Cohen & Weiss, 1977, p. 68)

The production of more social science research aimed at shedding light on and proposing solutions to social problems presents an opportunity. Organizations and individuals can work to shape the manner in which certain research moves from production to policy and/or practice. This is significant, for if increased production of social science research knowledge does not necessarily lead to consensus around the solutions to social problems, then the middlemen tasked with increasing the use of social science research by policymakers have a powerful role in shaping which knowledge moves to influence policymakers' decisions.

Moving Research into Policy or Knowledge Mobilization (KMb)

It is supposed that to better connect the policymaking and research community strong linkage mechanisms are required (Feldman, Nadash, & Gursen, 2001). If linkage mechanisms need to be improved to better connect policymakers and researchers in order for evidence-based policy decisions to occur, what conditions and mechanisms elevate research for use in policymaking?

The process of getting research into the policy sphere goes by a number of different terms, some of which prevail over others in certain fields. This process is alternatively called knowledge transfer and exchange, knowledge linkage and exchange, knowledge exchange, knowledge management, knowledge dissemination, knowledge translation, and knowledge mobilization. This abundance of terms, each with slightly different connotations, makes it difficult to review the body of literature on the ways in which research finds the ears of policymakers and how to improve such processes.

With that said, the term knowledge mobilization (KMb) is increasingly used in studies of education policy and practice that analyze this process (see Cooper & Shewchuk, 2015; Scott, Jabbar, LaLonde, Debray, & Lubienski, 2015). For the sake of consistency, in this study I employ the term knowledge mobilization to explore the process of moving research into the policy sphere. Knowledge mobilization (KMb) is operationalized as follows: “knowledge mobilization includes efforts to increase the use of research evidence in policy and practice in education (Cooper & Shewchuk, 2015, p. 1). Mobilization implies movement, and so Read, Cooper, Edelstein, Sohn, and Levin (2013) further conceptualize knowledge mobilization as the “movement of research from production to its ultimate impact on policy and practice” (p. 25).

With that clarified, the question of what influences the effects of knowledge mobilization on policy and practice is of central importance.

Political, organizational, and institutional contexts matter for knowledge mobilization (Contandriopoulos, Lemire, Denis, & Tremblay, 2010; Paul Sabatier, 1978). This is sometimes referred to as the "social ecology of research use" where use unfolds in different ways in organizational and social settings and in different political and policy contexts (Coburn, Honig, & Stein, 2009; Nutley et al., 2007; Tseng & Senior Program Team, 2008). Acquiring, using and interpreting information requires capacity. Thus, organizational capacity, culture, and structure also shape how research is used (Tseng, 2012).

Relationships are essential to how policymakers receive, understand, and use research (Finnigan, Daly, & Che, 2013; Tseng, 2012). Individuals and groups access information through their social ties (Finnigan & Daly, 2012). To build these social ties requires relational trust. Thus, policymakers who have direct contacts and relational trust with researchers are more likely to use research (Crona & Parker, 2011). Consequently, the development of social networks that bring researchers and policymakers into contact may increase the use of research in policy decisions (Crona & Parker, 2011).

The perception of policymakers that a particular source is authoritative increases the likelihood that such research will be used (Percy-Smith et al., 2002). Thus, large, analytical and purportedly objective research organizations have more influence over policymaking than their smaller, more descriptive counterparts (Hird, 2005). Additionally, a key factor in whether social science research is used is accessibility (Nelson et al., 1987). Research findings are more likely used when they are intuitive and when the implications for action are clear (Caplan, 1977). Furthermore, research directly affiliated with the decision-making agency is used more frequently than outside research (Rich, 1977; Dunn, 1980; Nelson et al., 1987; Percy-Smith et al., 2002). This suggests that in-house research or research organizations directly affiliated with the decision-making agency have more authority or are perceived to be more credible than outside sources. When external research *is* used, it is more often to provide background information to inform the development of policy than to inform policy decisions (Percy-Smith, et. al., 2002). Furthermore, research that finds the ears of policymakers is often sponsored and supported by knowledge brokers, such as intermediary organizations like the Regional Educational Laboratories (RELs) who provide the links between research producers and research users (Ward, House, & Hamer, 2009).

Now that the conditions shaping research use in policymaking have been described, how does this extend understanding of the knowledge brokering function of intermediary organizations? Specifically, how are intermediary organizations currently operating as knowledge brokers?

As alluded to earlier, intermediary organizations (IOs) are increasingly playing a role as knowledge brokers, who work to link research producers and research users. Thus, in exploring the mechanisms that support the use of research evidence in policymaking, the knowledge-brokering function of IOs cannot be overlooked. This next section briefly reviews the literature around knowledge brokering and intermediary organizations.

Knowledge Brokering and Intermediary Organizations

Intermediaries translate and package research for legislators, agency staff, and service providers, and they broker relationships between researchers and policymakers (Tseng, 2012). They play a key function in brokering knowledge between the research and policy communities, especially in education policy (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Tseng, 2012).

These intermediary organizations (IOs), including foundations, policy groups, think tanks, and private technical assistance providers have increased their capacity to serve as knowledge brokers. Now, they compete for and are awarded federal funding to do the research production and brokering work historically reserved for university-based researchers (Mason, 2013; Rose, 1977; Useem, 1977). Significantly, such intermediaries purport to vet their own research without engaging in independent peer review. It is also important to note that these intermediaries are not simply neutral, objective parties offering recommendations and providing syntheses of research though they may claim to be. They bring their own agendas and priorities (Henig, 2008).

The term knowledge brokering comes from the private sector and the field of knowledge management (Ward et al., 2009). In the private sector, brokering facilitates the spread of knowledge, which is believed to stimulate innovation (Roth, 2003). Lomas (2007) defines knowledge brokering as follows:

> all the activity that links decision makers with researchers, facilitating their interaction so that they are able to better understand each other's goals and professional cultures, influence each other's work, forge new partnerships, and promote the use of research-based evidence in decision-making. (Lomas, 2007, p. 131)

Knowledge brokers "perform a variety of functions including managing research and other information, facilitating linkage between parties and developing the skills of both researchers and practitioners" (Ward, et. al., 2009, p. 267). In all cases, these brokering functions "seek to build bridges between research, policy, and practice in order to improve societal systems (Cooper & Shewchuk, 2015, p. 3).

A few different frameworks have been developed to understand the various functions of knowledge brokers (e.g. Turnhout, Stuiver, Klostermann, Harms, & Leeuwis, 2013; Ward et al., 2009). Common to all three is the sense that knowledge brokers operate in three arenas: 1) disseminating, packaging and translating knowledge; 2) linking researchers and users by building connections between the two communities; and 3) building capacity through the training and skill building of research users.

Certain functions of knowledge brokers have proven to be more effective than others. Knowledge brokers are tasked with making research evidence accessible, often through synthesis, translation, and dissemination of research results (Cooper & Shewchuk, 2015; Feldman et al., 2001). Not surprisingly when one considers research on the science of situated learning (e.g. Lave & Wenger, 1991), the passive dissemination of knowledge has proven to be largely ineffective particularly as it relates to moving research into practice. However, when research is mediated by knowledge brokers and discussed with end users, research uptake by practitioners is more significant (Amsallem et al., 2007). Knowledge brokers thus need to incorporate a range of strategies rather than purely sharing the latest research findings (Armstrong, Waters, Crockett, & Keleher, 2007).

Knowledge brokers assist with this linkage in different ways. They promote interaction between researchers and end users that supports the use of research evidence in policy (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Feldman et al., 2001). Relational strategies like networks, partnerships, collaboratives, and communities of practice enhance knowledge exchange (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). Knowledge brokers also encourage the development of mechanisms that support knowledge sharing among members and stakeholders, as in the development of an online network or a community of practice (Cooper & Shewchuk, 2015; Dobbins et al., 2009).

It is common for knowledge brokers to also assist with building capacity (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Feldman et al., 2001). In their work, Dobbins et. al.

(2009) found that relationship development, ongoing support, customized approaches and opportunities for capacity development were central themes in the functions of knowledge brokers. The authors also acknowledged that this process takes time, as it must be based in trust and collaboration (Dobbins et al., 2009). The authors found that face-to-face interactions were beneficial to the knowledge-brokering role (Dobbins et al., 2009). Understanding the organization from an ecological perspective was also beneficial; that is, getting a “strong pulse” of the organization early on aided knowledge brokering (Dobbins, et. al, 2009). This research suggests that the efforts of knowledge brokers to build capacity increases knowledge exchange though the research is less substantial with respect to the role of knowledge brokers in successfully building capacity (Ward, et. al., 2009).

Beyond capacity building, knowledge brokers control and mediate the flow of knowledge to research users. Feldman et. al. (2001) view knowledge brokers as playing a role that supports decision makers in managing information overload. In this role, knowledge brokers filter and screen knowledge for what the knowledge brokers themselves deem to be policy relevant knowledge or sound research evidence. Using a RAND report on the role of demonstrations in federal research and development policy as one example, Knott and Wildavsky speak to this dissemination function as one that can become a “mask for policy advocacy” (1991, p. 216). They write: “under the guise of spreading knowledge, disseminators try to make changes which policymakers perceive as unnecessary or, when a performance gap is perceived, to promote their own policy to the exclusion of others” (p. 216). Thus, in filtering information, knowledge brokers may position themselves as powerful policy advocates.

There are also challenges to effective knowledge brokering. Such challenges include the length of time and resource requirements to effectively engage in knowledge brokering; the wide range of skills required of successful knowledge brokers; the lack of a clear distinction about brokering roles; and more broadly, a lack of knowledge about how knowledge brokering works and under which contextual conditions knowledge brokering results in higher uptake of social science research in policymaking (Ward, et. al., 2009). To bridge these challenges, there have been calls to build more effective research-practice partnerships (Tseng, 2012). Kochanek, Scholz, and Garcia (2015) explore the work of one intermediary organization, the American Institutes for Research (AIR) that is working on building collaborative research models and research alliances with a number of different organizations, including the Regional Educational Laboratory Midwest. It is clear from this article that the authors, who work for AIR, believe in the value of research-practice partnerships as a means to impact the direct use of rigorous, "high quality research" as defined by the Institute of Education Sciences and the What Works Clearinghouse in policy and practice (Kochanek, Scholz, and Garcia 2015, p. 3).

Since at least one intermediary organization (IO) believes its role as a knowledge broker is to impact research use in policy and practice, how are intermediary organizations defined, and what is the current research on the impact of intermediary organizations in the education policymaking process?

The research on IOs can be roughly separated into three categories: practice, policy, and critical commentary. The bulk of the research on intermediary organizations in concerned with the practical, instructional effects of IOs (Datnow & Honig, 2008; K. Finnigan, Bitter, & O'day, 2009; Trujillo & Woulfin, 2014) or offers descriptions of IOs' functions related to instruction (Burch, 2009; Honig & Ikemoto, 2008).

At the policy level, research on IOs has explored the degree to which local context constrains and/or enables IOs' work in policy implementation (e.g. Coburn, 2005b; Mclaughlin, West, & Anderson, 2016; Smylie & Corcoran, 2009). For instance, Honig (2004) concludes that IOs' "functions and their abilities to perform those functions are context specific – contingent on given policy demands and policymakers' and implementers' capacity to meet those demands themselves" (p. 83).

More recently scholars like Chris Lubienski, Janelle Scott, and Elizabeth DeBray have focused on the function of IOs in the policymaking process. In so doing, Lubienski, Scott, and DeBray (2011) narrow Honig's definition of intermediary organizations to the domain of knowledge mobilization. The authors define IOs as "the actors that function in the space between research producers and users, including organizations such as think tanks, philanthropies, the media, bloggers, and other advocacy organizations to facilitate particular policy agendas (Lubienski, Scott, & DeBray; 2011, p. 1).

With respect to the role of IOs in knowledge mobilization (KMb), Scott et al., (2017) conclude IOs play a role in agenda-setting during the policy process. The authors deem these IOs "high-capacity" (i.e. those with steady funding streams who can hire both research and advocacy staff). In their study, the authors consider the Colorado Education Initiative, the Colorado League of Charter Schools, The New York City Charter Schools Association, and New Schools for New Orleans in their analysis of three case cities (Denver, New York, and New Orleans) to be "high-capacity" intermediary organizations (2017, p. 24). These IOs are often asked by national organizations and/or policymakers to engage in agenda setting. Funding for these high-capacity IOs comes predominantly from philanthropic funding streams, but some funding flows from the federal government as was the case with New Schools for New Orleans which received federal funding via i3 grants and the federal Teacher Incentive Fund (Scott et al., 2017).

Because IOs are often funded by foundation gifting and philanthropy, another line of recent research inquiry related to IOs has been the influence of venture philanthropy via philanthropic and foundation funding to support policymaking and the advocacy work of intermediary organizations (Lubienski et al., 2011; Reckhow & Snyder, 2014; Scott et al., 2015). These scholars have concluded that foundations' and philanthropists' ideologies and conceptualizations of education reform in turn influence which IOs receive foundation funding, and in turn the policy advocacy work and knowledge mobilization within which IOs and their policy advocacy networks engage.

Scholars have begun to examine the impact of IOs on policy advocacy with regard to education reform initiatives, and more specifically, education reforms related to the charter and choice movement (Au & Ferrare, 2014, 2015). These studies have analyzed the degree to which IOs engage in knowledge mobilization by encouraging the use of research supportive of the charter school movement by policymakers (DeBray, Scott, Lubienski, & Jabbar, 2014; Ness & Gandara, 2014; Scott et al., 2017). These authors have determined that a critical function of IOs is the dissemination and/or translation of research largely supportive of charter schools to the policymaking community.

Beyond understanding how and under which conditions IOs operate, some scholars have adopted a conceptual approach to their work on intermediary organizations. For instance, Ball (2008) has conceptually connected intermediary organizations – which he terms at different points, consultants, technical assistance providers, nongovernmental organizations – to his work on "new public management" and new governance structures. In brief, New Public Management (NPM) is management of the public sector that accords with management in the business and private sector (Gruening, 2001). NPM requires a focus on outcomes and performance, and is akin to Foucault's concept of governmentality, which gives great weight to data and measurement as a mode of governance (Olssen, Codd, & O'Neill, 2004; N. Rose, 1999). Much like the administrative progressives during the Progressive Era, efforts to reform education are turning again to data collection, weight, rank, and performance outcomes as measures of quality. Again, much like the IOs who serve as knowledge brokers between the research and policy community, IOs serve a role within NPM with respect to assisting with data collection and analysis. Also within NPM are new public managers who include state education agency personnel and school administrators whose new roles are not conceived as teacher leaders and instructional coaches, but resource and personnel managers responsible for recruitment, retention, development, and dismissal of low performing teachers.

Trujillo (2014) engages critically with the role of IOs as an extension of the "efficiency experts" during the Industrial Revolution, arguing that the reliance today on IOs represents an "enduring ideological faith in technocratic solutions to complex social problems (p. 207). Trujillo's (2014) study examines one national IO's work with schools and finds that collecting and analyzing data via checklists, rubrics, and graphics ("pretty papers" (p. 215)) was a dominant outcome of working with the IO. Rather than focusing on a stated goal of increasing educational equity, services were technical and managerial in nature, focusing instead on the creation of tools such as spreadsheets, checklists, diagrams, and rubrics. Trujillo concludes that

> while the interests of those they purport to serve – poor children and children of color – continue to justify their entrance into these public spaces, [IOs'] emphasis on managerialism, competition, and market-based values suggests that today's cult of efficiency will persist for the time being […] (229).

This cult of efficiency has found renewed vigor in concepts such as comprehensive human capital management and comprehensive approaches to talent development, which seek to streamline processes of human resource management, including rewards systems, based on measures of teacher effectiveness and student performance (Odden, 2013).

Research exploring the intersection of knowledge mobilization and intermediary organizations is not fully developed. To date, the research on IOs has focused almost exclusively on advocacy networks funded by foundations whose work it is to package, translate, and disseminate research for the purpose of shaping educational policy in line with their advocacy agendas. What has not been explored, however, is the way in which the federal government employs the knowledge dissemination industry – and in particular, government funded IOs – to influence which policy ideas gain prominence at the state level in education policy. Additionally, while research has examined the role of IOs in supporting research in favor of charters and choice, it has not uncovered the processes and mechanisms operating to disseminate policy ideas to policymakers. Research on IOs and their advocacy work has been largely descriptive in nature, tracking those IOs involved in particular policy ideas. It has failed to sufficiently surface the machinery through which knowledge mobilization occurs, especially at the intersection between state and federal policy.

Social science research does influence policymaking, and it does so most often through the conceptual use of research, or through ideas. Knowledge brokers play a key role in linking such research to policy. To address these gaps in the IO literature requires a review of the political science literature that explores the role of ideas in policymaking. I turn now to the political science literature on the policy process, which suggests that ideas matter.

Ideational Theories of the Policymaking Process

Until the mid-1980s, the dominant framework for analysis of the policy process assumed that a policy cycle existed in discrete stages. The framework for understanding the policy process has been termed the “textbook approach” (Nakamura, 1987) and is often referred to as the “stages heuristic” (Sabatier, 1993; Sabatier, 2007). As the moniker suggests, the “stages heuristic” divides the policy process into a series of stages, typically termed agenda setting, policy formulation and legitimation, implementation, and evaluation (Anderson, 1975; Brewer & DeLeon, 1983; Jones, 1970; Lasswell, 1956). In the 1980s, this framework faced criticism that it was too top-down of an approach; policymaking is much messier and more complex that the framework suggests (Nakamura, 1987; Sabatier, 1991; Sabatier & Jenkins-Smith, 1993).

In the literature that rejects the stages heuristic, there are a number of frameworks that theorize the policy process. Operating within these theoretical frames, researchers have tended to frame their research using one of three conceptual lenses to understanding the policy process: institutions, interest groups, and ideas. Policy analysts term these approaches the institutional approach, the interest group approach, and the ideational approach.

Ideational scholars view the concept of ideas as an alternative to institutions constrained by rules and groups governed by interests (Beland, 2005; Béland & Cox, 2010; Campbell, 2002; Kingdon, 2011). For ideational scholars, ideas are causal beliefs socially constructed out of lived experiences and the stories of others’ experiences. Ideas are figments that signal individual, institutional, and societal values and become institutionalized in knowledge, narratives, and policies. Causal beliefs held by individuals or adopted by institutions have the capacity to influence attitudes and actions (see Gusfield, 1976). Ideas can be high profile, filtering into public discourse and operating at the foreground of the public policy arena, or they can be lower-profile assumptions and paradigms that remain under the surface (Campbell, 1998).

It has become clear that ideas matter in policymaking (Blyth, 2011; Hall, 1989, 1993; Schmidt, 2011). And yet, all ideas do not hold equal value or equal standing when it comes to policymaking. Until Campbell and Petersen (2011) little attention was paid to how ideas were produced and disseminated. Campbell and Pedersen's (2015) work on what they term "knowledge regimes" focuses on the "organizational and institutional machinery" by which these ideas are produced. In essence, knowledge regimes "are the organizational and institutional machinery that generates data, research, policy recommendations, and other ideas that influence public debate and policymaking" (Campbell & Petersen, 2015, p. 2). Campbell and Pedersen further define knowledge regimes as "sets of actors, organizations, and institutions that produce and disseminate policy ideas" (2015, p. 167) that affect the policy process. As such, a knowledge regime is "a sense-making apparatus" (Campbell & Pedersen, 2015, p. 3). For Campbell and Pederson, knowledge regimes are an important topic of study with respect to the policy process as they contribute the ideas, in the form of data, research, theories, and policy recommendations that influence public policy (2011).

Conclusion

It is clear from the research base on knowledge utilization that multiple forms of knowledge compete to gain the attention of policymakers. Of these forms of knowledge, personal experiences, social ties, and firsthand familiarity with the topic are more influential than social science research in shaping policy. Policy decisions are governed more by personal and professional beliefs, values, and experiences than by empirical research. Though social science research rarely initiates sweeping policy changes, it frequently influences how policymakers come to think about a policy problem and its associated solutions.

Even though it is apparent that social science research does not impact policy decisions to the same degree as policymakers' personal experiences or the experiences of those they know with the particular topic, academics and American political institutions have placed an enduring faith in the value of data and research to improve education. In the 21st Century, funding trends to promote the development of data systems and longitudinal databases corroborate this point. However, increased investments in social science research may not actually lead to consensus around how to best improve education. As it often the case, social science research tends to result in more questions than answers, more controversies over methods and procedures, and more nuance than previously assumed. Consequently, more attention and investment to social science research may reveal that improving education through policy solutions is far more complicated and complex than the surface belies, raising new questions, reframing problems and associated solutions, and calling attention to murky undercurrents of reality.

This more complicated and nuanced view of improving education produced by the increased output of social science researchers presents an opportunity for individuals and organizations to shape the manner in which research is promoted for policy and practice. Such individuals and organizations can act as powerful filters through which to translate and disseminate research to policymakers, urging the uptake of particular social science research over other research, screening and filtering the research presumed to be useful. These individuals and organizations, more recently called intermediary organizations, act as knowledge brokers that support the mobilization of knowledge into policy and practice. In so doing, they play an integral part of what Campbell and Petersen describe as “knowledge regimes,” shaping the ideas and knowledge that become relevant in policymaking and practice. Such intermediary organizations are part of the “sense-making apparatus,” a part of the “organizational and operational machinery,” which concludes that some social science research is more relevant to policymakers and practitioners than other, perhaps equally or even more relevant social science research.

While the research to date has explored the role of intermediary organizations in knowledge mobilization for policy, few studies have examined the processes and mechanisms operating to disseminate policy ideas to policymakers. Research has failed to sufficiently surface the machinery through which the knowledge mobilization of certain policy ideas to policymakers occurs, especially at the intersection between state and federal policy. What follows are three standalone papers which seek to do the following: 1) uncover the social science research promoted by intermediary organizations around the topic of equitable access to teachers; 2) surface the machinery – toolkits and templates – that translated such social science research for instrumental use, altering the array of viable policy solutions to the inequitable distribution of teachers; and 3) examine additional mechanisms of knowledge mobilization employed by intermediary organizations within this knowledge regime and state education agency staff members' experiences with this support. Gaining a better understanding of the mechanisms that served to promote and mobilize knowledge within the Excellent Educators for All Initiative will shed light on the nature of this particular knowledge regime. As such, it has implications for the role of intermediary organizations engaging in knowledge mobilization.

CHAPTER 3: KNOWLEDGE DISTRIBUTION AS POLICY LIMITATION

It is well documented that the inequitable distribution of fully prepared professional and experienced teachers disproportionately impacts poor and minority students (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004; Peske & Haycock, 2006). Students of color in low-income schools are more likely to be taught by teachers who are uncertified, inexperienced, or teaching outside of their field of expertise (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004). Schools with high minority populations and schools in communities impacted by poverty suffer from higher levels of teacher turnover and attrition (Esch et al., 2005; Ingersoll, 2004). Difficult-to-staff urban schools in communities impacted by poverty and with large numbers of minority students also face the greatest number of out-of-field teachers (Horng, 2009; Ingersoll et al., 2004; Jerald & Ingersoll, 2002). Similarly, teacher credentials are unevenly distributed among students with different racial and socioeconomic statuses (Clotfelter, Ladd, & Vigdor, 2005). And, even within schools, classrooms with low-achieving, minority, and poor students are more likely to have novice teachers (Kalogrides & Loeb, 2013).

The problem of the inequitable distribution of workforce talent in education has proven to be somewhat of a "wicked problem" (Rittel & Webber, 1973) for those seeking to craft policy solutions. No single factor contributes to the inequitable distribution of inexperienced, unqualified, and out-of-field teachers, and like most complex problems, the influence of specific factors is contingent on the unique social, political, and historical contexts and structures of schooling in communities, districts, states, and regions.

Policy initiatives to address these disparities have been attempted. Since 2002, the federal department of education has attempted to tackle the inequitable distribution of teachers. The No Child Left Behind Act of 2001 (NCLB) stipulated that state teacher equity plans needed to describe the steps states would take to ensure that low income and minority students were not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers (DeBray, 2006; No Child Left Behind [NCLB], 2002; Rebell & Wolff, 2008). These equity plans needed to identify inequities in the distribution of inexperienced, unqualified and out-of-field teachers, delineate strategies for addressing the inequities, provide evidence of the probable success of these strategies, and include how the state would monitor local education authorities (LEAs) with respect to the identified inequities (Loeb & Miller, 2009, p. 212).

In general, however, the teacher equity plans required by law under NCLB were ineffective at reducing the disproportionate number of low income and minority students taught by inexperienced, unqualified, or out-of-field teachers (Loeb & Miller, 2009). In part, this was due to an initial decision by the U.S. Department of Education (U.S. DOE) not to require that the plans be officially reviewed and approved (Loeb & Miller, 2009). This sharply contrasted with NCLB's punitive accountability requirements for student achievement. As a consequence, most states prioritized the development of plans for student achievement goals, and left teacher quality and inequitable distribution on the sidelines. Even after the U.S. Department of Education stepped up proactive oversight in 2006, limited data, nonstandardized evaluation protocols, and nonuniform teacher equity plan formats made it difficult for states and the federal government to promote effective policies around teacher quality (Loeb & Miller, 2006).

The desire to encourage states to develop and implement their equity plans did not end there. In 2014, the U.S. Department of Education launched the Excellent Educators for All Initiative by calling on states to submit updated plans, which the U.S. DOE termed "State Plans to Ensure Equitable Access to Excellent Educators." For simplicity's sake, I refer to these plans as equitable access plans moving forward. In these equitable access plans, state education agencies needed to document the root causes of the inequitable distribution of excellent teachers in their state and list strategies to resolve these gaps in teacher quality. In December 2015, the U.S. Department of Education approved fifty-two plans to ensure equitable access to excellent educators. Today, state education agencies throughout the country are in the midst of implementing their planned strategies to improve the inequitable distribution of out-of-field, inexperienced, and otherwise unqualified teachers.

The strategies included as solutions to the inequitable distribution of high-quality teachers in states' equitable access plans raise new questions about influence in the education policymaking process. For instance, even though insufficient or poor working conditions are listed as primary root causes to nearly the same degree as root causes related to inefficient human capital management, there is a disproportionate number of strategies addressing human capital management when compared with strategies that address working conditions in states' equitable access plans (Williams II et al. 2016). What patterns of influence led state education agencies to list strategies so heavily focused on human capital management?

One assumption of traditional theories of the policymaking process is that policymakers carefully consider research evidence when designing policy. As others have pointed out, this is often not the case (e.g. Ball, 1998; Weiss, 1979). Policymakers use research evidence politically (Weiss, 1979). That is, policymakers selectively use research evidence that supports their views as a means to justify decisions. In addition to using research evidence politically, policymakers often pick and choose evidence haphazardly through a process of "bricolage" (Ball, 1998). Policymakers also experience difficulty distilling and evaluating complex research reports – especially in reports with nuanced, qualified, or conflicting conclusions (Nelson, Leffler, & Hansen, 2009).

Despite these cautioned conclusions about the ways in which policymakers use (or struggle to use) education research to craft policy, there is renewed interest today in increasing the use of research knowledge and data, which is now frequently termed evidence-based policy and practice (Davies et al., 2000; Nutley et al., 2007; Tseng, 2012). Emerging definitions of "scientifically-based research" are shaping education research (Mason, 2013). This includes the U.S. Department of Education's promotion of education studies that use experimental or quasi-experimental research designs, the results of which can be replicated and brought to scale (Mason, 2013). In prioritizing such studies, other perhaps equally or more valuable studies are sidelined either through disinvestment or reverse incentives. Thus, certain types of research (i.e. quantitative, quasi-experimental, easily scalable) are the studies more likely to be promoted in the education policymaking arena.

Though it is not without its critics (see Holmes, Murray, Perron, & Rail, 2006; Trinder & Reynolds, 2000), evidence-based policy and practice continues to forge ahead in many policy arenas both within and outside the United States. Federal funding continues to flow to National Centers tasked with producing policy-relevant research knowledge. Among these centers is the National Center for the Analysis of Longitudinal Data in Education Research (CALDER). CALDER has become a focal point for research on the teacher labor market, particularly as it seeks to address ways to improve the management of school personnel through attention to student outcomes via teachers' value-added scores (Odden, 2013). Additionally, federally funded competitive grant opportunities like Race to the Top, Investing in Innovation (i3), and the Teacher Incentive Fund (TIF) incentivize the use of research that analyzes teacher and student outcomes, performance, and longitudinal data – largely statistical analyses – instead of more qualitative analyses.

Funding trends corroborate this point. In 2009-2010, just over $10 billion in discretionary funding to the Institute of Education Sciences (IES) from the American Reinvestment and Recovery Act (ARRA) was pumped into the education economy to develop statewide data systems, and support research, development, and dissemination (Mason, 2013). Funding was "targeted toward applied research, development of national and state data systems, and research and evaluation that prioritizes rigorous analysis of student outcomes" (Mason, 2013, p. 213). Furthermore, funds from the American Recovery and Reinvestment Act of 2009 were dispersed to galvanize reform initiatives. Many of these funds from the American Recovery and Reinvestment Act of 2009 were authorized for evaluation, research, and data system development in the Race to the Top competition.

This is not to say that increased investment in efforts to use social science research in policymaking or even increased research production will lead to consensus around how to solve social problems. In fact, increased social research may do just the opposite:

> For the most part, the improvement of research on social policy does not lead to greater clarity about what to think or what to do; instead, it usually tends to produce a greater sense of complexity. This result is endemic to the research process. For what researchers understand by improvement in their craft leads not to greater consensus about research problems, methods, and interpretation of results, but to more variety in the ways problems are seen, more divergence in the way studies are carried out, and more controversy in the ways results are interpreted. It leads also to a more complicated view of problems and solutions, for the progress of research tends to reveal the inadequacy of accepted ideas about solving problems. (Cohen & Weiss, 1977, p. 68)

The production of more social science research aimed at shedding light on and proposing solutions to social problems presents an opportunity. There is a new politics of research production, promotion, and use in educational policy (Lubienski, Scott, & DeBray, 2014). Organizations and individuals can work to shape the manner in which certain research moves from production to policy and/or practice. This is significant, for if increased production of social science research knowledge does not necessarily lead to consensus around the solutions to social problems, then the middlemen tasked with increasing the use of social science research by policymakers have a powerful role in shaping access to the knowledge that comes to influence policymakers' decisions.

As a consequence, a new market for mediating research evidence to policymakers has been created. What I am calling the *knowledge dissemination industry* is comprised of various competing intermediary organizations whose work it is to gather, interpret, and package research evidence for policymakers. With a number of new actors mediating which research is valid, and then translating, distilling and sharing it with their networks, coalitions, and policymakers, the ways in which these actors operate as a "government out of sight" (Balogh, 2009) merit investigation.

Purpose of the Study

This article is part of a larger study exploring the ways in which states' plans to ensure equitable access to excellent educators were influenced by federally funded intermediary organizations' strategies of knowledge mobilization. I am concerned with which knowledge came to be employed by state education agency personnel tasked with designing policies around teacher quality and the distribution of teacher quality. In so doing, I seek to uncover the processes and mechanisms through which relevant knowledge is shared, mobilized, and disseminated to state-level policymakers.

Embedded within this research is a commitment to surfacing the biases and power dynamics inherent to the policy process. The strategies selected by states to ensure equitable distribution of excellent teachers and leaders impact nearly every aspect of teaching and learning in today's public schools. To uncover the processes through which these strategies are determined is to do right by public educators and principals, teacher educators, and their students who deserve to know how such policies are decided upon, by whom, and for what purposes. To uncover these processes is an endeavor to make the policymaking more transparent and democratic.

In this study, using the critical conceptualization of Campbell and Peterson's "knowledge regimes" (2007), I explore the patterns of knowledge mobilization within the broader support network tasked with supporting states to develop their equitable access plans. In doing so, I am interested in understanding the policy ideas that circulated through the support networks to state education agencies. I begin by briefly reviewing the literature on knowledge utilization, knowledge mobilization and knowledge brokering by intermediary organizations and talent management. I then move on to discuss my theoretical framework, methods of inquiry, data collection procedures, and findings.

Review of the Literature

Knowledge Utilization

It is broadly understood that there are multiple forms of knowledge in circulation at any given time, and all are competing for the ear of policymakers (Weiss, 1999). Consequently, knowledge utilization is a field within social science that seeks to understand and improve the ways in which knowledge is used in policy and practice (Dunn, Holzner, & Zaltman, 1985). Scholars studying knowledge utilization in policymaking have concluded that personal experience and/or familiarity with the topic through interactions in both informal and formal social networks is often more influential in determining policy decisions than social science research (Galway & Sheppard, 2015; Nutley et al., 2007). Since social science research is typically not the most influential agent in policy decisions when compared with personal experiences and social interactions, it is important to understand how social science research is used when it makes its way onto policymakers' radar. I turn now to the literature on the uses of research in policy making.

Uses of Research in Policy Making

There are many ways research is used in the policy arena. Scholars have developed a number of different frameworks and typologies for thinking about research use (Farkas, Jette, Tennstedt, Haley, & Quinn, 2003; Greenberg & Mandell, 1991; Knott & Wildavsky, 1980; Weiss, 1979). One of the most frequently referenced typologies of research use is Weiss's (1979) work. Weiss's contribution to the field proposes six models for how research is utilized in policymaking. They are as follows: knowledge-driven, problem-solving, interactive, political, tactical, and enlightenment.

Over the past few decades, Weiss's original typology of research use has been consolidated to three main types of research use. These three types of research use are referred to as instrumental, symbolic (though this is sometimes referred to as political use (see Daviter, 2015), and conceptual (Estabrooks, 1999; Sudsawad, 2007). Most often it is assumed that research will be used instrumentally, in that the findings and policy recommendations produced in the research will directly influence policy implementation. Instrumental use then is the concrete application of research in direct and specific ways (Beyer, 1997; Estabrooks, 1999b).

In practice, however, instrumental use of research is rare. Instead, research is used subtly and indirectly in a number of different ways (Court & Young, 2003; Nutley et al., 2007). Symbolic or political use of research helps to legitimize predetermined policy decisions (Estabrooks, 1999). Research is used at other times to indirectly influence policymakers' thinking. When research is used as an indirect, influencing element, its use is considered to be conceptual (Lindblom & Cohen, 1979; Rich, 1979). Conceptual use shapes and helps frame the ways in which policymakers come to think about a policy problem and its associated solutions. Conceptual use may change thinking around the issue but not necessarily action (Estabrooks, 1999). In this way, while the conceptual use of research may eventually come to influence policy change – by altering the array of viable policy options, for example – it can be considered to be different from instrumental use whose goal it to directly influence policy action, without correspondingly changing policymakers' conceptual understanding or thought behind the policy change itself.

In studies of research utilization, scholars have concluded that research does influence policymaking (Biddle & Anderson, 1991; Weiss & Bucuvalas, 1980). It can influence policymaking instrumentally, resulting in direct changes to policy and practice (e.g. Shavelson and Berliner, 1991). Most social science research, however, is used conceptually; that is, it rarely initiates sweeping policy changes, but results more frequently in policymakers' enlightenment. This "enlightenment" is "the percolation of new information, ideas, and perspectives into the arenas where decisions are made" (Weiss, 1999, p. 471). With enlightenment, social science research seeps into the policy sphere, "puncturing old myths," changing how issues are framed, and altering the array of viable policy options (Weiss, 1999). Since social science research does influence policymaking, though in often subtle, indirect, and conceptual and/or symbolic ways, what determines which research and knowledge will catch a policymaker's ear?

"Two Communities" Thesis

Caplan (1979) proposed what has come to be called the "two communities" thesis. This two communities thesis hypothesizes that policymakers and researchers reside in two different "communities" in that they are motivated by different incentives, they follow different timelines, they speak a different language, they communicate to different audiences, and they have different priorities (Mead, 2015; Mitton et al., 2007; C. Nelson et al., 1987; R. Rose, 1977). In essence, “the direct use of policy research by decision makers is unlikely because of the competing world views and belief systems of policy researchers and policymakers” (Lester & Wilds, 1990, p. 314). Thus, it is supposed, getting researchers to produce policy-relevant knowledge and having policymakers attend to social science research more than other types of knowledge is a rather tall order.

Moving Research into Policy or Knowledge Mobilization (KMb)

The process of getting research into the policy sphere goes by a number of different terms, some of which prevail over others in certain fields. This process is alternatively called knowledge transfer and exchange, knowledge linkage and exchange, knowledge exchange, knowledge management, knowledge dissemination, knowledge translation, and knowledge mobilization. This abundance of terms, each with slightly different connotations, makes it difficult to review the body of literature on the ways in which research finds the ears of policymakers and how to improve such processes.

With that said, the term knowledge mobilization (KMb) is increasingly used in education policy and practice studies analyzing this process (see Cooper & Shewchuk, 2015; Scott, Jabbar, LaLonde, Debray, & Lubienski, 2015). To keep the terms consistent, I will be employing the term knowledge mobilization to talk about this process. Knowledge mobilization (KMb) is operationalized as follows: “knowledge mobilization includes efforts to increase the use of research evidence in policy and practice in education (Cooper & Shewchuk, 2015, p. 1). Mobilization implies movement, and so Read, Cooper, Edelstein, Sohn, and Levin (2013) further conceptualize knowledge mobilization as the “movement of research from production to its ultimate impact on policy and practice" (p. 25). With that clarified, what factors enable or constrain knowledge mobilization on policy and practice?

