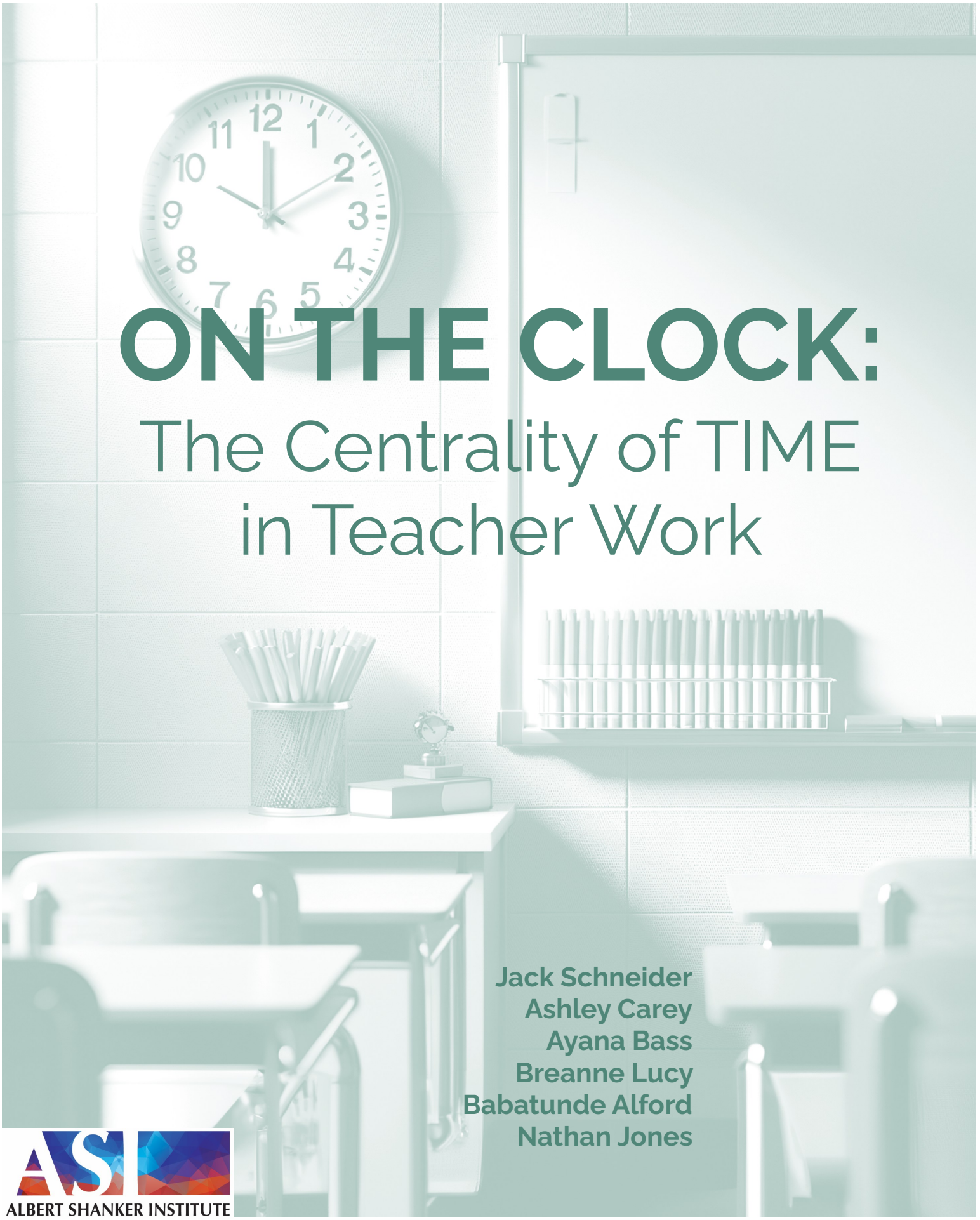

ON THE CLOCK:

The Centrality of TIME in Teacher Work

Jack Schneider
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ALBERT SHANKER INSTITUTE

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ON THE CLOCK:

The Centrality of TIME in Teacher Work

EXECUTIVE SUMMARY

American teachers work substantially more hours than their international peers; yet much of this work occurs outside the contract day. Despite this, teachers in the U.S. consistently report insufficient time to complete essential tasks—particularly lesson planning, collaboration, and professional reflection. This paradox of long working hours and persistent time scarcity creates chronically high workloads, with documented consequences for teacher stress, burnout, and turnover. Ultimately, these conditions affect student outcomes and the sustainability of the profession. Yet time continues to be overlooked in policy design and implementation.

This paper proposes an ecological framework with six interconnected components: education policy, professional context, teacher profile, teacher allocation of time, teacher effectiveness, and teacher affective outcomes. As the framework demonstrates, policy does not directly shape classroom practice. Rather, policy influences the professional contexts in which teachers work, which in turn interact with individual teacher characteristics to shape how teachers allocate their time. Teachers' allocation of time then mediates how effective they are at their jobs, and it shapes affective outcomes like emotions and attitudes. Critically, the framework frames these relationships as systemic and reciprocal: teacher effectiveness shapes professional context and individual trajectories, while affective outcomes circle back to reshape teacher identity and commitment.

On the Clock presents evidence that time constraints undermine effective policy implementation. Without sufficient time to learn new practices, implement them with fidelity, and collaborate with colleagues, even well-intentioned policies can lead to superficial compliance, temporary transformation, or complete failure. Using the recent wave of literacy legislation as a case study, this paper illustrates—through the hypothetical case of Ms. Smith—how even committed, skilled teachers face impossible constraints when policies add significant responsibilities without restructuring existing time demands. New curricula, assessments, professional development, and data management requirements accumulate without corresponding adjustments to the school day or teacher workload, creating tension between teachers' professional aspirations and personal well-being.

