Adopting a Critical Lens: A Conceptual Framework for Analyzing Local School Resources

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ABSTRACT: Current studies of school finance equity focus on quantitative approaches to understanding resource disparities. Analyses of school resources that capture stakeholder perceptions and values are better positioned to critically examine the historical, cultural, and political significance of different types of school resources. The purpose of this article is to advance a framework for analyzing school resources at the site level through a critical lens. We propose a novel conceptual framework, which we refer to as the "Critical School Level Resources" framework, to capture how local school stakeholders, specifically principals, teachers, and families, understand, allocate, and use school resources. Our hope is to see this framework push the field's conceptualization of resources to include qualitative and critical approaches, in addition to quantitative or a-critical metrics, while incorporating more stakeholders in the evaluation of resources at their schools.

KEYWORDS: school resources, critical framework, local stakeholders, resource analysis, school resource evaluation, school resource allocation

Schools are networks of professionals and local stakeholders with shared goals and activities that depend on effective allocation and use of resources (Odden & Picus, 2019). How principals, teachers, and families understand, utilize, and evaluate school resources is thus critical for improving schools. While a wide range of research focuses on resource allocation at the state and district levels, researchers have expressed the need to examine resources at the school level (Miller et al., 2004; Odden et al., 2003, 2008; Roza et al., 2004). Substantial research explores variation in funding formulas and resources between and within districts, the effects of district-level resource allocation, and administrative budgeting. However, research analyzing school-level resources is lacking, especially with criticality to challenge dominant ideologies, which may be due to a dearth of conceptual frameworks for studying school-level resources critically. As we argue below, current frameworks for studying school-level resource allocation are insufficient because they do not

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explicitly account for students' cultural assets or center on race, racism, or intersectionality in their analysis (City, 2008; Sorenson & Goldsmith, 2017).

We propose a novel conceptual framework, which we refer to as the "Critical School Level Resources" (CSLR) framework, to capture how local school stakeholders, specifically principals, teachers, and families, understand, allocate, use, or evaluate school resources. The framework can shed light on how resources may relate to school goals, mission, and community. More importantly, local school stakeholders can use CSLR to examine school-level resources with a critical lens to center on race and challenge hegemony, along with other principles of critical race theory (CRT). In the next section, we describe our purpose and research questions. Subsequent sections discuss limitations in the literature concerning school resources. We will follow that with our articulation of the proposed conceptual framework. We conclude with discussion of the framework's application, limitations, and implications in educational research and school practice.

Purpose and Research Questions

Our purpose is to draw on multiple areas of literature to present a framework for understanding how resources are perceived by a school's local stakeholders and how these resources are allocated and utilized at the school level. We refer to local stakeholders of a school as specifically including principals, teachers, and families. This conceptual study provides an overview of the literature relating to school resources to show how our proposed conceptual framework can help to address limitations in the literature. For example, most research on school finance and resource allocation focuses on material differences in resources across schools, districts, or states. We highlight a lack of emphasis on school-level resources and dynamics, which are the focus of our proposed conceptual framework. The following research question guides this inquiry: How can schools and researchers critically analyze school-level resources?

We define criticality drawing on critical race theory (Ladson-Billings, 1998; Yosso, 2005). Our goal is to identify specific points of analysis to critically examine school-level resources. We do so by applying a CRT lens to Norton Grubb's (2009) categorization scheme for school resources. We emphasize the tenets of CRT in our analysis of the school finance literature and in our conceptual framework, which are the centrality of race, racism, and intersectionality, challenging dominant ideologies, and valuing experiential knowledge and transdisciplinary perspectives (Ladson-Billings, 1998; Ladson-Billings & Tate, 1995; Yosso, 2005). Our proposed framework, the CSLR framework, is a method of analyzing the tenets of CRT in school resources by recognizing the multiple categories or depths school-level resources embody. As expanded on below, extant frameworks for understanding and categorizing school resources (e.g., City, 2005; Odden & Archibald, 2002) honor the interdependency of resources, but limit the use of racial

lenses and thus lack attention to a school's cultural and racial/ethnic assets, needs, values, and history. Contemporary research into school-level resources and their relationship to local stakeholders and schools is valuable because it can highlight new needs, dynamics, practices, and issues unique to current and future settings, especially regarding racial politics and analysis of dominant ideologies. Renewed perspectives on analysis of school resources are important for continuous monitoring and evaluation of educational practices that can also accommodate changes in technology, curriculum, equity goals, economic constraints, and societal needs.

To provide greater context for these renewed perspectives, and the CSLR framework broadly, we next discuss major findings in the literature regarding school resources. Through these findings, we will highlight the two key limitations that our conceptual framework aims to address.

Literature Review

This section explores studies of resource equity in K–12 schools. School resource equity studies refer to research on the quantity and quality of resources provided to different schools serving different student populations (e.g., Berne, 1994; Chingos & Blagg, 2018). Resources are often defined in simple terms such as funding, spending per student, the number of teachers, or the number of other staff members per student. Other resource equity studies define resources as advanced curriculum, experienced school leadership, or an effective and culturally competent teacher workforce (e.g., Conger et al., 2009; Goldhaber et al., 2019). This work highlights disparities in available resources by student race/ethnicity and socioeconomic status. However, the literature traditionally has rarely adopted critical frameworks in the analyses, or does not examine individual school resource allocation in depth. Below we synthesize literature on school resource equity, highlighting two key areas for further research: (a) adopting critical theoretical frameworks and (b) conducting within-school resource analysis.