Political, organizational, and institutional contexts matter for knowledge mobilization (Contandriopoulos et al., 2010; Paul Sabatier, 1978). This is sometimes referred to as the "social ecology of research use" where use unfolds in different ways in organizational and social settings and in different political and policy contexts (Coburn, Honig, & Stein, 2009; Nutley et al., 2007; Tseng & Senior Program Team, 2008). Organizational capacity, culture, and structure also shape how research is used (Tseng, 2012).

Beyond institutions and organizations, relationships are essential to how policymakers receive, understand, and use research (Finnigan, Daly, & Che, 2013; Tseng, 2012). Individuals and groups access information through their social ties, which require relational trust (Finnigan & Daly, 2012). Thus, policymakers who have direct contact and relational trust with researchers are more likely to use research (Crona & Parker, 2011). Consequently, it is supposed that the development of social networks that bring researchers and policymakers into contact with each other may increase the use of research in policy decisions (Crona & Parker, 2011).

The perception of policymakers that a particular source is authoritative increases the likelihood that such research will be used (Percy-Smith et al., 2002). Thus, large, analytical purportedly objective research organizations such as the American Institutes for Research (AIR), the National Center on the Longitudinal Data Analysis in Education Research (CALDER), and Mathematica Policy Research have more influence over policymaking than their smaller, more descriptive counterparts (Hird, 2005). Social science research also needs to be accessible (Nelson et al., 1987). Research findings are more likely used when they are intuitive and when the implications for action are clear (Caplan, 1977). Furthermore, research directly affiliated with the decision-making agency is used more frequently than outside research (Rich, 1977; Dunn, 1980; Nelson et al., 1987; Percy-Smith et al., 2002). This suggests that in-house research or research organizations directly affiliated with the decision-making agency have more authority or are perceived to be more credible than outside sources. When external research *is* used, it is more often to provide background information to inform the development of policy than to inform policy decisions (Percy-Smith, et. al., 2002). Finally, research that finds the ears of policymakers is often sponsored and supported by knowledge brokers who provide the links between research producers and research users (Ward et al., 2009).

Knowledge Brokering and Intermediary Organizations

In exploring the mechanisms that support the use of research evidence in policymaking, the role of IOs as knowledge brokers cannot be overlooked. This next section briefly explores the literature around knowledge brokering and intermediary organizations.

Intermediary organizations (IOs) are “organizations that occupy the space in between at least two other parties” and “function to mediate or manage change in both of these parties” (Honig, 2004). Intermediary organizations may include foundations, policy groups, think tanks, and private technical assistance providers. These intermediaries are not simply neutral, objective parties offering recommendations and providing syntheses of research. They bring their own agendas and priorities (Henig, 2008). Significantly, such intermediaries purport to vet their own research without engaging in independent peer review.

Lomas (2007) defines knowledge brokering as follows: "all the activity that links decision makers with researchers, facilitating their interaction so that they are able to better understand each other's goals and professional cultures, influence each other's work, forge new partnerships, and promote the use of research-based evidence in decision-making” (Lomas, 2007,

p. 131). Knowledge brokers "perform a variety of functions including managing research and other information, facilitating linkage between parties and developing the skills of both researchers and practitioners" (Ward, et. al., 2009, p. 267). In all cases, "these brokering functions seek to build bridges between research, policy, and practice in order to improve societal systems (Cooper & Shewchuk, 2015, p. 3). Knowledge brokers have three main functions: 1) disseminating, packaging and translating knowledge; 2) linking researchers and users and building connections between the two communities; and 3) building capacity through training and skill building of users (e.g. Turnhout, Stuiver, Klostermann, Harms, & Leeuwis, 2013; Ward et al., 2009).

Knowledge brokers are tasked with making research evidence accessible, often through synthesis, translation, and dissemination of research results (Cooper & Shewchuk, 2015; Feldman et al., 2001). The passive dissemination of knowledge has proven to be largely ineffective particularly as it relates to translating research to practice (e.g. Lave & Wenger, 1991). However, when the research is mediated by knowledge brokers and discussed with end users, research uptake by practitioners is more significant (Amsallem et al., 2007). Knowledge brokers thus need to incorporate a range of strategies rather than purely sharing the latest research findings (Armstrong et al., 2007).

One strategy involves translating research materials for use by policymakers and communicating ideas within research to end-users. Scholars have documented the importance of translating research materials for policymaker and practitioner use to encourage the use of research in policy and practice. In their work on how state education agencies locate and use research for school improvement, Barnes, Goertz, and Massell (2014) even include in their conception of research forms of research designed for use in practice. These forms of research include “models, protocols, or other tools that embed research or research-based practices in somewhat specified guides to action” (Barnes, Goertz, & Massell, 2014, p. 102).

Feldman et. al. (2001) also view knowledge brokers as playing a role that supports decision makers in managing information overload. In this role, the knowledge broker helps filter out or screen in what they themselves deem to be policy relevant knowledge or sound research evidence. Using a RAND report on the role of demonstrations in federal research and development policy as one example, Knott and Wildavsky speak to this dissemination function as one that can become a “mask for policy advocacy” (1991, p. 216). They write: “under the guise of spreading knowledge, disseminators try to make changes which policymakers perceive as unnecessary or, when a performance gap is perceived, to promote their own policy to the exclusion of others” (Knott and Wildavsky, 1991, p. 216). Thus, in filtering information, knowledge brokers may also be positioning themselves as powerful policy advocates.

Intermediary organizations increasingly operate as knowledge brokers between the research and policy communities, especially in education policy (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Tseng, 2012). Scholars like Chris Lubienski, Janelle Scott, and Elizabeth DeBray have focused on the function of IOs in the policymaking process. In so doing, Lubienski, Scott, and DeBray (2011) narrow Honig’s definition of intermediary organizations to the domain of knowledge mobilization. The authors define IOs as “the actors that function in the space between research producers and users, including organizations such as think tanks, philanthropies, the media, bloggers, and other advocacy organizations to facilitate particular policy agendas (Lubienski, Scott, & DeBray; 2011, p. 1).

With respect to the role of IOs in knowledge mobilization (KMb), Scott et al., (2017) conclude IOs play a role in agenda-setting during the policy process. Because IOs are often funded by foundation gifting and philanthropy, another line of recent research inquiry related to IOs has been the influence of venture philanthropy via philanthropic and foundation funding to support policymaking and the advocacy work of intermediary organizations (Lubienski et al., 2011; Reckhow & Snyder, 2014; Scott et al., 2015). These scholars have concluded that foundations' and philanthropists' ideology and conceptualizations of education reform in turn influence which IOs receive foundation funding, and in turn the policy advocacy work and knowledge mobilization within which IOs and their policy advocacy networks engage. Scholars have also begun to examine the impact of IOs on policy advocacy with regard to education reform initiatives, and more specifically, education reforms related to the charter and choice movement (Au & Ferrare, 2014, 2015). These studies have analyzed the degree to which IOs engage in knowledge mobilization by encouraging the use of research supportive of the charter school movement by policymakers and determined that a critical function of IOs is the dissemination and/or translation of research largely supportive of charter schools to the policymaking community (DeBray, Scott, Lubienski, & Jabbar, 2014; Ness & Gandara, 2014; Scott et al., 2017).

Education policy researchers have begun to explore the impact of intermediary organizations (IOs) on policymaking in this knowledge dissemination industry. Intermediaries translate and package research for legislators, agency staff, and service providers, and they broker relationships between researchers and policymakers (Tseng, 2012). Lubienski et al., (2011) have identified that IOs serve as brokers between the production of research and its use by policymakers. IOs such as foundations, advocacy organizations, and think tanks select and disseminate research in line with education reforms such as charter schools, school vouchers and choice, and parent trigger laws (Lubienski, Brewer, & LaLonde, 2016; Lubienski et al., 2011;

Ness & Gandara, 2014; Janelle Scott & Jabbar, 2014; Janelle Scott et al., 2015). Studies have found the involvement of IOs in supporting education reforms aligned with the agendas of privatization and deregulation, though one should not presume that there are no IOs supporting more progressive policies. Analyses have focused on the use of IOs on policy ideas around school vouchers and school choice (Goldie, Linick, Jabbar, & Lubienski, 2014; Lubienski, Weitzel, & Lubienski, 2009) and charter schools (Au & Ferrare, 2014). Additionally, researchers have found that in the case of foundations, IOs can play multiple roles: as funders of knowledge brokers *and* as knowledge brokers themselves (Reckhow & Snyder, 2014; Janelle Scott & Jabbar, 2014).

Research that explores the intersection of knowledge mobilization and intermediary organizations is not fully developed. To date, the research on IOs has focused almost exclusively on advocacy networks funded by foundations whose work it is to package, translate, and disseminate research for the purpose of shaping educational policy in line with their advocacy agendas. What has not been explored, however, is the way in which the federal government employs the knowledge dissemination industry – and in particular, government-sponsored IOs – to influence which policy ideas gain prominence at the state level in education policy.

Additionally, while research has examined the role of IOs on supporting research in favor of charters and choice, it has not uncovered the processes and mechanisms operating to disseminate policy ideas to policymakers. Research on IOs and their advocacy work has been largely descriptive in nature, tracking those IOS involved in particular policy ideas. It has failed to sufficiently surface the machinery through which the mobilization of certain policy ideas to policymakers occurs, especially at the intersection between state and federal policy. Thus, my research seeks to address these gaps in the literature on IOs by examining the mechanisms and means through which ideas are shared by federally sponsored intermediary organizations to state education agencies. I ask the following research questions:

1) What is the research base cited in resources advanced by federally-funded intermediary organizations tasked with supporting SEA personnel in the development of states' equitable access plans?

2) What is the research base cited within states' equitable access plans?

3) What is the degree of overlap between the research base in states' equitable access plans and the resources promoted by federally funded IOs?

4) What are the prevailing policy ideas promoted within the resources provided by federally funded IOs to SEAs?

Theoretical Framework

Ideas matter in policymaking (Dobbin & Sutton, 1998; Hall, 1989, 1993; Lieberman, 2002; Mehta, 2006, 2013; Yee, 1996). And yet, all ideas are not presumed to hold equal value or equal standing when it comes to policymaking. Ideational approaches to the policy process operate under the assumption that causal beliefs held by individuals or adopted by institutions have the capacity to influence attitudes and actions (Béland & Cox, 2010, p. 6). As John Campbell puts it, "ideas provide specific solutions to policy problems, constrain the cognitive and normative range of solutions that policy makers are likely to consider, and constitute symbols and concepts that enable actors to construct frames with which to legitimize their policy proposals" (1998, p. 398). Ideas can be high profile as in public discourse or they can be lower-profile assumptions and paradigms that remain in the background or under the surface

(Campbell, 2002). But how do these ideas come to be produced, disseminated, translated, and ultimately, consumed by policymakers?

For this study, I use the conceptual framework advanced by Campbell and Pedersen's (2015), which they term "knowledge regimes. " Knowledge regimes constitute the "organizational and institutional machinery" by which ideas are produced (and reproduced) (Campbell & Petersen, 2014). In essence, knowledge regimes "are the organizational and institutional machinery that generates data, research, policy recommendations, and other ideas that influence public debate and policymaking" (Campbell & Petersen, 2015, p.2). Campbell and Pedersen further define knowledge regimes as "sets of actors, organizations, and institutions that produce and disseminate policy ideas" (2015, p. 167) that affect the policy process. As such, a knowledge regime is "a sense-making apparatus" (Campbell & Pedersen, 2015, p. 3).

Under this construct, I take knowledge regimes to be the "organizational and institutional machinery" – the "sense-making apparatus"—that assists with knowledge mobilization. As a consequence, the knowledge base circulated by the intermediary organizations tasked with supporting state education agencies as they developed their equitable access plans is one part of the machinery within the knowledge regime that communicates and elevates certain policy ideas over others. Thus, knowledge regimes are an important topic of study with respect to the policy process. Knowledge regimes contribute the ideas – in the form of data, research theories, policy recommendations and even policy tools – that influence public policy (2011).

Methods

To explore how government funded IOs in the knowledge dissemination industry cite and disseminate research for use by SEAs in the development of state's equitable access plans, I use bibliometrics and policy network analysis approaches similar to those advanced by Goldie, Linick, Jabbar, and Lubienski (2014).

Bibliometrics is often used to explore the impact of a series of articles on the field or of a group of authors within the field. Though its lineage can be traced to studies of bibliographies in the late nineteenth century, the term bibliometrics is relatively recent (Osareh, 1996). Pritchard (1969) coined the term bibliometrics as the application of mathematics and statistics to books and communication. It is used to study patterns of publication within a field (De Bellis, 2009). As such, bibliometric techniques can be used to trace the diffusion of ideas in a body of literature (Osareh, 1996). Often, bibliometric analyses are combined with visual mapping techniques to map the intellectual structure and organization of a particular field or subfield (Cobo, Lopez-Herrera, Herrera-Viedma, & Herrera, 2011). Bibliometrics incorporates different forms of analysis, including citation analysis, co-citation analysis, keyword occurrence analysis, co-authorship analysis, and co-word analysis (Van Eck & Waltman, 2014). Citation analysis is one of the most common methods used in bibliometrics (Osareh, 1996). It is used to obtain insight into the knowledge base and intellectual structure – or idea network – of research (Culnan, 1986; Pasadeos, Phelps, & Kim, 1998; Small, 1978).

The field of library science employs bibliometrics frequently, but similar analyses have been conducted in other fields as well, including in the study of science and social networks (White, 2011). However, bibliometric analyses remain rare in the field of education policy. Since I am interested in the types of knowledge cited across a policy network, and whose knowledge is most valued, a bibliometric analysis that uses citation analysis as advanced by Goldie, et. al. (2014) of the knowledge within a bounded network makes sense. After all, a "citation is the representation of a decision made by an author who wants to show the relation between the document he is writing and the work of another (at a particular point)" (Osareh, 1996, p. 152; Sandison, 1989). As such, a citation analysis should indicate which ideas as promoted through research studies are the most salient within states' equitable access plans, and which ideas – by virtue of not being cited with nearly as much frequency – are sidelined.

Here, I analyze a "policy network" (Knoke, 2011) working to support state education agency personnel in the development of states' equitable access plans. Policy networks have been defined by Kenis and Schneider (1991) as "a set of public and private corporate actors linked by communication ties for exchanging information, expertise, trust, and other political resources" (as cited in Knoke, 2011, p. 211).

Backgrounds of the Intermediary Organizations

In establishing this initiative and providing a guidance document to the states, the U.S. Department of Education elevated the status of two intermediary organizations tasked with supporting states to develop their equity plans: the Equitable Access Support Network and the Center on Great Teachers and Leaders.

The Equitable Access Support Network

The U.S. Department of Education committed $4.2 million dollars for the creation of the Equitable Access Support Network (EASN) to assist states with their development of the equity plans (U.S. Department of Education, 2014a). Applied Engineering Management Corporation (AEM Corporation) administered the EASN. The EASN's predecessor is the Reform Support Network. The Reform Support Network was administered by ICF International and created as an online collaborative forum to support winners of Race to the Top. Like the Reform Support Network, the EASN platform is set up in a similar fashion: there are resources for states along with online communities of practice around topic areas and webinars.

Before the EASN was up and running and just as state education agencies were beginning to turn their attention to developing the equitable access plans, the Reform Support Network partnered with the U.S. Department of Education to sponsor a meeting with select states. Thus, the EASN and the Reform Support Network were interlocking partners in the support they provided to state education agencies.

Both ICF International and AEM Corporation outsourced some of the work of producing support materials via contracts with third-party organizations, including negotiation of a third party contract with an organization called Education First (email communication with Education First Staff Member, April 13, 2017). Education First describes itself as a "for-profit professional services firm with a not-for-profit soul" and considers itself "nimble and responsive, while pursuing our broader agenda of equitable and effective public education for all" ("Education First," n.d.). Education First has received funding from the Bill and Melinda Gates Foundation and the U.S Department of Education. Education First also operated on a third party contract with the Reform Support Network to support states in preparing applications for Race to the Top and then again as a technical assistance provider to 19 Race to the Top winners. On its website, Education First lists a number of barriers to achievement, including low expectations and not enough accountability, limited capacity, inflexibility and an aversion to innovative ideas, a focus "on what feels right rather than what actually works" and policy decisions that benefit adults but not children ("Education First," n.d.).

With such insight from Education First as to its priorities, it becomes clear that the Equitable Access Support Network in concert with the Reform Support Network and Education First believes that barriers to achievement include low accountability, low capacity, low expectations, and inflexibility on the part of educational institutions to accept and support innovation. These beliefs are in lock step with education reform organizations such as The New

Teacher Project (TNTP) and the priorities incentivized through the Federal Government's Race to the Top Competition (U.S. Department of Education, 2009; Weisberg, Sexton, Mulhern, & Keeling, 2009).

The Center on Great Teachers and Leaders (GTL Center)

In unveiling the Excellent Educators for All Initiative, the GTL Center was named as an additional resource for state education agencies. The American Institutes for Research (AIR) received a contract to operate the GTL Center through a competitive process. Initially funded as a national comprehensive content center to support effective teachers and leaders, the GTL Center operates via a U.S Department of Education grant as one of seven content centers funded through the Office of School Support and Rural Programs. In the call for applicants as listed in the Federal Register, the Center on Great Teachers and Leaders was designed to provide technical assistance and identify, synthesize, and disseminate research-based practices and emerging promising practices to increase the capacity of SEAs to support their districts and schools in improving student outcomes by supporting effective instruction and leadership. Additionally, the GTL Center was required to provide technical assistance to regional centers and state education agencies in the following areas: developing the knowledge and skills of teachers and leaders; strategies to ensure the equitable distribution of effective teachers and to meet demand in high-need and rural areas; developing and implementing teacher and leader human capital management systems, including educator evaluation and effectiveness systems; using human capital strategies to build teacher and leader capacity around productive school environments; and using data from human capital management systems and state longitudinal databases to guide professional development and improve instruction (Department of Education: Final Priorities, Requirements, and Selection Criteria - Comprehensive Centers Program, 2012).

The GTL Center was seen as an outgrowth of its predecessor, the National Comprehensive Center for Teacher Quality (TQ Center), with staff from TQ Center operating within the GTL Center and continuing their earlier TQ Center work on teacher quality (GTL Center Staff A, personal communication, December 21, 2016). Another reason for awarding funding to the American Institutes for Research (AIR) to support the Excellent Educators for All initiative was a commitment by AIR to support state education agencies in their development of a comprehensive human capital management approach to teacher and principal quality (GTL Center Staff B, personal communication, December 31, 2016).

In 2012, the American Institutes for Research (AIR) was awarded funding to administer the GTL Center in partnership with the Chief Council of State School Officers (CCSSO) and Public Impact. The American Institutes for Research brands itself as an independent, objective, and non-partisan research and evaluation nonprofit. The research branch of AIR conducts behavioral and social science research and evaluation. Some of its goals are to produce improvements in education, health, and the workforce, to inform public understanding and policymaking by the best evidence, and to design and advance statistical and research methods ("American Institutes for Research," n.d.).

The Chief Council of State School Officers (CCSSO) brands itself as a nonpartisan, nonprofit organization of state school officers committed to ensuring that all students graduate prepared for college, careers, and life. Some of CCSSO's named business and industry partners include the American Institutes for Research, the Educational Testing service (ETS), Pearson Education, McGraw-Hill Education, Batelle for Kids, Smarter Balance, and Teachers of Tomorrow. Important to note here is that CCSSO was an outspoken advocate for the adoption and implementation of the Common Core State Standards while Smarter Balance developed one of the two main assessments adopted by states to measure student learning around the common core. The American Institutes for Research developed the delivery platform for the Smarter Balance Assessment. Thus, these for-profit and nonprofit organizations are not strange bedfellows.

The third partner of the GTL Center is another apparently nonpartisan organization called Public Impact. Public Impact is run by a husband and wife team out of North Carolina and provides research assistance, policy and planning advice, and implementation support for topics related to school funding, school turnaround, charter schools, technology in schools, and teachers and principals.[6] Public Impact has long been a partner of the American Institutes for Research, and also with AIR's predecessor, Learning Point Associates (email communication with Public Impact Staff Member, December 15, 2017). Public Impact was approached to partner with AIR on the GTL Center in particular because of the work the organization had done related to teacher leadership and innovative staffing models (Public Impact Staff Member, 2017). One particular policy idea developed by Public Impact and advocated for within the policy community is a concept termed "Opportunity Culture" wherein the main operating belief is that student learning can be improved within existing budgets through an increased reliance on paraprofessionals, larger class sizes, and technology (for a cogent critique of "Opportunity Culture," see Hinchey, 2013).

Together, these three partners hold beliefs and reform priorities that align with federal U.S. Department of Education investments in evidence-based and innovative educational practices, longitudinal data systems, effectiveness measures based on growth data through standardized tests, and education reforms that view human resources and personnel modifications to teaching and leading as key levers through which to advance education reform. Figure 1 provides an organizational chart of these intermediary organizations.

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[6] http://publicimpact.com/

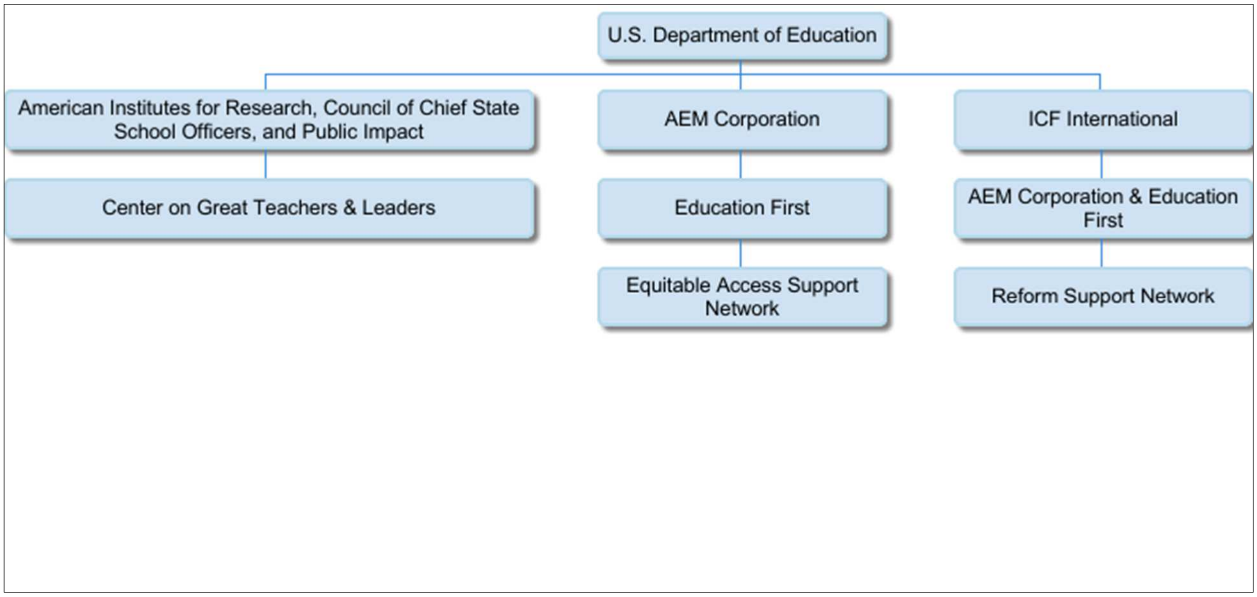
U.S. Department of Education
American Institutes for Research, Council of Chief State School Officers, and Public Impact
AEM Corporation
ICF International
Center on Great Teachers & Leaders
Education First
AEM Corporation & Education First
Equitable Access Support Network
Reform Support Network

Figure 1. Organizational Chart of the Federally Funded Intermediary Organizations and Partners operating the GTL Center, EASN, and RSN.

Data Collection and Procedures

As federally funded intermediary organizations, the GTL Center and the Equitable Access Support Network were responsible for supporting state education agencies to develop their equitable access plans. These two organizations constitute the bulk of support network from which data was collected.

Data was collected from four places within the policy network: 1) resources on the EASN (n=118); 2) resources made available on the GTL Center's website and cited in presentations during a convening for state education agencies around state equity plan development hosted by the GTL Center (n= 103); 3) references cited within the U.S. Department of Education's significant guidance document herein shortened to the US DOE FAQ (n=16), and 4) state plans with citations (state n=30, citations = 312).

For each citation, I noted the author(s), title of the resource or article title, year of publication, where the resource was originally published, and the first author's affiliation(s), the knowledge sponsor, and the knowledge funder, if known. Because the process of ascertaining citations within the network was different for the EASN, the GTL Center, US DOE FAQ, and State Equitable Access Plans, a brief discussion of the data collection process for each domain listed above is warranted.

The Equitable Access Support Network

To investigate the broader knowledge base that grounds the resources on the EASN, I compiled the resources available on the Equitable Access Support Network by using the EASN's Public Domain Clearinghouse for documents.[7] The EASN's Public Domain Clearinghouse contained documents from 2003-2016. Since I was only interested in the materials used by state education agencies to develop their plans, I included documents published between 2003 and 2015. I then completed two stages of data collection. First, I collected data on all of the resources cited in the EASN's Public Domain Clearinghouse for documents. For each of these resources, I noted the resource's author(s), affiliation, publication type, and funding source where available. Doing so gave me a sense of the nature of the support materials provided to states. Then, I sorted the documents by most recommended resources, narrowing my focus to the top ten most recommended resources. To understand the knowledge base operating within the most recommended resources, I collected citation data from within these resources. This citation data included the author(s) of the citation, affiliation, publication type, and funding source where available.

Center on Great Teachers and Leaders (GTL Center)

Like the EASN, the GTL Center used a website to provide support materials to SEAs. To make sure I selected information directly relevant to the development of states' equitable access plans, I selected the GTL Center's Equitable Access Toolkit and presentation materials from a GTL Center convening in San Diego, CA in February 2015 from which to compile bibliographic information. This convening was the first formal convening that launched states' equity work and nearly all of the SEAs participated (Erica, 2016). Documentation of these sources is provided in Appendix 3. As with all of the other domains, I then noted the resource's author(s), author affiliation, publication type, and funding source where available.

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[7] https://easn.grads360.org/#p=19

U.S. Department of Education Significant Guidance Document (US DOE FAQ)

I compiled a similar bibliographic index of citations provided in the *Significant Guidance Document: State Plans to Ensure Equitable Access to Excellent Education: Frequently Asked Questions* (US DOE FAQ) developed by the U.S. Department of Education. In this instance, the data collection procedures for the US DOE FAQ were different than the data collection procedures for the EASN because the US DOE FAQ was one self-contained document rather than an online repository for resources. Hence, data collection was limited to those cited resources in the bibliography and footnotes of the US DOE FAQ. Additionally, some cited resources contained within the US DOE FAQ were outside of the purview of this analysis and thus excluded (e.g. references to data collection websites and legal statutes). I noted the resource's author(s), affiliation, publication type, and funding source (when available).

State Plans for Ensuring Equitable Access to Excellent Educators

The analysis of state citations began with the thirty states that provided in-text citations or a reference list in their plans. As I was concerned with the research base from which state education agency personnel developed strategies to resolve the inequitable distribution of excellent educators, I further excluded any equitable access plan that cited only the GTL

Center's policy tools, state laws, statutes, or regulations, or the US DOE FAQ with no reference to underlying academic research or advocacy briefs. Based on the above parameters, while thirty states' equitable access plans included citations, twenty-three state plans were ultimately included in this analysis (n=23).[8] As with all of the other domains, I then noted the cited resource's author(s), author affiliation, publication type, and funding source where available.

Once citation data was collected and compiled, I first analyzed the citation data within each domain, noting which types of data, authors, and affiliations were cited more than others. Then, to map the relationship between state citations and the US DOE FAQ, the EASN, and the GTL Center, I noted duplicate citations across the domains (e.g. EASN, GTL Center, US DOE FAQ, and State EA Plans). Noting duplicate citations across the domains was not enough, however.

Small (1978) advanced the idea that repeatedly cited articles serve as convenient shorthand for larger concepts and ideas. Thus, the reference by the GTL Center, US DOE FAQ, or the EASN of one article within an author's body of work provided credibility to the entire body of work by the same author. For instance, just because the GTL Center may have cited one specific article and five of the states did so in their plans as well, any additional citations within the State Equitable Access Plans to that same author – even when not included in the GTL Center's citations – may have been influenced by the GTL Center's initial reference. To collect this third set of data and to understand the influence of the policy network citations upon states' Equitable Access Plans, I noted where authors, regardless of article title and author status (i.e.

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[8] State equitable access plans included in this analysis included AZ, CA, CT, D.C., DE, FL, GA, IA, MA, MD, MI, MN, MO, MS, NM, NY, OH, OK, RI, TN, VA, WA, and WV.

first author, second author) were cited in the equitable access plans and by one or more of the support providers (i.e. EASN, GTL Center, US DOE FAQ).

Findings

Resources Available to SEAs on the Equitable Access Support Network

There are 118 resources published between 2003 and 2015 on the EASN. The majority (55%) of these citations came from eight organizations.[9] Of these eight organizations, the EASN and the GTL Center contributed the most resources. Federally funded Regional Educational Laboratories contributed twelve resources. The Reform Support Network contributed eight resources. The State Longitudinal Data System (SLDS) authored five resources. The Institute of Education Sciences (IES), the U.S. Department of Education, and The New Teacher Project (TNTP) all contributed four resources. Table 1 provides an overview of these organizations.

Table 1

Overview of Organizations Contributing Resources to the Equitable Access Support Network

Knowledge Sponsor	Type of Knowledge Sponsor	No. of Sources on EASN	Parent Organization	Knowledge Funder
EASN	Government-funded IO	16	AEM Corp.	U.S. DOE
GTL Center	Government-funded IO	16	AIR	U.S. DOE
RELs	Government-funded IO	12	Multiple	U.S. DOE
RSN	Government-funded IO	8	ICF International	U.S. DOE
SLDS Grant Program	Government-funded IO	5	AEM Corp.	NCES, Institute of Education Sciences, U.S. DOE
TNTP	Revenue generating nonprofit IO	4	TNTP	Bill & Melinda Gates, Walton Foundation, NSVF
U.S. DOE	Government	4	U.S. DOE	U.S. DOE

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[9] The eight sponsoring organizations included the EASN, the GTL Center, the Reform Support Organization, the Regional Education Laboratories, the State Longitudinal Data System (SLDS), the Institute of Education Sciences (IES), the U.S. DOE, and The New Teacher Project (TNTP).

The prominence of resources cited on the EASN sourced from the GTL Center and the EASN is not surprising because the GTL Center and the EASN were the two knowledge sponsors that received contracts with the U.S. DOE to support states' development of teacher equity plans. Consequently, government-sponsored IOs used each other's resources more frequently than outside resources.

While outside resources may have been able to offer different, varied perspectives, the decision to disseminate to states resources sourced from primarily government-funded IOs suggests that this policy network was operating rather parochially in that government-funded intermediary organizations dominated policy learning across the Equitable Access Support Network. Similarly, the EASN relied heavily upon resources brokered by organizations affiliated with the AEM Corporation and the American Institutes for Research (AIR). In fact, nearly 40% of the resources on the EASN network are the result of knowledge brokered by AEM Corporation affiliates or AIR affiliates.

The results of this first analysis are not too surprising. After all, the GTL Center (with AIR as its administrative affiliate) and the EASN (with AEM Corporation) were tasked with supporting state education agencies in developing their Equitable Access Plans. It follows then that the GTL Center and the EASN would be more inclined to broker their proprietary materials or the materials of their partner organizations. These materials are familiar and at hand and probably require less duplication and copyright permissions than other proprietary information. I turn now to the knowledge base within the EASN's top ten most recommended resources.

The knowledge base within the EASN's top ten most recommended resources

Within the Equitable Access Support Network, the impact of particular knowledge sponsors on the knowledge base informing the EASN is evident. Table 2 lists those publications cited more than once within the bibliographies or footnotes of the top ten recommended resources on the EASN's website. A complete list of the bibliographic information included in these ten resources is provided in Appendix 1.

Table 2

Bibliographic information of those resources listed multiple times within the top 10 most recommended resources on the EASN

Author	**Title**	**Date**	**Affiliated Organization**	**Type**	**Citation Frequency**
The New Teacher Project	*The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools*	2012	TNTP	Advocacy Report	13
Goldhaber, Gross, & Player	*Teacher Career Paths, Teacher Quality, and Persistence in the Classroom: Are Public Schools Keeping their Best?*	2009	CALDER	Working paper	6
Sass, Hannaway, Xu, Figlio, & Feng	*Value Added of Teachers in High-Poverty and Lower-Poverty Schools*	2010	CALDER	Working paper	4
Rivkin et al.	*Teachers, Schools, and Academic Achievement*	2005	Econometrica	Peer-Reviewed	3
Center for Education Policy Research	*Strategic Data Project Human Capital Diagnostic: Los Angeles*	2012	CEPR	Report	3
Aaronson, Barrow, & Sander	*Teachers and Student Achievement in the Chicago Public Schools*	2007	Journal of Labor Economics	Peer-Reviewed Article	2
Feng & Sass	*Teacher Quality and Teacher Mobility*	2011	Urban Institute	Working Paper	2
Goldhaber & Brewer	*Evaluating the Effect of Teacher Degree Level on Educational Performance*	1996	Westat, Inc.	Working Paper	2
Kane, Rockoff, & Staiger	*What does certification tell us about teacher effectiveness? Evidence from New York City*	2006	NBER	Working Paper	2

Table 2

Bibliographic information of those resources listed multiple times within the top 10 most recommended resources on the EASN

Author	**Title**	**Date**	**Affiliated Organization**	**Type**	**Citation Frequency**
Rockoff	*The Impact of Individual Teachers on Student Achievement: Evidence from Panel Data*	2004	American Economic Review	Peer-Reviewed Article	2
The New Teacher Project	*Keeping Irreplaceables in DC Public Schools: Lessons in Smart Retention*	2012	TNTP	Advocacy Report	2

Forty-one of the ninety-four citations (44%) within the top ten most recommended resources come from the authors and institutions in Table 3 above. Policy ideas common to many of the resources focus on teacher recruitment and retention strategies with specific focal areas on preparing, recruiting, and retaining principals and teachers.

A GTL Center staff member, with whom I spoke, and whom I will call Erica mentioned that while the EASN staff were knowledgeable and had good intentions, they did not necessarily have the knowledge about equitable distribution and teacher quality to sufficiently vet documents prior to placing them on the support network site. As a result, many of the documents were simply documents that represented the "policy du jour" rather than documents that may have been evidence-based and vetted in research.

Additionally, The New Teacher Project (TNTP) has by far the most frequently cited resources on the Equitable Access Support Network. The Bill and Melinda Gates Foundation has been a generous benefactor of TNTP having donated nearly thirty million dollars to the organization between 2009 and 2015.[10] The New Teacher Project also received $5,300,244 (with anticipated funding of close to $15,000,000 over three years) in federal grant funding under the Supporting Effective Educator Development (SEED) program (U.S. Department of Education, 2015). TNTP's reports such as *The Irreplaceables, The Widget Effect, Shortchanged, Keeping Irreplaceables,* and *Unintended Consequences* are all cited within the EASN (J Levin, Mulhern, & Schunck, 2005; The New Teacher Project, 2012a, 2012b, 2014; Weisberg, Sexton, Mulhern, & Keeling, 2009). The reports are focused on using teacher effectiveness scores as measured through teachers' value-added to enable what is termed "smart retention," retaining only those teachers who have demonstrated high performance as measured by student achievement. For instance, the central argument within the policy advocacy report *The Irreplaceables* claims that not all teacher retention is good; rather, principals and district administrators ought to implement "smart retention" wherein they incentivize high-performing teachers to stay and low-performing teachers to leave (The New Teacher Project, 2012b). Like a number of education reform organizations, the policy advocacy report recommends strong evaluation systems and transparency around effectiveness. It also recommends eliminating current policies such as "last in, first out" or LIFO and step salary schedules and replacing them with policies that use performance pay to reward the high-performers. Notably, The New Teacher Project along with Teach for America are two of the most prominent organizations galvanizing the movement to reform approaches to talent management in education (Odden, 2011).

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[10] Donations to TNTP from the Bill and Melinda Gates Foundation between 2010 and 2015 totaled $29,571,414 dollars (https://www.gatesfoundation.org).

Second, of the working papers and publications in peer-reviewed journals, two knowledge sponsors are prominent: The National Center for the Analysis of Longitudinal Data in Education Research (CALDER) and the National Bureau of Economic Research (NBER). Both of these organizations rely on large, longitudinal data sets for their research, and their affiliated researchers typically employ quantitative research methods. NBER exclusively investigates education policy questions through economic analyses.

Center on Great Teachers and Leaders (GTL Center)

The GTL Center had the widest selection of resources within the support network. Of the 68 citations mentioned within the convening presentations or the Equitable Access Toolkit materials, 18 were advocacy reports, 17 were peer-reviewed, and 10 were working papers. Other resource types in the GTL Center's knowledge base included conference presentations, policy reports, survey data, MET project reports, policy briefs, evaluation reports, state documents, research briefs, evaluation briefs, research reports, IES reports, and books.[11] However, the bulk of the citations were comprised of advocacy reports, peer-reviewed articles, and working papers. The GTL Center also included resources authored by researchers such as Harvard's Susan Moore Johnson and Penn's Richard Ingersoll who employ organizational theory rather than purely economic perspectives in analyzing issues of equitable distribution and teacher quality.