At a moment when teacher satisfaction and interest in the profession are at historic lows, *On the Clock* sounds an alarm: If schools are to improve in meaningful ways, they must do so in commensuration with our collective ability to make teaching more successful, more rewarding, and more sustainable. The framework offered here provides a foundation for that work. Only by attending explicitly to time—through understanding how policy shapes professional contexts, how contexts interact with teacher characteristics to influence time allocation, and how time allocation drives both effectiveness and well-being—can education reform become as feasible and as humane as it needs to be in order to work.

INTRODUCTION

Over the past several years, the vast majority of U.S. states have rushed to enact new literacy laws. Propelled by a narrative about the "science of reading," such legislation has generally required teachers to adopt new curricula, administer new screeners and assessments, attend intensive professional development, and redesign instruction. To casual observers, it would seem the entire policy arsenal has been deployed in service of closing literacy gaps.

For students of education reform, this is a broadly familiar storyline. Distressing outcomes in achievement and attainment are met with ambitious, well-intentioned policy. Stirring rhetoric and significant investments raise expectations. And early wins suggest that sweeping change will follow. But if the past is a predictor of the future, those early wins will fail to translate at scale; promising trendlines will flatten; results, ultimately, will disappoint.

Perhaps things will be different this time. Several states have seen improvements that appear connected to the adoption of new literacy policies. These bright spots suggest that stagnation is not an inevitable outcome. Yet, we fear that the current spate of reading reforms sweeping the U.S. is much like large-scale education reforms of the past, and that they will meet the same fate.

We are not fatalists. Schools can and do improve, as documented across a compelling body of scholarship (e.g., Bryk, 2010; Cohen et al., 2003; Cuban, 2010; Fullan, 2016; Haskins & Loeb, 2007). Yet the research literature also suggests there is a common facilitating ingredient needed for instructional improvement, and which is all too often in short supply: time. Without it, sustained improvement—in literacy or any other domain—is nearly impossible.

Unfortunately, the role of time in educators' work has been understudied and under-conceptualized. Frequently, time is treated as a fixed entity beyond the control of school leaders and educators. The structure of a school day, the hours worked by classroom teachers, and the organization of teacher time are all presumed as constraints; teaching and learning must occur within prescribed time boundaries. Yet these constraints are largely unrecognized as limitations that inhibit instructional effectiveness and other valued outcomes.

Drawing on an ecological framework (Lenhoff et al, 2022; Weaver-Hightower, 2008), we argue that time should be understood as a central element within a dynamic system. From this perspective, policy does not simply structure educators' work. Rather, policy shapes—and is shaped by—factors such as the context in which teachers work and the ways in which they allocate their time.

Researchers can and should do more to guide school leaders and educators on how the ways teachers use their time can be more productively oriented toward high-quality instruction. To date, a handful of efforts have sought to accurately capture the full range of activities that are part of a teacher's workday. The American Time Use Study, for instance, provides time diary data from a national sample of adults to understand their work activities; periodic reports from that project have produced estimates of the amount of time teachers work (Krantz-Kent, 2008; West, 2014). An additional source of data has been the Teaching and Learning International Study, a survey that collects information on specific instructional activities and overall hours worked from nationally representative samples in 34 countries.

Beyond these large-scale survey efforts, researchers have developed novel ways of capturing the specifics of teachers' daily work, both when teaching and completing other essential work tasks. Examples of such scholarship include the use of teacher instructional

logs (e.g., Rowan, Camburn, & Correnti, 2004; Rowan, Harrison, & Hayes, 2004), detailed classroom observations (e.g., Engel et al., 2021; Vannest & Hagan-Burke, 2010), and momentary time sampling approaches like the Day Reconstruction Method (e.g., Jones et al., 2022). These studies have begun to paint a picture of the specifics of teachers' daily use of time, but the research base remains relatively sparse and would benefit from further investigation.

Better measurement of teacher time is not enough, however. As we argue, the field needs a clearer understanding of the underlying relationship between policies, time and teaching. This paper offers a conceptual framework that centralizes the role of teacher time in schools, and we believe its potential benefits extend well beyond influencing understanding.

First, we believe this framework can provide a much-needed structure for guiding future research on teacher time-use. At present, studies of time-use have rarely built on one another systematically; a clear conceptual framework would help chart a course.

Further, such a framework might help develop stronger rationales for where and how to improve the way teachers' time is structured. It provides language that invites educators, leaders and policymakers to engage with time as a malleable structure—one to be considered, shaped and restructured to unlock conditions that allow policy to work as intended. As a result, it might also reduce educator resistance to reform, which is often rooted in reasonable concerns about capacity for implementation.

Finally, this framework might help clarify the challenges facing the teaching profession, as well as the possible ways forward. At a moment when teacher satisfaction and interest in the profession are at an all-time low (Kraft & Lyon, 2024), all interested parties need to begin thinking more carefully and more critically about time. What do teachers have time for during the day? What aspects of their work are shortchanged? What are the personal and professional impacts on teachers? And how does all of this affect students? By engaging with these questions, the field can move toward constructing a more sustainable profession for the 21st century.

This paper begins by contextualizing the problem of teacher time by drawing together disparate bodies of literature that paint a picture of how time is structured in the work of teachers. Then, we propose a new conceptual framework that situates time at the center of teachers' work. From there, we explain each component of the framework, drawing on the existing research base when possible, and identifying areas where more research is needed.

Although this framework was not developed in response to the spate of new literacy legislation, we do believe that this current reform movement is typical in its relative inattention to the problem of time. In light of that, we include a hypothetical case of a teacher, Ms. Smith, who has been tasked with transforming her classroom practice while continuing to meet existing demands on her time.