Adopting a Critical Lens

School resource equity research can be enhanced through greater use of critical frameworks. In the three subsections below, we highlight how such an approach can be used to better understand (a) mechanisms driving district funding gaps, (b) the definition of school resources, and (c) local research capacity.

Mechanisms Driving District Funding Gaps

Given availability and reliability of district-level finance data, many school resource equity studies compare funding (or spending) per student across school districts (e.g., Baker et al., 2019; Card & Payne, 2002). Studies typically compare districts in the same state, since state laws guide the allocation of most state and local tax revenues to schools (Chingos & Blagg, 2017). Depending on the specific

measure, these studies find that roughly one-third of states have K–12 school finance systems that allocate per-pupil state and local revenues "progressively," such that school districts serving a larger percentage of low-income students receives a greater share of resources (Baker & Green, 2012; Morgan & Amerikaner, 2018). Another one-third have "flat" allocations, while that remaining one-third allocate resources "regressively," sending more state and local revenues to wealthier or lower-poverty districts.

In some cases, reports and studies also examine funding gaps by race/ethnicity (Spatig-Amerikaner, 2012). One national report found that compared to districts serving predominantly White students, those enrolling larger percentages of students of color receive over $2,000 less per student, collectively summing to a $23 billion funding gap (EdBuild, 2019; see also Morgan & Amerikaner, 2018). These national reports are important, as they shed light on broad trends in the data. Peer-reviewed research studies have also examined racial funding gaps (Baker & Cotto, 2020; Bifulco, 2005; Evans et al., 1999; Parrish et al., 1995, 1998; Rubenstein, 2003; Sosina & Weathers, 2019). Rothbart (2020) and others (Evans et al., 1999; Sims, 2011) examine the extent to which court-mandated school finance reforms increase funding for districts serving larger percentages of students of color. The authors use theories and methods similar to those employed in studies of poverty-based funding disparities (e.g., Knight & Mendoza, 2019; Card & Payne, 2002) but do not draw heavily on theories or frameworks related to race to guide their research questions or interpretations. Some scholars highlight limitations with this "replacing the variable" approach, where researchers explore funding gaps along a particular dimension or variable, such as race, without drawing on theoretical frameworks that emphasize race or broader literature on critical theory (Alemán, 2007a, 2007b; Martínez, 2021). Such frameworks can help provide more nuanced research questions and more informed interpretation of findings. Baker et al. (2020) focus specifically on funding gaps for Latinx youth, linking present day differences in property values to historical trends in immigration, labor markets, residential zoning, and policy-induced racial segregation. Similarly, Weathers and Sosina (2020) link racial funding gaps to student racial segregation. Their work draws on racial segregation literature to describe the nature of racial segregation over several decades, shifting more heavily toward across, rather than within-district divides. The specific nature of shifts in segregation motivates their research question and design and helps inform interpretation of their findings.

Definition of Resources

The above studies focus on revenues and expenditures, without exploring specifically what that funding purchases. Recognizing the limitations of resource equity studies focused on simple resources, many studies examine the allocation of complex school resources, such as teacher qualifications and effectiveness. These studies

show that, in addition to funding gaps, some states and school districts assign low-income students and students of color to less qualified teachers (Haycock & Crawford, 2008; Owings & Kaplan, 2010; Roza, 2008). Scholars refer to this disparity as the "teacher quality gap" and findings are generally consistent across a wide range of teacher quality indicators, such as years of experience, full credential or endorsement status, and value-added measures (Goldhaber et al., 2015).

These studies assume that teacher quality is defined similarly for different students. Separate areas of research examine the role of culturally responsive pedagogy (Ladson-Billings, 1998) and the impact of teacher–student racial match on students' long-term outcomes (Gershenson et al., 2018; Hart, 2020; Redding, 2022). Lindsay and Hart (2017), for example, argue that cultural competency is a central indicator of teacher quality for students of color and that student–-teacher racial match can be an important driver of cultural congruency. In short, resource equity studies that adopt critical frameworks, or those that consider race, are more likely to address differences in how resources are defined and how they benefit students.

Practitioner-Led Resource Equity Analyses

Another challenge associated with conducting critical resource equity studies pertains to limited capacity at the local school level. State agencies and school districts sometimes examine resource equity by studying formulas and budget or staffing models, often as part of federal mandates. Some scholars note that school district leaders in particular do not always have necessary data systems in place to quantitatively assess the distribution of resources (Roza et al., 2004). Many districts rely on averages in personnel salaries to analyze their budgets, which causes significant discrepancies between published school budgets and actual costs of salaries and benefits (Miller et al., 2004; Odden et al., 2003; Owings & Kaplan, 2010). As a result, districts do not always know how much is spent at one school versus another, or whether their staffing models are equitable. In short, despite a need to study resources at the individual school level, many districts lack the capacity to do so.