U.S. Department of Education Significant Guidance Document (US DOE FAQ)

The US DOE FAQ contains sixteen bibliographic references. Of the sixteen references, twelve (75%) are working papers or policy reports. The other four (25%) of the references are reports on equity data and support materials for states to develop the equity plans. Similar to the EASN, with the twelve other resources, more than half were affiliated with CALDER or NBER. While some of the working papers have since been published in revised form in peer-reviewed journals, the US DOE FAQ cited only four articles from peer-refereed publications. Of those, three of the four were published in economic or management journals, and only one was published in an education journal. Of course, there are education journals such as *Educational*

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[11] Funded by the Bill & Melinda Gates Foundation, the Measures of Effective Teaching Project, or MET Project, was a three-year project that examined how teacher evaluation methods, including classroom observations, could be used to inform teachers about the skills that make them effective and to help districts identify great teaching.

Researcher and others that publish econometric studies. However, the decision by the U.S. Department of Education to source the majority of peer-reviewed articles for its Frequently Asked Questions document from economic or management journals implies that the U.S. DOE views the problems and solutions to the inequitable distribution of teacher quality through a lens of economic competitiveness and new managerialism. Consequently, the prevailing policy ideas in the EASN are also evidenced in the bibliographic record of the US DOE FAQ. Appendix 2 provides the bibliographic citations for this document.

The research base cited within States' Equitable Access Plans

The total number of citations inclusive of duplicate citations within States' Equitable Access Plans is 312. A little over a third of these 312 citations (34%) are cited in more than one state's Equitable Access Plan. When repeat authors including duplicate citations are considered, the same twenty-four authors or organizations are responsible for producing 75% of the 312 citations with States' Equitable Access Plans. Notably, twelve of these twenty-four authors or organizations are affiliated with the National Center for the Analysis of Longitudinal Data in Education Research, or CALDER.

CALDER affiliates overwhelmingly direct the field of research cited in the plans, with 44% of the research cited within the plans produced from CALDER researchers and its affiliates. Additionally, authors affiliated with the National Bureau of Economic Research (NBER), produced another seven percent of the research cited within the plans. More to the point, NBER and CALDER researchers and affiliates produced 51% of the research cited within the plans.

The Policy Network: degree of overlap between states' plans and the federally funded IOs

Of the 312 citations in States' Equitable Access Plans, eighty-one (26%) are cited either by the GTL Center, the EASN, the U.S. DOE FAQ document or some combination thereof.

Thus, one quarter of the citations within States' Equitable Access Plan are directly networked to these providers.

Twenty-six per cent is likely an underrepresentation of the influence of the resources provided by the support providers on the citations in states' equitable access plans. Small (1978) advanced the idea that repeatedly cited articles serve as convenient shorthand for larger concepts and ideas. Using this logic, the reference by the GTL Center, US DOE FAQ, or the EASN of one article within an author's body of work provided credibility to the entire body of work by the same author. For instance, just because the GTL Center may have cited one specific article and five of the states did so in their plans as well, any additional citations within the State Equitable Access Plans of that same author – even when not included in the GTL Center's citations – may have been influenced by the GTL Center's initial reference.

When considered in this way, of those citations in state plans networked to authors cited by the support organizations, CALDER affiliates produced 40% of the networked citations, while NBER and CALDER together produced 52% of the networked citations. Thus, knowledge producers affiliated with only two knowledge sponsors (NBER and CALDER) generated more than half of the empirical research base behind the development of States' Equitable Access Plans.

Policy ideas elevated through resources promoted by the federally funded IOs

In the policy network, oft-cited articles may constitute the network's values. That is, oft-cited articles validate certain policy ideas at the expense of others. Table 3 provides an overview of the resources promoted by more than one of the support network providers.

Table 3

Resources cited by more than one support provider

Author(s)	Year	Title	Publication	Publication Type

Table 3

Resources cited by more than one support provider

Author(s)	Year	Title	Publication	Publication Type
Aaronson et al.	2007	*Teachers and Student Achievement in the Chicago Public High Schools*	Journal of Labor Economics	Peer-Reviewed
Center for Education Policy Research	2012	*Strategic Data Project Human Capital Diagnostic: Los Angeles Unified School District*	CEPR	Report
Friedman et al.	2011	*The Long-Term Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood*	NBER	Working Paper
Clotfelter et al.	2007	*High-Poverty Schools and the Distribution of Teachers and Principals*	CALDER	Working Paper
DeMonte & Hanna	2014	*Looking at the Best Teachers and Who They Teach: Poor Students and Students of Color are Less Likely to Get Highly Effective Teaching*	Center for American Progress	Advocacy Report
Glazerman & Max	2014	*Do Disadvantaged Students Get Less Effective Teaching?*	U.S. DOE, IES	
Kane, Rockoff, & Staiger	2006	*What does certification tell us about teacher effectiveness? Evidence from New York City*	NBER	Working Paper
MetLife Foundation	2013	*The MetLife Survey of The American Teacher*	MetLife	Survey
Rivkin et al.	2005	*Teachers, Schools, and Academic Achievement*	Econometrica	Peer-Reviewed Article
Sass, Hannaway, Xu, Figlio, & Feng	2010	*Value Added of Teachers in High-Poverty and Lower-Poverty Schools*	CALDER	Working Paper
StudentsFirstNY	2013	*Unsatisfactory: The Distribution of Teacher Quality in New York City*	StudentsFirstNY	Advocacy Report
The New Teacher Project	2012	*The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools*	TNTP	Advocacy Report

Table 3

Resources cited by more than one support provider

Author(s)	Year	Title	Publication	Publication Type
Xu, Özek, & Corritore	2012	*Portability of Teacher Effectiveness Across School Settings*	CALDER	Working Paper

In the bulk of these resources, teachers' value-added measures constitute effectiveness or "good teaching" despite substantial critiques of using value-added measures for educator evaluation (see American Educational Research Association, 2015; American Statistical Association, 2014; Darling-Hammond, Amrein-Beardsley, Haertel, & Rothstein, 2011). To build a case for the validity of value-added measures and to dismantle traditional methods of measuring teacher effectiveness, three of these resources serve as foundational articles for disregarding observed teacher characteristics, such as education, certification, and experience. In *What does certification tell us about teacher effectiveness? Evidence from New York City,* Kane, Rockoff, and Staiger (2014) argue that the emphasis on certification status by policymakers, states and districts is misplaced: there is little difference in the academic achievement impacts of teachers by certification status (i.e. certified, uncertified, and alternatively certified). The authors believe that attention to teacher selection is important and write, "policies that enable districts to attract and retain high-quality teachers (or screen-out less effective teachers) have potentially large benefits for student achievement" (Kane, Rockoff, & Staiger, 2014, p. 43). They argue that because neither certification status nor teacher attributes appear to have predictive power as to a teacher's effectiveness, districts should use performance on the job rather than initial certification status to improve average teacher effectiveness. One tool to measure teacher effectiveness, despite their "limited scope and potential malleability" is valued-added measures

(Kane, et. al., 2014, p. 44). The authors believe that value-added measures are objective, and the data to construct them is already collected by most school districts.

In the second article titled *Teachers, Schools, and Academic Achievement* Rivkin, Hanushek, and Kain (2005) refute the Coleman Report's claim that school or teachers do not matter for academic achievement. The authors also argue that observed teacher characteristics, such as education level, certification, or experience, do little to indicate teaching quality and instead use valued-added student growth models to illustrate teacher effects on student growth. For Chetty, Friedman, and Rockoff (2012), good teachers, as measured by teachers' value-added are shown to create substantial economic value.

Within these three articles, policy recommendations include improving personnel policies with a closer link between rewards and performance and accountability systems for school administrators that focus on student outcomes rather than teacher inputs. The articles assert that rigorous certification requirements or education levels are not the proper policy prescription; rather, stricter attention to personnel policies (hiring, firing, development, and promotion) should be the focus. Such policies should also strive to increase the quality of teaching through the use of value-added, changes to salary structure, or teacher training.

Once observed characteristics (i.e. experience, education level, certification) were disregarded as effective measures of teacher quality, value-added measures became the gold standard for measuring teacher quality in these resources. Personnel policies that tie recruitment, assignment, and retention increasingly to teachers' value-added scores prevail. For instance, Aaronson, Barrow, and Sanders (2007) advocate attaching teacher pay more directly to teacher performance instead of to observed characteristics like experience or degree level. Altering the way teacher and principal labor markets work is another policy idea advocated in *High-Poverty*

*Schools and the Distribution of Teachers and Principals (*Clotfelter, Ladd, Vigdor, and Wheeler, 2006). Recommendations include instituting policies that will increase the overall supply of quality teachers in the state by making it more attractive for teachers to teach in high poverty schools.

Within the support network, strict attention to personnel policies surfaces again. Policy recommendations include implementing "smart retention" wherein principals and district administrators incentivize high-performing teachers to stay and low-performing teachers to leave (The New Teacher Project, 2012; Sass, Hannaway, Xu, Figlio, & Feng, 2012). Like a number of education reform organizations, *The Irreplaceables* advocacy report recommends strong evaluation systems and transparency around effectiveness along with revision to current policies such as "last in, first out" and step salary schedules in replace of retaining the highest-performing and paying them the most money to remain in teaching (The New Teacher Project, 2012b). Similarly, authors of the advocacy report *Unsatisfactory: The Distribution of Teacher Quality in New York City* recommend instituting merit pay, eliminating barriers to entry for college graduates, expanding school choice, public reporting, revising collective bargaining agreements and tenure policies such as "last in, first out," and implementing more stringent educator evaluation and performance accountability systems (StudentsFirstNY, 2013). StudentsFirstNY[12] claims these are *the* preferred mechanisms through which to rectify the inequitable distribution of teachers. The policy ideas within these resources focus on talent management. The assumption inherent within them is that a tighter adherence to human capital management based on data and measures of teacher effectiveness will raise teacher quality. This operating belief is also central to the research priorities within the National Center for the Analysis of Longitudinal Data in Education Research (CALDER).

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[12] StudentsFirstNY is a branch of StudentsFirst, which was founded by Former Chancellor of D.C. Public Schools Michelle Rhee Johnson in 2010. Michelle Rhee Johnson, Joel Klein – former Chancellor of the New York City Department of Education, and Eva Moskowitz – founder and CEO of Success Academy Charter Schools all serve on the Board of Directors of StudentsFirstNY. StudentsFirstNY advocates teacher evaluation reform and for new approaches to managing educator talent: http://www.studentsfirstny.org/priorities.

CALDER is one of the National Research and Development Centers funded through a $10,000,000 grant from the Institute of Education Sciences (IES). The American Institutes for Research – notable in that it also administers the GTL Center – currently administers the grant to CALDER. CALDER has focused its research priorities on the relationship between state and district education personnel policies and student outcomes. Conceptually, the six research priority topics identified for the five-year award are yoked by their focus on investigations that study state and district policies around human resource management and human capital. These research priority topics include investigations of how personnel policies around preparation, recruitment, induction, incentives, and supports contribute to teacher and student outcomes; the extent to which value-added estimates are correlated with additional measures of teacher performance like classroom observations and student outcomes; the influence of financial and non-financial factors on the distribution and mobility patterns of high-quality teachers and principals; the effect of policies on teacher retirement and layoffs to teacher quality; the effects of moving effective teachers in and out of schools as school turnaround and improvement strategies; and the policies and practices that affect students' college readiness ("IES Funded Research Grants and Contracts," n.d.).

The overreliance upon knowledge sponsored by CALDER, which in turn is supported by the American Institutes for Research and the U.S. Department of Education sheds light on the nature of this knowledge regime. It indicates that the knowledge "valued" within the policy network explores teacher quality and inequitable distribution from a particular lens. This lens defines student learning as achievement on standardized achievement tests. It also indicates that the knowledge valued within the policy network is one that views individuals (teachers) – rather than the systems, structures, organizations and social conditions that generate societal inequity – as the locus of education reform policies.

Other research approaches explore issues of equity and equitable distribution from a more ecological perspective. Yet, most of this research was left out of the research base elevated by the U.S. DOE, the EASN, and the GTL Center. Rather than focus on teachers as the sole factor impacting student achievement, ecological research explores the underlying ecology and organizational constructs of inequitable distribution. This includes examining issues related to the teaching and learning environment, including a teacher's level of autonomy, compensation, access to professional development, and classroom resources (Carver-Thomas & Darling-Hammond, 2017; Ingersoll, 2001; Simon & Moore Johnson, 2015).

Conclusion

State Education Agency personnel who worked to create states' equitable access plans may have cited those sources promoted and recommended by the EASN, GTL Center and U.S. DOE in an effort to appeal to federal education reform priorities. At the same time, however, the root causes and policy strategies advanced within many of these plans approach resolving the inequitable distribution of excellent teachers with an eye on personnel policies, teacher effectiveness measures, and the distribution and mobility patterns of teachers, including retiring teachers.

It is notable then, that while the citations may have been tacked on at the end of the plan to legitimate policy strategies and/or via a pattern of "bricolage," picking those citations most frequently mentioned by support providers (e.g. the GTL Center, the EASN, etc…) or cited in the U.S. DOE FAQ document provides one indication of how SEAs conceptualized the policy options they believed would lead to the U.S. Department of Education's approval of the state's equitable access plan.

In a state like New York that appeared to rely heavily upon citations from the support providers, all of the state's strategies to resolve the inequitable distribution of teachers are focused on talent management. In contrast, California did not appear to rely heavily on the citations provided via the policy support network. Only one citation is common to California's equitable access plan and the GTL Center: Johnson, Kraft, and Papay (2012). The Johnson, Kraft and Papay (2012) article frames the problem of inequitable access less as a talent management problem than as an organizational and structural problem related to the conditions in which teachers work.

This idea: that the conditions in which teachers work is not a problem of talent management but rather an organizational and structural problem is reflected in California's strategies. For instance, California advances strategies around increasing teacher and leader induction and professional learning, equitably funding CA's public schools, and engaging collaboratively with parents and communities as a means for improving conditions of schooling and working conditions for teachers (California Department of Education, 2015).

While it is possible that the strategies in each state's plan evolved organically through authentic stakeholder engagement, there is a case to be made through this analysis that for those states who cited the resources promoted through the policy network, the policy ideas inherent within those resources limited the array of viable policy options states elected to pursue. In contrast, while California may have sought guidance and support from the federally-funded intermediary organizations – indeed it is clear that California Department of Education staff relied on the GTL Center to facilitate a stakeholder engagement session – the fact that California did not rely to any extent on the research promoted by the IOs is telling: California's strategies reveal a propensity of California Department of Education staff to engage in more autonomous analysis of the research independent of the dissemination of research by the federally-funded intermediary organizations (California Department of Education, 2015). A later article, (Hollar 2017c, chapter 5) takes up SEA personnel's experiences in working with these federally funded IOs.

Furthermore, since U.S. DOE publicly endorsed two support providers for states around equity plan work, these support providers are powerfully positioned to sway SEA personnel's understandings not only of what is needed for the plan to be approved but also to dictate the knowledge and ideas deemed "most valuable" to thinking about the issues of inequitable access. Without directly telling the states how to think about developing their equitable access plans, by strategically funding intermediary organizations whose policy ideas accorded with those of the U.S. DOE, the U.S. Department of Education may have indirectly influenced how states came to think about inequitable distribution.

This has implications for the policymaking process, for the intermediary organizations tasked with brokering knowledge for policymaking, and for state education policymakers required to respond to federal education initiatives. However, the U.S. Department of Education encouraged states to develop strategies that would work for their unique state contexts with input from stakeholders; in fact, the U.S. DOE required states to document how they were planning to engage stakeholders around development of the equitable access plan. But, on the other hand, the U.S. DOE sponsored intermediary organizations tasked with state support in large part through knowledge mobilization. Thus, without prescribing the strategies states should elect to pursue, the overreliance on particular types of knowledge sources within the policy network and translated through the network may have effectively limited certain states' policy options.

That being said, for some states, such as California, strong internal capacity or partnerships with other organizations beyond the Equitable Access Support Network and the GTL Center may have broadened understanding of the issues surrounding equitable distribution. There were other states that, like California, did not cite many of the resources promoted by the federally funded intermediary organizations. For instance, Iowa's equitable access plan also cites a number of resources neither recommended nor promoted by the federally funded intermediary organizations. Despite the failure of citing "recommended" resources within the equitable access plans (citations of a research base were not a requirement within the plans) both California and Iowa's plans were approved by the U.S. Department of Education. Thus, while failure to cite the resources recommended by the federally funded intermediary organizations did not result in a corresponding failure to have a state plan approved by the U.S. Department of Education, free technical assistance and support from the federal funded intermediary organizations encouraged the inclusion of particular resources into the plans for those states who availed themselves of the support.

This research has implications for future research on knowledge utilization in educational policymaking, particularly in the context of state and federal power. The ways in which federally funded intermediary organizations advance policy ideas in line with federal policy ideas reinforces the importance of examining whose knowledge is shared and how, and ultimately, how this knowledge filters into state policy ideas around the inequitable distribution of excellent teachers. In such a way, federally sponsored IOs may enable the federal department of education, despite its relatively weak statutory role in education, to align state and federal policy agendas.

Future Research

While the bulk of the strategies advanced within the state plans focus on human capital management, in the aggregate knowing this does not help researchers understand how particular states in particular contexts consumed the knowledge provided to them through the government sponsored IOs. The next phase in this research project seeks to do so by asking in essence how states came to consume the knowledge made available to them within the knowledge dissemination industry. The next phase in this project also considers how the knowledge base was translated into policy tools by government-sponsored IOs. Following this, the final phase of this research examines how state education agency personnel experienced support providers during the development of the state equitable access plan.

Appendix 1: Equitable Access Support Network

Knowledge Producers	Knowledge	Knowledge Sponsor	Knowledge Type	Knowledge Funder
Aaronson, D., Barrow, L. and Sander, W.	*Teachers and Student Achievement in Chicago Public High Schools*	Federal Reserve Bank of Chicago; Journal of Labor Economics	Commissioned Paper	Federal Reserve Bank of Chicago
Ahmad, F., and Boser, U.	*America's Leaky Pipeline for Teachers of Color - Getting More Teachers of Colors into the Classroom*	Center for American Progress	Research Report	
American Youth Policy Forum	*Building an Effective Teacher Pipeline: A Special Briefing for Congressional Staff: List of Resources*	American Youth Policy Forum	Resource Brief	
Berry, B., Montgomery, D., Curtis, R., Hernandez, M., Wurtzel, J., and Snyder, J.	*Creating and Sustaining Urban Teacher Residencies: A New War to Recruit, Prepare, and Retain Effective Teachers in High-Needs Districts*	The Aspen Institute; Center for Teaching Quality	Research Report	Arthur Vining Davis Foundations, MetLife Foundation
Boyd, D., Lankford, H., Loeb, S., and Wyckoff, J.	*Understanding Teacher Labor Markets: Implications for Equity*	Center for Education Policy Analysis (CEPA); CALDER	Working Paper	Smith Richardson Foundation; the Office of Educational Research and Improvement; U.S. DOE; and NY State Education Department
Boyd, D., Grossman, P., Lankford, H., Loeb, S., and Wyckoff, J.	*Teacher Preparation and Student Achievement*	National Bureau of Economic Research (NBER)	Working Paper	Carnegie Corporation of NY; City University of NY; the National Science Foundation; the Spencer Foundation; CALDER
Carlsen, W. and Monk, D.	*Differences between rural and nonrural secondary science teachers: evidence from the longitudinal study of American youth*	Journal of Research in Rural Education	Peer-Reviewed Article	-

CCSSO	*Our Responsibility, Our Promise: Transforming Educator Preparation and Entry into the Profession*	CCSSO	Advocacy Report	-
Strategic Data Project	*Strategic data Project, Human capital diagnostic of Los Angeles Unified School district*	Strategic Data Project	Data Brief	Bill & Melinda Gates Foundation
Strategic Data Project	*Strategic Data Project, Human Capital Diagnostic, New York State Education Department*	Strategic Data Project	Data Brief	Bill & Melinda Gates Foundation
Chetty, R., Friedman, J., and Rockoff, J.	*The Long-Term Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood*	NBER; American Economic Review	Working Paper	Lab for Economic Applications and Policy at Harvard; National Science Foundation
Feng, L.	*Opportunity Wages, Classroom Characteristics, and Teacher Mobility*	Southern Economic Journal	Peer-Reviewed Article	-
Feng, L. and Sass, T.	*Teacher Quality and Teacher Mobility*	CALDER, the Urban Institute	Working Paper	Institute of Education Science, U.S. DOE; Urban Institute
Gibbs, R.	*The Challenge Ahead for Rural Schools*	Forum for Applied Research and Public Policy	-	-
Goldhaber, D. and Brewer, D.	*Evaluating the Effect of Teacher Degree Level on Educational Performance*	The CNA Corporation; RAND Corporation; Westat, Inc.	Evaluation Report	-
Goldhaber, D. et. al.	*Teacher Career Paths, teacher quality, and persistence in the classroom: Are public schools keeping their best?*	CALDER; The Urban Institute	Working Paper	CALDER; Carnegie Corporation; Ewing Marion Kauffman Foundation; anonymous foundation, IES, U.S. DOE
Greenberg, J., McKee, A., and Walsh, K.	*Teacher Prep Review: A review of the Nation's Teacher Preparation Programs*	National Council on Teacher Quality (NCTQ)	Advocacy Report	Multiple funders

Grissmer, D., Flanagan, A., Kawata, J., and Williamson, S.	*Improving Student Achievement: What State NAEP Test Scores Tell Us*	RAND Corporation	Research Report	ExxonMobil Foundation; Danforth Foundation; NAEP Secondary Analysis Program; Center for Research on Educational Excellence and Diversity
GTL Center	*Moving toward Equity: Root Causes Analysis Workbook*	GTL Center	Policy tool	U.S. DOE
GTL Center	*Moving toward Equity: Stakeholder Engagement Guide*	GTL Center	Policy tool	U..S. DOE
GTL Center	*Moving toward equity toolkit*	GTL Center	Policy tool	U.S. DOE
GTL Center	*Preparing Teachers for the Common Core: Aligning Preparation Program Curricula*	GTL Center	Policy tool	U.S. DOE
Hanushek, E.	*Teacher Quality*	Hoover Institution	Research Paper	-
Hanushek, E., Kain, J., and Rivkin, S.	*Why Public Schools Lose Teachers*	Journal of Human Resources	Research Paper	Packard Humanities Institute; Smith Richardson Foundation
IES	*Reading 2011: National Assessment of Educational Progress at Grades 4 and 8*	IES, US DOE	Evaluation Report	IES, US DOE
Ingersoll, R. and Smith, T.	*The wrong solution to the teacher shortage*	Educational Leadership; Association for Supervision and Curriculum Development (ASCD)	Media Report	-
IRIS Center	*Teacher Induction: Providing Comprehensive Training for new Special Educators*	IRIS Center; Peabody College Vanderbilt University	Issue Brief	U.S. DOE, Office of Special Programs (OSEP)

IRIS Center	*Teacher Retention: Reducing the Attrition of Special Educators*	IRIS Center; Peabody College Vanderbilt University	Issue Brief	U.S. DOE, Office of Special Programs (OSEP)
Kane, T., Rockoff, J., and Staiger, D.	*What does Certification tell us about teacher effectiveness? Evidence from New York City*	Economics of Education Review; NBER	Working Paper	-
Lemke, M., Thomsen, K., Wayne, A., Birman, B.	*Providing Effective Teachers for all students: examples from five districts*	U.S. DOE; AIR	Policy Paper	Office of Planning, Evaluation, and Policy Development; Policy and Program Studies Service
Beesley, A., Atwill, K., Blair, P., and Barley, Z.	*Strategies for Recruitment and Retention of Secondary Teachers in Central Region Rural Schools*	REL Central; Mid-Continent Research for Education and Learning (McREL);	Policy Paper	Institute of Education Sciences, U.S. DOE
Kane, T. and Staiger, D.	*Gathering Feedback for Teaching: Combining High-Quality Observations with Student Surveys and Achievement gains*	MET Project	Commissioned Project	Bill & Melinda Gates Foundation
Metlife	*The MetLife Survey of the American Teacher: Challenges for School Leadership*	Metlife	Survey Report	Metlife, Inc.
Najera, T.	*7 steps for a balanced recruitment and retention strategy*	Battelle for Kids; Education Week; GTL Center; CCSSO; Battelle for Kids	Advocacy Report	Ohio Business Roundtable
Personnel Improvement Center	*Examples from Four States Using New Technologies to Improve Recruitment and Retention of Qualified Special Education Personnel*	National Association of State Directors of Special Education, Inc.	Policy Paper	U.S. DOE (OSEP)

Personnel Improvement Center	*Guidelines for Building State Capacity to Recruit, Prepare, and Retain Qualified Special Education, Early Intervention, and Related Services Personnel*	National Association of State Directors of Special Education, Inc.	Policy Paper	U.S. DOE (OSEP)
Personnel Improvement Center	*Special Education Personnel Preparation Partnerships: program Features to Promote Recruitment and Retention*	National Association of State Directors of Special Education, Inc.	Policy Paper	U.S. DOE (OSEP)
Personnel Improvement Center	*Using Grow your own Programs to Promote Recruitment and Retention of Qualified Special Education Personnel: Three State Approaches*	National Association of State Directors of Special Education, Inc.	Policy Paper	U.S. DOE (OSEP)
Personnel Improvement Center	*Using New Social Media to Recruit and Retain Qualified Special Education Personnel*	National Association of State Directors of Special Education, Inc.	Policy Paper	U.S. DOE (OSEP)
National Comprehensive Center for Teacher Quality	*Recruiting Special Education Teachers*	Learning Point Associates; Education Commission of the States; ETS; Vanderbilt University; GTL Center	Policy paper	U.S. DOE
National Comprehensive Center for Teacher Quality	*Teacher Hiring, Placement, and Assignment Practices*	Learning Point Associates; Education Commission of the States; ETS; Vanderbilt University; GTL Center	Policy paper	U.S. DOE
National Comprehensive Center for Teacher Quality	*Recruiting Teachers for Urban and Rural Schools*	Learning Point Associates; Education Commission of the States; ETS; Vanderbilt University; GTL Center	Policy paper	U.S. DOE

National Education Association	*Strengthening and Diversifying the Teacher Recruitment Pipeline: current efforts*	NEA	Advocacy Report	-
Orfield, G., Kucsera, J., and Siegel-Hawley, G.	*E. Pluribus… separation: Deepening Double Segregation for More Students*	Civil Rights Project	Advocacy Report	Ford Foundation; Spencer Foundation
Public Impact	*Opportunity Culture*	Public Impact	Advocacy Report	Carnegie Corporation of New York, Joyce Foundation; Bill & Melinda Gates Foundation
Public Impact	*Expanding the Pipeline of Teachers and Principals in Urban Public Schools: Design Principles and Conditions for Success*	Public Impact	Advocacy Report	Cleveland Foundation; George Fund Foundation
Kowal, J. and Hassel, E.A.	*Importing Leaders for School Turnarounds: lessons and opportunities*	Public Impact; Center on School Turnaround; WestED	Advocacy Report	University of Virginia's Darden/Curry Partnership for Leaders in Education and its School Turnaround Specialist Program. T
Reform Support Network	*Promoting More equitable access to effective teachers: problems and root causes*	Reform Support Network; AEM Corporation	Policy Tool	U.S. DOE
Reform Support Network	*Educator Equity Strategic Options Report*	Reform Support Network; AEM Corporation	Policy Tool	U.S. DOE
Ripley, A	*The Smartest Kids in the World: And How they got that way*	-	Book	-
Rivken, S., Hanushek, E., and Kain, J.	*Teachers, Schools, and Academic Achievement*	Econometrica; NBER	Peer-reviewed journal	Donner Foundation; Smith Richardson Foundation; Spencer Foundation

Rockoff, J.,	*The Impact of Individual Teachers on Student Achievement: Evidence from Panel Data*	American Economic Review; NBER	Peer-reviewed journal	Inequality and Social Poicy Program Grant, Harvard's Kennedy School of Govenrment
Sass, T., Hannaway, J., Zeyu, X., Filio, D., and Feng, L.	*Value Added of Teachers in High-Poverty and Lower-Poverty Schools*	CALDER, the Urban Institute	Working Paper	IES, U.S. DOE
Shanker Institute	*How do we get experienced accomplished teachers into high-need schools?*	Shanker Institute	Advocacy Presentation	-
Strategic Data Project	*SDP Human Capital Diagnostic: New York State Education Department*	Strategic Data Project, Harvard University	Research brief	Bill & Melinda Gates Foundation
StudentsFirstNY	*Unsatisfactory: The distribution of teacher quality in New York City*	StudentsFirstNY	Advocacy Report	-
Travers, J. and Christiansen, B.	*Strategic Staffing for Successful Schools: Breaking the Cycle of Failure in Charlotte-Mecklenburg Schools*	The Aspen Institute	Research report	Carnegie Corporation of NY
TNTP	*Shortchanged: The Hidden Costs of Lockstep Teacher Pay*	TNTP	Advocacy Report	Bill & Melinda Gates, Walton Foundation, NSVF
TNTP	*The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools*	TNTP	Advocacy Report	Bill & Melinda Gates, Walton Foundation, NSVF
TNTP	*Unintended Consequences*	TNTP	Advocacy Report	Bill & Melinda Gates, Walton Foundation, NSVF
TNTP	*Keeping Irreplaceables in DC Public Schools: Lessons in Smart Teacher Retentioin*	TNTP	Advocacy Report	Bill & Melinda Gates, Walton Foundation, NSVF
Max, J., and Glazerman, S.	*Do Disadvantaged Students Get Less Effective Teaching?*	NCEE; Mathematica Policy research	Research Brief	IES , U.S. DOE

Glazerman, S., Protik, A., The, B., Gruch, J. and Max, J.	*Transfer Incentives for high-performing teachers: final results from a multisite randomized experiment*	NCEE Report; Mathematica Policy Research	Research Report	IES, U.S. DOE
Turnbull, B., Riley, D., Arcaira, E., Anderson, L., and McFarlane, J.	*Building a Stronger Principalship, Vol. 1: Six Districts Begin the Principal Pipeline Initiative*	Wallace Foundation; Policy Studies Associates, Inc.; RAND	Commissioned Report	Wallace Foundation
Turnbull, B., Riley, D., and MacFarlane, J.	*Building a Stronger Principalship, Vol. 2: cultivating talent through a principal pipeline*	Wallace Foundation; Policy Studies Associates, Inc.; RAND	Commissioned Report	Wallace Foundation
Turnbull, B., Riley, D., and MacFarlane, J.	*Building a Stronger Principalship, Vol. 3: districts Taking Charge of the Principal Pipeline*	Wallace Foundation; Policy Studies Associates, Inc.; RAND	Commissioned Report	Wallace Foundation
Mitgang, L.	*Beyond the Pipeline: Getting the Principals we need, where they are need most*	Wallace Foundation	Advocacy Report	Wallace Foundation
Mitgang, L.	*Districts Matter: Cultivating the Principals Urban Schools Need*	Wallace Foundation	Advocacy Report	Wallace Foundation
Xu, Z., Özek, U., & Corritore, M.	*Portability of Teacher Effectiveness Across Schools Settings*	CALDER; AIR	Working Paper	Bill & Melinda Gates Foundation; IES, U.S. DOE

Appendix 2: U.S. DOE Frequently Asked Questions Document

Knowledge Producer	Knowledge	Knowledge Sponsor	Knowledge Funder
DeMonte, J. and Hanna, R.	*Looking at the Best Teachers and Who They Teach: Poor Students and Students of Color are Less Likely to Get Highly Effective Teaching*	Center for American Progress	
Clotfelter, C., Ladd, H., Vigdor, J., and Wheeler, J.	*High-Poverty School and the Distribution of Teachers and Principals*	CALDER, The Urban Institute	U.S. DOE; Spencer Foundation
Boyd, D., Lankford, H., Loeb, S., Rockoff, J., and Wyckoff, J.	*The Narrowing Gap in New York City teacher qualifications and its implications for student achievement in high-poverty schools.*	Journal of Policy Analysis and Management; NBER	
Henry, G., Bastian, K., and Fortner, K.	*Stayers and Leavers: Early-Career Teacher Effectiveness and Attrition*	Educational Researcher	Teacher Quality Research Initiative UNC General Administration
Clotfelter, C., Ladd, H. and Vigdor, J.	*Teacher credentials and student achievement: Longitudinal analysis with student fixed effects*	Economics of Education Review; NBER	Spencer Foundation; CALDER
Harris, D. and Sass, T.	*Teacher training, teacher quality, and student achievement*	Journal of Public Economics; CALDER	U.S. DOE
Partee, G.	*Attaining Equitable Distribution of Effective Teachers in Public Schools*	Center for American Progress	
Glazerman, S., Protik, A. The B., Bruch, J., Max, J.	*Transfer Incentives for High-Performing Teachers: Final Results from a Multisite Randomized Experiment*	Institute of Education Sciences, NCEE; Mathematica Policy Research	U.S. DOE
Hansen, M.	*Right-Sizing the Classroom: Making the Most of Great Teachers*	CALDER, American Institutes for Research	Thomas B. Fordham Institute
Xu, Z., Ozek, U., and	*Portability of Teacher Effectiveness Across Schools*	CALDER, American Institutes for Research	Bill & Melinda Gates

Knowledge Producer	Knowledge	Knowledge Sponsor	Knowledge Funder
Corritore, M.			Foundation
Sass, T., Hannaway, J., Xu, Z., Figlio, D., and Feng, L.	*Value Added of Teachers in High-Poverty Schools and Lower-Poverty Schools*	CALDER, The Urban Institute	U.S. DOE
Clotfelter, C., Ladd, H. and Vigdor, J.	*Teacher Mobility, School Segregation, and Pay-Based Policies to Level the Playing Field*	CALDER, the Urban Institute	U.S. DOE, Russell Sage Foundation, Spencer Foundation

Appendix 3: GTL Center Citations

Author	**Title**	**Organization**	**Resource Type**
Aaronson, D., Barrow, L., and Sanders, W.	*Teachers and Student Achievement in the Chicago Public High Schools*	Journal of Public Economics	Peer-refereed journal
Almy, S. and Tooley, M.	*Building and sustaining talent: creating conditions in high-poverty schools that support effective teaching and learning*	Education Trust	Advocacy report
Arbuckle, M and Murray, I.	*Building Systems for Professional Growth: An action guide*	REL Northeast & Islands	Policy Tool
Auguste, B., Kihn, P., and Miller, M.	*Closing the talent gap: Attracting and retaining top-third graduates to careers in teaching. An internal market research-based perspective*	McKinsey & Co.	Research Report
Barbour, C.	*Identifying, Developing, and Supporting Turnaround Principal Competencies*	GTL Center	presentation
Baxter, A.	*Data Deep Dive*		presentation
Berhstock-Sherratt, E., and Fetters, J.	*Lessons learned on communication and engagement for educator evaluation: Colorado case study*	National Comprehensive Center on Teacher Quality; Learning Point Associates; AIR	Policy report
Berhstock-Sherratt, E., Rizzolo, A., Laine, S., and Friedman, W.	*Everyone at the table: Engaging teachers in evaluation reform.*	Public Agenda; AIR	Policy Tool
Beteille, T., Kalogrides, D., and Loeb, S.	*Effective Schools: Managing the recruitment, development, and retention of high-quality teachers*	CALDER	Working paper
Boffy, H. and Janicki, T.	*Educator Preparation*	CCSSO	presentation
Boffy, H. and Sherratt, E.	*Root-Cause Analysis*		presentation
Borman, G., and Dowling,	*Teacher attrition and retention: a meta-analytic and narrative*	Effectiveness and School	Peer-Reviewed Article

Author	Title	Organization	Resource Type
M.	*review of the research*	Review of Educational Research	
Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S. and Wychoff, J.	*The influence of school administrators on teacher retention decisions*	American Educational Research Journal	Peer-Reviewed Article
Bryk, A., Gomez, L. et. al.	*Improving: Helping our schools get better at getting better*	Carnegie Foundation for the Advancement of Teaching and Learning	Book
Buddin, R. and Zamarro	*Teacher quality, teacher licensure tests, and student achievement*	RAND	Policy report
Butterfield, K. and Ennis, J.	*Developing a Theory of Action*		Policy Tool
Caroll, T.	*Policy Brief: the high cost of teacher turnover.*	NCTAF	Policy Brief
CCSSO	*Educational leadership policy standards: ISLLC 2008*	CCSSO	Standards
Chetty, R., Friedman, J. and Rockoff, J.	*The Long-Term Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood*	NBER	Working Paper
Clifford, M.	*Leader Evaluation as a Strategy for Equitable Access*	GTL Center	Policy Tool
Clifford, M.	*Instructional feedback observation tool.*	AIR	Instructional Tool
Clifford, M. and Ross, S.	*Rethinking principal evaluation: A new paradigm informed by research and practice*	NAESP; NASSP	Advocacy Report
Clifford, M., Behrstock-Sherratt, E., and Fetters, J.	*The Ripple Effect: A synthesis of research on principal influence to inform performance evaluation design*	AIR	Research Synthesis
Clifford, M., Fetters, J., and Yoder, N.	*The five essential practices of school leadership: A framework for principal evaluation and growth*	AIR	Instructional Tool
Clotfelter, C., Ladd, H., and	*High-poverty schools and the distribution of teachers and*	CALDER	Working paper