It may turn out that literacy legislation is the rare reform that succeeds despite paying marginal attention to teacher time. We anticipate, though, that this will not be the case. And we worry that we will look back at this reform effort and find that, as always, the instructional core proved resistant to change. Thus, we enter the fray now, hoping to draw attention to the matter of teachers' time while it might still be addressed.

THE PROBLEM OF TEACHERS' TIME

We introduce our framework by first mapping out an overview of teachers' time. Determining the exact number of hours teachers work each week is challenging. The contracted working hours of most American teachers span roughly 8 a.m. to 3 p.m., Monday through Friday. If they worked only those 35 hours each week, with a week off each spring and winter, as well as for eight-10 weeks during the summer, teachers would work only about 1,400 hours each year.

Yet, all available data suggest that this figure vastly underestimates the actual number of hours teachers work. According to the Organization for Economic Cooperation and Development (OECD), the total hours worked by U.S. teachers each year is approximately 1,900—more than teachers in any other country except Chile, where the average is 1,971. Moreover, OECD (n.d.) figures indicate that U.S. teachers work approximately 100 hours per year more than the average American non-teacher. These estimates align with data from the Bureau of Labor Statistics' *American Time Use Survey,* which shows that teachers, on average, work approximately 38 hours per week during the school year and 21.5 hours per week during the summer months (West, 2014).

The result of these conditions—long days with few breaks and insufficient time to complete their tasks—leaves teachers feeling they are struggling to stay afloat.

Importantly, much of this work occurs outside teachers' contracted hours. Research suggests that the boundaries between work and personal life are more blurred for educators than for employees in similar professions (Gibney, West, & Gershenson, 2022). Teachers, for instance, are more likely to work evenings and weekends. And, in a female-dominated profession, it is essential to note that women in the U.S. also continue to shoulder more at-home responsibilities than men (Pew Research Center, 2023).

U.S. teachers work more total hours than their global peers, but they do so in conditions distinct from their counterparts in other fields. One recent study, for instance, estimated that the average U.S. white-collar employee spends one to two hours each workday on personal nonwork tasks (Martin et al., 2010). And according to a recent international survey, roughly half of private sector employees stated that it would take fewer than five hours per day to complete their work if they were not interrupted by distractions (Franklin, 2018). For teachers, the workday is significantly more intense. Unlike many of their similarly educated peers, American teachers are "on" for nearly the whole time they are at work (Jones et al., 2022; Skaalvik & Skaalvik, 2017).

Given the way their time is structured during the school day—with the bulk of their hours dedicated to classroom instruction—teachers in the U.S. report having insufficient time to complete the tasks required by their work. Lesson planning, for instance, is frequently identified as a task squeezed by time restrictions (OECD, 2021; Phillip & Kunter, 2013). This can be particularly problematic for novice teachers, who often need more time to plan compared to veteran teachers, as well as for teachers whose students have divergent needs (Sellen, 2016). For their part, experienced teachers can be asked to take on more administrative tasks, further reducing the time they have available for tasks like lesson planning.

Research suggests that long hours with relatively few breaks can have both psychological and physical consequences for educators (Stark & Bettini, 2021). In response to similar insights in other bodies of scholarship, leaders across a range of fields have recognized the importance of structuring work in a manner that acknowledges human cognitive limitations (Lyubykh, et al., 2022). Reducing demands on employees, as such research suggests, might not only increase overall employee well-being but also productivity (Ripp, 2021). Teaching, however, has been immune to such transformations. Who, for instance, is going to ensure that student time is being used productively while teachers are on their "cognitive breaks"? And if the workday is shortened for teachers, who will watch the students while their parents are at work?

The result of these conditions—long days with few breaks and insufficient time to complete their tasks—leaves teachers feeling they are struggling to stay afloat. According to one study, "chronically high-workload pressures occur in work environments that routinely involve mindful and cognitively challenging tasks, have high-time pressures for completion of those tasks, include frequent interruptions as multiple tasks intrude on each other, and involve attenuated control over the timing, pacing, and quality of work output as supervisors attempt to manage time deficiencies by imposing deadlines or rearranging project schedules" (Elsbach & Hargadon, 2006). In many ways, teaching is the textbook definition of chronically high workload. Addressing this problem requires a better understanding of the role time plays.

A NEW CONCEPTUAL FRAMEWORK WITH TIME AT THE CENTER

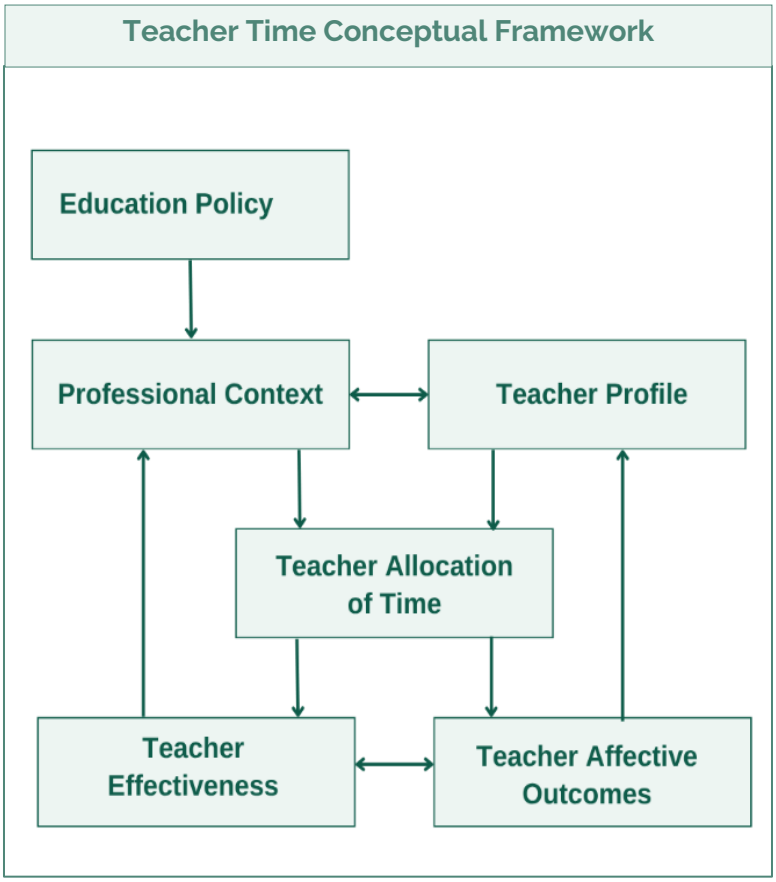
Drawing on relevant research literature, we propose a conceptual framework that situates teacher time within its broader context. Of particular interest to us is mapping the relationship between education policy and its impact on educators and their work. That relationship, as our framework illustrates, is centrally mediated by time.