Policy responses to local resource disparities often focus on additional funding to counteract the inequities, rather than directly addressing these issues by creating different reporting and accountability systems (Roza et al., 2004). The requirement in the Every Student Success Act to report school-level spending data may help these challenges and improve district transparency. An explicit framework to guide analysis of resource allocation can also improve capacity among local stakeholders. The CSLR framework described in the present study provides guidance around the types of questions to ask, the data to collect, and the local stakeholders whose voices should be included in resource equity discussions. As we argue further below, districts may better understand their own resource allocation patterns through use of an explicit resource framework.

Conducting Within-School Analyses

School resource equity research can also be enhanced through greater use of school-level analyses. In the three subsections below, we highlight the role of (a) qualitative research, (b) the impact of resources literature, and (b) critical legal studies.

Role of Qualitative Research

Some resource equity studies drill down within school districts to explore resource allocation across schools in the same district (Iatarola, 2002; Knight, 2019; Lane et al., 2018; Shores & Ejdemyr, 2017). In some cases, studies even explore disparities in access to resources across classrooms in the same school (Bruno et al., 2020; Goldhaber et al., 2018; Grissom et al., 2015; Knight, 2020). These studies show that within schools, low-income students and students of color are disproportionately assigned to classrooms with less qualified teachers and less rigorous coursework, compared with White students or students from middle-and upper-income households. By drawing on large-scale quantitative datasets, researchers can demonstrate that these trends are systemic and widespread across various contexts. To support this work, additional research is needed on what drives these trends. Scholars speculate that micropolitics and power imbalances among families of different racial/ethnic groups are likely at play. Such insights are important, but do not necessarily provide lessons for how to reform educational resource allocation and budgeting processes at the school level.

Qualitative studies can provide more direct evidence of the drivers of local disparities and thus offer solutions informed by local stakeholder input. For example, in addition to teacher experience gaps, studies show students of color disproportionately attend high schools with fewer advanced placement courses (Anderson et al., 2021; Kano & Kangas, 2014; Kolluri, 2020; Xu et al., 2019). Policy recommendations include larger systemic reforms to coursework policy, as well as suggestions for principals to simply offer more advanced placement courses. According to this argument, if principals have more autonomy in allocating resources, they would be better equipped to target resources to higher-need students. Vaught's (2008) qualitative case study examines a district's implementation of weighted student funding, a district funding model that distributes dollars to schools based on student characteristics and provides principals with local spending flexibility. Her findings document how several families of color at the school in her study pushed for additional remedial math course offerings, while several White families pushed for college-level math courses. Principals expressed concerns about how best to make resource allocation decisions in the face of competing demands. In some cases, White families had direct lines of communication with school board members and district central office staff and held prominent positions in the parent–teacher association. Plecki et al. (2009) observe similar dynamics in a large urban district engaged in resource equity reforms. By drawing on

qualitative research methods and theoretical frameworks that account for racialized institutions and processes, these studies shed additional light on the mechanisms driving educational resource inequity.

Impact of Resources Studies

Next, we explore lessons learned from research on the impact of resources and explain how these findings need to be expanded upon at the school level. Research on the impact of resources either examines the effects of individual educators on student achievement, often using value-added measures, or examines the effects of changes in district-level funding and student outcomes (e.g., Chetty et al., 2014; Lafortune et al., 2018). Value-added studies are designed to estimate variation in the impact of individual educators in order to inform district and state human capital management practices. Impact of funding studies are designed to identify the causal effect of additional funding in order to inform policymakers of the likely impacts of system-wide increases or reductions in spending. In both cases, the studies are not necessarily designed to provide direct implications for school leaders. Below, we highlight key findings from this literature and explain how school-level analyses can build on this work.

Studies document wide variation among the ability of teachers and principals to promote student learning (Chetty et al., 2014; Grissom et al., 2021; Jimenez-Castellanos, 2010). Educator experience is a strong predictor of effectiveness, and studies show that within-district experience is especially beneficial for students of color, students with special needs, and emergent bilingual students (Owings & Kaplan, 2010; Wu, 2019). As noted earlier, teachers' cultural congruence and racial match with students are associated with greater effectiveness (Egalite & Kisida, 2018; Gershenson et al., 2018). In addition to teachers, principals play a vital role in supporting learning environments, serving as stewards of school resources, and supporting teacher development (Grissom et al., 2021; Plecki et al., 2009). Principals rate their own influence on certain key decision areas higher than their districts (Xia et al., 2020), and studies show that after teachers, principals are the most important school-based factor in improving student achievement.

Given the centrality of principals for determining local school resource allocation, we note several empirical findings from the literature germane to our proposed conceptual framework. Leithwood et al. (2020) characterize principals' work through different paths that might emphasize, for example, data, technology, pedagogy, resources, curriculum, and instruction time. How principals prioritize different elements of their role influences the interactions of resources within schools, including relationships among educators (Xia et al., 2020). Principal actions are reflective of how resources are managed and perceived by other local stakeholders. Studies document principals creating positive school climates, professional learning communities, and collective responsibilities (e.g., Park et al.,

2019). Principals influence teacher retention and differ in their ability to retain teachers of color and teachers with higher measures of effectiveness (Sun, 2018). Effective principals have expertise in instruction, organizational management, human capital management, budgeting, and strategic resource allocation practices (Grissom et al., 2021; Plecki et al., 2009). While principals are key actors in resource allocation, limited research or best-practice guides provide recommendations for budgeting for racial equity (City, 2008; Kalifa, 2018; Sorenson & Goldsmith, 2017; Theoharis & Scanlan, 2015).