Author	Title	Organization	Resource Type
Vigdor, J.	*principals*		
Clotfelter, C., Ladd, H., Vigdor, J., and Wheeler, J.	*High poverty schools and the distribution of teachers and principals*	CALDER	Working paper
DeAngelis, K., Presley, J., and White, B.	*The distribution of teacher quality in Illinois*	Illinois Education Research Council	State document
Dee, T. and Wyckoff, J.	*Incentives, selection, and teacher performance: evidence from IMPACT*	NBER; Journal of Policy Analysis and Management	Working Paper & Peer-Reviewed Paper
DeMonte, J. and Hanna, R.	*Looking at the Best Teachers and Who They Teach*	Center for American Progress	Advocacy Report
Dove, T. and Holdheide, L.	*Talent Development Frameworks*	CCSSO, GTL Center	Policy Tool
Duncan, A.	*Letter to Chief State School Officers regarding the new state equitable access plans*	US DOE	US DOE
Exstrom, M.	*What teachers need*	State Legislatures	advocacy report
Ferguson R and Hirsch, E..	*How working conditions predict teaching quality and student outcomes*	MET project	Book chapter
Ferguson, R. and Hirsch, E	*Using teacher and student surveys to link school context, classroom learning conditions, and achievement*		
Gates, S., Kalogrides, D., Loeb, S., and Beteille, T	*Power play? Teacher characteristics and class assignments.*	CALDER	Working paper
Gates, S., Ringels, J., Santibanez, L, Guarino, C., Ghosh-Dastidar, B., and Brown, A.	*Mobility and turn-over among school principals.*	Economics of Education Review	Peer-Reviewed paper

Author	**Title**	**Organization**	**Resource Type**
Gates, S., Ringels, J., Santibanez, L., Ross, K., and Chung, C.	*Who is leading our schools? An overview of school administrators and their careers.*	RAND	Report
Glazerman, S. and Max, J.	*Do Disadvantaged Students Get Less Effective Teaching? Key Findings from Recent Institute of Education Sciences Studies*	IES, US DOE	Research Report
Glazerman, S. and Max, J.	*Do Low-Income Students Have Equal Access to the Highest-Performing Teachers?*	NCEE Evaluation Brief	Research Brief
Goe, L.	*Professional Learning for New and Experienced Teachers*	GTL Center	Presentation
Goe, L., Biggers, K. and Croft, A.	*Linking Teacher Evaluation to Professional Development: focusing on improving teaching and learning*	NCCTQ	Research Brief
Gordon, R., Kane, T., and Staiger, D.	*Identifying effective teachers using performance on the job.*	The Brookings Institution, The Hamilton Project	Advocacy Report
GTL Center	*Moving toward equity stakeholder engagement guide*	GTL Center	Policy Tool
GTL Center	*Talent Development Framework for 21st Century Educators: Moving toward state policy alignment and coherence*	GTL Center	Policy Tool
Hahnel, C. and Orville, J.	*Learning Denied: The Case for Equitable Access to Effective Teaching in California's Largest School District*	The Education Trust	Advocacy Report
Hanushek, E. and Rivkin, S.	*How to improve the supply of high quality teachers*	Brookings Institution	Advocacy Report
Hassel, B. and Losoponkus, N.	*Career Pathways and Extending the Reach of Excellent Teachers*	Public Impact	Presentation
Hassel, B. and Losoponkus, N.	*Recruitment and Workforce Practices*	Public Impact	Presentation
Haycock, K.	*Closing the Achievement Gap*	Educational Leadership	Advocacy Article

Author	Title	Organization	Resource Type
Hill, C., Bloom, H., Black, A., and Lipsey, M.	*Empirical Benchmarks for Interpreting Effective Sizes in Research*	Child Development Perspectives	Working Paper
Hillsborough County Public Schools	*Teacher Evaluation Handbook: Empowering Effective Teachers*		State Document
Ikemoto, G., Taliaferro, L., Fenton, B., & Davis, J.	*Great leaders at scale: Creating district conditions that enable all principals to be effective.*	New Leaders	Advocacy Report
Ingersoll, R.	*Is there really a teacher shortage?*	CRPE	Advocacy Report
Ingersoll, R. and Perda, D.	*The mathematics and science teacher shortage: Fact and myth*	CPRE	Advocacy Report
Glazerman, S. and Max, J.	*Do Disadvantaged students get less effective teaching? Key findings from recent Institute of Education Sciences Studies*	Mathematica Policy Research	Research Report
Isenberg, E., Max, J., Gleason, P., Potamites, L., Santillano, R., Hock, H., Hansen, M.	*Access to effective teaching for disadvantaged students*	US DOE, IES, NCEE	Research Report
Jacques, C., Clifford, M., and Hornung, K.	*State policies on principal evaluation: trends in a changing landscape*	GTL Center	Policy Brief
Johnson, J., Arumi, A., and Ott, A.	*The insiders: how principals and superintendents see public education today*	Public Agenda	Policy Report
Johnson, S.M.	*The workplace matters: Teacher quality, retention, and effectiveness*	NEA	Policy Report
Johnson, S.M., Kraft, M.A., and Papay, J.P.	*How context matters in high-need schools: The effects of teachers' working conditions on their professional satisfaction and their students' achievement*	Teachers College Record	Peer-Reviewed Article
Kane, T. and Staiger, D.	*Estimating Teacher Impacts on Student Achievement: An Experimental Evaluation*	NBER	Working Paper

Author	Title	Organization	Resource Type
Kane, T., McCaffrey, D., Miller, T., and Staiger, D.	*Have we identified effective teachers?*	Bill & Melinda Gates Foundation	Commissioned Report
Kane, T., Rockoff, J., and Staiger, D.	*What does certification tell us about teacher effectiveness? Evidence from New York City*	NBER	Working Paper
Koedel, C. and Betts, J.	*Re-Examining the Role of Teacher Quality in the Educational Production Function*	University of Missouri	Working Paper
Ladd, H.	*Teachers' perceptions of their working conditions: how predictive of planned and actual teacher movement*	Educational Evaluation and Policy Analysis	Peer-reviewed article
Lankford, H., Loeb, S. and Wyckoff, J.	*Teacher sorting and the plight of the urban schools: A descriptive analysis*	Education Evaluation and Policy Analysis	Peer-reviewed article
Liu and Johnson	*New Teachers' Experiences of Hiring: Late, Rushed, and Information-Poor*	Educational Administration Quarterly	Peer-reviewed article
Loeb, S., Kalogrides, D., and Horng, E.	*Principal preferences and the uneven distribution of principals across schools.*	Educational Evaluation and Policy Analysis	Peer-Reviewed Article
Mansfield, R.	*Teacher equality and student inequality*	Cornell University	Research
MetLife			Survey Results
Murphy, J., Hallinger, P., and Heck, R.	*Leading via teacher evaluation: the case of the missing clothes?*	Educational Researcher	Peer Reviewed Article
Najera, T. and Bagshaw, T.	*Bring the Opportunity gap: Growing and Keeping Effective Teachers in Rural School Districts (powerpoint)*	Battelle for Kids	Presentation
Papa, F., Lankford, H., and Wyckoff, J.	*The attributes and career paths of principals: Implications for improving policy.*	Teacher Policy Research	Advocacy Report
Poda, J.	*Funding the Equitable Access Work in your State (powerpoint)*	CCSSO	Presentation

Author	**Title**	**Organization**	**Resource Type**
Public Agenda	*How can we ensure that all children have excellent teachers?: A choicework discussion starter from public agenda*	Public Agenda; AIR	Policy Tool
Public Impact	*Opportunity Culture (poweproint)*	Public Impact	Presentation
Punswick, E., Belt, C. and Baker, B.	*Principals' backgrounds and school leadership stability: evidence from fly-over country.*	American Education Finance Association Conference	Conference Presentation
Punswick, E., Belt, C., and Baker, B.	*School leadership stability, principal moves and departures: Evidence from Missouri*	University Council on Educational Administration Annual Conference	Conference presntation
Reform Support Network	*Educator evaluation communications toolkit: Tools and resources to support states in communicating about educator evaluation systems.*	ICF International	Policy Tool
Reform Support Network	*From 'inform' to 'inspire': A framework for communications and engagement.*	ICF International	Policy Tool
n/a	*Education Logic Model Tool*	REP Pacific; McREL	Policy Tool
Regional Educational Laboratory Netework Program	*Facilitating systemic change in science and mathematics education: A toolkit for professional developers*	REL Northeast & Islands	Policy Tool
Rivkin, S., Hanushek, E., and Kain, J.	*Teachers, Schools, and Academic Achievement*	Econometrica	Peer-Reviewed article
Rothstein, J.	*Student sorting and bias in value added estimation: selection on observables and unobservables*	Education Finance and Policy	Peer-Reviewed Article
Sanders, W. and Rivers, J.	*Cumulative and Residual Effects of Teachers on Future Student Academic Achievement*	University of Tennessee Value-Added Research	Research article

Author	Title	Organization	Resource Type
		and Assessment Center	
Sass, T., Hannaway, J., Xu, Z., Figlio, D. and Feng, L.	*Value added of teachers in high-poverty schools and lower-poverty schools*	Journal of Urban Economics	Peer-Reviewed Article
Sherratt, E. and Ruszkowski, C.	*Teacher Compensation (powerpoint)*	GTL Center, Delaware Department of Education	Presentation
Sherratt, E., and Clifford, M.	*Ensuring the equitable distribution of teachers: strategies for schools, districts, and states*	NCCTQ	Policy Report
Silverman, S. and Rowland, C.	*Leadership Pipeline and Preparation (powerpoint)*	National Governor's Association Center for Best Practices	Presentation
Smylie, M.	*Teacher evaluation and the problem of professional development*	Mid-Western Educational Researcher	Peer-Reviewed article
Steele, J., Pepper, M., Springer, M., and Lockwood, J.	*The distribution and mobility of effective teacher: evidence from a large, urban school district*	Association of Public Policy Analysis and Management Fall Conference	Conference Presentation
Stockard, J. and Lehman, M.	*Influences on the satisfaction and retention of 1st-year teachers: the importance of effective school management*	Educational Administration Quarterly	Peer-Reviewed Article
StudentsFirstNY	*Unsatisfactory: The distribution of teacher quality in New York City*	StudentsFirstNY	Advocacy Report
Tenessee DOE	*Tennessee's Most Effective Teachers: Are they Assigned to the Schools that need them most?*	TN DOE	State Document
Tennessee DOE	*How TEAM Works*	TN DOE	State Document
The Education Trust	*Missing the Mark: An Education Trust Analysis of teacher-equity plans*	The Education Trust	Advocacy Report

Author	Title	Organization	Resource Type
The Education Trust	*Fact Sheet - Teacher Equity*	The Education Trust	Advocacy Report
TNTP	*The Irreplaceables - Understanding the Real Retention Crisis*	TNTP	Advocacy Report
TNTP	*Perspectives of Irreplaceable Teachers*	TNTP	Advocacy Report
U.S. DOE	*New initiative to provide all students access to great educators: U.S. Department of Education launches 'Excellent Educators for All Initiative'*	US DOE	US DOE Document
U.S. DOE Office for Civil Rights	*Data Snapshot: Teacher Equity*	US DOE	US DOE Document
US DOE	*Race to the Top Program: Executive Summary*	US DOE	US DOE Document
US DOE	*ESEA Flexibility*	US DOE	US DOE Document
Weber, G. and Ennis, J.	*Working Conditions powerpoint*	GTL Center	Presentation

CHAPTER 4: TOOLS OF THE TRADE: TRANSLATING KNOWLEDGE

It is well documented that the inequitable distribution of fully prepared professional and experienced teachers disproportionately impacts poor and minority students (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004; Peske & Haycock, 2006). Students of color in low income schools are more likely to be taught by teachers who are uncertified, inexperienced, or teaching outside of their field of expertise (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004). Schools with high minority populations and schools in communities impacted by poverty suffer from higher levels of teacher turnover and attrition (Esch et al., 2005; Ingersoll, 2004). Difficult-to-staff urban schools in communities impacted by poverty and with large numbers of minority students also face the greatest number of out-of-field teachers (Horng, 2009; Ingersoll et al., 2004; Jerald & Ingersoll, 2002). Similarly, teacher credentials are unevenly distributed among students with different racial and socioeconomic statuses (Clotfelter, Ladd, & Vigdor, 2005). And, even within schools, classrooms with low-achieving, minority, and poor students are more likely to have novice teachers (Kalogrides & Loeb, 2013).

The problem of the inequitable distribution of workforce talent in education has proven to be somewhat of a “wicked problem” (Rittel & Webber, 1973) for those seeking to craft policy solutions. No single factor contributes to the inequitable distribution of inexperienced, unqualified, and out-of-field teachers, and like most complex problems, the influence of specific factors is contingent on the unique social, political, and historical contexts and structures of schooling in communities, districts, states, and regions.

Policy initiatives to address these disparities have been attempted. Since 2002, the federal department of education has attempted to tackle the inequitable distribution of teachers. The No Child Left Behind Act of 2001 (NCLB) stipulated that state teacher equity plans needed to describe the steps that would be taken to ensure that low income and minority students are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers (DeBray, 2006; No Child Left Behind [NCLB], 2002; Rebell & Wolff, 2008). These equity plans needed to identify inequities in the distribution of inexperienced, unqualified and out-of-field teachers, delineate strategies for addressing the inequities, provide evidence of the probable success of these strategies, and include how the state would monitor local education authorities (LEAs) with respect to the identified inequities (Loeb & Miller, 2009, p. 212).

In general, the teacher equity plans required by law under NCLB were ineffective at reducing the disproportionate number of low income and minority students taught by inexperienced, unqualified, or out-of-field teachers. In part, this was due to an initial decision by the U.S. Department of Education not to require that the plans be officially reviewed and approved (Loeb & Miller, 2009). This sharply contrasted with NCLB's punitive accountability requirements for student achievement. As a consequence, most states prioritized the development of plans for student achievement goals, rather than teacher quality and the inequitable distribution of teachers. Even after the U.S. Department of Education stepped up proactive oversight in 2006, limited data, nonstandardized evaluation protocols, and nonuniform teacher equity plan formats made it difficult for states and the federal government to promote effective policies around teacher quality.

The desire to encourage states to enact their equity plans did not end there. In 2014, the U.S. Department of Education launched the Excellent Educators for All Initiative by calling on states to submit updated plans, which the U.S. DOE termed "State Plans to Ensure Equitable Access to Excellent Educators." For simplicity's sake, I refer to these plans as equitable access plans moving forward. In these equitable access plans, state education agencies needed to document the root causes of inequitable distribution of excellent teachers in their state and list strategies to resolve these gaps in teacher quality. In December 2015, the U.S. Department of Education approved fifty-two plans to ensure equitable access to excellent educators. Today, state education agencies throughout the country are in the midst of implementing their planned strategies to improve the inequitable distribution of out-of-field, inexperienced, and otherwise unqualified teachers.

The strategies included as solutions to the inequitable distribution of high-quality teachers in states' equitable access plans raise new questions about influence in the education policymaking process. For instance, even though insufficient or poor working conditions are listed as primary root causes to nearly the same degree as root causes related to inefficient human capital management, there is a disproportionate number of strategies addressing human capital management when compared with strategies that address working conditions in states' equitable access plans (Williams II et al. 2016). What patterns of influence led state education agencies to list strategies so heavily focused on human capital management?

Purpose of the Study

In this study, using the critical conceptualization of Campbell and Peterson's "knowledge regimes" (2007), I explore the impact of a policy toolkit produced by a federally funded intermediary organization (IO) on the strategies advanced in states' plans to ensure equitable access to excellent teachers. I ask the following research question: how did the use of a policy toolkit enable or constrain policy choices in those states that used it as a resource? As a federally funded intermediary organization, I argue that this particular IO communicated policy-relevant ideas to state education agency personnel through a toolkit. I begin by briefly reviewing the literature on research use in policymaking, knowledge mobilization, knowledge brokering and intermediary organizations, and toolkits. I then move on to discuss my theoretical framework, methods of inquiry, data collection procedures, and findings.

Review of the Literature

Uses of Research in Policy Making

Scholars have developed a number of different frameworks and typologies for thinking about research use (Farkas, Jette, Tennstedt, Haley, & Quinn, 2003; Greenberg & Mandell, 1991; Knott & Wildavsky, 1980; Weiss, 1979). One of the most frequently referenced typologies of research use is Weiss's (1979) work that proposes six models for how research is utilized in policymaking. They are as follows: knowledge-driven, problem solving, interactive, political, tactical, and enlightenment. Over the past few decades, Weiss's original six types of research use have been consolidated to three. These three types of research use are referred to as instrumental, symbolic (though this is sometimes referred to as political use (see Daviter, 2015), and conceptual (Estabrooks, 1999; Sudsawad, 2007). In this construct, instrumental use refers primarily to the first three of Weiss's models (knowledge-driven, problem-solving, and interactive); symbolic and/or political use refers to the next two models (political and tactical) and conceptual use refers to the enlightenment model.

Most often it is assumed that research will be used instrumentally, in that the findings and policy recommendations produced in the research will directly influence policy implementation. Instrumental use then is the concrete application of research in direct and specific ways (Beyer, 1997; Estabrooks, 1999b). In practice, however, instrumental use of research is rare. Instead, research is used subtly and indirectly in a number of different ways (Court & Young, 2003; Nutley et al., 2007). Symbolic or political use of research helps to legitimize predetermined policy decisions (Estabrooks, 1999). Research is also used to indirectly influence policymakers' thinking. When research is used as an indirect, influencing element, its use is considered to be conceptual (Lindblom & Cohen, 1979; Rich, 1979). Conceptual use shapes and helps frame the ways in which policymakers come to think about a policy problem and its associated solutions. It may change thinking but not necessarily action (Estabrooks, 1999). In this way, while the conceptual use of research may eventually come to influence policy change – by altering the array of viable policy options, for example – it can be considered to be different from instrumental use whose goal it to directly influence policy action, without correspondingly changing policymakers' conceptual understanding or thought behind the policy change itself.

In studies of knowledge utilization, scholars have concluded that research does influence policymaking (Biddle & Anderson, 1991; Weiss & Bucuvalas, 1980). It can influence policymaking instrumentally, resulting in direct changes to policy and practice (e.g. Shavelson and Berliner, 1991). Most social science research, however, is used conceptually; that is, it rarely initiates sweeping policy changes, but results more frequently in policymakers' enlightenment. This "enlightenment" is "the percolation of new information, ideas, and perspectives into the arenas where decisions are made" (Weiss, 1999, p. 471). With enlightenment, social science research seeps into the policy sphere, "puncturing old myths," changing how issues are framed, and altering the array of viable policy options (Weiss, 1999). Since social science research does influence policymaking, what determines which research and knowledge will catch a policymaker's ear?

Moving Research into Policy or Knowledge Mobilization (KMb)

The process of getting research into the policy sphere goes by a number of different terms, some of which prevail over others in certain fields. This process is alternatively called knowledge transfer and exchange, knowledge linkage and exchange, knowledge exchange, knowledge management, knowledge dissemination, knowledge translation, and knowledge mobilization. This abundance of terms, each with slightly different connotations, makes it difficult to review the body of literature on the ways in which research finds the ears of policymakers and how to improve such processes.

With that said, the term knowledge mobilization (KMb) is increasingly used in education policy and practice studies analyzing the process of getting research into the policy sphere (see Cooper & Shewchuk, 2015; Scott, Jabbar, LaLonde, Debray, & Lubienski, 2015). To keep the terms consistent, I will be employing the term knowledge mobilization to talk about this process in this article. Knowledge mobilization (KMb) is operationalized as follows: "knowledge mobilization includes efforts to increase the use of research evidence in policy and practice in education (Cooper & Shewchuk, 2015, p. 1). Mobilization implies movement, and so Read, Cooper, Edelstein, Sohn, and Levin (2013) further conceptualize knowledge mobilization as the "movement of research from production to its ultimate impact on policy and practice" (p. 25). With that clarified, what influences the effects of knowledge mobilization on policy and practice?

Political, organizational, and institutional contexts matter for knowledge mobilization (Contandriopoulos et al., 2010; Paul Sabatier, 1978). This is sometimes referred to as the "social ecology of research use" where use unfolds in different ways in organizational and social settings and in different political and policy contexts (Coburn, Honig, & Stein, 2009; Nutley et al., 2007; Tseng & Senior Program Team, 2008). Organizational capacity, culture, and structure also shape how research is used (Tseng, 2012).

Beyond institutions and organizations, relationships are essential to how policymakers receive, understand, and use research (Finnigan, Daly, & Che, 2013; Tseng, 2012). Individuals and groups access information through their social ties, which require relational trust (Finnigan & Daly, 2012). Thus, policymakers who have direct contact and relational trust with researchers are more likely to use research (Crona & Parker, 2011). Consequently, it is supposed that the development of social networks that bring researchers and policymakers into contact with each other may increase the use of research in policy decisions (Crona & Parker, 2011).

The perception of policymakers that a particular source is authoritative increases the likelihood that such research will be used (Percy-Smith et al., 2002). Thus, large, analytical purportedly objective research organizations have more influence over policymaking than their smaller, more descriptive counterparts (Hird, 2005). Social science research also needs to be accessible (Nelson et al., 1987). Research findings are more likely used when they are intuitive and when the implications for action are clear (Caplan, 1977). Furthermore, research directly affiliated with the decision-making agency is used more frequently than outside research (Rich, 1977; Dunn, 1980; Nelson et al., 1987; Percy-Smith et al., 2002). This suggests that in-house research or research organizations directly affiliated with the decision-making agency have more authority or are perceived to be more credible than outside sources. When external research *is* used, it is more often to provide background information to inform the development of policy than to inform policy decisions (Percy-Smith, et. al., 2002). Finally, research that finds the ears of policymakers is often sponsored and supported by knowledge brokers who provide the links between research producers and research users (Ward et al., 2009).

Our Enduring Faith in Research and Data to Improve Education

Based in part on the hypothesis that researchers and policymakers reside in two different "communities" (see Caplan, 1979 for an explication of the "two communities" thesis), it is supposed that getting researchers to produce policy-relevant knowledge and having policymakers attend to social science research more than other types of knowledge is a rather tall order. This does not mean that enthusiasm around efforts to increase the impact of education research on the policymaking community has been dampened.

There is renewed interest today in increasing the use of research knowledge and data, which is now frequently termed evidence-based policy and practice (Davies et al., 2000; Nutley et al., 2007; Tseng, 2012). For instance, No Child Left Behind contained more than 100 references to “scientifically-based research” and required states to incorporate such research into decisions (Tseng, 2012). Furthermore, emerging definitions of “scientifically-based research” is shaping education research (Mason, 2013). So-called “gold standard” education studies use experimental or quasi-experimental research designs, their results can be replicated, and their policy prescriptions can be brought to scale (Mason, 2013). In 2002, the What Works Clearinghouse was created to share what are presumed to be best practices gleaned from research studies. In prioritizing such studies, other perhaps equally or more valuable studies are dismissed either through disinvestment or reverse incentives. Thus, certain types of research (i.e. quantitative, quasi-experimental, easily scalable) are more likely to be promoted in the policymaking arena.

This push to incentivize research that fits the operating definition of “scientifically-based research” did not end with the Bush Administration. Federal funding continues to flow to National Centers tasked with producing policy-relevant research knowledge. Among these centers is the National Center for the Analysis of Longitudinal Data in Education Research (CALDER). CALDER has become a focal point for research on the teacher labor market, particularly as it seeks to address ways to improve the management of school personnel through attention to student outcomes via teachers’ value-added scores (Odden, 2013). Additionally, federally funded competitive grant opportunities like Race to the Top, Investing in Innovation (i3), and the Teacher Incentive Fund (TIF) incentivize the use of research that analyzes teacher and student outcomes, performance, and longitudinal data – largely statistical analyses – instead of more qualitative analyses.

Funding trends corroborate this point. In 2009-2010, just over $10 billion in discretionary funding to the Institute of Education Sciences (IES) from the American Reinvestment and Recovery Act (ARRA) was pumped into the education economy to develop statewide data systems, and to support research, development, and dissemination (Mason, 2013). Funding was "targeted toward applied research, development of national and state data systems, and research and evaluation that prioritizes rigorous analysis of student outcomes" (p. 213). Furthermore, funds from the American Recovery and Reinvestment Act of 2009 were dispersed to galvanize reform initiatives. Many of these funds from the American Recovery and Reinvestment Act of 2009 were authorized for evaluation, research, and data system development in the Race to the Top competition.

Though it is not without its critics (see Holmes, Murray, Perron, & Rail, 2006; Trinder & Reynolds, 2000), evidence-based policy and practice continues to forge ahead in many policy arenas both within and outside the United States. Increased investment in efforts to use social science research in policymaking or even increased research production may not necessarily lead to consensus around how to solve social problems. In fact, increased social science research may do just the opposite:

> For the most part, the improvement of research on social policy does not lead to greater clarity about what to think or what to do; instead, it usually tends to produce a greater sense of complexity. This result is endemic to the research process. For what researchers understand by improvement in their craft leads not to greater consensus about research problems, methods, and interpretation of results, but to more variety in the ways problems are seen, more divergence in the way studies are carried out, and more

> controversy in the ways results are interpreted. It leads also to a more complicated view of problems and solutions, for the progress of research tends to reveal the inadequacy of accepted ideas about solving problems. (Cohen & Weiss, 1977, p. 68)

The production of more social science research aimed at shedding light on and proposing solutions to social problems presents an opportunity. Organizations and individuals can work to shape the manner in which certain research moves from production to policy and/or practice. This is significant, for if increased production of social science research knowledge does not necessarily lead to consensus around the solutions to social problems, then the middlemen tasked with increasing the use of social science research by policymakers have a powerful role in mobilizing the knowledge that comes to influence policymakers' decisions.

Knowledge Brokering and Intermediary Organizations

As mentioned earlier, intermediary organizations (IOs) are increasingly playing a role as knowledge brokers, who work to link research producers and research users. Thus, in exploring the mechanisms that support the use of research evidence in policymaking, the knowledge-brokering role of IOs cannot be overlooked. This next section briefly explores the literature around knowledge brokering and intermediary organizations.

Intermediaries translate and package research for legislators, agency staff, and service providers, and they broker relationships between researchers and policymakers (Tseng, 2012). Increasingly, intermediary organizations play a key function in brokering knowledge between the research and policy communities, especially in education policy (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Tseng, 2012). These intermediary organizations, including foundations, policy groups, think tanks, and private technical assistance providers have increased their capacity to do so. Now, they compete for and are awarded federal funding to do the research production and brokering work historically reserved for university-based researchers (Mason, 2013; R. Rose, 1977; Useem, 1977). Contrary to popular belief, these intermediaries are not simply neutral, objective parties offering recommendations and providing syntheses of research. Significantly, such intermediaries purport to vet their own research without engaging in independent peer review. They bring their own agendas and priorities (Henig, 2008). And, like an enterprising or entrepreneurial institution, intermediaries are also influenced by funders' policy priorities.

The term knowledge brokering comes from the private sector and the field of knowledge management (Ward et al., 2009). In the private sector, brokering facilitates the spread of knowledge, which is believed to stimulate innovation (Roth, 2003). Lomas (2007) defines knowledge brokering as follows: "all the activity that links decision makers with researchers, facilitating their interaction so that they are able to better understand each other's goals and professional cultures, influence each other's work, forge new partnerships, and promote the use of research-based evidence in decision-making" (Lomas, 2007, p. 131). IOs as knowledge brokers "perform a variety of functions including managing research and other information, facilitating linkage between parties and developing the skills of both researchers and practitioners" (Ward, et. al., 2009, p. 267). In all cases, "these brokering functions all seek to build bridges between research, policy, and practice in order to improve societal systems (Cooper & Shewchuk, 2015, p. 3). Knowledge brokers have three main functions: 1) disseminating, packaging and translating knowledge; 2) linking researchers and users and building connections between the two communities; and 3) building capacity through training and skill building of users (e.g. Turnhout, Stuiver, Klostermann, Harms, & Leeuwis, 2013; Ward et al., 2009). This article is concerned with the first function – disseminating, packaging, and translating knowledge.

Knowledge brokers are tasked with making research evidence accessible, often through synthesis, translation, and dissemination of research results (Cooper & Shewchuk, 2015; Feldman et al., 2001). The passive dissemination of knowledge has proven to be largely ineffective particularly as it relates to translating research to practice (e.g. Lave & Wenger, 1991). However, when the research is mediated by knowledge brokers and discussed with end users, research uptake by practitioners is more significant (Amsallem et al., 2007). Knowledge brokers thus need to incorporate a range of strategies rather than purely sharing the latest research findings (Armstrong et al., 2007).

One strategy involves translating research materials for use by policymakers and communicating ideas within research to end-users. Scholars have documented the importance of translating research materials for policymaker and practitioner use to encourage the use of research in policy and practice. In their work on how state education agencies locate and use research for school improvement, Barnes, Goertz, and Massell (2014) even include in their conception of research forms of research designed for use in practice. These forms of research include "models, protocols, or other tools that embed research or research-based practices in somewhat specified guides to action" (Barnes, Goertz, & Massell, 2014, p. 102).

Feldman et. al. (2001) also view knowledge brokers as playing a role that supports decision makers in managing information overload. In this role, the knowledge broker helps filter out or screen in what they themselves deem to be policy relevant knowledge or sound research evidence. Using a RAND report on the role of demonstrations in federal research and development policy as one example, Knott and Wildavsky speak to this dissemination function as one that can become a "mask for policy advocacy" (1991, p. 216). They write: "under the guise of spreading knowledge, disseminators try to make changes which policymakers perceive as unnecessary or, when a performance gap is perceived, to promote their own policy to the exclusion of others" (Knott and Wildavsky, 1991, p. 216). Thus, in filtering information, knowledge brokers may position themselves as powerful policy advocates.

Furthermore, the use of models, protocols and guides embedded with research-based practices can serve as a mechanism through which to shift research use from conceptual use to instrumental use (Beyer, 1997; Estabrooks, 1999a, 1999b). For example, in their study of comprehensive school reform designs, Rowan, Miller and Camburn (2009) found that research tools providing more specificity and scaffolding were more likely to be used and resulted in less variation by users. In other words, these research tools allowed research to be used instrumentally.

By distilling esoteric conclusions within the research base into actionable guides, protocols, and templates, research that may have previously served to enlighten policymakers or frame thinking around a policy idea can now be used instrumentally to recommend and support the enactment of particular policy ideas. Thus, it is important to understand the ways in which such "forms of research," which I take to mean methods of technical and policy development support, influence state education agencies' policy development. One such form of technical and policy development support is the "toolkit".

Toolkits in the Literature

Toolkits are used in a number of fields, including in business management and healthcare and by a variety of entities, including nonprofit, nongovernmental, professional associations, and community organizations. The term "toolkit" originated in the 1980s, and it is ubiquitous; however, there is a lack of clarity around a clear definition of the term across fields and users

(Barac, Stein, Bruce, & Barwick, 2015; Yamada, Shorkey, Barwick, Widger, & Stevens, 2015). The Office of Special Education Programs defines toolkits as:

> compilations of resources and information highlighting evidence-based and promising practices, skills and interventions in a particular area. The toolkits are developed and compiled to provide information to practitioners, families, and other stakeholders involved in improving outcomes for children with disabilities. (Office of Special Education Programs, n.d.)

In healthcare, the term toolkit has been used to describe “packaging of multiple resources that codify explicit knowledge, such as templates, pocket cards, guidelines, algorithms, summaries, and that are geared to knowledge sharing, education, and/or facilitate behavior change” (Barac et al., 2015, p. 123).

Additionally, user toolkits in the business and innovation management sector have been developed to allow consumers to customize products based on their own needs within set boundaries developed by the company. This has allowed companies to innovate and better meet customers’ desires while not having to increase costs to do so (Hippel & Katz, 2002).

Because toolkits are perceived to be communicating information and knowledge to end users, they have the potential to be effective knowledge translation tools. Yamada, Shorkey, Barwick, et. al. (2015) determined just this. As knowledge translation tools, toolkits are used to educate and/or facilitate behavior change, and they are proving to be moderately effective at doing so (Yamada et al., 2015). While they may be effective at educating and facilitating behavior change, toolkits also present problems that have been framed in particular ways and rarely mention the specific evidence-base(s) from which they draw (Barac et al., 2015).

The use of toolkits in the field of education and education policy and advocacy is growing. For instance, the U.S. Department of Education now promotes the use of an English Learner Toolkit for state education agencies to use as they work to fulfill legal obligations in supporting English Learners under ESSA legislation (Office of English Language Acquisition &

U.S. Department of Education, 2016). There is an archived "Tool Kit on Teaching and Assessing Students with Disabilities" and a recently published toolkit on "Improving Outcomes for Youth with Disabilities in Juvenile Corrections" (U.S. Department of Education, 2004, 2016). Additionally, so-called "turnkey toolkits," which include summaries of relevant theoretical frameworks, IRB guidance, research questions, findings, and data collection templates are being used to encourage research-based innovations by faculty (Hamilton, 2006). In these "turnkey toolkits," the consumer does not determine which operating frameworks are relevant to the work. Instead, those who develop the toolkit – whether they are aware of the contexts in which the toolkit will be used or not – decide which frameworks are relevant.

Despite the abundance of "toolkits" available on the internet from a variety of organizations, the aims of these toolkits and the resources contained within them appear to be multiple, varied, and ill-defined.[13] This contributes no doubt to the difficulty in defining what a toolkit is and does (or should do). At times, resources labeled as toolkits serve as step-by-step guides for action or implementation with very little information provided on the topic itself (see National Center for Learning Disabilities & Understood, n.d.; Afterschool Alliance, 2017). Other toolkits serve as a repository for a variety of resources and literature directly related to the topic but little in the way of implementation or action guides (see "Toolkit for Using the AHRQ Quality Indicators," 2017; "Transitioning Newborns from NICU to Home: A resource toolkit," 2013). In other words, the roles and aims of toolkits appear to be quite diverse.

Simplistic "take action" checklists with a step-by-step process are often geared toward helping communities, institutions, or individuals organize and take action on a perceived issue. Other toolkits aim to inform and raise awareness around an issue while also generating informed advocates of the subject (see National Collegiate Athletic Association & Sport Science Institute, 2016). Still others appear to raise awareness through information dissemination and processes in an effort to improve the research-to-practice/policy connection (see The White House, 2016). And, there are some who use the resources, templates, and samples strategically to increase the likelihood that those using the toolkit will act in an advocacy role or design policies that are in line with the ideas conveyed in the template.

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[13] A google search for the terms "ESSA toolkit" alone contains more than 6700 hits.

In the field of education and education policy, few researchers have explored the ways in which these toolkits act as vehicles for policy advocacy or the ways in which they may serve to constrain policy options. Related research by Anderson and Donchik (2014) on the American Legislative Exchange Council's (ALEC) use of prefabricated model legislation to influence and advice policymakers is one. Trujillo (2014) provides another related account of the use of templates and tools in school improvement. The role of intermediary organizations in producing these toolkits and the ways in which these toolkits have been used to shape policy choices within state education agencies is worthy of exploration and can add to the literature on knowledge mobilization and the role of intermediary organizations in advocating and supporting education reforms.

Theoretical Framework

It has become clear that ideas matter in policymaking (Blyth, 2011; Hall, 1989, 1993; Schmidt, 2011). And yet, ideas do not hold equal value or equal standing when it comes to policymaking. For this study, I work under the conceptual framework advanced by Campbell and Pedersen's (2015), which they term "knowledge regimes". Knowledge regimes constitute the "organizational and institutional machinery" by which ideas are produced (and reproduced) (Campbell & Petersen, 2015). In essence, knowledge regimes "are the organizational and institutional machinery that generates data, research, policy recommendations, and other ideas that influence public debate and policymaking" (Campbell & Petersen, 2015, p. 2). Campbell and Pedersen further define knowledge regimes as "sets of actors, organizations, and institutions that produce and disseminate policy ideas" (2015, p. 167) that affect the policy process. As such, a knowledge regime is "a sense-making apparatus" (Campbell & Pedersen, 2015, p. 3).

Under this construct, I take knowledge regimes to be the "organizational and institutional machinery" – the "sense-making apparatus"—that assists with knowledge mobilization. As a consequence, the toolkits produced by IOs for state education agencies to develop their plans to ensure equitable access to excellent educators are one part of the machinery within the knowledge regime designed to communicate and elevate certain policy ideas over others. Other parts of the "machinery" are discussed in additional articles within this dissertation (Hollar, 2017a, chapter 3 and Hollar, 2017b, chapter 5).

Methods

The mode of inquiry used in this study is critical document and discourse analysis. While there are numerous approaches to conducting a critical discourse analysis (CDA), a goal of CDA is to analyze the ways in which power operates through discursive formations, structures, and strategies, which necessitate macro-level and micro-level analyses (Fairclough, 2014; Mills, 2004; Van Dijk, 1993; Yates, Taylor, & Wetherell, 2001). This combined approach – at once understanding the sociopolitical contexts around which the discourse is created and the microanalyses of how such stances actually come to be embodied at the thematic, semantic, and linguistic levels – differentiates critical discourse analysis from discourse analysis.