The specific components of this framework should not strike readers as particularly novel. The professional context in which teachers work, for instance, is obviously important in mediating outcomes, as are the individual profiles of teachers. Teacher effectiveness is a concern not only for policy leaders but also for teachers themselves. And teacher affective outcomes, like sense of self-efficacy or emotional exhaustion, are well documented in both scholarship and popular accounts of the profession. Our contribution, then, is to tie these elements together with time (specifically "teachers' allocation of time") at the center.

By identifying the relationships between time and other key constructs, we believe this framework holds the potential to enhance our understanding of the profession and the challenges faced by those working in the nation's classrooms. Ultimately, we hope this will shape the actions of policy leaders to more effectively advance school improvement efforts. At the very least, we are confident that such a framework will enhance educators' ability to describe their professional challenges and advocate for conditions more conducive to success

In the six subsections that follow, we define each of these elements and provide brief explanations of the immediate relationships indicated by the framework. As we do, we cite the relevant research literature; yet we do not seek to conceal the many areas where existing scholarship remains thin. Inasmuch as this framework is informed by our engagement with the research base, it also serves as a call for other scholars to contribute to our collective understanding of time and its centrality in teachers' work.

Across each of these subsections, we also tell the story of a fictional teacher. Although our case focuses specifically on changes in literacy instruction, readers might well imagine other education reforms playing out in a similar fashion.



EDUCATION POLICY

Education policy is the key driver for change originating outside the context of schools and classrooms. Using rules, regulations and resources, policy leaders aim to influence the processes and outcomes of schooling. Yet, as scholars have often observed, official policy changes do not always translate into perceivable or predictable changes in practice, particularly inside classrooms (e.g., Cuban, 1993; Levin, 1998; Schneider, 2011). Our framework suggests that one major reason for this discrepancy—between ambition and outcome—may be due to the persistent failure to recognize the mediating role of time.

Policy can shape teachers' work by influencing the professional context. Without careful attention to the matter of time, however, policy can become distorted upon implementation. (Stoddard and Kuhn 2008), for example, found that education reforms emphasizing incentives and accountability led to significant increases in teachers' working hours, reflecting both expanded reporting requirements and heightened performance pressures. Similarly, Reback et al. (2014) demonstrated that accountability systems under the No Child Left Behind Act prompted schools to reallocate teacher time toward compliance activities and test preparation, narrowing the scope for broader pedagogical engagement. In each case, the presumption that policy would directly shape teacher effectiveness crashed into the reality of teachers' working conditions.

Superficial compliance with policy, rather than substantive and sustainable change, is well documented in the research literature (Cohen & Ball, 1990; Coburn, 2001; Cuban & Usdan, 2003). And the ultimate upshot of this pattern is a familiar and equally well documented cycle of overpromising and underdelivering on the promise of transformation (Cohen et al., 2007; Elmore & McLaughlin, 1988; Malen & Knapp, 1997). As our framework suggests, policy can only have its intended impact if leaders recognize the mediating factors of professional context (the conditions in which teachers work), teacher profile (the characteristics of teachers themselves), and teacher allocation of time. This perspective is in alignment with the argument advanced by Cohen and Hill (2001) in their book, *Learning Policy,* in which they maintain that schools' successes in implementing state curricular reforms in mathematics were dependent on the extent to which they provided educators with opportunities to learn about the new curriculum. Our focus on time complements and extends Cohen and Hill's "opportunities to learn" approach by more fully articulating the ways in which time specifically contributes to the success or failure of policy.

Over the past several years, a patchwork of literacy laws has been enacted across the U.S. Under these kinds of laws, states and districts are held accountable for implementation through requirements such as transforming educator preparation programs, adopting aligned curricula, providing educator professional development, monitoring student progress, and reporting on student literacy outcomes. Such legislation aims to ensure that all students have access to foundational reading skill instruction that aligns with research, while also building student confidence, comprehension and long-term literacy success.

These requirements are primarily implemented at the district level, but their impact is felt most directly in classrooms through changes to instructional materials, expectations for instructional fidelity and the use of literacy data to inform teaching. The legislation intends to shape teachers' work in ways that extend beyond curriculum reform, producing measurable impacts across a range of workforce expectations. Districts are held accountable for aligning instruction closely to approved curricula, using assessment data in instructional coaching and educator evaluation, and demonstrating improvements in student literacy outcomes.

Ms. Smith is a teacher who has been tasked with adhering to and implementing policies and practices aligned with new "Right to Read" legislation in her state. These expectations are guiding her classroom practice and changing the demands on her time.

policy is mediated through the professional contexts in which teachers work. These contexts define the practical boundaries and possibilities of teachers' daily activities and vary across school environments. Elements such as class size, the length of the school day, curriculum structure and available resources all influence teachers' work (Dresser, 2012; Harfitt & Tsui, 2015; Patall et al., 2010).