Additional school-level analyses could help unpack how principals leverage racial equity and social justice in budgeting and resource allocation decisions. Research on the impact of principals or teachers could focus on how various school assets, such as a culturally competent and effective teacher workforce and supportive school leadership can work together with local community stakeholders. In our proposed conceptual framework, we focus on principals as important school resources, but more importantly as stakeholders who traditionally hold power over their school's resources.

A final lesson from the impact of resources literature pertains to capital resources. Facility and infrastructure resources are key structural factors for school achievement because they affect attendance and parent involvement (Jimenez-Castellanos, 2010). Infrastructure and facilities also interact with computer and technology resources, which directly impact student learning (Wu, 2019). Improved information technology can promote greater access to data to inform best practices among educators and is often an integral part in adopting a culture of data (Lasater et al., 2020). However, data resources are rarely examined specifically at the individual school level in conjunction with other resources such as technology, professional development, and curriculum. In short, research shows updated facilities, technological capacity, and effective data systems are important resources for driving improvement, but use of these resources and their interaction at the school level is understudied.

Critical Legal Studies and Systems-Level Research

Finally, we highlight studies that adopt a critical lens, but address systems-level issues and thus are not always directly useful to school leaders and practitioners. Scholars have engaged several critical theories within the school finance literature, including CRT, Tribal Crit, LatCrit, Critical Policy Analysis, and Critical Resource Theory. Some research employs critical theories such as CRT in examining school resources, specifically state and district funding models and formulas (Aleman, 2007b; Green & Gooden, 2016; Martínez et al., 2019; López, 2019). Critical Resource Theory is a useful theory that is specifically designed to support the analysis of educational funding policies, inter- and intra-resource allocation, and the systemic inequities that arise from them (Whitfield, 2020). Research on school

litigation investigates the history of key court cases and its implications on future litigation and the current state of school resources (e.g., Green et al., 2020). Other research that does not explicitly employ critical frameworks explores state and district racialized history on education, school funding's ties to local taxation, and issues relating to housing and political agency via school boards (Backer, 2020; Cyna, 2019). Contemporary researchers critically examining school resources explore the various intersectionalities that school resources occupy, including housing discrimination, racist creation of spatial boundaries, and the resilience and resistance of communities of color for their students and schools. These critical studies of school resource policies explore how historical and contemporary policies are racialized in their development and dependence on racism to advance White privilege at the cost of communities of color. Research on school resources using critical means of analysis and methodology interrogates school resources through state funding models and district formulas, educational policies and other sociopolitical policies, school litigation, and community history.

Studies outlined here fill a need to critically examine school resources by unveiling White supremacist policies and structures, racialized histories, and dominant ideologies that funding formulas and models are built upon. However, these works focus on larger school contexts, do not examine resources at the school level, and do not always incorporate local stakeholders' voices or narratives. Our conceptual framework builds on this work to critically analyze resources at the school level with local stakeholders.

In summary, we synthesized literature on school resource equity, highlighting two key areas for further research: (a) adopting a critical lens, and (b) conducting within-school resource analyses. The purpose of the CSLR framework is to synergize criticality and school-level analysis.

Conceptual Framework for School-Level Resource Analysis

The conceptual framework introduced in the current study, the CSLR framework, combines a school resource categorization scheme defined by Norton Grubb (2010) with the tenets of Critical Race Theory (CRT). We use Grubb's (2010) concept of four categories to build the CSLR framework, with the aim of addressing the two key literature limitations described earlier. CSLR emphasizes CRT as a lens to provide criticality in examining school-level resources that is less present in the school finance literature. We first provide an overview of each concept and discuss how they are synthesized in the framework. The subsequent section provides a visual model of the framework.

Grubb's Four Categories of School Resources

Grubb (2010) divides school resources into four broad categories: simple, compound, complex, and abstract. The categories help frame analysis of school

Resource Type	Description	Category
Simple	Individual resources	Fiscal
Compound	Groups of resources	Fiscal
Complex	Systems of resources	Connects to school mission and CRT tenets
Abstract	Qualities, characteristics, and traits	Connects to CCW, CRT tenets, and school mission and community

Table 1: Application of the Grubb (2010) framework to CRT and CCW components
Note. CCW = community cultural wealth; CRT = Critical Race Theory. Grubb's (2010) framework is described in greater detail in the text.

resources, highlighting how resources work together rather than in isolation. Table 1 summarizes the four categories. Simple resources are individual parts of expenditures that contribute to per-pupil spending. These include a school's average teacher experience, set of curriculum materials, and computers. Compound resources, shown in column 2 of Table 1, are combinations of two or more simple resources, such as grade-level teams, smaller class sizes, curriculum and technology, or extracurricular programs. These two categories represent the fiscal aspect of school resources. Simple and compound categories are widely researched in the literature on school resources because they are easily quantified and regularly recorded. Research uses simple and compound categories to develop a fiscal snapshot of school level resources. This work is useful for comparing resource levels across school years or across schools.