Data Sources

To conduct this study, I used two main data sources. The first data source is an Equitable Access Toolkit (EA Toolkit) produced by the Center on Great Teachers and Leaders (GTL Center). Before describing this data source in more detail, it is necessary to provide a bit of background on the Center on Great Teachers and Leaders.

Center on Great Teachers and Leaders

When the U.S. Department of Education unveiled the Excellent Educators for All Initiative, the GTL Center was named as an additional resource for states. The GTL Center received its contract through a competitive process. The GTL Center was initially funded as a national comprehensive content center to support effective teachers and leaders and operates via a U.S Department of Education grant as one of seven content centers funded through the Office of School Support and Rural Programs. In the call for applicants as listed in the Federal Register, the Center on Great Teachers and Leaders was created to provide technical assistance and identify, synthesize, and disseminate research-based practices and emerging promising practices to increase the capacity of SEAs to support their districts and schools in improving student outcomes by supporting effective instruction and leadership. Additionally, the GTL Center was required to provide technical assistance to regional centers and state education agencies in the following areas: developing the knowledge and skills of teachers and leaders; strategies to ensure the equitable distribution of effective teachers and to meet demand in high-need and rural areas; developing and implementing teacher and leader human capital management systems, including educator evaluation and effectiveness systems; using human capital strategies to build teacher and leader capacity around productive school environments; and using data from human capital management systems and state longitudinal databases to guide professional development and improve instruction (Department of Education: Final Priorities, Requirements, and Selection Criteria - Comprehensive Centers Program, 2012).

The GTL Center was seen as an outgrowth of its predecessor, the National Comprehensive Center for Teacher Quality (TQ Center), with staff from TQ Center operating within the GTL Center and continuing their earlier work on teacher quality (GTL Center Staff A, personal communication, December 21, 2016). Another reason for the GTL Center's selection to receive funding to support the Excellent Educators for All initiative was a commitment by the GTL Center to support states in their development of a comprehensive human capital management approach to teacher and principal quality (GTL Center Staff B, personal communication, December 31, 2016).

In 2012, the American Institutes for Research (AIR) was awarded funding to administer the GTL Center in partnership with the Chief Council of State School Officers (CCSSO) and Public Impact. The American Institutes for Research brands itself as an independent, objective, and non-partisan research and evaluation nonprofit. The research branch of AIR conducts behavioral and social science research and evaluation. Some of its goals are to produce improvements in education, health, and the workforce, to inform public understanding and policymaking by the best evidence, and to design and advance statistical and research methods ("American Institutes for Research," n.d.).

The Chief Council of State School Officers (CCSSO) brands itself as a nonpartisan, nonprofit organization of state school officers committed to ensuring that all students graduate prepared for college, careers, and life. Some of CCSSO's named business and industry partners include the American Institutes for Research, the Educational Testing service (ETS), Pearson Education, McGraw-Hill Education, Batelle for Kids, Smarter Balance, and Teachers of

Tomorrow. Important to note here is that CCSSO was an outspoken advocate for the adoption and implementation of the Common Core State Standards while Smarter Balance developed one of the two main assessments adopted by states to measure student learning around the common core. The American Institutes for Research developed the delivery platform for the Smarter Balance Assessment. Thus, these for-profit and nonprofit organizations are not strange bedfellows.

The third partner of the GTL Center is another apparently nonpartisan organization called Public Impact. Public Impact is run by a husband and wife team out of North Carolina and provides research assistance, policy and planning advice, and implementation support for topics related to school funding, school turnaround, charter schools, technology in schools, and teachers and principals.[14] One particular policy idea developed by Public Impact and advocated for within the policy community is a concept termed "Opportunity Culture" wherein the main operating belief is that student learning can be improved within existing budgets through an increased reliance on paraprofessionals, larger class sizes, and technology (for a cogent critique of "Opportunity Culture," see Hinchey, 2013).

Together, these three partners hold beliefs and reform priorities that align with federal U.S. Department of Education investments in evidence-based and innovative educational practices, longitudinal data systems, effectiveness measures based on growth data through standardized tests, and education reforms that view modifications to teaching and leading as key levers through which to advance education reform.

The Equitable Access Toolkit

The Equitable Access Toolkit (EA Toolkit) prepared by the Center on Great Teachers and Leaders includes a number of tools to support state development of equitable access plans. Tools include a stakeholder engagement guide with twelve accompanying resources, a data review tool which includes sample data sets and metrics, a root cause analysis workbook, and a moving toward equity tool presented online and in paper. Within the toolkit, the twelve accompanying resources to the Stakeholder Engagement Guide include sample meeting agendas, a PowerPoint template, engaging stakeholders in a root-cause analysis, a “Taking the Temperature” activity, a sample state plan to ensure equitable access to excellent educators, and a “build-your-own” template for state education agencies to use in developing their equitable access plans. The toolkit materials are meant to be used in concert with each other and as a result frequently refer to each other as part of the suite of technical assistance materials designed to support plan development.

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[14] http://publicimpact.com/

Many of the policy ideas emphasized within the Equitable Access Toolkit emphasize comprehensive approaches to talent management. The Sample Plan is no exception. The GTL Center’s tools both within and outside of the EA toolkit elevate a comprehensive approach to talent management as a policy idea. In this approach, state education agencies work to systematize all facets of human capital and talent management, including attracting, preparing, hiring, recruiting, retaining, and developing educators.

At the same time, within the sample state plan resource and the large EA toolkit, the more sociological perspectives around inequitable distribution are adjuncts and in a number of resources not present at all (e.g. Ingersoll, 2005, 2008; Johnson, Kraft, & Papay, 2012; Moore Johnson, 2012; Simon & Moore Johnson, 2015; Smith & Ingersoll, 2004). For instance, Richard Ingersoll has written extensively around teacher attrition, teacher quality, and the impacts on schooling of and on teachers teaching out-of-field (2005) along with the status of teaching as a profession. Susan Moore Johnson, with her colleagues Michael Kraft and John Papay, (2011, 2012) dig more deeply into the conditions and social contexts of schools that impact whether teachers remain in the profession.

In contrast, other references external to the toolkit itself and considered "companion resources" are frequently mentioned. These resources include a website called *Everyone at the Table*, which promotes itself as a website with support tools to engage educators in evaluation reform.[15] Another companion resource mentioned within the EA Toolkit is a document published by Public Agenda called *How Can We Ensure that All Children have Excellent Teachers: A Choicework Discussion Guide* ("Everyone at the Table," n.d.). This guide was produced as part of the "Everyone at the Table" initiative spearheaded by the American Institutes for Research and Public Agenda with support from the Bill and Melinda Gates Foundation (Public Agenda, 2015). Additional support tools include a document developed by the GTL Center's staff called the *Talent Development Framework for 21st Century Educators: Moving Toward State Policy Alignment and Coherence*, which was published in November 2014 (The Center on Great Teachers and Leaders, 2014).

Equitable Access Plans

The second data source included 52 equitable access plans, including all fifty state plans and plans for the District of Columbia and Puerto Rico. The 52 equitable access plans each contain six components. These components were required by the U.S. Department of Education and ask include the following: (1) a description and documentation of the steps the SEA took to consult with stakeholders; (2) an identification of the equity gaps; (3) an explanation of the likely cause of the equity gaps; (4) a list of strategies to eliminate equity gaps; (5) a description of the measures the SEA will use to evaluate progress toward eliminating equity gaps; and (6) a description of how the SEA will publicly report on its progress. Table 1 provides an overview of the data sources used for this analysis.

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[15] www.everyoneatthetable.org

Table 1
Data Sources

Equitable Access Toolkit	Data Review Tool Sample Data Sets and Example Metrics Root Cause Analysis Workbook Stakeholder Engagement Guide Four Key Steps for Equitable Access Communication Planning Sample SEA Internal Team Meeting for Identifying Existing State Efforts and Stakeholder Groups Sample Meeting Agendas Incorporating Stakeholder Feedback – Discussion Planning, Recording, and Summary Forms Sample Timeline and Timeline Template for Developing a State Plan to Ensure Equitable Access to Excellent Educators PowerPoint Template Engaging Stakeholders in a Root-Cause Analysis Fishbone Diagram Talent Development Framework "Taking the Temperature" Activity Sample State plan to Ensure Equitable Access to Excellent Educators A "Build-Your-Own State Plan" Template
Companion Resources	Everyone at the Table How Can We Ensure that All Children have Excellent Teachers: A Choicework Discussion Guide Talent Development Framework for 21st Century Educators: Moving Toward State Policy Alignment and Coherence

State Equitable Access Plans	Alabama - AL	Nebraska - NE
	Alaska - AK	Nevada - NV
	Arizona - AZ	New Hampshire - NH
	Arkansas - AR	New Jersey - NJ
	California - CA	New Mexico - NM
	Colorado - CO	New York - NY
	Connecticut - CT	North Carolina - NC
	Delaware - DE	North Dakota - ND
	Florida - FL	Ohio - OH
	Georgia – GA	Oklahoma - OK
	Hawaii - HI	Oregon - OR
	Idaho - ID	Pennsylvania - PA
	Illinois - IL	Rhode Island - RI
	Indiana – IN	South Carolina - SC
	Iowa - IA	South Dakota - SD
	Kansas - KS	Tennessee - TN
	Kentucky - KY	Texas - TX
	Louisiana - LA	Utah - UT
	Maine - ME	Vermont - VT
	Maryland - MD	Virginia - VA
	Massachusetts - MA	Washington - WA
	Michigan - MI	West Virginia - WV
	Minnesota - MN	Wisconsin - WI
	Mississippi - MS	Wyoming – WY
	Missouri - MO	Puerto Rico – PR
	Montana - MT	District of Columbia – DC

Data Collection and Procedures

To conduct this analysis, I read the fifty-two equitable access plans with attention to whether the Equitable Access Toolkit or any of the resources contained or mentioned therein were referenced or cited in the text of the plans. Not every state credited or cited the resources used in the development of the plan, so initial data collection was likely an underrepresentation of the actual number of states that used tools, toolkits, and/templates from the GTL Center.

To address this, I completed another close reading of the plans and compiled a list of unique discourse markers written into the text of the EA plans. These discourse markers contained the same language or diagram (as in the case of the Fishbone Diagram, that I discuss briefly later on) as the GTL Center's EA Toolkit.

The first discourse marker was the phrase “as augmented with” when plans referred to the U.S. Department of Education’s official guidance document added after the launch of the Excellent Educators for All Initiative. “As augmented with” is an unnatural turn of phrase and thus served as a unique discourse marker. When a state used this same phrase in its plan, it indicated the likelihood that the state employed the EA toolkit during plan development, lifting language directly from *Resource 9: Sample State Plan to Ensure Equitable Access to Excellent Educators* (Sample Plan).

A second discourse marker within the EA toolkit’s Sample Plan was the definition of an “excellent teacher.” In the Sample Plan an excellent teacher was defined as follows:

> An *excellent teacher* is fully prepared to teach in his or her assigned content area, is able to demonstrate strong instructional practices and significant contributions to growth in student learning (on tests and in terms of social-emotional indicators), and consistently demonstrates professionalism and a dedication to the profession both within and outside of the classroom. (Center on Great Teachers and Leaders, 2015, p. 6)

There is a good likelihood that SEA personnel writing the state plans that included this definition (with or without slight modifications) used the Sample Plan within the EA toolkit when developing their state plan.

A third discourse marker used to signal the likelihood that SEA personnel used the Sample Plan within the EA Toolkit was the theory of action contained in the Sample Plan. The theory of action reads as follows:

> If a comprehensive approach to talent management—in particular for low-income, high-minority, and high-need schools and districts—is implemented carefully and its implementation is monitored and modified when warranted over time, then State A school districts will be better able to recruit, retain, and develop excellent educators such that all students have equitable access to excellent teaching and leaders to help them achieve their highest potential in school and beyond. (Center on Great Teachers and Leaders, 2015, p. 14)

Aside from serving as a unique discourse marker, the theory of action also promotes a particular policy idea; namely, that a comprehensive approach to talent management is *the* means through which to resolve the inequitable distribution of teachers. Notably, this theory of action does not refer to excellent teachers as certified teachers, teachers teaching in their field, and experienced teachers.

The final marker I employed to ascertain whether SEA personnel used the EA toolkit was the inclusion of a “Fishbone Diagram” for the root cause analysis in a state’s plan. The EA Toolkit promoted the use of this “Fishbone Diagram” resource when SEA personnel conducted a root cause analysis with stakeholders. Thus, the use of the same Fishbone Diagram in states’ equitable access plans provided another indication that the SEA had relied on the EA toolkit.

Disentangling which resources within the EA toolkit state education agencies used and worked from to develop their plans presented a methodological puzzle. However, the discourse markers included in state’s plan are drawn from one particular resource within the EA toolkit: *Resource 9: Sample State Plan to Ensure Equitable Access to Excellent Educators* (Sample Plan). I selected the Sample Plan to explore in more depth alongside state plans because the three discourse markers (other than the Fishbone Diagram) were written directly into it. The text of the Sample Plan also contains a theory of action, root causes, and strategies with embedded policies ideas to resolve those root causes. Thus, rather than conjecture about the use or nonuse of other EA toolkit resources by state education agencies, the Sample Plan within the EA toolkit provided a concrete way to examine the phenomenon of the toolkit’s influence on policy ideas within the plans.

Since I was interested in how SEAs’ use of the EA toolkit enhanced or constrained the strategies listed within states’ equitable access plans, my purposeful sampling strategy follows Patton's (2002) definition of criterion sampling. I selected to include as cases those state plans with three or more markers that SEA personnel had relied upon the EA toolkit and Sample Plan and those state plans with no outward markers indicating reliance upon the EA toolkit resources. I excluded from my analysis Equitable Access Plans that did not fit either criteria (i.e. plans who had 1-2 indicators). I excluded Puerto Rico's plan, as hiring policies in the protectorate are more centralized than in the rest of the states' plans, and this made Puerto Rico's plan an outlier with respect to its strategies (Puerto Rico Department of Education, 2015). I also excluded state plans for Idaho and Virginia from this analysis, as the strategies indicated in those plans were undeveloped, and it was not clear which strategies might be implemented (Idaho State Department of Education, 2015; Virginia Department of Education, 2015). Finally, I excluded plans written by six education agencies that received intensive early technical assistance around plan development and possibly prior to the publication of the EA toolkit.[16]

After excluding the state plans noted above, high-use states in this analysis included Alabama, Connecticut, Maine, Nevada, Oregon, Vermont, and Wisconsin. Low-use states in this analysis included Colorado, Florida, Hawaii, Illinois, Indiana, Kentucky, Maryland, Missouri, Montana, New Mexico, Nebraska, North Carolina, South Dakota, Texas, Utah, Washington, and Wyoming. Appendix 1 provides a table of the state plans that relied to a greater or lesser extent upon the EA toolkit resources.

To complete the analysis of the strategies within states' plans, I completed three rounds of coding for the twenty-four state plans, noting the specific strategies named within the plans. Per the coding manual by Saldana (2009), I began with descriptive and *in vivo* codes of the strategies named in the Sample Plan and of the strategies named in states' plans. The second round of coding incorporated structural codes. I then mapped state plans' strategies to the strategies listed in the Sample Plan. Initial codes were developed into eighteen categories of strategies named in the findings section. Strategies not listed in the Sample Plan but listed in states' plans were categorized as "state-identified strategies." Strategies within the Sample Plan were categorized as "Sample Plan Strategies." Once coding was completed, I tabulated state-identified strategies and Sample Plan Strategies for the high-use states and the low-use states.

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[16] D.C., MN, NJ, NY, OH, TN, OH, MN, NJ

Findings

The strategies listed within the twenty-four plans fall into seventeen broad categories. Table 2 provides a list of the categories with the number of Sample Plan Strategies and State-Identified Strategies listed in each category.

Table 2
No. of Strategies Named within Each Category by the Sample Plan & State Plans

Category	*Sample Plan Strategies*	*State Identified Strategies*
Hiring Practices	3	2
Recruitment	3	8
Compensation Practices	4	2
Career Advancement Opportunities	1	1
School & State Funding	6	6
Educator Effectiveness & Evaluation	2	2
Induction & Mentoring	3	3
Professional Development & Ongoing Learning	0	11
Educator and Leader Preparation	9	7
Licensing & Certification	3	5
Data Systems & Accountability	4	6
Training & Technical Assistance	4	6
Distance & Virtual Learning	0	2
School Climate & Working Conditions	0	5
Further Research	0	8
Family, Community & Stakeholder Engagement	0	3
Streamlined Policies	0	1

There are seventeen categories of strategies listed within the twenty-four plans I analyzed. The majority of these seventeen categories fall underneath the concept of human capital management or comprehensive talent management with respect to the educator workforce. There are only five categories not represented in the GTL Center's Talent Development Framework, and they are: School and State Funding; Training and Technical Assistance; Expanded Access to Excellent Teachers; Family, Community and Stakeholder Engagement; and Streamlined Policies (The Center on Great Teachers and Leaders, 2014). Thus, the majority of strategies named within state plans can be viewed as responding to demands for comprehensive talent management.

How did the use of a policy toolkit enable or constrain states' policy choices?

With respect to state education agencies' relative use of the strategies contained within the Sample Plan, high-use states included more Sample Plan strategies than low-use states in their Equitable Access Plans. In every category where the Sample Plan listed strategies, high-use states adopted more of the Sample Plan strategies than low-use states for inclusion in the state's Equitable Access Plan. Table 3 below illustrates sample plan strategy use by high-use and low-use states.

Table 3

Sample Plan Strategy Use by High-Use and Low-Use States

Sample Plan Strategies	*High-Use*	*Low-Use*
Hiring Practices	0.14	0.02
Recruitment	0.33	0.14
Compensation Practices	0.11	0.06
Educator career advancement opportunities	0.29	0.24
School & State Funding	0.14	0.04
Educator Effectiveness & Evaluation	0.21	0.18
Induction & Mentoring	0.14	0.06
Educator & Leader Preparation	0.11	0.10
Licensing & Certification	0.08	0.02
Data & Accountability	0.14	0.06
Training & Technical Assistance	0.04	0

A chi squared test for significance reveals that high-use states used more Sample Plan strategies than low-use states at a level of $p<.05$ significance.

For states that used the Equitable Access Toolkit and its accompanying resources, the strategies listed within state plans followed markedly from the strategies promoted in the EA toolkit and Sample Plan.

High-use states did not only use Sample Plan strategies. They also listed strategies different from those included in the Sample Plan. However, low-use states identified their own strategies to an equal extent. See Table 4 for a breakdown of state-identified strategies for high-use and low-use states.

Table 4
State-Identified Strategy Use by High-Use and Low-Use States

State-Identified Strategies	*High-Use*	*Low-Use*
Hiring Practices	0.14	0.06
Recruitment	0.05	0.10
Compensation Practices	0	0.06
Career Advancement opportunities	0	0.18
Educator Effectiveness & Evaluation	0.07	0.06
Induction & Mentoring	0	0.11
Professional Development & Learning	0.11	0.07
Educator & Leader Preparation	0.02	0.08
Licensing & Certification	0.06	0.07
Data & Accountability	0.07	0.09
Further Research	0.15	0.07
School Climate & Working Conditions	0.13	0.07
School & State Funding	0.14	0.05
Training & Technical Assistance	0.14	0.12
Distance & Virtual Learning	0.17	0.12
Stakeholder & Parent Engagement	0.17	0.06
Streamline Policies	0.17	0.0

Low-use states identified more of their own strategies in the umbrella categories of talent development and human capital management (i.e. compensation, recruitment, educator and leadership preparation, licensing and certification) than high-use states. The majority of the state-identified strategies mentioned by high-use states occurred outside the larger categories of talent development or human capital management. Consequently, while high-use states listed different strategies in other categories (such as working conditions and research), use of the Sample Plan with its prepackaged strategies in the categories under comprehensive talent management made it less likely that states would identify their own strategies in those same categories.

Discussion

Turnkey Strategies

The strategies within the Sample Plan appear to drive many of the high-use states' strategies to achieve equitable access to excellent educators. I now turn to Nevada's state plan to illustrate this point. One of the Sample Plan's strategies under the category of hiring practice is to negotiate changes in collective bargaining agreements (Center on Great Teachers and Leaders, 2015). Nevada's plan also includes as a strategy changes to collective bargaining agreements. In this case, Nevada's strategies included rolling back collective bargaining agreements and district policies related to hiring in underperforming schools so that "principals can hire teachers who want to work in the schools and have the skills, beliefs, and commitment necessary to succeed in underperforming school" (Nevada Department of Education, 2015, p. 34). Additionally, a strategy within the compensation practices category of the Sample Plan calls for implementing a new teacher compensation system based in part on teacher performance (Center on Great Teachers and Leaders, 2015). Similarly, Nevada included a strategy around performance pay to attract and retain effective principals and teachers (Nevada Department of Education, 2015). Wisconsin, another high-use state relied on the Sample Plan strategies in the categories of licensing and certification and educator and leader preparation. For instance, the Sample Plan lists strategies such as "cultivating reciprocity agreements and neighboring-state relationships" and "establishing or recruiting alternative pathways/programs to supply teachers to the rural areas of the state (e.g. a 'grow your own' approach), and developing targeted residency programs –among other things" in the category of licensing and certification (Center on Great Teachers and Leaders, 2015, pp.24-25). Correspondingly, Wisconsin lists as some of its strategies: "explore licensing reciprocity agreements with neighboring states," and "explore […] an option to create […] DPI-approved alternative licensure programs to [allow districts to] grow their own teachers to address shortage areas" – the same strategies enumerated in the Sample Plan (Center on Great Teachers and Leaders, 2015; Wisconsin Department of Public Instruction, 2015, p. 34). In the case of Wisconsin and the other high-use states, the strategies proposed in the Sample Plan were used as turnkey strategies for state education agencies to adopt or recommend in their equitable access plans. See Appendix 2 for an overview of the strategies identified in the Sample Plan and state-identified strategies.

Warrants for Existing Strategies

Not all of the strategies proposed by states in their Equitable Access Plans were new; in fact, many strategies continued existing initiatives to improve teacher quality. These strategies include many of the policy levers Sykes and Dibner (2009) mention have been used in the past to address teacher quality (i.e. recruitment initiatives with scholarships, expansion of alternate pathways, preparation program accountability, differential salaries for teachers working in high need schools and subjects, professional development, induction support, etc…). Yet, many of these ideas such as expanding alternative pathways, "grow-your-own" programs, targeted teacher residency models, and preparation program accountability, loan forgiveness, differential salaries, and mentoring and induction support are also included in the Sample Plan as strategies (Center on Great Teachers and Leaders, 2015).

The policy ideas promoted by the GTL Center within the EA toolkit and its accompanying resources were not designed out of the blue by the administrative partners (i.e. American Institutes for Research, the Chief Council of State School Officers, and Public Impact) and staff of the GTL Center. Policy advocacy organizations and governments alike have promoted policy ideas such as performance pay and connecting education preparation program approval to graduates' outcomes. However, the concept of a comprehensive approach to talent management helps states to rhetorically justify some of these strategies that might be otherwise out of place. As a consequence, the umbrella term "comprehensive approach to talent management" enabled states to both justify what they were already doing and to continue engaging in existing and new efforts to expand alternative certification programs. It also helps that the Sample Plan includes alternative pathways to certification as a viable tool to support recruitment as part of the comprehensive approach to talent management. For example, Alabama couched the expansion of alternative certification routes as a recruitment effort aligned with comprehensive talent management (Alabama State Department of Education, 2015). Alabama's theory of action reads as follows:

> Our theory of action will be to have a comprehensive approach to talent management and resources and to implement it carefully and to monitor it to modify when necessary. If we accomplish this, our LEAs will be better able to recruit, retain, and develop excellent educators so that all students have equitable access to excellent teaching and leading to help them achieve the highest potential in school and beyond. (Alabama State Department of Education, 2015, p. 21)

Alabama's first goal within this theory of action is to "ensure effective teacher and leader preparation" (Alabama State Department of Education, 2015, p. 22). To do so, one of the strategies advocated within the plan is to:

> increase the quality of current alternative certification routes and create new routes that encourage the best and the brightest to enter the teaching profession. In order to remove the barriers that current prevent talented individuals from teaching, the Alabama State

> Department of Education [recommends] a partnership with Teach for America and/or an Alabama version of this program. (Alabama State Department of Education, 2015, p. 25)

By linking the expansion of alternative certification programs as one element of an effort to improve recruitment in line with a comprehensive approach to talent management, the sample plan enabled Alabama and other states to continue existing efforts and engage in new efforts to expand alternative certification programs without encouraging a rigorous evaluation of their current efforts to improve teacher quality.

State Identified Strategies outside of the Sample Plan

Recruitment is one area where low-use states listed more state-identified strategies than high-use states. One subcategory, which I titled "uplift the teaching profession" within the category of recruitment bears pause. While recruitment is a category under comprehensive talent management, the strategies named within the Sample Plan include recruiting excellent school leaders, hosting recruitment events through local educator preparation programs for hard-to-staff schools, and offering recruitment incentives like scholarships, loan forgiveness and signing bonuses. No strategies named within the Sample Plan include investing in efforts to uplift the teaching profession. Notably, only low-use states listed efforts to uplift the teaching profession, such as conducting marketing campaigns and celebrating excellent teachers or teaching successes as recruitment strategies. In fact, nearly one quarter of the low-use states (24%) listed this as a key strategy for recruitment.[17]

Similarly, other strategies promoted by low-use states include providing recommendations to districts and schools around how to best support new teachers with positive working conditions, such as requirements for planning time and limited participation of beginning teachers in non-instructional activities (North Carolina Department of Public Instruction, 2015). To attract teachers to hard-to-staff schools, Utah recommended providing resources to hard-to-staff schools to develop interesting programs and providing well-resourced classrooms as a means to attract teachers to hard-to-staff schools (Utah State Office of Education, 2015).

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[17] WY, MO, IN, and SD

Conclusion

The EA Toolkit and specifically the Sample Plan influenced the way high-use states went about conceptualizing their strategies. While it certainly may be the case that talent management is a more politically feasible strategy at the state level than delving into local schools' working conditions, it is equally the case that the GTL Center Sample Plan provided a conceptual roadmap that framed what state education agencies perceived as viable policy options.

In creating a suite of tools and resources for state equitable access plan development that simultaneously highlighted issues of expressed importance to the GTL Center, the GTL Center and its staff were able to advance what they (or their funders) believed to be the best strategies to resolve inequitable distribution regardless of root causes or unique state contexts. Even if the sample plan served as a model for what the U.S. Department of Education wished states to produce, the overriding emphasis on comprehensive talent management as emphasized within the GTL Center's suite of technical assistance tools and in the EA toolkit itself indicates that the GTL Center, in its role as an federally-funded intermediary organization, advanced one policy idea (a comprehensive approach to talent management) around teacher quality. Thus, rather than serving as a toolkit to support equitable access plan development, the toolkit narrowed and informed the menu of policy ideas around human capital management for states using the IO's support.

As expressed earlier, literature that explores the role of toolkits and technical assistance tools in policy development is education policy is not well developed. From a critical and discursive perspective, this current work begins to delve into the ways in which toolkits, and the intermediary organizations tasked and paid to develop them, shaped the policy ideas within those state education agencies that used the resources.

Toolkits are proving to be effective at educating end-users and/or facilitating behavior change – albeit in part by shaping and framing the ways these end-users engage with the knowledge base. However, if the evidence base is not specified in toolkits, end users may end up making choices without sufficiently understanding the deliberate inclusion and exclusion of sources that went into the design and development of the toolkit itself. It remains problematic that the ways in which toolkits frame and shape the ideas and innovations considered acceptable contain no analysis of *what* makes them acceptable.

Beyond knowledge mobilization then, the preliminary conclusions of this work raise implications for the policy process in a policy arena increasingly crowded by advocacy organizations and intermediary organizations, each with their own beliefs, values, or opportunistic appetite about the ways to best reform education. It is not simply research use as in issue briefs, advocacy reports, economic working papers, or peer-reviewed education research that influences policy ideas in this arena. Rather, technical assistance tools coded as nonpartisan support may play an even larger role than research in shaping the policy ideas that state education agencies elect to implement.

Appendix 1: Unique Discourse Markers contained in States' Equitable Access Plans

State	Direct Reference to EA Toolkit or Resource Therein	"as augmented with"	"excellent educator" definition	Theory of Action	Fishbone Diagram
AK		☐			
AL	x	x		x	
AR		x			
AZ	x				x
CA		x			
CO					
CT	x		x		x
D.C.	x	x			
DE		x	x		
FL					
GA		x			x
HI					
IA		x			
ID	x	x	x		
IL					
IN					
KS		x	x		
KY					
LA		x			
MA	x				
MD					
ME	x	x		x	x
MI		x			
MN		x			
MO					
MS	x		x		
MT					
NC					
ND				x	
NE					
NH		x		x	
NJ		x			
NM					
NV	x		x	x	x
NY					
OH					
OK					x
OR	x	x	x		x
PA	x				
PR					

RI			x		
SC		x			x
SD					
TX					
TN					
UT		x			
VA					
VT	x	x		x	x
WA					
WI	x	x	x	x	x
WV		x	x		
WY					

Appendix 2: Strategies Identified in State Plans

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Hiring Practices																								
Negotiate changes in collective bargaining agreements				X	X																			
Initiate discussions of a model collective-bargaining agreement that provides districts flexibility in moving teachers across schools while preserving teacher rights and protections									X															
Consider new staffing models like digital course choices or teams of high-qualified educators	X																						X	
Review district assignment policies				X					X								X							
Use edTPA rubrics as a screening tool to support hiring							X																	
Recruitment																								
Recruit excellent school leaders																								
Host strategic recruitment events by hard-to-staff schools through local EPPs	X				X			X	X															
Offer recruitment incentives like scholarships, loan forgiveness, and signing bonuses	X	X	X	X	X			X						X	X	X						X		
Develop community based incentives to attract teachers	X							X						X										
Create high school programs to attract new teachers							X						X						X					
Increase representation of black and latino, American Indian teachers		X														X						X		
Uplift the teaching profession													X			X				X	X			
Make candidates aware of federal loan forgiveness programs																		X						
Place desirable programs and equipment in under-resourced schools as a means to attract teachers to rural areas and those impacted by poverty														X										

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Minority teacher recruitment and retention program																	X							
Perception campaign of working in high need schools																								
Compensation Practices																								
Implement a new teacher compensation system based in part on teacher performance	X			X						X														
New teacher compensation also provides financial incentives for high poverty and hard to staff subject areas					X			X			X						X							
Collaborate with business leaders, legislators, and community organizations to identify ways to raise teacher salaries																								
Increase teacher pay so that it is competitive in high-poverty schools																								
Increase across-the-board teacher salaries										X														
Pay special education teachers for case management meetings													X											
Educator career advancement opportunities in high-need schools																								
Encourage LEAs to create teacher leader programs, particularly in high-poverty schools		X	X													X	X		X				X	
Encourage National Board Certification									X		X									X				
School and State Funding																								
Encourage states to use Title Part A and Title II Part A funding to cover the cost of training new mentors																		X						
Set aside Title II, Part A funds to cover the cost of training new teacher leaders																								
Strategically allocate federal funds	X						X					X					X							

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Review funding streams (title I, part A; title III, SIGs, IDEA funds, TIF, and TQP, TtT, SLP, SPT, and IEPD grants) to see if they can be deployed more effectively					X		X																	
Identify other funds that can be directed to teacher and leader equity-related professional learning																								
Critically review alternative funding streams	X						X										X							
Improvement of Fiscal Resources to Match Demographic Shifts in K-12 Population.				X																				
New funding appropriations				X			X																	
Examine Effective Use of Per Pupil Expenditure		X																						
Clearinghouse for Grant Opportunities							X																	
Grants to LEAs					X				X									X						
Advocate for increased funding from legislature								X				X							X					
Educator Effectiveness and Evaluation																								
Assess how the new Educator Effectiveness Evaluation System data can identify areas for improvement and the availability of relevant opportunities for professional learning				X			X			X	X				X		X							
Partner with LEAs to critically review the alignment of educator evaluation and professional learning	X													X										
Principal evaluation systems				X																				
Encourage the use of a clear and comprehensive system of evaluation and external review																					X	X		
Induction and Mentoring																								
provide training for teachers serving as mentors to beginning teachers																								
provide best practices for inducting teachers into the profession to all school districts																								

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Improve and expand the induction and mentoring program	X				X	X									X							X		X
Use community leaders and members to support teachers								X																
Set statewide program standards for high-quality comprehensive induction																X	X							
Fund statewide induction and mentoring												X												
Professional Development & Learning																								
Integrate cultural competence into professional learning		X					X																	
Develop content modules for understanding urban education																								
Require professional development for student evaluated as less than effective																			X					
Develop online courses to support teachers						X					X			X		X								
Facilitate targeted PD for beginning teachers																								
Provide PD to AP teachers										X														
Provide PD to teachers around teaching English language learners	X								X	X														X
Provide PD to teachers around teaching Native Americans															X									
Engage teachers in professional learning experiences that will increase student achievement	X																X							
Create a "growth mindset" among teachers																			X					
Cultural Competency		X			X					X				X										
Educator & Leader Preparation																								
Utilize the educator preparation task force					X		X																	
Provide EPPs with awareness of new student standards and offer time for them to revise programs so that new teachers can teach to those standards																								

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Develop partnerships between preparation providers and the schools with the highest needs		X					X		X						X									
Establish or recruit alternative pathways/programs to supply teachers to the rural areas of the state (grow your own)	X	X					X	X	X	X	X	X	X											
Develop targeted residency programs							X																	
Begin examining the principal preparation pipeline to gauge the quality of principal preparation programs and alignment to current demands of the role													X											
Change program approval requirements to match new standards and performance expectations											X						X							
Implement a process for reviewing and revising program requirements with an emphasis on outcomes									X										X					
Expand school setting experiences in preparation programs																	X	X						
Enhance cultural competency preparation							X							X										
Partner with IHEs to improve teacher preparation programs												X					X							
Develop or expand an alternate route to licensure for principals											X													
Reduce educator preparation program credit requirements										X														
Establish new content assessments for candidates in TPPs																X								
Increase standards for literacy instruction in EPPs																	X							
Establish a performance assessment for teacher candidates																X						X		
Licensing and Certification																								
Change licensure requirements to match new academic standards and performance expectations																								

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Review and revise the teacher and leader licensure requirements							X			X														
Cultivate reciprocity agreements and neighboring-state relationships							X																	
Tiered certification	X																							
Allow teachers with effective student growth ratings to advance to next level of licensure										X									X					
Modify HQT requirements for Special Education Teachers								X		X														
Broaden areas of certification			X						X															
Allow teaching time on permits to count to required hours of licensed teaching time to advance to next level of licensure.										X														
Data and Accountability																								
Annually review the overall status of teacher recruitment					X						X													
Publicly report data so teacher candidates selecting programs and school leaders hiring candidates have the information they need to make informed decisions							X				X								X					X
Create an annual publicly-available fiscal equity report																								
Conduct periodic district quality assurance reviews of school spending plans	X	X																						
publicly report on shortage data											X													
publicly report on teacher qualifications and equity data											X			X										
Annual performance reports for teacher preparation programs										X	X											X		
Connect state data with school climate surveys							X																	
Monitor district continuous improvement plans that should include professional development goals	X																							
Require LEAs to submit their own equity plans					X						X											X	X	

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Training & Technical Assistance																								
Expand and improve school budget management training, support, and professional learning																								
Develop a series of budget management trainings targeted the challenges of school leaders in high-need schools	X																							
Work intensively with select districts, providing leaders the opportunity to use state fiscal staff as a resource on the budget process																								
Facilitate communication between administrative staff on budget management and allowable use of funds																								
Technical assistance and training to LEAs	X		X	X			X			X					X	X					X		X	X
Offer training to administrators		X		X										X	X									
Build capacity of teachers to understand value-added scores																			X					
Create a model teacher evaluation system																								X
Select high-VAM scoring teachers to share best practices																			X					
Release resources for compensation factors, teacher leadership and teacher retention via the new Equity website																				X				
Access to Excellent Teachers																								
Create or Expand Virtual Schools/Distance Learning	X		X								X				X							X		
Share teachers across districts															X									
School Climate and Working Conditions																								
Build capacity to serve students with emotional and behavioral health needs		X																						
Implement a multi-tiered behavioral framework		X												X	X						X			
Reduce chronic absenteeism		X																						

	AL	CT	ME	NV	OR	VT	WI	HI	MD	NM	NC	WA	WY	UT	MT	MO	KY	IL	FL	IN	SD	NE	TX	CO
Provide technical assistance around RtI & PBIS							X		X												X			
Provide recommendations for working conditions (e.g. limited noninstructional duties, early mentor assignment, orientation, etc..)											X													
Further Research																								
Conduct a feasibility study to determine. professional learning needs and cost-effective approaches for ongoing principal development.		X																						
Research on staff turnover						X	X	X	X							X								
Research on shortage areas							X									X								
Measure the distribution of high impact teachers																			X					
Research on existing policies around teacher preparation														X										
Teacher surveys						X	X																	X
Conduct an analysis of current professional development offerings	X													X										
Develop a statewide culture and climate survey																				X				
Engagement																								
Establish or continue an educator equity work group					X		X															X		
Continue to engage key stakeholders																					X			
Increase parent engagement in school contexts		X											X											
Streamline Policies																								
integrate state and federal programs effectively																						X		

CHAPTER 5: ON MECHANISMS EMPLOYED BY INTERMEDIARY ORGANIZATIONS TO BROKER KNOWLEDGE AND THE EXPERIENCES OF BEING BROKERED

It is well documented that the inequitable distribution of fully prepared professional and experienced teachers disproportionately impacts poor and minority students (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004; Peske & Haycock, 2006). Students of color in low income schools are more likely to be taught by teachers who are uncertified, inexperienced, or teaching outside of their field of expertise (Adamson & Darling-Hammond, 2012; Ingersoll et al., 2004). Schools with high minority populations and schools in communities impacted by poverty suffer from higher levels of teacher turnover and attrition (Esch et al., 2005; Ingersoll, 2004). Difficult-to-staff urban schools in communities impacted by poverty and with large numbers of minority students also face the greatest number of out-of-field teachers (Horng, 2009; Ingersoll et al., 2004; Jerald & Ingersoll, 2002). Similarly, teacher credentials are unevenly distributed among students with different racial and socioeconomic statuses (Clotfelter, Ladd, & Vigdor, 2005). And, even within schools, classrooms with low-achieving, minority, and poor students are more likely to have novice teachers (Kalogrides & Loeb, 2013).