One key element of the professional context in which teachers work is time. Teachers certainly make their own decisions about how they *allocate* time, as is illustrated in our framework. However, their time is also shaped and constrained by factors such as their daily schedule. While time structures vary from school to school, the U.S. professional context is relatively distinct in the intensity of demand it places on teachers to provide instruction. Specifically, teachers in the U.S. provide instruction for an average of 28 hours per week, compared with the OECD (2021) global average of 22.1 hours. This demand, in turn, leaves less time for other teaching-related tasks such as lesson planning, collaboration and professional reflection (Jones et al., 2022; Merritt, 2016; National Council on Teacher Quality, 2016).

Teachers do have some agency in how they spend their time. In our framework, the profiles of individual teachers interact with the professional context to influence the way teachers allocate their time. Yet such agency has been steadily eroded over the past several decades, as policy leaders have sought to exert greater control over teachers' work (Schneider & Saultz, 2020; Taylor, 2007).

Ms. Smith teaches second-graders at a large, suburban school, which has a diverse student body, and students come to school with a wide range of skills and backgrounds. She is optimistic that the new, state-approved curriculum her school adopted in response to her state's Right to Read policy will help her students become stronger readers.

The new curriculum emphasizes explicit phonics, fluency routines and structured comprehension strategies, and it differs significantly from the curriculum she previously used. Communication from school-level administrators has not been extremely clear or explicit, leaving Ms. Smith and her colleagues with unanswered questions about implementation. Ms. Smith does her best to familiarize herself with and prepare for the new reading lessons, stay on top of data reporting, and communicate with families. Still, she finds it difficult to meet these newfound demands during her 47 minutes of daily prep time. As a result, she often feels she's scrambling to teach the new curriculum rather than implementing it as intended.

Ms. Smith wants to ensure students' learning needs are met, and she supports student progress. But what other time in her day will she need to give up to ensure she can appropriately implement the new system of progress monitoring? Ms. Smith teaches 24 students, and screeners are conducted one-on-one. With substitute teachers in short supply, teachers are often expected to cover each other's classes. Ms. Smith needs to assess her students' reading progress individually, and she is responsible for arranging coverage of her classes while she administers reading assessments. Due to these challenges, assessing all 24 of her students requires two full instructional days and adds to Ms. Smith's workload.

While Ms. Smith craves support from colleagues as she navigates the new policy, grumblings about the new reading curriculum in the staff lounge prevent her from reaching out. Ms. Smith is beginning to feel like she has been left to figure it out on her own.

TEACHER PROFILE

In our model, professional context is not the only variable shaping teachers' allocation of time. There are aspects of an individual—including descriptive characteristics (e.g., age, gender), job-related skills and attitudes, professional experiences and unique personal circumstances—that also play a role in how educators allocate time across a day or a week (Krantz-Kent, 2008; Rushton, et al., 2023; Shulze-Hagenest et al., 2023; Topchyan & Woehler, 2021). Women, for instance, report working more hours outside the workplace than their male counterparts (Gibney, et al., 2022). And novice teachers, predictably, spend more time planning lessons than more experienced teachers, who often replace planning time with time spent interacting with students and colleagues (Jones, 2009).

Teacher profile, as mentioned previously, also interacts with the professional context. Educators' beliefs about themselves or how they fit within their school organizations are undoubtedly shaped by the context of their schools (Miller & Youngs, 2021). In turn, different teachers—with their different identities, priorities and life circumstances—shape the professional context in which they work. This interaction likely plays a role in how teachers structure their work time. Expending additional effort on planning, for example, is likely tied to how teachers perceive their colleagues and their workplaces.

In our model, teacher profile is also shaped by teacher affective outcomes. A teacher who feels successful in the classroom, for instance, will develop a particular professional identity, along with habits and routines. That teacher's profile, in turn, is likely to shape their allocation of time, and by extension their affective outcomes. Although further research is needed, evidence suggests that this feedback loop is mediated by time and offers a potential point of intervention.

Ms. Smith obtained her bachelor's degree and teaching license in elementary education through a traditional university-based program. She has been an educator for 10 years and has worked in her school for the last seven. After her first five years in the classroom, Ms. Smith wanted to return to school for a graduate degree in special education, to better serve the learners in front of her. So far, however, she has been unable to pursue her studies due to work demands, family responsibilities and the high cost of the degree.

As one of the few teachers of color among her predominantly white colleagues, she often finds students, families and colleagues come to her for support with a range of needs; among other things, she often serves as an informal cultural liaison and advocate for students of color. Ms. Smith often feels isolated in her school and feels the extra weight and responsibility are impacting her professional growth.

Ms. Smith takes pride in being a highly qualified, skilled and dedicated teacher, as well as a lifelong learner. Although she's confident in her abilities and has consistently demonstrated her skills, the introduction of the new curriculum has presented a challenge. Ms. Smith quickly realized that her initial training was not applicable to the new curriculum. Moreover, she doubts that the program she obtained licensure from has made meaningful changes to improve teacher training in alignment with these new policy mandates, which could set future teachers up for similar experiences of feeling underprepared. On top of all that, she's anxious about finding time to change her practice. Early in her career, it was easy to work nights and weekends, but now she is acutely aware of the impact on her family.

TEACHER ALLOCATION OF TIME

How teachers spend their time is directly shaped by the professional contexts in which they work and their unique profiles. As previously discussed, these factors are not isolated from one another: They interact in an ongoing and dynamic fashion. In general, however, it seems safe to say that teachers' professional and personal circumstances strongly influence how they spend their time.

Teacher allocation of time, in our framework, has a direct influence on teacher effectiveness. Obviously, it does not do so alone; a large body of research has identified a broad range of factors that influence teacher success in the classroom, however that is defined and measured (e.g., Stronge, Tucker, & Hindman, 2004). As our model suggests, however, the allocation of time is a mediating variable through which those other factors—the professional context in which teachers work and the individual profiles of teachers themselves—impact instruction.