Complex resources involve the combination of multiple compound resources, emphasizing how sets of resources interact with each other as a system and how these processes relate to goals, patterns, and strategies. Understanding a school's complex resources requires analyzing systems of resources in relation to the goals, mission, and community needs of the school as well as the principles of CRT. For example, researchers or practitioners might explore the relationships between resources, such as how teacher evaluations, professional development, wrap-around services, and curriculum support a school's improvement plan. If a school promotes balanced literacy pedagogy, ethnic studies, or restorative justice practices, local stakeholders might explore how different resources are targeted within the school to support these goals.

Finally, abstract resources, shown in the final column of Table 1, represent traits or characteristics related to school resources, which could encompass different pedagogical approaches, cultural values, leadership styles, school philosophy, and community history. The abstract category is the conceptual space in which to examine the implicit, thematic, emotional, and sociopolitical aspects of school

resources, such as curriculum's cultural sustainability, administration's leadership style, school climate, accessibility of technology, and teachers' understanding of students. Complex and abstract resource categories fit well into the principles of CRT, which supports the development of the CSLR framework that is applicable for critically analyzing school level resources.

Grubb (2010) defines complex and abstract as distinct from simple and compound resources. Our conceptual framework follows that definition. However, we acknowledge that at times a simple resource, such as teachers, may cross categories, and any particular resource may embody simple and compound categories as well as complex and abstract categories. For example, the hiring of three new teachers to reduce class size and add planning time could be considered a compound resource, but the cultural competency and collaborative capacity of teachers might be considered an abstract resource. One resource may not be a distinct complex or abstract resource by itself, but it may connect with other resources to be characterized with complex and abstract elements. This means that resources can belong to simple, compound, complex, and abstract categories rather than just one of the categories. The following section presents a broad overview of CRT and shows how we combine it with Grubb's (2010) four categories, specifically complex and abstract categories, for our conceptual framework.

Critical Race Theory

CRT is influential and prophetic for our research because the theory reflects on how race and power structures in school resources are often not critically analyzed or studied (Aleman, 2007a; Crenshaw, 2010; Dixson & Rousseau Anderson, 2018; Ladson-Billings & Tate, 1995; Ledesma & Calderón, 2015). The primary tenets of CRT are challenging dominant ideologies, centering racism, race, and intersectionality, committing to social justice, valuing experiential knowledge, and acknowledging transdisciplinary perspectives (Ladson-Billings, 1998; Yosso, 2005). In our conceptual framework we use the complex and abstract categories of resources to specifically analyze school-level resources through the tenets of CRT. Complex categories of resources relate to how resources work as a system to accomplish school goals that are connected to CRT tenets. These goals can include effective use of teacher time, reforming disciplinary systems, improving student's learning conditions, and culturally sustaining pedagogy. Abstract categories of resources relate to the intangible elements of school resources. Local stakeholders can use this category to analyze the quality, characteristics, meanings, and relationships of specific individual resources. CRT provides languages and frames to understand that school resources are not inherently neutral, but rather rooted in larger systems of hegemony and history of inequity (Aleman, 2007a). To accomplish this, local stakeholders must decide what resources and what categories they want to focus on. Those stakeholders can use this framework to prioritize particular tenets of CRT that represent their

school mission, goals, and needs, such as using the abstract category to dialogue about how support staff relate to the school's goal to reform disciplinary practices in relations to the CRT tenets of valuing transdisciplinary perspectives and experiential knowledge. By using the complex category, local stakeholders can analyze how resources at their school are working toward those goals, mission, needs, and tenets. The categories do not represent a specific order of operation and do not require local stakeholders to use all of the categories or tenets of CRT.

Families and communities are influential stakeholders that are not often considered as school resources in educational research and more importantly are often not part of school analysis of resources (Ishimaru, 2019). This is especially true for families of color. Research on school resources has not effectively captured the ways families and communities may contribute to students and their education (Plecki & Castaneda, 2012). Yet these local stakeholders provide wells for insight and understanding about the resources at their schools. This means that families need access to school resources, but, perhaps more importantly, families are themselves resources, just like teachers and principals (Peterson & Heywood, 2007). Families are sometimes engaged in school processes such as analyzing resources through parent coordinators, parent leadership, or family liaisons, but are often limited in their participation through a lack of access, capacity, and number of roles available (Ishimaru, 2019). Broader and deeper family engagement does not inherently position families in decision-making roles. Families and communities know about particular needs and nuances of their students and schools, including the historicity of their school community or the unique learning needs and assets of their students. These include valuable experiential knowledge, transdisciplinary perspectives, and intersectionalities these stakeholders bring to schools, along with different community cultural wealth (CCW) they possess (Yosso, 2005). The perspectives, knowledge, and expertise families can bring make them crucial to the local stakeholders necessary to utilize CSLR. Having families in this role aligns with CRT because it challenges dominant practices of excluding families in decision-making processes and creates opportunities to center on race, intersectionality, experiential knowledge, and transdisciplinary perspectives, especially for families of color (Ishimaru, 2019). We would not be able to honor CRT's tenet of committing to social justice without families. The conceptual framework in this research emphasizes the importance of families and communities as local stakeholders integral in analyzing school resources.