The problem of the inequitable distribution of workforce talent in education has proven to be somewhat of a “wicked problem” (Rittel & Webber, 1973) for those seeking to craft policy solutions. No single factor contributes to the inequitable distribution of inexperienced, unqualified, and out-of-field teachers, and like most complex problems, the influence of specific factors is contingent on the unique social, political, and historical contexts and structures of schooling in communities, districts, states, and regions.

Policy Context

Since 2002, the federal department of education has attempted to tackle the inequitable distribution of teachers. The No Child Left Behind Act of 2001 (NCLB) stipulated that state teacher equity plans needed to describe the steps that would be taken to ensure that low income and minority students are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers (DeBray, 2006; No Child Left Behind [NCLB], 2002; Rebell & Wolff, 2008). These equity plans needed to identify inequities in the distribution of inexperienced, unqualified and out-of-field teachers, delineate strategies for addressing the inequities, provide evidence of the probable success of these strategies, and include how the state would monitor local education authorities (LEAs) with respect to the identified inequities (p. 212).

In general, the teacher equity plans required by law under NCLB were ineffective at reducing the disproportionate number of low income and minority students taught by inexperienced, unqualified, or out-of-field teachers. In part, this was due to an initial decision by the U.S. Department of Education not to require that the plans be officially reviewed and approved (Loeb & Miller, 2009). This sharply contrasted with NCLB's punitive accountability requirements for student achievement. As a consequence, most states prioritized the development of plans for student achievement goals, and disregarded issues of teacher quality and inequitable distribution. Additionally, limited data, nonstandardized evaluation protocols, and nonuniform teacher equity plan formats made it difficult for states and the federal government to promote effective policies around teacher quality. The desire to encourage states to enact their equity plans did not end there.

In 2014, the U.S. Department of Education launched the Excellent Educators for All

Initiative by calling on states to submit updated plans, which the U.S. DOE termed "State Plans to Ensure Equitable Access to Excellent Educators." For simplicity's sake, I refer to these plans as equitable access plans moving forward. In these equitable access plans, state education agencies needed to document the root causes of inequitable distribution of excellent teachers in their state and list strategies to resolve these gaps in teacher quality. In December 2015, fifty-two plans to ensure equitable access to excellent educators were approved by the U.S. Department of Education. Today, state education agencies throughout the country are in the midst of implementing their planned strategies to improve the inequitable distribution of out-of-field, inexperienced, and otherwise unqualified teachers.

Backgrounds of the Intermediary Organizations

In establishing this initiative and providing a guidance document to the states, the U.S. Department of Education elevated the status of two intermediary organizations (IOs) tasked with supporting states to develop their equity plans: the Equitable Access Support Network and the Center on Great Teachers and Leaders.

The Equitable Access Support Network

The U.S. Department of Education committed $4.2 million dollars for the creation of the Equitable Access Support Network (EASN) to assist states with their development of the equity plans (U.S. Department of Education, 2014a). Applied Engineering Management Corporation (AEM Corporation) administers the EASN. The EASN's predecessor is the Reform Support Network. The Reform Support Network was administered by ICF International and designed as an online collaborative forum to support the winners of Race to the Top. Like the Reform Support Network, the EASN platform is set up in a similar fashion: there are resources for states along with online communities of practice around topic areas and webinars.

In fact, before the EASN was up and running and just as state education agencies were beginning to turn their attention to developing the equitable access plans, the Reform Support Network partnered with the U.S. Department of Education to sponsor a meeting with select states. Thus, the EASN and the Reform Support Network were interlocking partners in the support they provided to state education agencies.

Both ICF International and AEM Corporation outsourced some of the work of producing support materials via contracts with third-party organizations, including contracting with an organization called Education First (email communication with Education First Staff Member, April 13, 2017). Education First describes itself as a "for-profit professional services firm with a not-for-profit soul" and considers itself "nimble and responsive, while pursuing our broader agenda of equitable and effective public education for all" ("Education First," n.d.). Education First has received funding from the Bill and Melinda Gates Foundation and the U.S Department of Education. Education First also worked through the Reform Support Network to support states in preparing applications for Race to the Top and then again as a technical assistance provider to 19 Race to the Top winners. On its website, Education First lists a number of barriers to achievement, including low expectations and not enough accountability, limited capacity, inflexibility and an aversion to innovative ideas, a focus "on what feels right rather than what actually works" and policy decisions that benefit adults but not children ("Education First," n.d.).

With such insight from Education First as to its priorities, it becomes clear that the Equitable Access Support Network in concert with the Reform Support Network and Education First believes that barriers to achievement include low accountability, low capacity, low expectations, and inflexibility on the part of educational institutions to accept and support innovation. These beliefs are in lock step with education reform organizations such as The New Teacher Project (TNTP) and the priorities incentivized through Race to the Top (U.S. Department of Education, 2009; Weisberg et al., 2009).

The Center on Great Teachers and Leaders (GTL Center)

In unveiling the Excellent Educators for All Initiative, the GTL Center was named as an additional resource for state education agencies. The American Institutes for Research (AIR) received a contract to operate the GTL Center through a competitive process. Initially funded as a national comprehensive content center to support effective teachers and leaders, the GTL Center operates via a U.S Department of Education grant as one of seven content centers funded through the Office of School Support and Rural Programs. In the call for applicants as listed in the Federal Register, the Center on Great Teachers and Leaders was created to provide technical assistance and identify, synthesize, and disseminate research-based practices and emerging promising practices to increase the capacity of SEAs to support their districts and schools in improving student outcomes by supporting effective instruction and leadership. Additionally, the GTL Center was required to provide technical assistance to regional centers and state education agencies in the following areas: developing the knowledge and skills of teachers and leaders; strategies to ensure the equitable distribution of effective teachers and to meet demand in high-need and rural areas; developing and implementing teacher and leader human capital management systems, including educator evaluation and effectiveness systems; using human capital strategies to build teacher and leader capacity around productive school environments; and using data from human capital management systems and state longitudinal databases to guide professional development and improve instruction (Department of Education: Final Priorities, Requirements, and Selection Criteria - Comprehensive Centers Program, 2012).

The GTL Center was seen as an outgrowth of its predecessor, the National Comprehensive Center for Teacher Quality (TQ Center), with staff from TQ Center working at the GTL Center and continuing their earlier TQ Center work on teacher quality (GTL Center Staff A, personal communication, December 21, 2016). Another reason for awarding funding to the American Institutes for Research (AIR) to support the Excellent Educators for All initiative was a commitment by the GTL Center to support state education agencies in their development of a comprehensive human capital management approach to teacher and principal quality (GTL Center Staff B, personal communication, December 31, 2016).

In 2012, the American Institutes for Research (AIR) was awarded funding to administer the GTL Center in partnership with the Chief Council of State School Officers (CCSSO) and Public Impact. The American Institutes for Research brands itself as an independent, objective, and non-partisan research and evaluation nonprofit. The research branch of AIR conducts behavioral and social science research and evaluation. Some of its goals are to produce improvements in education, health, and the workforce, to inform public understanding and policymaking by the best evidence, and to design and advance statistical and research methods ("American Institutes for Research," n.d.).

The Chief Council of State School Officers (CCSSO) brands itself as a nonpartisan, nonprofit organization of state school officers committed to ensuring that all students graduate prepared for college, careers, and life. Some of CCSSO's named business and industry partners include the American Institutes for Research, the Educational Testing service (ETS), Pearson Education, McGraw-Hill Education, Batelle for Kids, Smarter Balance, and Teachers of Tomorrow. Important to note here is that CCSSO was an outspoken advocate for the adoption and implementation of the Common Core State Standards while Smarter Balance developed one of the two main assessments adopted by states to measure student learning around the common core. The American Institutes for Research developed the delivery platform for the Smarter Balance Assessment. Thus, these for-profit and nonprofit organizations are not strange bedfellows.

The third partner of the GTL Center is another apparently nonpartisan organization called Public Impact. Public Impact is run by a husband and wife team out of North Carolina and provides research assistance, policy and planning advice, and implementation support for topics related to school funding, school turnaround, charter schools, technology in schools, and teachers and principals.[18] One particular policy idea developed by Public Impact and advocated for within the policy community is a concept termed "Opportunity Culture" wherein the main operating belief is that student learning can be improved within existing budgets through an increased reliance on paraprofessionals, larger class sizes, and technology (for a cogent critique of "Opportunity Culture," see Hinchey, 2013).

Together, these three partners hold beliefs and reform priorities that align with federal U.S. Department of Education investments in evidence-based and innovative educational practices, longitudinal data systems, effectiveness measures based on growth data through standardized tests, and education reforms that view modifications to teaching and leading as key levers through which to advance education reform.

Purpose of the Study

The strategies included as solutions to the inequitable distribution of high-quality teachers in states' equitable access plans raise new questions about influence in the education policymaking process. For instance, even though insufficient or poor working conditions are listed as primary root causes to nearly the same degree as root causes related to inefficient human capital management, there is a disproportionate number of strategies addressing human capital management when compared with strategies that address working conditions in states' equitable access plans (Williams II et al. 2016). What patterns of influence led state education agencies to list strategies so focused on human capital management?

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[18] http://publicimpact.com/

In this study, I use the critical conceptualization of Campbell and Peterson's "knowledge regimes" (2007) to explore the mechanisms employed by federally funded intermediary organizations to facilitate the development of states' equitable access plans. I also explore through interviews SEA personnel's perspectives of the support they received from the support organizations tasked with helping SEAs develop their Equitable Access Plans. In this analysis, I ask the following two research questions:

1) what were the mechanisms through which support was provided to state education agencies by the federally funded intermediary organizations; and

2) how did state education agency personnel experience this support?

I begin by briefly reviewing the literature on intermediary organizations, knowledge brokering, and technical assistance by intermediary organizations around education reform. I then discuss my theoretical framework, and in so doing operationalize the concept of knowledge regimes. From there, I discuss my research methods, data collection and procedures, and findings.

Review of the Literature

Moving Research into Policy or Knowledge Mobilization (KMb)

The process of getting research into the policy sphere goes by a number of different terms, some of which prevail over others in certain fields. This process is alternatively called knowledge transfer and exchange, knowledge linkage and exchange, knowledge exchange, knowledge management, knowledge dissemination, knowledge translation, and knowledge mobilization. This abundance of terms, each with slightly different connotations, makes it difficult to review the body of literature on the ways in which research finds the ears of policymakers and how to improve such processes.

With that said, the term knowledge mobilization (KMb) is increasingly used in education policy and practice studies analyzing this process (see Cooper & Shewchuk, 2015; Scott, Jabbar, LaLonde, Debray, & Lubienski, 2015). To keep the terms consistent, I will be employing the term knowledge mobilization to talk about this process in this article. Knowledge mobilization (KMb) is operationalized as follows: "knowledge mobilization includes efforts to increase the use of research evidence in policy and practice in education (Cooper & Shewchuk, 2015, p. 1). Mobilization implies movement, and so Read, Cooper, Edelstein, Sohn, and Levin (2013) further conceptualize knowledge mobilization as the "movement of research from production to its ultimate impact on policy and practice" (p. 25). With that clarified, what influences the effects of knowledge mobilization on policy and practice?

Political, organizational, and institutional contexts matter for knowledge mobilization (Contandriopoulos et al., 2010; Paul Sabatier, 1978). This is sometimes referred to as the "social ecology of research use" where use unfolds in different ways in organizational and social settings and in different political and policy contexts (Coburn, Honig, & Stein, 2009; Nutley et al., 2007; Tseng & Senior Program Team, 2008). Organizational capacity, culture, and structure also shape how research is used (Tseng, 2012).

Beyond institutions and organizations, relationships are essential to how policymakers receive, understand, and use research (Finnigan, Daly, & Che, 2013; Tseng, 2012). Individuals and groups access information through their social ties, which require relational trust (Finnigan

& Daly, 2012). Thus, policymakers who have direct contact and relational trust with researchers are more likely to use research (Crona & Parker, 2011). Consequently, it is supposed that the development of social networks that bring researchers and policymakers into contact with each other may increase the use of research in policy decisions (Crona & Parker, 2011).

The perception of policymakers that a particular source is authoritative increases the likelihood that such research will be used (Percy-Smith et al., 2002). Thus, large, analytical purportedly objective research organizations have more influence over policymaking than their smaller, more descriptive counterparts (Hird, 2005). Social science research also needs to be accessible (Nelson et al., 1987). Research findings are more likely used when they are intuitive and when the implications for action are clear (Caplan, 1977). Furthermore, research directly affiliated with the decision-making agency is used more frequently than outside research (Rich, 1977; Dunn, 1980; Nelson et al., 1987; Percy-Smith et al., 2002). This suggests that in-house research or research organizations directly affiliated with the decision-making agency have more authority or are perceived to be more credible than outside sources. When external research *is* used, it is more often to provide background information to inform the development of policy than to inform policy decisions (Percy-Smith, et. al., 2002). Finally, research that finds the ears of policymakers is often sponsored and supported by knowledge brokers who provide the links between research producers and research users (Ward et al., 2009).

Our Enduring Faith in Research and Data to Improve Education

Based in part on the hypothesis that researchers and policymakers reside in two different “communities” (see Caplan, 1979 for an explication of the “two communities” thesis), it is supposed that getting researchers to produce policy-relevant knowledge and having policymakers attend to social science research more than other types of knowledge is a rather tall order. This does not mean that enthusiasm around efforts to increase the effect of education research on the policymaking community has been dampened.

There is renewed interest today in increasing the use of research knowledge and data, which is now frequently termed evidence-based policy and practice (Davies et al., 2000; Nutley et al., 2007; Tseng, 2012). For instance, No Child Left Behind contained more than 100 references to "scientifically-based research" and required states to incorporate such research into decisions (Tseng, 2012). Furthermore, emerging definitions of "scientifically-based research" is shaping education research (Mason, 2013). So-called "gold standard" education studies use experimental or quasi-experimental research designs, their results can be replicated, and their policy prescriptions can be brought to scale (Mason, 2013). In 2002 the What Works Clearinghouse was created to share what are presumed to be best practices gleaned from research studies. The goal was to provide educators, policymakers, and the public with a central and trusted source of science evidence of what *works* in education. In prioritizing such studies, other perhaps equally or more valuable studies are sidelined either through disinvestment or reverse incentives. Thus, certain types of research (i.e. quantitative, quasi-experimental, easily scalable) are the studies more likely to be promoted in the policymaking arena.

This push to incentivize research that fits the operating definition of "scientifically-based research" did not end with the eclipse of the Bush Administration. Though it is not without its critics (see Holmes, Murray, Perron, & Rail, 2006; Trinder & Reynolds, 2000), evidence-based policy and practice continues to forge ahead in many policy arenas both within and outside the United States. Federal funding continues to flow to National Centers tasked with producing policy-relevant research knowledge. Among these centers is the National Center for the Analysis of Longitudinal Data in Education Research (CALDER). CALDER has become a focal point for research on the teacher labor market, particularly as it seeks to address ways to improve the management of school personnel through attention to student outcomes via teachers' value-added scores (Odden, 2013). Additionally, federally funded competitive grant opportunities like Race to the Top, Investing in Innovation (i3), and the Teacher Incentive Fund (TIF) incentivize the use of research that analyzes teacher and student outcomes, performance, and longitudinal data – largely statistical analyses – instead of more qualitative analyses.

Funding trends corroborate this point. In 2009-2010, just over $10 billion in discretionary funding to the Institute of Education Sciences (IES) from the American Reinvestment and Recovery Act (ARRA) was pumped into the education economy to develop statewide data systems, and support research, development, and dissemination (Mason, 2013). Funding was "targeted toward applied research, development of national and state data systems, and research and evaluation that prioritizes rigorous analysis of student outcomes" (p. 213). Furthermore, funds from the American Recovery and Reinvestment Act of 2009 were dispersed to galvanize reform initiatives. Many of these funds from the American Recovery and Reinvestment Act of 2009 were authorized for evaluation, research, and data system development in the Race to the Top competition.

This is not to say that increased investment in efforts to use social science research in policymaking or even increased research production will lead to consensus around how to solve social problems. In fact, increased social research may do just the opposite:

> For the most part, the improvement of research on social policy does not lead to greater clarity about what to think or what to do; instead, it usually tends to produce a greater sense of complexity. This result is endemic to the research process. For what researchers understand by improvement in their craft leads not to greater consensus about research problems, methods, and interpretation of results, but to more variety in the ways problems are seen, more divergence in the way studies are carried out, and more controversy in the ways results are interpreted. It leads also to a more complicated view

> of problems and solutions, for the progress of research tends to reveal the inadequacy of accepted ideas about solving problems. (Cohen & Weiss, 1977, p. 68)

The production of more social science research aimed at shedding light on and proposing solutions to social problems presents an opportunity. Organizations and individuals can work to shape the manner in which certain research moves from production to policy and/or practice. This is significant, for if increased production of social science research knowledge does not necessarily lead to consensus around the solutions to social problems, then the middlemen tasked with increasing the use of social science research by policymakers have a powerful role in mobilizing knowledge so that it comes to influence policymakers' decisions.

Clearly the concepts of intermediary organizations operating in the policy sphere and knowledge brokering are linked. I turn now to the research that explores the functions and processes of knowledge brokering.

Knowledge Brokering within Knowledge Mobilization

Lomas (2007) defines knowledge brokering as follows: "all the activity that links decision makers with researchers, facilitating their interaction so that they are able to better understand each other's goals and professional cultures, influence each other's work, forge new partnerships, and promote the use of research-based evidence in decision-making" (Lomas, 2007, p. 131). Knowledge brokers "perform a variety of functions including managing research and other information, facilitating linkage between parties and developing the skills of both researchers and practitioners" (Ward, et. al., 2009, p. 267). In all cases, "these brokering functions all seek to build bridges between research, policy, and practice in order to improve societal systems (Cooper & Shewchuk, 2015, p. 3). Knowledge brokers work in three primary arenas: 1) disseminating, packaging and translating knowledge; 2) linking researchers and users and building connections between the two communities; and 3) building capacity through the training and skill building of users (e.g. Turnhout, Stuiver, Klostermann, Harms, & Leeuwis, 2013; Ward et al., 2009).

That being said, certain functions of knowledge brokers have proven to be more effective than others. As mentioned above, one of the function of knowledge brokers is to make research evidence accessible, often through synthesis, translation, and dissemination of research results (Cooper & Shewchuk, 2015; Feldman et al., 2001). Not surprisingly when one considers research on the science of situated learning (e.g. Lave & Wenger, 1991), the passive dissemination of knowledge has proven to be largely ineffective particularly as it relates to translating research to practice. However, when the research is mediated by knowledge brokers and discussed with end users, research uptake by practitioners is more significant (Amsallem et al., 2007). Knowledge brokers thus need to incorporate a range of strategies rather than purely sharing the latest research findings (Armstrong et al., 2007). Knowledge brokers assist with this linkage in a number of different ways. They promote interaction between researchers and end users that in turn supports the use of research evidence in policy (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Feldman et al., 2001). Relational strategies like networks, partnerships, collaboratives, and communities of practice enhance knowledge exchange (Greenhalgh et al., 2004). Knowledge brokers also encourage the development of mechanisms that support knowledge sharing among members and stakeholders, as in the development of a online network or a community of practice (Cooper & Shewchuk, 2015; Dobbins et al., 2009).

There is some suggestion that capacity building functions increase knowledge mobilization though the research is less substantial in this area (Ward, et. al., 2009). It is common, however, for knowledge brokers to also assist with building capacity (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Feldman et al., 2001). In their work, Dobbins et. al.

(2009) found that relationship development, ongoing support, customized approaches and opportunities for capacity development were central themes in the functions of knowledge brokers. Additionally, understanding the organization from an ecological perspective was also beneficial; that is, getting a “strong pulse” of the organization early on aided knowledge brokering (Dobbins, et. al, 2009).

Feldman et. al. (2001) view knowledge brokers as playing a role that supports decision makers in managing information overload. In this role, the knowledge broker helps filter and screen for what they themselves deem to be policy relevant knowledge or sound research evidence. Using a RAND report on the role of demonstrations in federal research and development policy as one example, Knott and Wildavsky speak to this dissemination function as one that can become a “mask for policy advocacy” (1991, p. 216). They write: “under the guise of spreading knowledge, disseminators try to make changes which policymakers perceive as unnecessary or, when a performance gap is perceived, to promote their own policy to the exclusion of others” (Knott and Wildavsky, 1991, p. 216). Thus, in filtering information, knowledge brokers may position themselves as powerful policy advocates.

Intermediary Organizations engaged in Knowledge Mobilization (KMb)

Intermediary organizations (IOs) are “organizations that occupy the space in between at least two other parties” and “function to mediate or manage change in both of these parties” (Honig 2004). Increasingly, IOs operate as knowledge brokers, who work to link research producers and research users. Thus, in exploring the mechanisms that support the use of research evidence in policymaking, the knowledge-brokering role of IOs cannot be overlooked. This next section briefly explores the literature around knowledge brokering and intermediary organizations.

Intermediaries translate and package research for legislators, agency staff, and service providers, and they broker relationships between researchers and policymakers (Tseng, 2012). Increasingly, intermediary organizations play a key function in brokering knowledge between the research and policy communities, especially in education policy (Cooper & Shewchuk, 2015; Dobbins et al., 2009; Tseng, 2012). These intermediary organizations include foundations, policy groups, think tanks, and private technical assistance providers. IOs are not simply neutral, objective parties offering recommendations and providing syntheses of research. Significantly, such intermediaries purport to vet their own research without engaging in independent peer review. They bring their own agendas and priorities (Henig, 2008). In other cases, these intermediary organizations may simply be promoting the agendas of those who contract for their services. Additionally, scholars have raised questions about the degree of vetting by state education agencies of these resources produced or disseminated by intermediary organizations (Hodge, Salloum, & Benko, 2016). Hodge, Salloum, and Benko (2016) caution that the dissemination of resources by non-state and non-system knowledge brokers may encourage the adoption of certain policy ideas over others despite a contested research base.

More recently scholars like Chris Lubienski, Janelle Scott, and Elizabeth DeBray have focused on the function of IOs in the policymaking process. In so doing, Lubienski, Scott, and DeBray (2011) narrow Honig's definition of intermediary organizations to the domain of knowledge mobilization: that is, to the spaces between researchers and policymakers. The authors define IOs as "the actors that function in the space between research producers and users, including organizations such as think tanks, philanthropies, the media, bloggers, and other advocacy organizations to facilitate particular policy agendas (Lubienski, Scott, & DeBray; 2011, p. 1).

With respect to the role of IOs in knowledge mobilization (KMb), Scott et al., (2017) conclude IOs play a role in agenda-setting during the policy process. Because IOs are often funded by foundation gifting and philanthropy, another line of recent research inquiry related to IOs has been the influence of venture philanthropy via philanthropic and foundation funding to support policymaking and the advocacy work of intermediary organizations (Lubienski et al., 2011; Reckhow & Snyder, 2014; Scott et al., 2015). These scholars concluded that foundations' and philanthropists' conceptualizations of education reform influence which IOs receive foundation funding, and in turn the policy advocacy work and the knowledge base IOs mobilize and engage. Scholars have also begun to examine the impact of IOs on policy advocacy with regard to education reform initiatives, and more specifically, education reforms related to the charter and choice movement (Au & Ferrare, 2014, 2015). These studies have analyzed the degree to which IOs engage in knowledge mobilization by encouraging the use of research supportive of the charter school movement by policymakers and determined that a critical function of IOs is the dissemination and/or translation of research largely supportive of charter schools to the policymaking community (DeBray, Scott, Lubienski, & Jabbar, 2014; Ness & Gandara, 2014; Scott et al., 2017).

Intermediary Organizations as Technical Assistance Providers

As capacity-builders and support organizations, intermediary organizations also often serve as technical assistance providers. Providing technical assistance, however, can also be a mechanism through which to mobilize particular knowledge(s) around a policy idea or education reform. As such, it is appropriate to review the literature on technical assistance related to education reform.

Childs and Russell (2017) acknowledge that the three main components necessary to support the success of education reform initiatives are capacity, focused resources, and expertise. It is often the case that when state education agencies lack these three components due to insufficient human capital (i.e. understaffed departments, lack of expertise in certain areas) and financial resources, state education agencies partner with nonsystem actors as a strategy during policy implementation (Childs & Russell, 2017). As nonsystem actors, IOs provide technical assistance and organizational capacity to an otherwise resource-strained agency. As it has been shown, such nonsystem actors are not neutral actors; they bring their own policy ideas and priorities. Additionally, such nonsystem actors might act opportunistically, opting to conduct research and/or promote and circulate ideas du jour, and for which they will be compensated. Consequently, in as much as they may assist in policy implementation processes, nonsystem actors may also screen and filter the policies and reforms they support.

All efforts to support large-scale school improvement require an investment in education infrastructure. As Peurach and Neumerski (2015) note, "building educational infrastructure to improve large numbers of underperforming schools will likely require massive, sustained, technical, financial, policy, and political support" (p. 379). In a space where investments in technical, financial, and political support is not likely, state education agencies that make overtures toward comprehensive school reform may need to resort to contracting with non-system and non-state actors, such as intermediary organizations, to complete the work.

Relatively little is known about whether such technical assistance by intermediary organizations results in school improvement. Strunk, McEachin, and Westover (2014) conclude that technical assistance providers positively impact student achievement. It is important to note that the Strunk, McEachin, and Westover study explored the improvement of student achievement on standardized tests in mathematics and English language arts, comparing districts that received intensive technical support from state-approved District Assistance and Intervention Teams (DAITs) with less intensive technical assistance from "non-DAITs" (2014). IOs as technical assistance providers also facilitate teachers' sense-making and understanding of policy for implementation (Coburn, 2005a). Additionally, intermediaries operating at school and district levels do shape instruction, though in ways that may not be seen as improving democratic goals of schooling (Datnow & Honig, 2008; Finnigan, Bitter, & O'day, 2009; Trujillo & Woulfin, 2014).

For Trujillo and Woulfin (2014), the standards-based accountability context incentivized one intermediary organization to design commodities for district use around uniform standards and standardized tests. Rather than being specialized to local and district contexts, however, the commodities designed by the intermediary organization were generalized (Trujillo & Woulfin, 2014). These generalized materials led school districts to adopt and employ standards-based content as promoted by the IO, but resulted in little improvement in addressing local and diverse contexts, such as implementing improved pedagogical strategies to teach English language learners or for culturally relevant pedagogy (Trujillo & Woulfin, 2014). The relative standardization of the IO's commodities also made the IO a recognizable brand, which helped it market itself to other districts and schools engaging in similar reforms (Trujillo & Woulfin, 2014).

Researchers contend that there are a number of challenges created in outsourcing capacity-building work to external technical assistance providers, which may negatively impact effective school reform. For instance, one mechanism increasingly employed by state education agencies to implement school improvement designs is to develop and call upon what Russell, Meredith, Childs, Stein, and Prine (2012) term “implementation networks”. These networks are composed of various IOs that bring different foci and areas of expertise to the table in an effort to engage in comprehensive school reforms. The formation of an implementation network has created new challenges for state education agencies, especially in low-capacity SEAs, which are often neither prepared for nor have the capacity with which to coordinate and oversee the implementation network. Glazer and Peurach (2012) also discuss downsides to this work with their analysis of intermediary organizations working on school reform initiatives. These downsides include uncertainty and unpredictability, especially when IOs interact with less supportive schools and districts.

An earlier study by Honig (2004) corroborates this point. In this study, intermediary organizations were tasked with facilitating policy implementation. In so doing, they brought new implementation resources such as political and social ties, an administrative infrastructure, and knowledge. However, they faced “different constraining and enabling conditions,” which included funding, priorities, and the capacity of the intermediary organizations’ themselves, and the presence of direct ties (or lack thereof) to district office staff (Honig, 2004, p. 65). As such, Honig concluded:

> Intermediary organizations’ functions and their abilities to perform those functions are context specific – contingent on given policy demands and policymakers’ and implementers’ capacity to meet those demands themselves. (Honig, 2004, p. 83)

The current body of research suggests that the influence of intermediary organizations as technical assistance providers at all levels appears to be at times enabled or constrained depending on the organizational and institutional contexts and conditions within which they work.

Beyond the exploration of organizational and institutional contexts and conditions that impact the influence of intermediary organizations as technical assistance providers, there has been some research on understanding how district administrators and educators experience the technical support and intervention initiatives provided to them. For instance, Trujillo (2014) suggests in interviews with administrators and teachers suggested that educators perceived one intermediary organization as helpful in some areas (as in supporting the use of tools to align curriculum to standards) but frustrating in others (i.e. the IOs use of lingo that was not understood by practitioners). Trujillo (2014) concludes that,

> [Models designed by the IO] minimized opportunities for leaders and teachers to exercise professional judgment, as many intermediary-driven tasks usually prescribed the structure and scope of their conversations. They also thwarted opportunities for more democratic deliberation about school communities' broader educational priorities, given that outside 'experts' imported their own methods and focuses to a large degree (Trujillo, 2014, p. 227).

What is lacking in the literature, however, is attention to the particular strategies and mechanisms employed by intermediary organizations to influence and shape policy ideas prior to policy implementation during the policy formulation process. In particular is a lack of attention on the role of intermediary organizations operating between levels of government (in this case federal and state) to shape policy ideas at the state level. Additionally, research on IOs and their advocacy work has been largely descriptive in nature, tracking those IOs involved in particular policy ideas. It has failed to sufficiently surface the machinery through which knowledge mobilization of certain policy ideas to policymakers occurs, especially at the intersection between state and federal policy. Thus, my work seeks to address these gaps in the literature on IOs by examining the mechanisms and means through which ideas are shared by federally sponsored intermediary organizations to state education agencies and the experiences of state education agency personnel who engaged with these IOs.

Theoretical Framework

The language use and cultural practices of intermediary organizations create and structure particular visions of how to resolve the inequitable distribution of teachers that excludes some individuals and ideas and legitimates certain ideas over others. This work is concerned with the sensemaking processes by knowledge regimes in supporting state education agencies' collective and individual sensemaking around policy ideas. Consequently, using a critical and poststructuralist lens, I use the concept of knowledge regimes and sensemaking theory to frame entry into this study.

The Concept of Knowledge Regimes

Ideas matter in policymaking (Dobbin & Sutton, 1998; Hall, 1989, 1993; Lieberman, 2002; Mehta, 2006, 2013; Yee, 1996). And yet, all ideas are not presumed to hold equal value or equal standing when it comes to policymaking. Until recently, little attention has been paid to how these ideas are produced and disseminated.

Ideational approaches to the policy process operate under the assumption that causal beliefs held by individuals or adopted by institutions have the capacity to influence attitudes and actions (Béland & Cox, 2010, p. 6). As John Campbell puts it, "ideas provide specific solutions to policy problems, constrain the cognitive and normative range of solutions that policy makers are likely to consider, and constitute symbols and concepts that enable actors to construct frames with which to legitimize their policy proposals" (Campbell, 1998, p. 398). Ideas can be high profile as in public discourse or they can be lower-profile assumptions and paradigms that remain in the background or under the surface (Campbell, 2002). But how do these ideas come to be produced, disseminated, translated, and ultimately, consumed by policymakers?

For this study, I work under the conceptual framework advanced by Campbell and Pedersen's (2015), which they term "knowledge regimes. " Knowledge regimes constitute the "organizational and institutional machinery" by which ideas are produced (and reproduced) (Campbell & Petersen, 2015). In essence, knowledge regimes "are the organizational and institutional machinery that generates data, research, policy recommendations, and other ideas that influence public debate and policymaking" (Campbell & Petersen, 2015, p. 2). Campbell and Pedersen further define knowledge regimes as "sets of actors, organizations, and institutions that produce and disseminate policy ideas" (2015, p. 167) that affect the policy process. As such, a knowledge regime is "a sense-making apparatus" (Campbell & Pedersen, 2015, p. 3). Under this construct, I take knowledge regimes to be the "organizational and institutional machinery" – the "sense-making apparatus" – that assists with knowledge mobilization.

As a consequence, the knowledge base circulated by the intermediary organizations tasked with supporting state education agencies as they developed their equitable access plans is one part of the machinery within the knowledge regime designed to communicate and elevate certain policy ideas over others. Thus, knowledge regimes are an important topic of study with respect to the policy process. Knowledge regimes contribute the ideas – in the form of data, research theories, policy recommendations and even policy tools – that influence public policy (2011).

Sensemaking Theory

Because at their core "knowledge regimes" are considered to be a "sensemaking apparatus," a brief discussion of sensemaking theory is also warranted. Sensemaking theory was developed by Karl Weick (1995) as a theory on organizational change. Sensemaking in education typically refers to how teachers make sense of a new policy idea so that it may be implemented. It refers to the ways in which individuals individually and collectively within institutions and organizations construct understandings and interpret information and events.

Individuals and organizations do so in part by placing new information into existing worldviews, rejecting information that resists or contradicts existing worldviews and embracing information that affirms existing worldviews (Weick, 1995). Sensemaking theory has been applied broadly to exploring the ways in which teachers and practitioners reconstruct policy during policy implementation in education. Coburn (2001, 2005) explores the sensemaking practices of principals and leaders tasked with facilitating staff policy implementation and the collective sensemaking of teachers as they interpreted policy messages around reading. Coburn (2001, 2005) argues that networks and alliances among teachers play a role in shaping the sensemaking process. An important role for organizational leaders, administrators, and I argue – intermediary organizations working with state education agencies – is to structure learning opportunities that enable sensemaking. Consider the following commentary from Spillane, Reiser, and Reimer (2002): "Agents will need to make sense of policy – there is a critical need to structure learning opportunities so that stakeholders can construct an interpretation of the policy and its implications for their own behavior" (p. 418). Federally funded intermediary organizations may thus play a role not only in knowledge mobilization but also in creating learning opportunities that support sensemaking within state education agencies.

Consequently, facilitating sensemaking may very well be another key function of knowledge brokering, and such facilitation may play a critical role in the success of a knowledge regime. In this analysis, I ask specifically two questions:

1) what were the mechanisms through which support was provided to state education agencies by the federally funded intermediary organizations; and

2) how did state education agency personnel experience this support?

Methods

I adopt Stake's (2000) definition of case study in that "case study is not a methodological choice but a choice of what is to be studied" (p. 435). In this analysis, I have chosen to study the case of federally funded intermediary organizations' support of state education agencies as SEA personnel developed their plans to ensure equitable access to excellent educators.

States' equitable access plans approved by the U.S. Department of Education in 2015 along with two federally sponsored intermediary organizations – the Center on Great Teachers and Leaders and the Equitable Access Support Network – tasked with supporting states to develop their equitable access plans are the focus of this analysis.

The selection of the Excellent Educators for All Initiative is strategic for another reason as well. This initiative came toward the end of the Obama Administration's tenure and just prior to the reauthorization of the Elementary and Secondary Education Act, passed in early 2016 as the Every Student Succeeds Act (ESSA). This reauthorization had been seen as a victory for state governments and individuals with the perception that No Child Left Behind gave too much authority and oversight of education policy to the federal government. ESSA is perceived to be a rolling back of federal overreach in the domain of education (Balingit & St. George, 2016). Thus, the federal financial support for, use of, and reliance on intermediary organizations to support state education agencies just prior to federal retrenchment creates an interesting case within which to examine the role of intermediary organizations operating as a government "out of sight" (Balogh, 2009).

Since I am interested in state education agency personnel's experiences in working with federally funded intermediary organizations in the development of the equitable access plans, I elected to conduct an open-ended interview study. As an open-ended interview study, interviews are particularly useful when the researcher seeks insight into participant's experiences and perceptions of a phenomenon (Brenner, 2006). I anticipated that the response rate would be higher when I reached out to state education agency personnel individually rather than through an anonymous survey or questionnaire. Additionally, though I did follow an interview protocol, conducting interviews allowed me to ask clarifying and probing questions or enter deeper into topics with participants as warranted (Brenner, 2006). The protocol is included in Appendix 1.