Teacher allocation of time also influences teacher affective outcomes in our framework. The first way it does so is indirectly, via teacher effectiveness. Teachers who are succeeding in the classroom are more likely to experience psychosocial benefits (Day & Qing, 2009). The second way it does so is directly. Teachers working long hours outside their schools, often at the expense of time with their friends and families, are more at risk of negative affective outcomes (e.g., Chang, 2009). Although more research in this area is needed, it stands to reason that allocating time to some tasks and not others, along with the consequences of such decisions, affects teachers' well-being.

Ms. Smith has spent significant personal and professional time learning to implement the new curriculum with fidelity because she deeply cares about her students' success. The state's new literacy reform assumes that teachers have time for deep learning, collaboration, data management, and effectively supporting student progress. Teachers need and want more time for this. The new curriculum also assumes that students enter Ms. Smith's classroom with the baseline skills they need to access lessons and concepts. In reality, Ms. Smith's students come to her with a wide range of skills; if she wants her students to be successful, she has to modify and differentiate the curriculum—a time-consuming process.

New policies are adding responsibilities to Ms. Smith's workload without restructuring the time allotted for her various tasks. As a result, Ms. Smith feels growing tension between her personal and professional identities. Despite being aligned with the goals of the new legislation, Ms. Smith has felt high levels of stress and fatigue; she's beginning to lose her motivation for investing all the additional time it takes to do her job well. For the first time in her career, she's questioning her commitment to teaching. Although she believes in the new literacy approach adopted by the district, she's also losing time for many of the things she values most as a teacher, including developing relationships with her students and their families

TEACHER AFFECTIVE OUTCOMES

In our framework, the allocation of time directly influences teacher affective outcomes—the feelings, attitudes and values that result from their work experience. As research demonstrates, without sufficient time to complete the many and varied tasks that effective practice demands, teachers experience high levels of stress and emotional exhaustion; this often manifests in burnout and turnover (Kraft et al., 2016; Schulze-Hagenset et al., 2023; Skaalvik & Skaalvik, 2017; Talmor et al., 2005). For some, the dissolution of work-life balance extends beyond the professional sphere to affect other areas of teachers' lives, such as their ability to maintain relationships (Clandinin et al., 2015).

Although teacher affective outcomes are important in their own right, it is also the case that students ultimately suffer. Our model illustrates the connection between teacher affect and student outcomes, recognizing that exhausted and overwhelmed teachers are less effective in the classroom (Duckworth, Quinn & Seligman, 2009). As research has found, teacher burnout can have a particularly negative impact on students, undermining student engagement and creating a negative feedback loop in which teaching and learning suffer further (Shen et al., 2015; Madigan & Kim, 2021). Additionally, teacher burnout impacts academic outcomes, degrades the quality of student-teacher relationships and reduces student well-being (Rose & Loomis, 2024; Oberle & Schoner-Reichl, 2016).

When teachers are not thriving, they are not their most effective professional selves. We reflect this in our framework, in which poor teacher affective outcomes feed back to the teacher profile. When negative outcomes, such as stress and burnout, lead to diminished success with students, teachers develop new views of themselves and their work—views that can lead to decreased effort or even exit from the profession (Cochran-Smith, 2004; Nguyen & Kremer, 2022).

Ms. Smith cares deeply about her students and understands that the school-to-home connection is essential to their progress. She also knows that having a strong reading foundation is key to their academic success. Given these values, she is working hard to teach the new reading curriculum to the best of her ability. Unfortunately, the first round of reading screenings indicates that her students have not shown much improvement; some have fallen further behind. Demoralized, she wonders what else she could or should be doing to support her students.

Ms. Smith has already given a significant amount of her personal time to implementing the new curriculum. She also spent part of her summer break in mandatory training, and she meets with her school's literacy coach once a week after school for targeted support. With two children of her own, she has had to arrange additional child care, which has been both expensive and logistically difficult. She had previously prided herself on maintaining a healthy work-life balance, but now she feels torn between being a present parent and an effective teacher.

Ms. Smith soon finds herself joining in when colleagues grumble about the new curriculum. The grumblers seem to have a point. Veteran teachers recall other shiny new programs the district told them to implement, only to abandon them a few years later. Why bother getting invested in the new program when the district will probably switch to something different in a few years anyway?

Ms. Smith had been doing her best to manage time demands and make the new program work, but now she feels drained and defeated. Most concerningly, she notices that she has less patience with her students and is less able to regulate her emotions throughout the day. She remains invested in the broader purpose, but she wonders how long she can withstand the toll this is taking on her energy and emotional well-being.

TEACHER EFFECTIVENESS

Over the past several years, schools' approaches to assessing teacher effectiveness have looked remarkably similar. A core component of many teacher evaluation systems has been the use of student standardized test scores (e.g. Kane, Rockoff & Staiger, 2008; Stronge, Ward & Grant, 2011). In addition, classroom observations remain a cornerstone of measuring teacher effectiveness (Cohen & Goldhaber, 2016). Some research has encouraged schools to take a broader view, considering teacher impacts on student attendance, engagement, behavior, sense of belonging and school advancement (e.g. Backes, et al., 2025; Jackson, 2018; Schneider & Gottlieb, 2021). In our work, we take an even wider perspective on teacher effectiveness, viewing it as multidimensional. This view resists policy logics that treat time and teaching as resources to be maximized; instead, we position teacher effectiveness as a human practice shaped by complex institutional ecologies.