We introduce the concept of CCW to analyze the CRT tenets regarding centering on race, intersectionality, experiential knowledge, and transdisciplinary perspectives (Yosso, 2005). CCW draws on CRT, identifying different forms of capital or resources local stakeholders, students, and communities bring to schools, and is particularly useful in analyzing other human resources (Yosso, 2005). We provide a brief overview of each component of CCW.

Yosso's (2005) concept of CCW is six distinct forms of capital that create language to analyze school-level resources through the complex and particularly the abstract category. The six distinct capitals that make up CCW are aspirational, linguistic, navigational, resistance, familial, and social capital (Yosso, 2005). Aspirational capital relates to the capacity to dream and hope—stakeholders' resiliency and positiveness in light of obstacles. Linguistic capital includes the communication skills that local stakeholders attain through experiences in more than one language context. This capital connects to languages beyond the hegemonic forms and expressions of English in the United States. Navigational capital refers to the skills and knowledge of navigating through social institutions. This includes navigating educational systems, job markets, health care, and judicial systems. Resistant capital encompasses the skills and knowledge to challenge inequities and hegemonic subordination. Familial capital refers to the connections, knowledge, and skills cultivated among families. This capital broadens the understanding of kinship and highlights the bonds and consciousness developed through families. Social capital is understood as the various networks of people, communities, and resources that stakeholders embody.

These various capitals are utilized in our conceptual framework as a means to explore complex and abstract categories of resource through CRT in more depth. This is especially useful for applying CSLR to human resources and capital by providing concepts and language to help critically analyze those types of resources through complex and abstract categories for local stakeholders. Our conceptual framework addresses the literature gap on the need for school-level analysis of resources and the continuation of criticality in resource allocation research and practice. Specifically, the framework provides a strategy or structure to understand how resources of and for local stakeholders, that are often historically undervalued and overlooked by educational research, are perceived and utilized in schools. Our conceptual framework depends on each tenet of CRT to interrogate specific school resources and to determine the various complex and abstract meanings and worth of those resources. We use CRT and CCW as an explicit way to provide language and categories for local stakeholders to analyze and comment on the complex and abstract nature of school resources and to determine their value.

The CSLR Framework

Our conceptual framework is applicable to analyzing school-level resources in totality or select groups of resources. We recommend applying it to a structure or menu of school-level resources, because analyzing a full picture of resources at a school is more beneficial to understanding how they work together as a system to accomplish school goals rather than in isolation. We use Odden et al.'s (2003) school expenditure structure as a comprehensive list of the types of resources schools typically use. We will begin with a brief overview of their school

School Resource Indicators:	
School building/unit size	Academic focus of school (goal, AYP, etc.)
Percent of low income	Length of instructional day
Percent of special education	Length of class periods (core and noncore classes; each subject—math, ELA, science, social studies, electives)
Percent of ELL	
Expenditures per pupil (can include: total, administration, general education, or categorical)	Class sizes for each subject/department
Professional development expenditures per teacher	Percent of teachers based on subject/department

School Expenditure Structure
Instructional
1. Core academic teachers
2. Elective teachers (planning/preparation time)
3. Special education and ELL (aides, resource rooms)
4. Extra help (tutors, after-school)
5. Professional development
6. Nonclassroom instructional staff (coordinators, specialists, program facilitators)
7. Technology
8. Curriculum
9. Data (programs, dedicated time, stakeholders involved)
10. Supplies, materials, and equipment
11. Student support (counselors, nurses)
12. Families and communities
Noninstructional
13. Administration
14. Operation and maintenance

Table 2: Odden et al.'s (2013) modified school expenditure structure

expenditure structure, which is presented in Table 2. The CSLR framework is presented in the following section, and we provide an example application of the framework in Table 3.

Odden's School Expenditure Structure

Odden et al.'s (2003) school expenditure structure contains 15 school resource indicators and nine primary types of school-level resources, which are divided into instructional and noninstructional. The indicators include student demographic measurements and academic goals of the school to capture a sense of the student community, school priorities, and relationship between many resource types to ground the complex and abstract analysis of resources. Some resource types were consolidated from Odden et al.'s (2003) original structure and some types were added to reflect new educational strategies, expectations, and tools, which includes core academic teachers, special education, technology, and operations. Odden et al. (2003) specify specific resources for each type. For example, in the professional development type, the expenditure structure outlines teacher time, coaches, materials, travel, and tuition as specific components of the professional development type. However, we leave this process of specifying components of each resource type and adding additional resource types to the local stakeholders

Four categories of school resources (each instructional category; simple, compound, complex, and abstract)
Examples
1. ELA, social studies, mathematics, science teachers
a. Simple (salaries)
b. Compound (salary of grade level or department team, percentage of FTE, beginning teachers, and emergency credentialed teachers)
c. Complex (experience at the school, district, grade level, and subject; how are they working toward school goals and CRT tenets?)
d. Abstract (what are their pedagogical beliefs and style? how do they understand race and racism?)
5. Professional development
a. Simple (cost per)
b. Compound (total costs; organizers, sequencing of PDs)
c. Complex (connection to needs of school; how are teachers improving culturally sustaining pedagogy and how are students benefiting?)
d. Abstract (how does the PDs help teachers and the school to challenge dominant ideologies? how is PD valuing experiential knowledge and transdisciplinary perspectives?)
9. Data
a. Simple (cost per program, assessment tool, etc.)
b. Compound (cost of data system; cost of all assessment tools)
c. Complex (data analysis centering race and challenging hegemonic assumptions and demands?)
d. Abstract (how are local stakeholders navigating data collection and analysis?)