Generally speaking, I employed a deductive approach to the interview (Brenner, 2006). As such, I was explicit before interviewing participants that I was interested in understanding the types of support provided by the GTL Center and the EASN as well as participants' perceptions of that support.

Data Collection

Over the course of a period of four months (from December 2016 to April 2017), I interviewed twenty-four state education agency personnel involved in developing the plans to ensure equitable access to excellent educators.[19] I also interviewed two GTL Center employees. To protect the participants' confidentiality, I use pseudonyms. A list of interview participants with their pseudonyms, state/organization affiliation, and the date of the interview are provided in Appendix 2. Interviews lasted from thirty minutes to one hour. I conducted a purposeful sampling of state education agency personnel, aiming to incur maximum variation sampling (Patton, 2002). In this instance, I selected from those states that included equitable access plans with bibliographic citations and/or notes on their work with the intermediary organizations and those states that did not indicate bibliographic citations in their plans. I interviewed state education agency personnel who worked in a demographically and geographically diverse group of states. This included a selection of both predominately rural and urban states and states governed by leaders from both political parties. A visual depiction of state participants is included in Appendix 3.

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[19] Interviews included state education agency personnel from these 24 states: TN, ND, MI, RI, D.C., WI, VT, MA, FL, NC, NH, ME, WA, MN, CO, OK, MS, ID, AK, NE, MO, DE, CT, and LA.

To complete this analysis, I conducted interviews using an open and semi-structured interview protocol. With the exception of one in-person interview and two email interviews, the rest of the interviews were conducted as phone interviews. Interviews were recorded and then transcribed. Unfortunately, during the data collection process, the data storage device I used stopped working, and I was unable to recover the recorded interviews or my transcripts. Thus, except for those italicized responses, which are direct quotations of transcribed audio recordings, this analysis draws from memos of my interviews and from follow up correspondence with state education agency interview participants to affirm the findings.

Findings and Discussion

Mechanisms through which support was provided to SEAs by federally funded IOs

The Center on Great Teachers and Leaders (GTL Center) and the Equitable Access Support Network employed a number of mechanisms to support development of states' equitable access plans. Modes of support included: the development of six "pilot" equitable access plans, convenings, direct assistance to SEAs, the dissemination of new and pre-existing resources and tools, online webinars, online communities of practice, and outsourced technical assistance and support to IOs with pre-existing relationships to SEAs.

Pilot Plans

In October 2014, prior to the official launch of technical support for all 52 education agencies, the U.S. Department of Education selected six state education agencies (NY, TN, OH, MN, NJ, and D.C.) that would go on to receive intensive support early on in the development of their equitable access plans. While there is limited evidence that indicates exactly why these six educational agencies were selected, it does appear there was an attempt to include education agencies that were widely representative of the fifty-two SEAs. However, because of the dearth of western states and southern states represented by these six it is fair to speculate that these six educational agencies had pre-existing relationships with either the U.S. Department of Education (i.e. as Race to the Top recipients) or the Reform Support Network and were geographically more proximate to D.C. than educational agencies in western, mountain, or southwestern regions. According to a Reform Support Network document,

> The goal of this cohort's early work was to inform the subsequent development of equity plans by all 50 states throughout the winter and spring of 2015. The pilot States are geographically and demographically diverse; some were recipients of Race to the Top grants and others were not. The pilot States received support from the RSN and experts, including the Center on Great Teachers and Leaders at the American Institutes for Research, and provided feedback on early tools and resources, which will be made available to all States through the Department's Equitable Access Support Network (EASN) this spring. (Reform Support Network, 2015b)

The U.S. Department of Education asked the Reform Support Network to support these six state education agencies as they developed their equitable access plans in advance of the deadline for all plans. When the guidance document was released in November, the hope was that these six SEAs would produce sample plans by December so that they could be shared with all the other states as a means to give states a sense of how to structure and shape their own plans (GTL Center Staff B, 2016).

Tennessee was one of the states selected. Susan from the Tennessee Department of Education writes of this opportunity:

> In October 2014 we attended the Educator Equity convening sponsored by U.S. DOE and the Reform Support Network. We took a team of five or six people to this meeting, and it was held right across the street from the U.S. DOE. We had already started doing this

> research, and we actually put ourselves on the fast track to submit a draft plan by December. It was maybe five or less states […].
>
> We had a whole group session, and there were small group breakouts by states, and we could get specific technical assistance. There were several organizations that were brought together to provide technical assistance to this initial group of states. In terms of the technical assistance we received during this meeting, we presented our analysis and then we got feedback on whether our analysis made sense, what we should do next with it, and what was missing from our analysis. That's what I remember.
>
> We came together [again] in Dec. 2014 […]. And there was a policy document that the RSN provided. Labor economics, military, health, corporate HR, came together to strategize about how to further address the issue of inequitable access to effective teaching. I remember we talked mostly about human capital here. {In looking at the document now, it does have] a lot of root cause information. (personal communication, April 7, 2017)

From Tennessee's experience, it is clear that guidance and support was provided to these six states well in advance of the guidance provided to other states. Additionally, these early meetings with the six pilot SEAs were informed by a policy document provided by the Reform Support Network that touted the policies of labor economists, military, health, and corporate human resources departments with respect to approach to managing human capital (Reform Support Network, 2015a; Susan, 2017) .

Documents and information on Tennessee and New York's plans were shared on the Equitable Access Support Network website, and many of these pilot states also shared their work at conferences in the months following. During my interview with a GTL Center Staff Member (Erica), it was made clear that these initial six plans were not shared with other states as having been endorsed by ED, but rather, that that they could be viewed as examples of directions other states that had yet to begin work on their plans could take. While these sample plans might not have received a stamped, federal seal of approval, the fact that they were shared openly early on in the process was a signal to other states that these were models from which states should base their ideas.

The work of these state education agencies was shared on the Equitable Access Support Network and drafts of both New York and Tennessee's equitable access plans were within the top ten most recommended resources on the Equitable Access Support Network. New York's equitable access plan emphasized educator effectiveness and evaluation systems and talent management systems as panaceas for resolving the inequitable distribution of teachers (New York State Education Department, 2015). The bulk of the strategies within the plan revolve around improved accountability for educator preparation programs, differentiated systems for measuring effective teachers and the influence of such measurements on hiring and firing decisions, and the development of career ladders (New York State Education Department, 2015). No attention is paid to improving and increasing the attractiveness of the working environments of teachers or seeking community and parent collaboration to do so. Rather, these strategies are informed by an entrenched belief in the ability of data, measurement, and surveillance to improve the distribution of effective educators.

Similarly, Tennessee's equitable access plan advocates for the continued collection and sharing of fine-grained data on teacher effectiveness, differentiated pay for performance, and continued efforts at accountability for inequitable distribution as key strategies (Tennessee Department of Education, 2015). When considering that these plans ignore components such as inequitable funding, lack of community and school collaboration to attract or retain educators, and lack of attention to the working conditions and climate of hard-to-staff schools, these plans are far from exemplary. However, they were shared with other states early in the process. New York and Tennessee's equitable access plans in particular were one of the top ten most recommended resources on the Equitable Access Support Network. State Education Agency personnel from Maine and other states participating in the Equitable Access Support Network's community of practice on Data Use and Analysis also attended a webinar facilitated by the Equitable Access Support Network entitled “Visualizing equity gaps: examples from Oklahoma and Tennessee” in April of 2015 (Maine Department of Education, 2015, p. 59). In so doing, these pilot states were used as models to influence the ways other states thought about and generated ideas for their plans. The emphasis on talent management and narrow definitions of effectiveness are pervasive in many states’ equitable access plans.

There were at least two reasons for intensively supporting six state education agencies in developing their equitable access plans. First, by the time state education agencies engaged in development of the equitable access plans, the six plans could serve as models to be shared with the other states. By providing intensive support to these education agencies, preferred operating policy ideas, root causes, strategies, and modes for stakeholder engagement, data collection and analysis, and root cause analysis could be upheld as exemplars and shared with states in advance as models from which to launch the states’ plans. Indeed, this occurred; the ideas within New York and Tennessee’s equitable access plans were upheld as exemplars on the Equitable Access Support Network and touted in one of the support documents from the Reform Support Network, which was also circulated on the GTL Center’s website and on the Equitable Access Support Network (Reform Support Network, 2015b). Second, this gave federally sponsored intermediary organizations an opportunity to pilot and refine their technical support resources, resource guides, and toolkits (GTL Center Staff B, 2016).

Convenings

Once the initial six education agencies had drafts of their plans, EASN and the Center on Great Teachers and Leaders (GTL Center), along with the Chief Council of State School Officers (CCSSO) and Public Impact as its partner organizations, hosted regional convenings. The largest convening was held in San Diego in February 2015. This was considered the "launch" of support for states to develop their plans (GTL Center Staff B, 2016). Forty-five states were represented at this particular convening, but a snowstorm in New England prevented some state leaders in that region from attending (GTL Center Staff B, 2016). A subsequent regional convening was held for the New England states in February. During this convening, the Delaware Department of Education and fellows from the Gates-funded Strategic Data Project at Harvard University were invited to share their approach to identifying equity gaps (Delaware Department of Education, 2015).[20] The Strategic Data Project is another IO that partners with state education agencies and school districts and funds and develops "fellows" to work in school districts and state education agencies with the goal of enhancing the use of data in educational decision-making

Additional convenings were held throughout the country with assistance from the Regional Educational Laboratories (RELs) in the spring of 2015. Convenings included presentations, brainstorming opportunities for individual state education agencies, and the provision of handouts and resources.

For state education agency personnel, the opportunity to collaborate with other states was attractive. Anika, a Michigan education department staff member, offered her reasons for attending the convening: "We attended a convening to collaborate with other states and receive assistance in developing our plan" (personal communication, February 6, 2017).

On this same point, Julia from the Wisconsin Department of Instruction explains, in her own words, some of the benefits of this particular February convening:

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[20] The Strategic Data Project is an initiative of the Center for Education Policy Research at Harvard University with a mission of "transforming the use of data in education to improve student achievement" (https://sdp.cepr.harvard.edu/about).

> They had a conference, for example, that I went to with a few of our staff members, and you spend the whole day talking about these issues. And the nice part of a conference like that is that you actually get to spend the whole day talking about it, and you get to talk to other states about this stuff, and that's why [the plans] look similar too because you can actually talk to other states about how they're doing things, and you're like, 'oh, that's a great idea, let's use it here instead'. But yeah, that was very helpful to have this kind of a setting to do this. This particular conference was useful, and so that also helped us as we were developing our plan. (personal communication, December 13, 2017)

Thus, convenings offered opportunities for states education agency leaders working on the development of their state's equitable access plan to learn from "experts". It also provided opportunities to interact with other state leaders to develop a collective understanding about the issues of equitable access to excellent teachers and strategies – both within the literature and through firsthand accounts of what other states were doing.

"Experts" on Hand to Support States

At these convenings and per state request, the GTL Center also made available to states "experts" with different areas of expertise around the teacher workforce. These experts were on hand to support state education leaders' thinking around these issues. Notably, these "experts" were employees of the federally funded intermediary organization or their affiliate organizations. Few were university researchers with PhDs with peer-refereed publications on topics of note; most were employed by advocacy organizations or federally funded centers or worked for state education agencies themselves. The GTL Center included a list of experts by area of expertise available to support states. In table 1, I have aggregated this list and removed names from the list to indicate areas of expertise more heavily represented by experts compared with other listed areas of expertise with less representation.

Table 1
Area of Expertise, Ranked by Total Number of Experts

Teacher Evaluation (22)	Data Collection and Analysis (9)
Stakeholder engagement & communication (17)	Measures of Student Growth (9)
Human capital management (15)	Leader Competencies (9)

Table 1
Area of Expertise, Ranked by Total Number of Experts

Recruitment, retention (15)	Rural School Strategies (7)
Educator Compensation (13)	Teaching & Learning Conditions (7)
Teacher & Leader Preparation (13)	Leadership preparation (5)
Extending the reach of effective teachers/career ladders (12)	Root Cause Analysis (4)
Teacher leadership/voice (11)	Teachers of special populations (3)
Principal/leader evaluation (10)	Funding Streams (3)
Professional learning (10)	

The areas of expertise with the most experts are those same areas that deal with talent and workforce management. Lacking are experts in areas such as funding streams, supporting teaching and learning conditions, and working with teachers of special populations of students, including English learners and students with disabilities. Additionally, the "experts" were primarily employees of the support organizations and their partnering organizations. These organizations included the GTL Center, the American Institutes for Research, Chief Council of State School Officers, Equitable Access Support Network, National Governor's Association, Public Impact, and Battelle for Kids. Thus, the "experts" on hand to support states mostly focused on teacher evaluation and human capital management. It should not be a surprise, then, that the strategies proposed by states are more heavily focused on human capital management instead of the conditions of teaching and learning despite the fact that both are listed heavily as root causes for the inequitable distribution of teachers.

Facilitation of Stakeholder Engagement Sessions & Root Cause Analysis

Federally sponsored intermediary organizations were involved more directly with individual SEAs that invited their involvement when it came to facilitating stakeholder engagement sessions and/or conducting data analysis sessions and root cause analyses.

Sometimes, support in this vein occurred as training or demonstration sessions for state education agency staff as to how to conduct a root cause analysis. At other times, the GTL Center directly facilitated stakeholder engagement sessions and conducted root cause analyses. A number of states took advantage of this support. Julia also spoke to the use of the GTL Center's facilitators:

> We presented our data to stakeholders in two phases: preliminary and more detailed and then we had a brainstorming session with them about root causes, and that's where the GTL Center came in and actually ran that, and took notes, and worked with us on that. It was a good session; we got a lot of great feedback (2016).

Notable were southern states such as Arkansas and Mississippi concerned with the historical context of segregated schooling in their states and the need to engage a diverse group of stakeholders, many with very different opinions. They felt that outside facilitation rather than facilitation by state education agency personnel would be more successful. Karen, a state education agency staff member in Arkansas spoke directly to the sensitivity of this work, and appreciated the willingness and support of the GTL Center in conducting the stakeholder engagement sessions (personal communication, February 20, 2017).

Writing States' Equitable Access Plans

In at least one instance, the GTL Center went beyond facilitation to directly writing a state's equitable access plan. In the case of Delaware, the GTL Center wrote the equitable access plan (Delaware Department of Education, 2015). Delaware provided the GTL Center with the required components of the plan, and the GTL Center staff drafted the plan (Margaret, personal communication, January 7, 2017). I did not receive confirmation that this happened with other states. However, with respect to knowledge mobilization and the agentive capacity of intermediary organizations, in writing Delaware's plan, the GTL Center appears to have moved beyond technical assistance to writing the state's plan for how to resolve the inequitable distribution of teachers. Telling in this instance is that Delaware's plan relies heavily on the GTL Center's Talent Development Framework (Delaware Department of Education, 2015). Additionally, the associated strategies listed in the plan to resolve inequitable distribution fall into the continuum of educator development as laid out in the Talent Development Framework document produced by AIR and the GTL Center (The Center on Great Teachers and Leaders, 2014). Here, the policy ideas around preparation, recruitment, and retention are aligned with the preferred policy ideas of the GTL Center's staff and experts. For instance, Delaware's equitable access plan follows directly from the Talent Development Framework, documenting efforts in thirteen areas of educator effectiveness policy. Policy strategies within Delaware's equitable access plan fall into six of these areas and include improving school leadership and retention of school leaders in part through the implementation of the "Relay National Principals Academy Fellowship" (Delaware Department of Education, 2015).[21] Additional strategies within Delaware's equitable access plan include expanding what Delaware considers to be "high-quality" alternative pathways such as Teach for America and the Relay Graduate School of Education in an effort to make the marketplace more competitive, and tying outcomes of program graduates' to educator preparation program approval and renewal (Delaware Department of Education, 2015). Important to note is that these two strategies were pre-existing recruitment strategies.[22] The plan makes clear that expansion of such "high-quality" alternative pathways was a key recruitment and preparation strategy for the state as the plan states, "these programs work to curb the root causes of inadequate preparation for high-need schools and work to provide a pipeline of candidates with the mindset and cultural competency to be effective in that environment" (Delaware Department of Education, 2015, p. 44). Whether this work represents and speaks to the full spectrum of opinion raised by stakeholders is unknown. However it appears that the coherence between Delaware's equitable access plans and the GTL Center's policy priorities reflects a point at which the GTL Center moved beyond technical assistance and advocacy to policy design.

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[21] The Relay National Principals Academy Fellowship is a program designed to prepare principals for high-need schools by the Relay Graduate School of Education https://www.relay.edu/school-leaders/national-principals-academy/overview-national-principals-academy.

[22] RELAY GSE was approved to begin recruiting its first class in Delaware in 2015.

"Objective" Review of States' Drafts of Equitable Access Plans

The federally sponsored IOs also offered states opportunities for feedback and review of their equitable access plans. A number of states participated in these review opportunities, including undergoing more than one review. This mechanism allowed IO staff to provide feedback on plans that was often viewed as "expert" feedback implicitly endorsed by the U.S. Department of Education. One state education agency official from Wisconsin took advantage of the opportunity to engage in this review because of the perception that the reviewers were objective experts:

> The other thing that was probably the most helpful thing was CCSSO offered states opportunities for reviews of their plans. We participated in two of those. It was good because it's like an independent party, and they see gaps in your reasoning because you know the systems and they don't and so they're like, 'you need to explain how get from here to here' so that was helpful. Some of them were from these intermediary type organizations. I looked at that more as, 'oh, they're policy people who are reviewing our plan and have a good sense of what's needed in the plan. It was… and they were clear that there was nothing they were telling us was an [endorsement by the U.S. Department of Education]. They weren't sanctioned from ED; it was just an opportunity for states to have kind of a quality control review. We used [those opportunities for review] because why not take advantage of an opportunity like that? (Julia, 2016)

In this instance, the perception that reviewers were nonpartisan experts may have given state education agency personnel a false sense that the feedback received from these policy analysts was objective. At the same time, the feedback received also facilitated state education agency personnel's own sense-making around the policy ideas: it confirmed some visions of the methods, modes, and strategies of the plan while rejecting others and enabled state education agency personnel to interpret policy ideas so that these ideas could come to align with their own beliefs. That being said, a number of the reviewers who provided feedback on states' equitable access plans were employed by the very same support organizations whose expertise rested in areas of talent management, educator effectiveness, and evaluation (GTL Center Staff A, personal communication, December 21, 2016). There was little consideration to other important areas of expertise such as developing "professional capital" which Hargreaves and Fullan (2012) conceptualize as a product of three types of capital: human, social, and decisional, building relational trust (Bryk & Schneider, 2002), equitable school-community relationships (Ishimaru, 2014), and practitioner expertise (see Table 1).

Equitable Access Toolkits and Companion Tools

The GTL Center also developed tools and repackaged existing resources to support the development of states' equitable access plans. Like the TQ Center (the GTL's predecessor), the role of the GTL Center was to provide technical assistance and support to states as requested. However, unlike the TQ Center, which developed tools and supports in direct response to state requests, some of the initial resources and tools designed by the GTL Center were produced not in response to state requests, but rather to anticipation that issues of equitable access would surface as federal policy priorities. Per my interview with GTL Center Staff Member, whom I will call Erica, as GTL Center staff received word that equitable access would be a priority from the U.S. Department of Education, GTL Center and its partners began ramping up the development of technical support materials in advance of the official release of the guidance document and FAQ from the U.S. Department of Education (2016).

A number of these support materials ended up in the Equitable Access Toolkit – one of the main resources promoted by the GTL Center for use by state education agencies. Resources in the Equitable Access Toolkit included a stakeholder engagement guide, a root cause analysis worksheet, and a sample state equity plan. The thought behind producing this stakeholder engagement guide suggests that the GTL Center had some capacity for agency separate from the U.S. Department of Education (GTL Center Staff B, 2016). For example, the stakeholder engagement guide moved beyond the minimum stakeholder engagement required by U.S. DOE to include more stakeholders such as civil rights groups, "token teachers", etc… (GTL Center Staff B, 2016). From Erica's perspective, stakeholder engagement became a major priority for the tool development for a few reasons: 1) stakeholder engagement had been scant in the 2006 plans; 2) one of the main GTL Center staff members had already done a lot of work creating meaningful and valuable stakeholder engagement and was well-versed on the topic; 3) because the plans had no "teeth," engaging stakeholders created a built-in accountability mechanism for state policymakers who would be held to account by stakeholders if aspects of the plan fell by the wayside; and 4) stakeholder buy-in was necessary to generate the political will for more intractable issues of equitable access (GTL Center Staff B, 2016). Important, however, is that while the stakeholder engagement guide may have been an effort to broaden the number and type of stakeholders to engage, Erica's use of the term "token teachers" suggests that the input of such stakeholders was never intended to be a key driver of policy ideas; rather, the goal of engaging a broader range of stakeholders was an effort to build political will, to engender buy-in of "intractable" policy ideas; and to hold policymakers accountable to stakeholders.

The root cause analysis fishbone diagram was another tool that sought to really dive deeply into the root causes behind equity gaps.[23] While the use of such a tool was not a requirement by the U.S. Department of Education, its prominence in the equity toolkit made it a frequently used tool by states in their root causes analyses. The root cause analysis fishbone diagram helped states to engage in useful and meaningful conversations with stakeholders that purportedly helped states to surface harder discussions (GTL Center Staff B, 2016).

Together, the GTL Center's staff envisioned these three documents as supports and tools to help states develop their equitable access plans. They were developed with the knowledge that the states would have a short period of time to draft their plans. The goal of such tools was to help speed up the efficiency of state plan development so that states would not be concerned with the outline or format of the state plan, but spend their valuable time on deeper engagement with stakeholders, with root causes, and with the development of their plans in their own unique state contexts (GTL Center Staff B, 2016).

Additionally, a number of the tools and companion resources provided to states by the GTL Center were developed prior to the launch of the Excellent Educators for All Initiative and simply repackaged as attending to issues of equitable access. For instance, though it was used by a number of states during the development of state's equity plans, the Talent Development Framework was created in November 2014, and drew from a 2013 AIR publication titled *Educator Talent Management Framework: a research-based model for district and state policymakers.* An even earlier 2010 document published by Learning Point Associates focused on the concept of educator talent management.[24] Thus, the concept of a talent development framework was not new; rather, it was purposefully yoked to the other support materials developed for states around their work on equitable distribution.

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[23] A copy of the fishbone diagram is provided in Appendix 4.

Other support resources developed prior to the launch of the Equitable Access to Excellent Educators Initiative included a number of resources from the Reform Support Network (RSN) and a Gates Foundation funded initiative termed "Everyone at the Table." Importantly, these resources and support materials were *not* developed to support states directly in their work on equitable access. Instead, they were developed for different reasons but simply tacked on as companion resources for states to use. The Reform Support Network resources, for instance, were developed to support winning states in the Race to the Top competition. The Public Agenda text, *Everyone at the Table*, was published in 2013 with funding from the Bill and Melinda Gates Foundation and used primarily for the purpose of better "engaging teachers in evaluation reform" (Public Agenda, 2013). Though this text, its associated website, and additional resources from Public Agenda were used to assist with stakeholder engagement during the development of states' equitable access plans, this document was produced prior to the launch of the Excellent Educators for All Initiative and developed explicitly to ensure buy-in from teachers around reforms to teacher evaluation.

Regular Communication and Online Communities of Practice

To a lesser extent, federally funded IOs supported the development of equitable access plans by relying on conference calls and online communities of practice around particular requirements within the plans. The Equitable Access Support Network encouraged state education agency personnel to participate in online communities of practice established on its website.

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[24] Learning Point Associates and the American Institutes for Research merged in 2010 (http://www.air.org/news/press-release/american-institutes-research-merge-learning-point-associates).

These online communities of practice were designed to bring states together without the overhead of in-person convenings to talk, share ideas, and collaborate on particular areas of focus within the equitable access plans. Online meetings were also held within these communities of practice with presentations and materials for participants. Webinars and informal “office hours” were aspects included in the online communities of practice. Specifically, the online communities of practice included communities focused on data use and analysis, stakeholder engagement, policy and programs, and rural access issues and support (“Equitable Access Support Network,” n.d.).

Importantly, facilitators within these online communities of practice were drawn from a number of intermediary organizations, including the aforementioned Reform Support Network, the EASN, the GTL Center, and Education First. Notably, not all of these IOs are federally funded IOs, but they operated as contracted partners with federally funded IOs (Education First Staff Member, personal communication, April 13, 2017).

Leveraging other support providers, partners, and intermediary organizations

In a number of cases, when speaking to state education agency personnel, other intermediary organizations were named as supportive during the development of the equitable access plans. The majority of the intermediary organizations mentioned outside of the Equitable Access Support Network and the GTL Center are federally funded as well and include federally funded comprehensive centers or RELs and federal technical assistance centers or equity centers. For instance, Georgia and Colorado worked with the Collaboration for Effective Educator Development, Accountability and Reform Center (CEEDAR), a federal grant funded center from the Office of Special Education Programs.[25] Connecticut, Delaware, Maine, Massachusetts, and New Hampshire all worked with the Northeast Comprehensive Center, another federally funded center. Missouri, Nevada, New Jersey, New York, and Tennessee worked with the Reform Support Network, a federally funded technical assistance center. A complete list of intermediary organizations mentioned as support organizations in the development of states' equitable access plans is provided in Appendix 5. While some of these support providers were not affiliated with the federally funded IOs tasked with providing support on the equitable access plan development, others, particularly the RELs, were leveraged by the GTL Center and the EASN, to support state equity plan development, especially when these IOs had preexisting relationships with SEAs. In doing so, the GTL Center and the EASN could share resources with these external support providers who then disseminated these resources to the states.

In many ways, this distributed technical assistance appears to be a result of the Institute of Education Science's (IES) funding of Comprehensive Content Centers such as the GTL Center, the Regional Educational Laboratories (RELs), and the Collaboration for Effective Educator Development, Accountability and Reform (CEEDAR). The RELs are supposed to be interacting most frequently with the states served in their region, while the Comprehensive Content Centers are tasked with developing resources to share with RELs who in turn share those resources with states in the region (U.S. Department of Education, n.d.).

In this case, however, the role of the GTL Center was broadened when it was named as a formal support provider for the development of state's equitable access plans. The GTL Center could also work directly with states rather than working through the RELs when warranted.

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[25] https://www.ed.gov/news/press-releases/5-million-grant-awarded-university-florida-provide-technical-assistance-develop-

However, the GTL Center appears to have leveraged the existing capacity of the RELs, its own relationship with them, and in turn, the RELs preexisting relationships with the states to disseminate resources and tools around equitable access.

This makes sense from an efficiency standpoint and from an effort to increase the states' uptake of resources and tools. Many state education agencies have existing relationships with their Regional Educational Laboratory. SEA personnel communicate on a regular basis with their REL liaison, and trust has already been established. Knowledge for policymaking is impacted by the degree of trust and connection between knowledge producers, brokers and users (Finnigan, Daly, & Che, 2013; Tseng, 2012). Thus, rather than communicate directly with a new support provider, the collective trust already established between the states (i.e. TX, CA, NC, AR, LA, WA, ID, CT, DE, ME, MA, NH, ND, WY, IN, PR, KS, RI, and WV) and their regional comprehensive centers presumably enabled greater use and uptake of the GTL Center's tools and resources.

State Education Agency Personnel's Perspectives of IOs' Support

It is clear that the federally funded IOs tasked with supporting state development of equitable access plans employed a number of mechanisms and strategies through which to support sensemaking and knowledge mobilization within state education agencies. What is less clear from my earlier findings is how states experienced working with these support providers. What follows is the second part of my analysis within this paper, which addresses this question.

Helpful

Overall, state education agencies officials tasked with developing their state's equitable access plan appreciated the resources and support provided by the federally-funded intermediary organizations and found them to be helpful. For a complete list of those state education agency official interviewed and who voiced their opinions around the development of the equitable access plans, see Appendix 2. For example, Ethan, who worked on the District of Columbia's equitable access plan, felt that the resources, technical assistance, and opportunities to collaborate with other state education agencies was a dramatic improvement compared to the lack of support and clarity provided during the development of state's 2006 equity plan (Ethan, personal communication, January 13, 2017). The resources and manpower devoted to the assistance effort encouraged him, and he was largely supportive of the IOs' efforts. In the case of Massachusetts, Mary, with whom I spoke appreciated the research base provided by the support organizations. As a newer member of the Massachusetts Department of Education tasked with developing the equitable access plan, access to easily accessible briefings of the literature helped her "catch up to speed" (Mary, personal communication, February 21, 2017).

State education agency personnel appreciated the IO's tools, templates, and resources, (or "thought pieces") as they helped to frame, justify and support the strategies and policy ideas developed within states' equitable access plans. For instance, the GTL Center's Talent Development Framework and Sample Equitable Access Plan helped Wisconsin justify new and existing strategies around equitable access via the adoption of a comprehensive approach to talent management. A Wisconsin State Education Agency staff member said:

> I led a team here in doing this work [along with] the Director of our Teacher Education Team, Program Approval and Licensing (TEPDL). What she did is she looked at that framework that they developed that was actually outside of that toolkit. I don't know to what degree she had the time, cause time is a big factor to look through all of the sourced research and articles, but I know for a fact that she picked that up at the conference and was reading through it, and was like this makes so much sense for us. This would help us frame things and help us as we look at because we have a shortage of teachers and so we were looking at how do we broach that. (Julia, 2016)

Here, resources like the Talent Development Framework were helpful because they gave credibility or a "framework" within which a state's existing policies would already fit. This was helpful for state education agencies, as it helped them to repackage existing strategies under the guise of new language, adopt new strategies that would accord with their existing strategies, and required little reflection or critical examination of current practices or attention to stakeholder concerns.

In Wisconsin's case, because the Talent Development Framework accorded with the Teacher Education, Program Approval, and Licensing Team Director's worldview around the educator pipeline, and because of the six-month turnaround for developing the plan, the Talent Development Framework was adopted by Wisconsin, with little vetting or critical engagement. Instead, it assisted SEA personnel in making sense of the equitable access requirements and viable policy ideas from which to choose related to the educator workforce.

Often, the state education agency personnel I interviewed spoke about the degree to which the resources and tools provided by the IOs helped shape and frame their thinking about issues of equitable access:

> I think the other thing that the great teachers and leaders brought together was just having other thought documents and thought processes. So we actually worked with them a bit and they helped support some of our brainstorming sessions. They had some other documents that explored some issues further that were thought pieces for us. And thought pieces such as a way of looking at the pipeline for teachers for example. And everyone knows it's about attracting, recruiting, and retaining, right? And the whole pipeline is a continuum and just having those types of things that frame things so that your time and your staff's time can be spent to really do deeper thinking around issues. (Julia, 2016)

Here, "thought pieces" were used conceptually to "frame things". Additionally, this staff member explains how these tools helped staff within Wisconsin's Department of Public Instruction frame existing practice and worldviews in accordance with federal guidelines and requirements.

> We definitely used some of their resources to support and frame the narrative behind the options we were putting out. Some of the first few pages [of the talent development

> framework we ended up adopting] were very helpful in helping us explain our own licensing system. (Julia, 2016)

Similarly, a Tennessee State Department of Education staff member shared:

> [The resources provided] helped us sort of shape and craft our document and the narrative of what we wanted to say. (Susan, 2017)

This sentiment was repeated among a number of state education officials. For instance, the GTL Center's resources helped Rhode Island's equitable access team think through the process, especially when the official guidance was not clear or detailed (Lucy, 2017). In particular, for those staff members tasked with developing Rhode Island's plan, the sample plan *Resource 9: Sample Equitable Access to Excellent Educators State Plan,* was viewed as "really helpful" (Lucy, personal communication, April 5, 2017).

In many interviews, the issue of state capacity was raised as a factor in the quality of the equitable access plans and the extent to whether state education agency personnel perceived the federally funded IOs to be enabling or constraining. The officials with whom I spoke appreciated the GTL Center's supports and tools, especially the sample plan, because they were able to use the same format – and in many cases the same words – and as such, it presented an efficient use of time rather than having state plan developers get bogged down with the formatting or "flowery verbage" (Julia, 2016).

Dedicated and/or Knowledgeable Staff

For states that did not have a large staff dedicated to work on the plans or in some cases, people with the right expertise working on the plans, it was more efficient to just pull pieces directly from the sample plan or from what other states shared about their plans than to reinvent the wheel.

Multiple SEA personnel spoke of the help provided by support providers in terms of direct assistance. Support providers frequently assisted in helping to facilitate deep dive data analyses and to conduct and/or facilitate stakeholder engagement meetings particularly around root cause analyses. This facilitation was helpful, especially when the pool of expertise around data analysis was not that deep within the state education agency itself or when engagement with stakeholders would better benefit from a skilled facilitator outside of the state department of education.

Data

The issue of access to useable data was another issue for states with limited capacity. Some states did not have sophisticated data systems to pull together the necessary information about the existence of equity gaps; other states may have had the data but did not have personnel who could interpret the data or slice it accurately to represent true equity gaps.

Time

With respect to time constraints, multiple SEA personnel acknowledged the short turnaround time to submit the report for approval by the U.S. DOE, and felt that the support providers' tools and templates helped them save time.

> The timeline to submit the original Equity Plan was very short, which certainly made developing the State Equity Plan a huge challenge. (Penelope, personal communication, January 26, 2017)

> The value of a template to a state agency when you know that it's from an entity that's working with the DOE is that it saves you a lot of time, and it probably saves the DOE a lot of time. But we only have so many resources, and it's not like there's a new pot of money to develop this plan, and so it's really about reallocating everyone. (Julia, 2016)

Lack of appropriate staff, funding, data, and time all contributed to finding shortcuts to develop the plans. Often, these short cuts took the form of lifting text directly from the sample plans or adopting policies, ideas, and outlines for the work based on knowledge sharing across states. For instance, the theory of action written into the GTL Center's Sample Equitable Access Plan was directly adopted by at least seven states.[26] It reads:

> If a comprehensive approach to talent management—in particular for low-income, high-minority, and high-need schools and districts—is implemented carefully and its implementation is monitored and modified when warranted over time, then State A school districts will be better able to recruit, retain, and develop excellent educators such that all students have equitable access to excellent teaching and leaders to help them achieve their highest potential in school and beyond. (Center on Great Teachers and Leaders, 2015, p. 14)

Such support – though perceived as helpful by SEA personnel – influenced the strategies in states' equitable access plans, potentially limiting what state education agencies came to believe were viable policy options. This support also did not enable resource-strapped SEAs to engage more thoughtfully and critically around the issue of inequitable access.

Information Overload

That being said, a number of states also indicated that at times there was a sense of bombardment when it came to the sheer number of resources shared with them. Both North Carolina and Nebraka SEA staff indicated that the unfiltered sharing of resources – many of which did not apply to their unique state contexts – bordered on information overload (Luke, personal communication, January 20, 2017; Penelope, 2017). At a number of times in different interviews with SEA personnel, personnel were clear to differentiate between the help provided via tools and templates and the help provided via conference calls, convenings, and weekly newsletters and briefings. While tools and templates were frequently listed as being helpful to SEA personnel with a limited budget, staff, and capacity on a tight timeline to submit equitable access plans to the U.S. DOE, a number of interviewees experienced conference calls, convenings, weekly email newsletters and briefings as less helpful.

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[26] AL, ME, ND, NH, NV, VT, & WI

> As a state education department, we were 'bombarded' not only with GTL technical support, but also technical support from additional various agencies—it was really way too much, especially given the very short timeline our state had before the State Equity Plan submission deadline. (Penelope, 2017)

Others characterized the information as overwhelming and difficult to triage information most pertinent to that state's needs. A few, such as a staff member in D.C. and another in Rhode Island were already familiar with the research base and thus found the tools and templates more helpful than the email blasts and online resources of the underlying research and conceptual underpinnings behind strategies around resolving inequitable access (Ethan, 2017; Lucy, 2017).

An "Arm"

From SEA personnel I spoke with, the GTL Center was also viewed as more an "arm" of the federal government by those crafting states' equitable access plans. In other words, the GTL Center acted as a knowledge broker between the U.S. Department of Education and SEA staff working on the plans. If the GTL Center recommended that states look at a particular tool, equitable access plan developers took that as a sign of the U.S. Department of Education's endorsement – whether or not it was an actual endorsement.

> Knowing how the organizations work with the federal government especially in this particular case, we viewed [GTL Center] as more of an arm. And the reason I say this is that they… and I'm referring to the GTL Center in particular because we worked with them… is that they talked with the department of education a lot to get a sense of the direction they were interested in going in and so when they prepared their templates, you see that knowing that they've had those conversations. And they're not going in a different direction, let's put it that way. They're not going to be wrong compared to the direction that the Department of Ed. would like to proceed. And so we actually had a template I think maybe even before the full guidance was published. (Julia, 2016)

Embedded Assumptions

SEA personnel also spoke a number of times about how there were some embedded assumptions in the technical support provided. For instance, some of the materials were ignorant of the unique contexts in different governments such as those states operating with a history of fierce local control (i.e. Penelope, personal communication, January 27, 2017; California Department of Education, 2015). Others spoke about embedded assumptions about statewide educator evaluation systems on the part of support providers.