Teacher effectiveness in our framework is directly influenced by teachers' allocation of time and teachers' affective outcomes. Other factors like education policy, the professional context of their schools, and individual teacher profiles also influence the work that teachers do inside classrooms, largely through the mediating variable of time. New policies, for instance, do not directly make teachers better or worse at their jobs; instead, they change the conditions in which teachers work, which in turn interacts with the teacher profile to affect how teachers spend their time. Put another way, if changes in teacher effectiveness are being driven by shifts in policy, or by the practices of school and district leaders, they are occurring through the mediating variable of time.

Finally, our framework suggests systemic interaction that frames teacher effectiveness not merely as an outcome, but also as an input shaping other variables.

Our model also recognizes the importance of the psychological domain. Improvements in classroom practice can be driven by a new sense of motivation and energy; conversely, practice can be undermined by negative emotions (Madigan & Kim, 2021; Shen et al., 2015; Viac & Fraser, 2020). Such affective outcomes influence teacher effectiveness and, in turn, are influenced by teachers' understandings of their own efficacy. Still, our framework suggests that such affective outcomes are also influenced by time—by the insufficiency of it, by the competing professional and personal demands on it, and by the relentlessness of it.

Time also plays a direct role in shaping the effectiveness of teachers. As education research has demonstrated, classroom instruction is strongly influenced by planning and preparation (Paniagua & Istance, 2018)—tasks that represent some of the most time-intensive aspects of a teacher's work outside the classroom (Philipp & Kunter, 2013). Instructional effectiveness is also shaped by factors like collaboration with colleagues (Thousand, Villa & Nevin, 2006; Chong & Kong, 2012; Berry, Daughtrey & Wieder, 2009) and relevant professional development (Darling-Hammond, Hyler & Gardner, 2017; Tschannen-Moran & McMaster, 2009; Ross & Bruce, 2007), as well as by adequate instructional time and time to meet with students (Smith, 2000; Kraft & Novicoff, 2022; Morrison, et al., 2019).

Finally, our framework suggests systemic interaction that frames teacher effectiveness not merely as an outcome, but also as an input shaping other variables. Effectiveness further shapes professional context, in that the work of each teacher in a school shapes the work of

all educators. And it shapes an individual teacher's affective outcomes, influencing factors like workplace satisfaction, stress and sense of self-efficacy (Harrison, King & Wang, 2023; Lortie,1975).

Ms. Smith has paid special attention to carefully following lesson routines, using the recommended instructional strategies, and observing student engagement during reading instruction, all of which require significant preparation. She recognizes that she needs to demonstrate high levels of competency during evaluations, including collecting student evidence for annual goals and documenting student outcomes. But Ms. Smith is increasingly concerned about her effectiveness. So far, the new data management system—adopted alongside the new curriculum—does not reflect the academic growth she expects to see in her students.

Ms. Smith is feeling uncertain about how she'll be evaluated and whether she is meeting expectations for student outcomes. She knows that to implement the new curriculum with fidelity, a nontrivial amount of her time will go toward learning how to teach in line with the new policy—time she would otherwise have spent on different activities that contribute to her sense of effectiveness in the classroom. She also worries that, at least in the short term, her instruction may not reflect her true abilities.

CONCLUSION

As we have argued from the outset of this paper, the elements of our framework are not new, nor is the observation that time is central to teachers' work. Instead, our contribution is to situate time as a mediating variable among the elements that shape and constrain teacher work. By identifying these elements and their relational interactions, we hope to offer a clearer picture of why teaching has proven so resistant to reform, as well as to identify how change might be possible.

Most immediately, we hope this work will expand how policy leaders approach the challenge of strengthening schools—and, particularly, improving instruction. As our framework suggests, education policy does not directly shape what teachers do inside their classrooms. Although tools like new reading curricula can influence what teachers do, all policy is ultimately filtered through the professional context in which teachers work, and in combination with teachers' individual profiles. And while context and profile do shape teacher effectiveness, our model suggests that this occurs through teacher time allocation rather than directly. Any theory of change, then, must account for how policy actually impacts practice, including the ways that outcomes ultimately feed back on the domains of professional context and teacher profile.

…our contribution is to situate time as a mediating variable among the elements that shape and constrain teacher work.

We also hope that this framework will challenge and expand research on the teaching profession, and particularly on efforts to transform classroom instruction via policy. There is abundant research on each of the elements in our framework; yet only a fraction of that scholarship addresses the systemic nature of those elements and the relationships between them. Among the components in our framework, teacher allocation of time is the most understudied and least understood, particularly in relation to other factors like professional context, teacher profile and teacher affective outcomes. And, as the hypothetical case of Ms. Smith illustrates, inattention to the realities of teacher time can be fatal for effective policy implementation.

Third, we believe it is important to develop a clearer understanding among the public of what teaching is and what teachers do. Teaching has long been perceived as "important but easy" (Lortie, 1975), and that is due in no small part to the fact that non-teachers often fail to understand the time-intensive nature of the profession. If teaching was a simpler charge, well over a century of reform efforts would have ironed out any kinks in the process. But efforts to improve instruction have told a different story—of complex and time-intensive work that is pursued under conditions of time scarcity. The result is the kind of "reform churn" (e.g. Hess, 1999) that advances some aims at the expense of others, produces temporary transformation, or fails to make an impact at all.

If schools are going to improve in meaningful ways—in literacy instruction or in any other domain—they will do so only in commensuration with our collective ability to make teaching more successful, more rewarding and more sustainable. Unfortunately, change appears to be unfolding in the opposite direction. This is deeply concerning, but not surprising, particularly given the limited resource of time. U.S. schools structure teacher time in ways that undercut school improvement efforts and threaten the viability of the teaching profession. The conditions of teaching are increasingly unattractive to individuals who may have historically considered a teaching career. And just as important, the way we

have structured teacher time directly undermines the ability of today's educators to plan and implement high-quality instruction.