Table 3: Conceptual framework for school-level resource allocation example

as each school context will be unique. Table 2 displays Odden et al.'s (2003) expenditure structure, modified to address the components of the CSLR, to which we turn in the next subsection. The top half of Table 2 shows school indicators and the bottom half is adapted from Odden et al.'s (2003) expenditure structure. This list of school indicators and resources provide the ingredients for applying the CSLR framework, which we discuss next.

Application of the Critical School Level Resource Framework

The CSLR can be applied by local stakeholders to evaluate the effectiveness, relevancy, and sustainability of school-level resources according to their goals, needs, and tenets of CRT. The framework can also be used to capture how local stakeholders conceptualize, understand, or use resources based on their experiences, needs, or goals. This includes what resources they value, how certain resources have changed over time, what resources are overlooked, how local stakeholders actually use resources such as after school programs or grants. Local stakeholders have access to the same resources at their school, but may understand, use, and evaluate them in very different ways. By examining how local stakeholders understand, use, or evaluate school-level resources using CSLR, local stakeholders can make better informed resource allocation decisions moving forward.

CSLR allows a variety of methodologies to gather data about school resources for local stakeholders. Simple and compound categories of each resource may require quantitative data, while complex and abstract categories are captured through qualitative means. However, the qualitative approach is crucial because

it is a method of examining the intricate and nuanced aspects of complex and abstract resources, which are not easily quantifiable. This approach to measuring school resources requires local stakeholder input including teachers and families (Ishimaru, 2019). Examining school-level resources by involving key local stakeholders in the process helps address the literature gap on school-level resource analysis by honoring local perspectives. More importantly, involving local stakeholders traditionally not included in resource analysis centers on the values of CRT by challenging the status quo on who is at the table to analyze school resources and by centering race, experiential knowledge, and transdisciplinary perspectives. Our conceptual framework's emphasis on qualitative approaches with the inclusion of local stakeholders besides administrators, is a means to critically examine the issues of school level resources by considering resources from new perspectives and empowering local stakeholders.

Table 3 shows an application of the CSLR framework. While we use Odden et al.'s (2003) structure as a base to create categories for each type of resource, we note that other lists or structures of school level resources can be used with the framework. The table lists four specific example resources: teachers, professional development, data, and administration. For each resource, we describe simple, compound, complex, and abstract elements.

Data

Data as a resource type has different meanings and value for different local stakeholders. In the simple category, data will encompass the different individual programs and assessment tools a school utilizes, which include the costs associated with them. Different stakeholders may consider different data types relevant in this analysis. For instance, parents may find attendance and disciplinary data important, teachers may find teacher evaluations essential, or principals may find student performance growth paramount. A compound specific analysis of data looks at how data resources, such as data programs and tools, associated professional development opportunities, and time spent working with data, are connected with each other. Compound analysis is a means of understanding how groups of data-related resources are fiscally connected to each other. The compound category for data as a resource type can examine the difference between district- and school-level programs and tools. A data tool utilized as a continuum to analyze student progress across grade levels and its associated costs falls under the compound category.

Not all data resources will have concrete fiscal value or fiscal qualities. The complex category is the space in which to contextualize data with school goals, mission, needs, and tenets of CRT. Does a school's usage and application of data challenge dominant ideologies, center on race, racism, and intersectionality, commit to social justice, value experiential knowledge, and/or acknowledge

transdisciplinary perspectives? To analyze resources in the complex category, a system of resources must relate to particular goals or practices. For instance, how does a system of data resources relate to culturally relevant and responsive pedagogy? Does our data usage progress toward a school's goal of centering on race and racism? The complex category is the specific aspect of CSLR that analyzes how resources work together in progressing toward specific goals and missions that are based on the tenets of CRT.

In the abstract category, we denote the history and characteristics of each data program, tool, and resource as it relates to the school. Questions such as if the data resource is outdated, what values the data resource embodies, how families and teachers view and feel about school data, and if data resources serve students or hegemonic agents such as legislators are answered in the abstract category. An abstract look also contextualizes data as a resource with policies and history related to data, which can include district and state policies concerning data, its tools, and its usage and differences in how data was managed by previous school administrators. The application of our conceptual framework will depend on the needs and focuses of the school, their stakeholders, and researchers.

Compound and particularly abstract categories are where CCW capital is applicable to interrogate resources such as data because CCW has no fiscal properties that would relate them to the simple or compound categories. Not all CCW may be applicable for all resources. The following paragraph will show how dara could be analyzed as a resource through the abstract category using CCW, specifically navigational capital.