> In my opinion, there were many assumptions made by the various technical support agencies that all states had a statewide teacher evaluation system in place, which NE does not have (NE is a local control state, so each district evaluates their own teachers at this time)—and that all states had applied for and received a NCLB waiver—again, which NE had not at that time applied for or received. (Penelope, 2017)

Advocacy or Technical Assistance

Another state education agency representative with whom I spoke indicated that sometimes it was difficult to disambiguate whether the information being provided was true technical assistance or whether the support provider was advocating particular items over others. For instance, Vermont had no apparent gaps in its distribution of teacher quality. However, rather than taking up the issues of why an achievement gap remained in Vermont or using Vermont as a case study, the support providers seemed convinced that there *had* to be an equity gap with respect to teacher quality (Anne, personal communication, January 25, 2017). Thus, the IO held the view that Vermont's current method of evaluating teacher quality was inadequate rather than latching on to an opportunity to conduct further research (Anne, 2017).

Conclusion and Recommendations for Future Research

From interviews with state education agency personnel, I draw three broad conclusions. First, it is apparent that efforts by the federally sponsored intermediary organizations to support state equitable access plan development were perceived to be helpful, but they may have also prevented states from considering alternative strategies and means of developing their plans. The resources and tools helped ground the operating ideas around issues of equitable access to excellent teachers in some states, but did not necessarily enable critical engagement with the materials themselves.

Second, it gave states, especially state departments of education with limited resources (i.e. staff, time, and funding), a more expedient means to complete the equitable access plans at the expense of critical engagement with the local issues affecting a state's inequitable distribution of teacher quality. In a context where state department of education budgets and staff have been cut, facing a tight timeline and few resources to devote themselves to thinking systematically about teacher quality, the federally sponsored intermediary organizations and their networks proved to be an invaluable resource.

The economic downtown, a slow economic recovery, and state and federal budgets cuts have produced capacity gaps within state departments of education at the same time that these departments have been asked to restructure and change their role, which includes providing more supports to local education agencies, to oversee complex data analysis and educator effectiveness systems, to approve and provide oversight of education preparation programs, and to ensure the success, broadly speaking, of children attending schools in the state (Burnette II, 2016). Such recent cuts to K-12 education budgets and state education agencies were the result of revenue loss during the Great Recession and then a slow economic recovery (Leachman, Albares, Masterson, & Wallace, 2016). In other words, while the role of state education agencies is expanding, such expansion has not been accompanied by a corresponding increase in federal funding. Having to do more with less has resulted in increasingly contracting out state department of education services to third parties (this is what Milward, Provan, and Else, (1993) refer to as "the hollow state"), and in this context for many states it has also meant relying on resources, tools, and facilitation skills of third parties to develop policy ideas around how to resolve the inequitable distribution of teacher quality.

Third, federal funding of the GTL Center and the Equitable Access Support Network served to legitimate for states the policy ideas inherent in the resources, supports, and tools provided by these support organizations. States believed, erroneously or not, that adopting such policy ideas would lead to the U.S. Department of Education's approval of their state's equitable access plan. At the same time, this thin endorsement of the support providers gave the support providers a carte blanche so to speak around the resources, tools, and policy ideas they would disseminate to states. This is seen in Erica's (2016) statement that the GTL Center sought to move beyond U.S. DOE requirements in the case of stakeholder engagement and root cause analysis. Here, while not endorsed specifically by the U.S. DOE, the illusion of federal endorsement sent a powerful signal to states that the policy ideas circulating within resources and tools provided by the support organizations were *the* policy ideas upon which states should focus their plans.

Furthermore, the intent in requiring states to develop these new equitable access plans was to induce states to reconsider their current initiatives, taking a hard look at whether their current policy priorities were really getting to the core of the issues of equitable access in their state contexts. The result, however, when reviewing the plans, from the GTL Center Staff's perspective was that states prioritized in their plans strategies that were a) aligned with current state initiatives, b) low-cost both financially and politically to implement, and c) non-resource intensive (Erica, 2016).

In states whose worldviews did not accord with the dominant policy ideas of the IOs, or in states that took the time and made the effort to engage more critically with the materials and resources provided, there was more freedom to consider expanded or different policy options. This led states to expand the diversity of resources from which they drew, making them relatively less reliant on the resources of the federally sponsored intermediary organizations and more independent to pursue alternative options.

For instance, in the case of Connecticut, a considerable amount of attention was paid to input from stakeholders, including practitioners. In an interview with Amy, a former Connecticut state education agency staff member who worked on the development of Connecticut's equitable access plan, she initially anticipated that stakeholders would want to look at neighboring states like Massachusetts and Rhode Island because "they always do good work" (Amy, personal communication, January 10, 2017).

In this case, however, Massachusetts and Rhode Island adopted strategies in alignment with the support providers' resources and materials. For example, a few of Massachusetts' strategies included implementing strong public accountability components that tied student growth of teachers trained at specific educator preparation programs to those educator preparation programs, providing autonomy to administrators and district leaders to hire whomever they perceived to be the best fit for a position and eliminating district or collective bargaining policies, and strengthening the educator effectiveness system to arm itself with better data to determine hiring and placement decisions (Massachusetts Department of Elementary and Secondary Education, 2015). Rhode Island focused its system on streamlining a comprehensive approach to managing educator talent (Rhode Island Department of Education, 2015). However, when listening to the stakeholders, who included a number of Connecticut teachers and administrators, Amy felt they emphatically rejected the policy ideas of Massachusetts and Rhode Island because they did not accord with their own existing practices, beliefs, and "worldviews" about how teachers should be evaluated. For Connecticut, it was not through value-added measures (Amy, 2017). Consequently, Connecticut moved beyond the formal support provided by federally funded IOs to engage with university researchers at the University of Connecticut (Amy, 2017). As a result, the policy strategies pursued within Connecticut's plan deviate from some of the policy ideas implicit within the technical assistance resources. Some of Connecticut's strategies included improving the working conditions of high-need schools, hiring more teachers of color, and focusing professional development and preservice preparation on cultural competence (Connecticut Department of Education, 2015).

In a similar case, California's equitable access plan lists parent engagement and partnerships with parent as a strategy to improve working conditions – something never mentioned in the comprehensive talent management framework tools provided by the GTL Center. Other strategies in California's plan include focusing on the local contexts of inequitable distribution, implementing local control funding formulas to address local concerns, improving induction and professional learning programs and revising them to incorporate culturally relevant practices (California Department of Education, 2015). In California's case, local and regional advocacy organizations such as Education Trust –West and Partners for Every Child, university-based academics including Linda Darling-Hammond, Bruce Fuller, and Jon Snyder, and university-based research centers like the Stanford Center of Policy in Education were prominent stakeholders and/or facilitators of meetings. Notable as well is the apparent exclusion of federally funded intermediary organizations (California Department of Education, 2015). It appears that California was able to martial its own state resources, including university researchers and academics as well as advocacy organizations and civil rights organizations to contribute to and work on the development of the state's plan rather than relying heavily on the GTL Center and the EASN.

From the examples of Connecticut and California, it is clear that there were states that did not incorporate the policy ideas inherent in the resources and tools of the federally funded support organizations. For instance, there are other states like Arizona, Georgia, Iowa, Maryland, Michigan, Mississippi, Washington, and West Virginia that provided citations but did not cite references provided by more than one support provider. Additionally, states like Illinois, Maryland, and Michigan do not appear to have relied upon federally funded comprehensive centers like the regional educational laboratories (RELs) or the federally funded content center (GTL Center) in the development of their plans. There is no mention in these states' plans of interaction with either the RELs or the GTL Center.

However, there are also a number of states that did avail themselves of the support and whose strategies reflect strategies that address comprehensive approaches to talent management. For instance, nineteen states reference a federal funded comprehensive center like one of the RELs as supporting the development of their equitable access plan. Another thirty-two mention the GTL Center as an intermediary organization that supported the development of the equitable access plan. And twenty state plans reference the use of a federally funded technical assistance provider like the Equitable Access Support Network during the plan's development. See appendix 6 for a breakdown of which states' equitable access plans referred to specific types of intermediary organization in the development of the plan.

It may be that low capacity or time strapped state education agencies with limited expertise relied more intensively on IO supports, devoting less time to critical engagement of those supports. Additionally, states that had pre-existing relationships with the support partners or their affiliates and that had found those relationships to be beneficial also appeared more likely to take up the support, resources, and tools offered by the GTL Center and EASN.

This has implications for state governance over state education policy. If states with low capacity or shallow talent pools themselves rely more heavily on federally funded intermediary organizations for their policy ideas and support, then it may be the case that the federal department of education can govern state's policy ideas out of sight through the use of third party knowledge brokering and technical assistance strategies. Additionally, for state governments that wish to remain in the good graces of the federal department of education, there may be an incentive to work with these support providers – whether or not they agree with the policy ideas inherent in their resources. It may take strong state education agency leaders and community involvement from a wide representation of stakeholders to counteract this expansion of the hollow state.

From the vantage point of the IOs, it appears that networking with partners who already hold preexisting relationships with state education agencies may support acceptance of new policy ideas. Additionally, toolkits and templates that embed policy ideas within them may make it easier for states to adopt those policy ideas without first approaching the tools with a critical eye. Toolkits and templates, thus, are strong aids in knowledge translation for instrumental use in policymaking (for more on toolkits and templates, see Chapter 4, Hollar 2017b).

Additional research along these lines should consider single, in-depth case studies that can delve more deeply into the policy process, to better understand the mechanisms through which support organizations assist and encourage state education agency personnel to accept new or revised policy ideas. Research along this same line could explore the experiences of other stakeholders in engaging with these support organizations, beyond simply the perspectives of state education agency personnel. More broadly, quantitative analysis could proceed with an effort to understand which mechanisms of knowledge brokering for policy are most effective.

This research has implications for future research on knowledge utilization in educational policymaking, particularly in the context of state and federal power. The ways in which government-sponsored IOs advance policy ideas in line with federal policy ideas reinforces the importance of examining whose knowledge is shared and how, and ultimately, how this knowledge filters into state policy ideas around the inequitable distribution of excellent teachers. In such a way, federally sponsored IOs may enable the federal department of education, despite its relatively weak statutory role in education, to align state and federal policy agendas.

Appendix 1

GTL Center Interview Protocol

1. How did you go about developing the resources provided to states?
2. Who was involved with the development of the resources you provided to states around their teacher equity plans?
3. What other resources informed your development of the Equitable Access Toolkit and Stakeholder Engagement Guides?
4. Were there a number of people on your team developing these management tools?
5. Did you involve stakeholders in the design of your management tools?
6. Did you know about the Excellent Educators for All Initiative in advance of the states as a way to develop these tools?
7. How did you go about designing sample vision statements, the sample equity plan, and the talent management framework?
8. Other than the tools and artifacts, what additional assistance did you provide?
9. Did you receive any feedback on which tools/resources/support were most beneficial for the development of the state plans?
10. From who did you receive funding to create all of these materials and provide technical assistance to individual states?
11. How many states actively used your tools and assistance?
12. Were there any who did not accept your offer to help with the state plan development?
13. Any thoughts as to why/why not?

SEA Leadership – Equitable Access Plans Interview Protocol

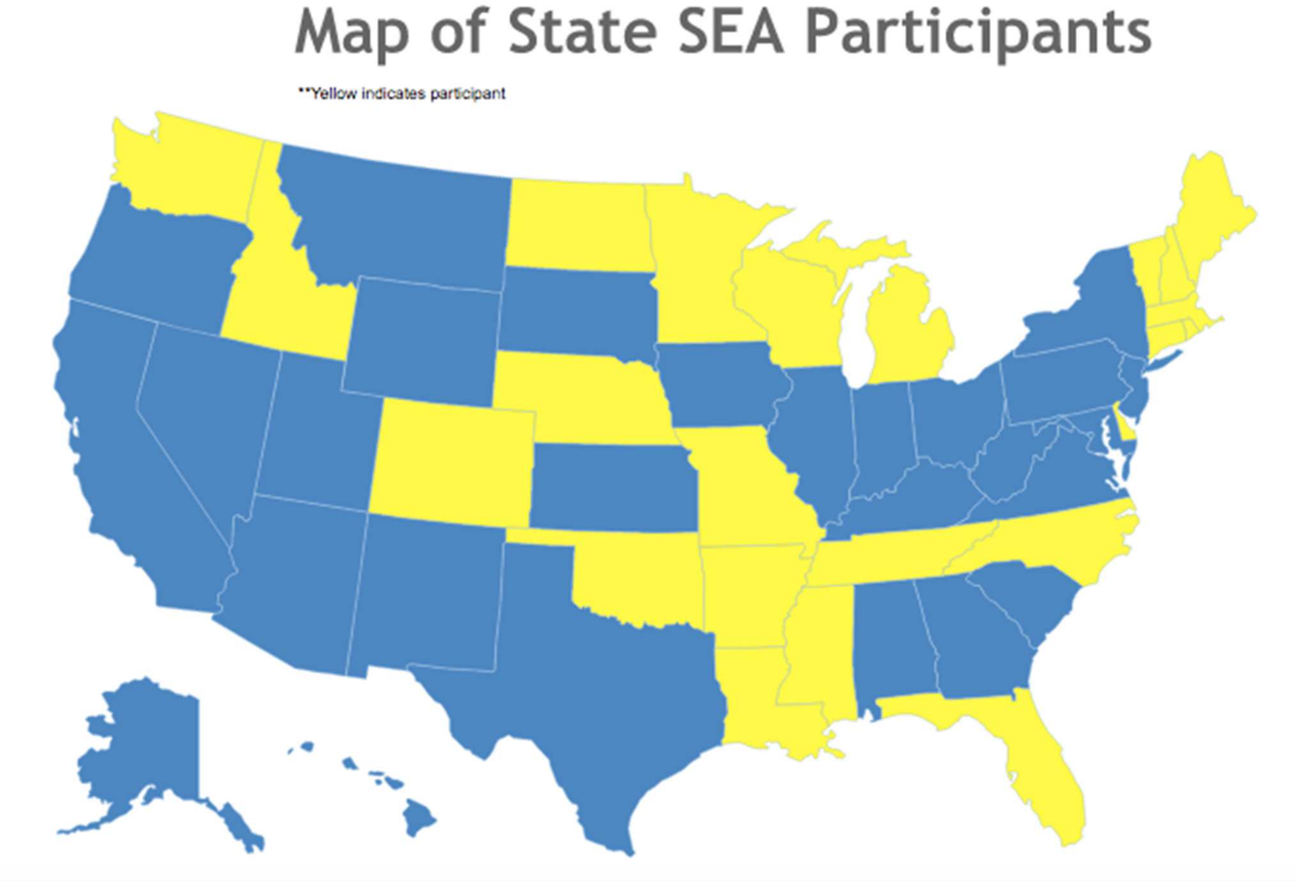
1. To what extent did you take advantage of resources and support provided by the Equitable Access Support Network & the Center on Great Teachers and Leaders?
2. Was there anyone at the CGTL particularly helpful in providing support for the development of your state's plan?
3. Which resources were most influential in the development of your state's plan?
4. What other resources did you rely upon to develop the state plan?
5. What other factors influenced the development of your state's plan?
    a. Which stakeholders?
    b. Which organizations?
    c. Political context?
    d. Local context(s)?

How effective do you feel your plan will be in ensuring equitable access?

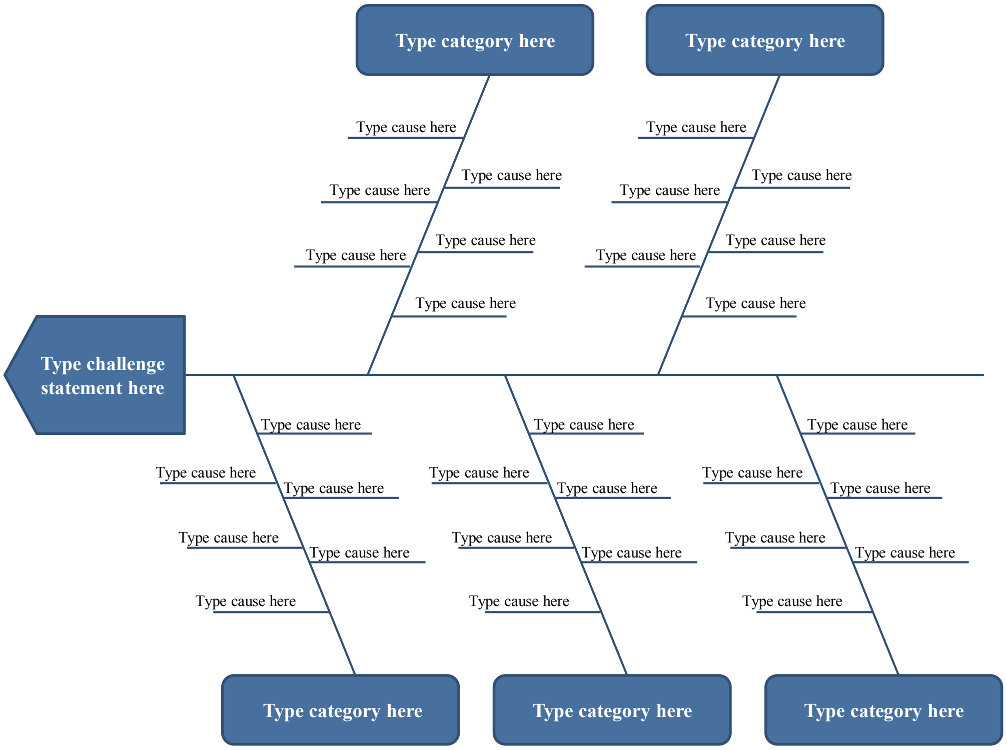
Appendix 2: State Education Agency Interview Participants

Pseudonym	*Position*	*Date*	*Type of Interview*
GTL Center Staff A	GTL Center Staff	21-Dec-17	phone interview
Erica, GTL Center Staff B	GTL Center Staff	31-Jan-17	phone interview
Susan	Tennessee Department of Education	7-Apr-17	phone interview
Grace	North Dakota Department of Education	7-Feb-17	phone interview
Anika	Michigan Department of Education	16-Feb-17	email
Lucy	Rhode Island Department of Education	5-Apr-17	phone interview
Ethan	District of Columbia Department of Education	13-Jan-17	phone interview
Julia	Wisconsin Department of Public Instruction	13-Dec-17	in person
Anne	Vermont Department of Education	25-Jan-17	phone interview
Mary	Massachusetts Department of Elementary and Secondary Education	21-Feb-17	phone interview
Bruce	Florida Department of Education	11-Jan-17	phone interview
Luke	North Carolina Department of Education	20-Jan-17	phone interview
Kris	New Hampshire Department of Education	8-Feb-17	phone interview
Renee	Maine Department of Education	8-Feb-17	phone interview
Michelle	Washington Office of the Superintendent of Public Instruction	10-Jan-17	phone interview
Holly	Minnesota Department of Education	8-Feb-17	phone interview
Jessica	Colorado Department of Education	21-Mar-17	phone interview
Rowan	Okahoma State Department of Education	28-Feb-17	phone interview
Christina	Mississippi Department of Education	21-Feb-17	phone interview
Terri	Idaho Department of Education	14-Feb-17	phone interview
Karen	Arkansas Department of Education	20-Feb-17	phone interview
Penelope	Nebraska Department of Education	26-Jan-17	email
Perry	Missouri Department of Elementary and Secondary Education	27-Jan-17	phone interview
Margaret	Delaware Department of Education	10-Jan-17	phone interview
Amy	Connecticut State Department of Education	10-Jan-17	phone interview
Hope	Louisiana Department of Education	20-Jan-17	phone interview

Appendix 3: Map of State Education Agency Participants


Map of State SEA Participants
**Yellow indicates participant

Appendix 4: Fishbone Diagram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(adopted from Handout 7.1 – Fishbone Diagram, Center on Great Teachers and Leaders)

Appendix 5: Intermediary Organizations Named in the Equitable Access Plans

Name of Intermediary Organization	*Type of Intermediary Organization*	*States that Mention IO in Equitable Access Plan*
American Institutes for Research	Nonprofit behavioral and social science research and evaluation organization	MS
APA Consulting	Nonprofit behavioral and social science research and evaluation organization	LA
Appalachian Regional Comprehensive Center (ARCC)	Fed. Funded Comprehensive Center	WV
Batelle for Kids	National nonprofit organization	OH
CEEDAR	National technical assistance center	CA, GA
Center for Alaska Education Policy Research (CAEPR)	University Affiliate	AK
Center on Great Teachers and Leaders	Federally Funded Content Center	AL, AZ, AK, CA, CO, CT, DE, GA, ID, IN, LA, ME, MA, MN, MS, MO, NV, NH, NJ, NY, NC, ND, OK, OR, PA, RI, SC, TX, UT, VT, VA, WI
Central Comprehensive Center	Fed. Funded Comprehensive Center	KS
Council of Chief State School Officers	National nonprofit organization	GA, IL, KS, ME, MA, MN, NC, PA, WV
Education Trust	National nonprofit advocacy organization	KY, MD, NJ, MI, CA
EducationCounsel	Education consulting firm	NY
Equitable Access Support Network	Federally Funded Technical Assistance Provider	AK, DE, GA, KS, ME, MA, MN, NJ, OK, PR, TX, VA
Families in Schools	State Nonprofit Organization	CA
Florida and the Islands Comprehensive Center	Fed. Funded Comprehensive Center	PR
Great Lakes Comprehensive Center	Fed. Funded Comprehensive Center	IN
Harvard University's Strategic Data Project	University Affiliate	DE, KY
Leading Educators	National Nonprofit Organization	NY
Mid-Atlantic Equity Consortium	Federal Equity Assistance Center	MD, WV
Network on Transforming Educator Effectiveness (NTEP)	CCSSO Affiliate	CT
North Central Comprehensive Center	Fed. Funded Comprehensive Center	ND, WY
Northeast Comprehensive Center	Fed. Funded Comprehensive Center	CT, DE, ME, MA, NH, RI

Name of Intermediary Organization	*Type of Intermediary Organization*	*States that Mention IO in Equitable Access Plan*
Northwest Comprehensive Center at Education Northwest IREL-NW)	Fed. Funded Comprehensive Center	WA, ID
Partners for Each and Every Child	Nonprofit National Organization	CA
Reform Support Network	Federally Funded Technical Assistance Provider	D.C., MO, OH, NV, NJ, NY, RI, TN
Regional Education Laboratory (REL)	Fed. Funded Comprehensive Center	WV
South Central Collaborative for Equity	Federal Equity Assistance Center	AR
South Central Comprehensive Center	Fed. Funded Comprehensive Center	AR, LA
Southeast Comprehensive Center, SEDL	Fed. Funded Comprehensive Center	NC
Southern Regional Education Board	Nonprofit Regional Organization	DE, NJ, WV
Stanford Center for Opportunity Policy in Education	University Affiliate	CA
Teach for America (TFA)	Nonprofit National Organization	WV
Texas Comprehensive Center	Fed. Funded Comprehensive Center	TX
TNTP	National nonprofit organization	NJ, NY
WestEd	Nonprofit behavioral and social science research and evaluation organization	CA

Appendix 6: Intermediary Organizations by Type Mentioned in States' Plans

Type of Intermediary Organization Referenced in Plans	*State Referencing the IO*
Nonprofit behavioral and social science research and evaluation organization	CA, LA, MS
Federally Funded Comprehensive Center	AR, CT, DE, ID, IN, KS, LA, ME, MA, NH, NC, ND, PR, RI, TX, WA, WV, WY
Federally Funded Content Center	AL, AK, AZ, CA, CO, CT, DE, GA, ID, IN, LA, ME, MA, MN, MS, MO, NV, NH, NJ, NY, NC, ND, OK, OR, PA, RI, SC, TX, UT, VT, VA, WI
Federal Equity Assistance Center	AR, MD, WV
Federally Funded Technical Assistance Provider	AK, DC, DE, GA, KYS, ME, MA, MN, MO, NV, NJ, NY, OH, OK, PR, RI, TX, TN, VA
National Technical Assistance Center	CA, GA
National Nonprofit Organization	CA, GA, IL, KS, ME, MA, MN, NJ, NY,NC, OH, PA, WV
Regional Nonprofit Organization	DE, NJ, WV
State Nonprofit Organization	CA
National Nonprofit Advocacy Organization	CA, KY, MD, MI, NJ
Education Consulting Firm	NY
University Affiliate	AK, CA, DE, KY
CCSSO Affiliate	CT

CHAPTER 6: CONCLUSION

Today, state departments of education are working to implement the strategies proposed in their equitable access plans and revising or beginning implementation of new plans approved under the Every Student Succeeds Act. Startling, however, is the degree to which the strategies proposed under the guise of comprehensive talent management have opened doors to licensing and certification deregulation and the further denigration of unionized employees and educator preparation programs.

Let me provide one example from what is now my home state of Wisconsin. Using the Talent Development Framework promoted by the GTL Center as its justification, Wisconsin's Department of Public Instruction has approved a new, tiered licensing system to enable unlicensed and unprepared individuals to teach as the teacher of record in classrooms under a "license with stipulations." Additionally, candidates pursuing initial certification no longer need to take and pass a basic academic skills test or a content area test because these tests were framed as barriers preventing the recruitment of top talent. At the same time, the one high-stakes standardized test (the Foundations of Reading Test) with the most disproportionate outcomes based on race of the formerly required assessments is *still* required by law. Furthermore, licensed teachers teaching "out-of-field" can now complete an add-on license through their school district rather than the complete requirements for an additional license in an approved educator preparation program. These efforts and others, such as the automatic granting of a lifetime license after six semesters of teaching, are portrayed as efforts to stem an apparent, yet unproven teacher shortage. Under the guise of comprehensive talent management and implementing the strategies set forth in Wisconsin's equitable access plan, the teacher licensing and certification department as well as teacher preparation programs – formerly considered to be mechanisms of quality control – are portrayed as impediments to talent management oversight by new public managers in school and districts. Now, the school administrator, superintendent, or chief talent officer is fast becoming the *sole* authority for all things talent management related. It can be said that providing Wisconsin with managerial language and the concept of a "comprehensive approach to talent management" provided a platform through which the state education agency could appear to be managing talent to resolve inequitable distribution while actually deregulating the teaching profession.[27]

Additionally, the use of terms such as "inexperienced," "unqualified," and "out-of-field" are quickly being supplanted with the catchall "excellent educators". Now, rather than ensuring teachers are experienced and qualified and fully prepared to teach in their field of expertise, teachers need only show that they are "excellent" as measured via teacher effectiveness and evaluation measures. Considered another way, as long as the teacher receives a rating of "excellent" on predetermined measures of effectiveness (i.e. value-added test scores, principal observations, etc…), ensuring teachers are licensed, prepared, retained, and professional is unnecessary. While claiming to do just the opposite in the name of equity, the Excellent Educators for All Initiative and the equitable access plans developed by state departments of education provided a foundation via which to reject these previous measures of excellence. While this may not have been the intention of the U.S. DOE staff when designing the Excellent Educators for All Initiative, the policy ideas promoted by U.S. DOE and the federally funded IOs as evidenced in literature base, tools, and resources as well as in the emphasis on improving talent management provided an ideational platform states could use to advance a deregulation agenda.

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[27] Wisconsin is not the only state engaged in these efforts to scale back licensing and teacher preparation as an outgrowth of the equitable access plans. New York State has approved that charter school networks can prepare their own teachers (Taylor, 2017). Licensing and certification changes to loosen regulations on who can become a teacher and how those teachers are prepared are also underway in Minnesota, Illinois, Arizona, Connecticut, and West Virginia.

In this project, I initially set out to understand how states' equitable access plans came to contain similar strategies for how the resolve the inequitable distribution of inexperienced, unqualified, and out-of-field teachers. Beyond exploring the overlap in states' proposed strategies, I also puzzled over how a process that appeared rational and thorough – a process involving stakeholder engagement, consideration of existing policies, examination of data, etc... – could result in strategies that appeared to exacerbate the inequitable distribution of teachers. There had to be some shared operating ideas, knowledge base, or causal beliefs providing the rationale and warrants for these policy strategies among state education agencies. After all, ideas and causal beliefs are not conjured; they are manufactured. Once created, narrative frames and causal beliefs act as powerful lenses through which policymakers and stakeholders' frame problems and consider solutions (Fischer & Forester, 1993; Stone, 2012).

The state equitable access plans were fertile documents through which to better understand the ways in knowledge was mobilized in policymaking to promote narrative frames and causal beliefs around issues of equitable access. The causal beliefs and policy solutions contained within the plans functioned as arguments and as such, were

> intimately involved with relations of power and the exercise of power, including the concerns of some and excluding others, distributing responsibility as well as causality, imputing praise and blame as well as efficacy and employing particular political strategies of problem framing and not others. (Fischer & Forester, 1993, p. 7)

Since all of the federal funding for the Excellent Educators for All initiative was distributed to intermediary organizations (IOs) rather than directly to state departments of education, the role of these IOs in shaping state plans could not be overlooked. In my analyses, the diffusion of knowledge by IOs operated as a mode of governance, influencing and shaping the ways in which state education agencies framed the root causes of inequitable distribution and the accompanying solutions proposed by state education agencies.

Two intermediary organizations operating as support providers were in a powerful position to sway SEA personnel's understandings not only of what was needed for the plan to be approved but also of which knowledge and ideas were *most valuable* for tackling issues of inequitable access. Because of the deliberate selection of the IOs for their policy alignment with the U.S. DOE, these federally funded intermediary organizations enabled the U.S. Department of Education, despite its relatively weak statutory role in education, to align state and federal policy agendas.

Federal support for these intermediary organizations legitimated for states the policy ideas inherent in the resources, supports, and tools provided by these support organizations. States believed, whether falsely or not, that adopting such policy ideas would lead to the U.S. Department of Education's approval of their state's equitable access plan. At the same time, this thin endorsement of the support providers gave the support providers significant authority to select and design resources, tools, and policy ideas they would disseminate to states. Indeed, even the illusion of federal endorsement sent a powerful signal to states that the policy ideas circulating within resources and tools provided by the support organizations were *the* policy ideas upon which states should focus their plans.

The knowledge base circulated by the intermediary organizations tasked with supporting state education agency personnel was one part of the machinery within the knowledge regime that communicated and elevated certain policy ideas, narrative frames, and causal beliefs over others. Upon investigating the knowledge base promoted by the federally funded intermediary organizations, it became clear that the causal beliefs and narrative frames imputed blame on poor or ineffective talent management.

The knowledge base promoted by the federally funded IOs relied largely on working papers from economists conducting large, experimental and longitudinal studies on teacher quality and student achievement with particular attention to teachers' value-added. Strikingly, of the twenty-three states that included reference pages or in-text citations, fifty-two percent of the research cited in those states' equitable access plans and also promoted by the federally funded intermediary organizations was produced by researchers at the National Center for the Analysis of Longitudinal Data in Education Research (CALDER) and the National Bureau of Economic Research (NBER). Furthermore, advocacy briefs from organizations such as The New Teacher Project and Public Impact, frontrunners in the push nationally to revamp talent management practices, were overrepresented in the knowledge base (Odden, 2011).

This knowledge base rejected teacher qualifications based on teacher characteristics (i.e. grade point average, test scores, degree and coursework, and certification type) in favor of teacher outputs (i.e. the ability to improve student achievement based on standardized tests). It also largely rejected a long-held belief by members of the professionalization agenda that high-quality teacher preparation should be a prerequisite for entry into the classroom. Rather, this knowledge base largely recommended the better management of talent – including the recruitment, promotion, compensation, and dismissal of teachers – as *the* means to improve the distribution of teacher workforce.

Thus, while it is possible that the strategies in each state's plan evolved organically through authentic stakeholder engagement, there is a case to be made that for those state education agencies that availed themselves of the IOs' support, the policy ideas inherent within the resources promoted by these IOs narrowed what states perceived to be viable policy strategies.

Toolkits and templates developed by the federal funded intermediary organizations were another component of the organizational and institutional machinery within this knowledge regime that advanced certain narrative frames, causal beliefs and policy ideas over others. Toolkits and templates embedded policy ideas related to talent management. Since the toolkits and template appeared innocuous – streamlining and guiding processes such as root cause analyses, the formatting of the equitable access plan itself, and conducting stakeholder engagement sessions – states did not approach these resources through a critical lens that interrogated the operating narrative frames, causal beliefs, or policy ideas behind them. This does not mean, however, that the toolkits and templates were neutral instruments to support states' equitable access plan development.

In creating a suite of tools and resources for state equitable access plan development that simultaneously highlighted issues of expressed importance to the federally funded intermediary organizations and the U.S. Department of Education, federally funded intermediary organizations were able to advance what they believed to be the best strategies to resolve inequitable distribution regardless of root causes or unique state contexts.

Toolkits are proving to be effective at educating end-users and/or facilitating behavior change in part by shaping and framing the ways these end-users engage with the knowledge base. Furthermore, if the evidence base is not specified in toolkits, end users, including policymakers, may end up making choices without sufficiently understanding the deliberate inclusion and exclusion of sources that went into the design and development of the toolkit itself. A more productive use of tools and toolkits than the heavy-handed template and Equitable

Access Toolkit may be to create tools that support the implementation of a variety of different strategies, based in part on state and stakeholder request.

Consequently, it is not simply research use as in issue briefs, advocacy reports, economic working papers, or peer-reviewed education research that influences policy ideas in this arena. Rather, technical assistance tools coded as nonpartisan support may play an even larger role in the policy ideas that end up being implemented by state education agencies.

Efforts by federally funded intermediary organizations to support the development of states' equitable access plans were yet another part of the machinery buttressing this knowledge regime. Although such efforts were perceived to be helpful by some (and as overload by others), these efforts may have also prevented states from entertaining alternative strategies or alternative ways of designing the equitable access plans. Support provided by the federally funded intermediary organizations did not enable critical engagement with the underlying operating beliefs of the materials themselves. Instead, federally funded intermediary organizations provided state education agencies, especially SEAs with limited resources (i.e. staff, time, and funding), a more expedient means to complete the equitable access plans and sacrificed critical engagement with the local issues affecting states' inequitable distribution of teacher quality.

These supports were provided in a context where the deprivation of funding and staffing allocations to state departments of education has produced capacity gaps within departments of education at the same time that these departments have been asked to provide more supports to local education agencies, to oversee complex data analysis and educator effectiveness systems, to approve and provide oversight of education preparation programs, and to ensure the success, broadly speaking, of children attending schools in the state (Burnette II, 2016). Having to do more with less has resulted in increasingly contracting out state department of education services to third parties. In this context, for many states "doing more with less" also meant relying on resources, tools, and facilitation skills of third parties to develop policy ideas around how to resolve the inequitable distribution of excellent educators.

Limitations

As a dissertation, I believe one of the chief limitations of this study was that it was too ambitious in scope. The scale of analyzing fifty-two equitable access plans through three different forms of analysis was daunting, and I think the quality of the conclusions I came to was impacted as a result. In retrospect, selecting one equitable access plan and performing a close analysis of this plan and conducting more interviews with those involved in the plan's construction may have led to more cogent conclusions about this phenomenon. Additionally, some of my methodological approaches could have been sharpened in advance of entering into this work. While I feel as though I can make some claims about general trends, I do not feel this work is as complete as it could be. For instance, to better understand if the U.S. Department of Education fully intended to use the intermediary organizations as a vehicle to push through its vision of education reform around the equitable distribution of teachers, I should have included in the design of this dissertation a study of the Department of Education staff members who designed the Excellent Educators for All Initiative in an effort to tease out the factors that shaped their design decisions. Doing so would have made my claims about U.S. DOE intentionality stronger, and the work is limited as a result.

Implications

This work raises implications for the policy process in a policy arena increasingly crowded by advocacy organizations and intermediary organizations. Central to this work was a commitment to surfacing the power dynamics inherent to the policy process. The strategies selected by states to ensure equitable distribution of excellent teachers and leaders impact nearly every aspect of teaching and learning in today's public education system. To uncover the processes through which these strategies are determined is to do right by public educators and principals, teacher educators, and their students who deserve to know how such policies – which trickle down to impact teaching and learning in local communities – are decided upon, by whom, and for what purpose. To uncover these processes is an endeavor to make the policymaking more transparent and democratic.

Future Research

The incomplete nature lets me establish a more robust research agenda moving forward. The ways in which government funded intermediary organizations advanced policy ideas in line with federal policy ideas reinforces the importance of examining whose knowledge is shared and how, and ultimately, how this knowledge filters into state policy ideas.

Future research could explore the degree to which states with low capacity, or shallow talent pools themselves rely more heavily on federally funded intermediary organizations for their policy ideas and support. Another line of inquiry could investigate the design decisions behind the Excellent Educators for All Initiative (or future federal education reform efforts of a similar nature), in an effort to resolve what I can now only speculate upon: that the federal department of education has little desire to build up state capacity when it can govern state's policy ideas out of sight through the use of third party knowledge brokering and technical assistance strategies.

Additional research along these lines could include conducting single, in-depth case studies that can delve more deeply into the policy process to better understand the mechanisms through which support organizations assist and encourage state education agency personnel to accept new or revised policy ideas. Research along this same line could move beyond the perspectives of state education agency personnel to probe the experiences of other stakeholders in engaging with these support organizations. More broadly, quantitative analysis could proceed with an effort to understand which mechanisms of knowledge brokering for policy are most effective.

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