Ms. Smith is not afraid of hard work, and she is committed to her students. Yet despite her good-faith efforts to engage with her district's new approach to literacy, a range of challenges emerge. This is a fictional scenario, but it is all too common. More disconcertingly, the case of Ms. Smith is in many ways a *best-case scenario*, in which a teacher goes above and beyond to meet the requirements placed upon her. She undoubtedly has colleagues who have learned to approach reform efforts quite differently: by ignoring them until they fade away.

But all is not lost. Our framework offers a concrete way to anticipate the time that new policies require to succeed. In the case of Ms. Smith, the framework highlights specific, addressable time-related pain points, and from these pain points, corresponding supports can be designed. When Ms. Smith is conducting screeners, the school might assign a dedicated substitute hired for this exact purpose. Similarly, the school could offer real-time coaching during instructional periods, so Ms. Smith doesn't need to stay late. Such adjustments recognize that schools are not black boxes, but rather, complex organizations in which policy outcomes depend on how reforms interact with daily practice.

The details of any time-related supports, of course, will depend on the nature of the desired change. But whatever the policy in question, this framework can help leaders think through the importance of time in realizing their intended outcomes. Only by attending explicitly to time will education reform become as feasible and as humane as it needs to be in order to work.

Ms. Smith's unwavering passion for teaching and a growth mindset help her push forward through some of the unrest from implementation efforts. She begins brainstorming ways to recenter joy and motivation for herself and her colleagues, and she proposes an idea: conducting a time audit using a framework that centers teacher allocation of time. Other colleagues agree to join her informal working group.

By using consistent language from the framework, the group can discuss the data from its audit with a better understanding of how current schedules undermine instructional quality and teacher well-being. Members of the group plan to discuss their concerns with school and district leaders, using the framework as a guide for improvements. They hope their efforts can be discussed across the district to address systemic concerns with the reading program and identify implementation needs.

Ms. Smith acknowledges that, yet again, she has taken on additional invisible labor. Yet she believes that her advocacy efforts may reach beyond her school and her district. She imagines a change that she's excited to usher into the world. "Time," she tells a legislator who visits her school, "isn't just a logistical resource—it's a necessary condition for instructional quality and teacher well-being."

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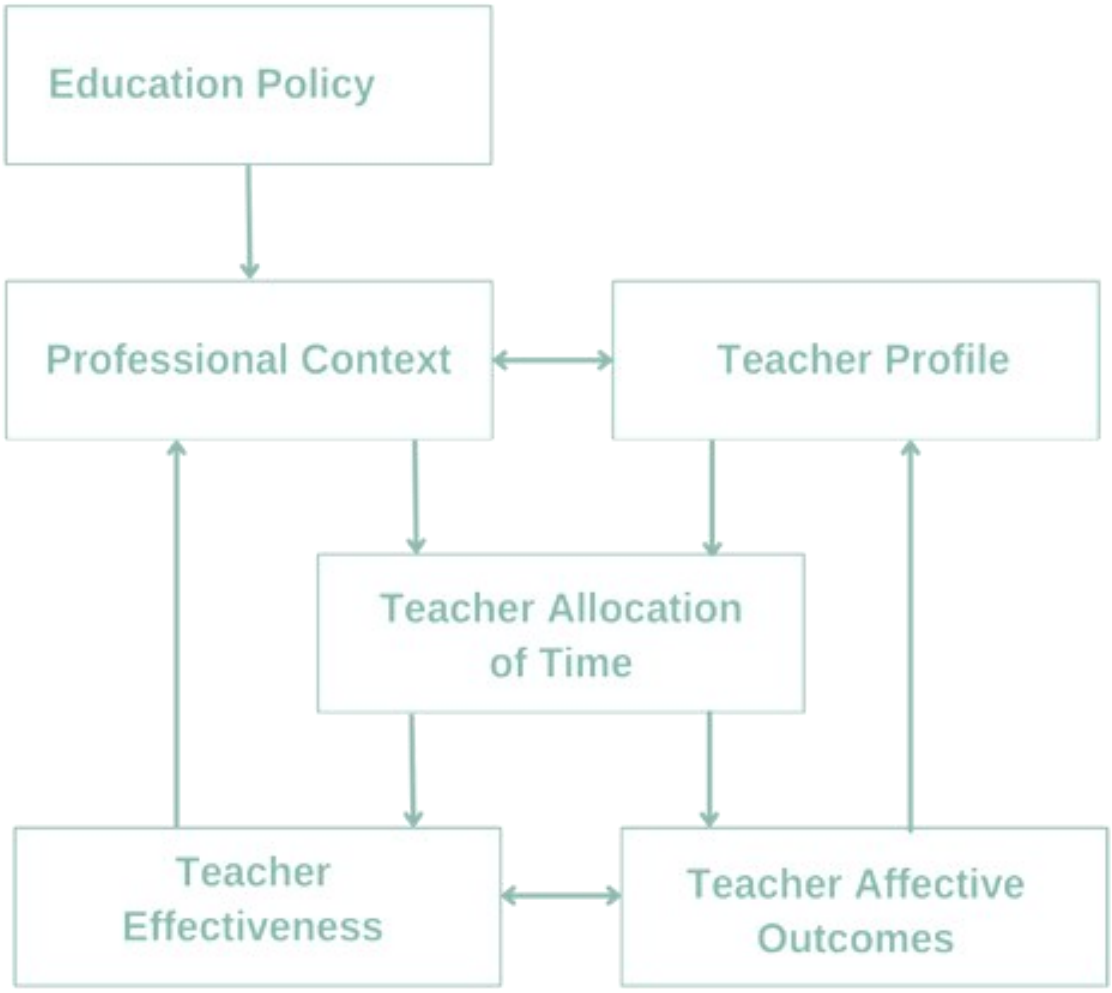

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