Examining data through the abstract category, focusing on navigational capital, may highlight how a school's use of data honors or limits navigational capital. Principals and teachers work with school data, but our conceptual framework requires families to be a part of the analysis of school resources such as data. An analysis of data in the abstract category for navigational capital can explicitly outline how local stakeholders navigate data, particularly for stakeholders who are not traditionally involved in the discussions concerning data. Looking at data for navigational capital is an opportunity for teachers and parents to share their own strategies of how they analyze, utilize, and navigate data for their students that could be useful for other local stakeholders. Understanding how parents understand and navigate data at their students' school may yield powerful insight into how schools' data usage can transform to adapt, honor, or utilize parents' navigational capital around data. These data can include disciplinary records, attendance and communication logs, observation data, standardized tests, assessments, and budgets. Examining how teachers navigate data in their practice can inform practices of certain teachers that are worth highlighting and further analyzing. This process can uncover difficulties experienced by teachers navigating data that could be unpacked further by local stakeholders.

Teachers

For analyzing core academic teachers, the simple category will record salaries and the compound category will record salaries of teachers within a grade level or subject department. Both the simple and compound categories may account for changes in the number of teachers over time. The complex category serves as a way to analyze teachers' pedagogy and its progress toward a school goal of anti-racist teaching and culturally sustaining pedagogy. Analyzing teacher practice in the complex category directly connects to other relevant resources as well such as professional development (PD), data, and administrators, and how those resources are working together to meet the school goals, mission, community needs, and CRT tenets. We use the abstract category to analyze teacher beliefs, school experiences, and CCW. Here, we qualitatively analyze teachers' CCW, such as the resistance capital teachers possess by cultivating a class culture of critical thinking, empathy, and challenging dominant narratives that are oppressive to their students.

Professional Development

Using the simple category to analyze PDs will require the costs of individual PDs and the compound category will record the costs of a year's worth of PDs, PDs within a particular series, or PDs for specific teachers. What the PDs produce is identified through the complex category by examining how teachers are progressing in the skills and content offered in the PDs. We use the complex category to evaluate how the PDs are contributing to reaching school goals and community needs such as honoring student experiential knowledge and transdisciplinary perspectives in relation to implementing restorative justice in disciplinary practices. The abstract category allows local stakeholders to analyze PDs by examining who designed the PDs, how they are structured, and what qualities and values they embody. Are the PDs designed with teacher input? Do the PDs centralize racism in their program? These are some of the questions explored in the abstract category. As in the example for teachers, analyzing PDs using this conceptual framework in the complex and abstract category will require connecting the analysis with other resources.

Administration

Analyzing administration is similar to analyzing teachers. Principals' salaries go under the simple category and the salaries of the administration team are recorded in the compound category. For the complex category, we explore the different ways principals contribute to school goals, mission, and community needs, particularly pertaining to the tenets of CRT. For the complex category, we pose questions such as the following: How does the principal's hiring practice align with the student community and experiences? Is their leadership style conducive for collaborative

work with local stakeholders? How are principals supporting teachers to challenge dominant ideologies and deficit thinking? How has leadership changed over different administrations? A principal's CCW, levels of trust, and contribution to school stability are aspects of the administration resource type examined in the abstract category. For example, questions that are qualitatively analyzed with local stakeholders can include: What social capital does the principal bring to the school and does the principal have the capacity and trust level to advocate for the social capital of their families?

In summary, the application of this framework, particularly the complex and abstract categories, is dependent on the needs and goals of a school's administration and its local stakeholders, namely teachers and families. The simple and compound categories for each resource type are intended to capture a fiscal baseline of the resources and a snapshot of their operations and interconnectedness. The purposes of the complex and abstract categories are to make meaning of and evaluate each resource type for local stakeholders, which includes unearthing effective resources, their historicity, redundancy, injustice, and untapped potential of school-level resources.

Discussion

Limitations on Implementing the Framework

Utilizing this framework may require schools to shift leadership practices by empowering teachers and families at the school leadership table. Analyzing school-level resources using this framework without teachers and families at the table for analysis, and thus conceptualization, evaluation, utilization, and allocation of resources, does not fulfill one of the primary objectives of the framework, which is to empower local stakeholders traditionally left out of decision-making processes at schools, that is, families of color. This objective is key to making the framework "critical," as challenging dominant ideologies (practices) and valuing experiential knowledge and transdisciplinary perspectives are key tenets of CRT. However, this can be difficult for many school leaders and administrators because it is in opposition to their leadership style and expectations.

Using CSLR will require supplemental time from local stakeholders who may not have the time available or the requirement from their job assignments. Organizing local stakeholders at any particular school is a daunting task. Principals and teachers have immense responsibilities and work demands with limited time, while families have many different duties and needs. Compensation is a means of empowering local stakeholders involved in using CSLR to critically examine resources at their schools, as well as making the process more accessible for local stakeholders, such as parents and families.

Critically analyzing school-level resources is not a "one and done" process. The work is iterative in nature, like many other participatory decision-making processes (Ishimaru, 2019; Ishimaru et al., 2019). Along with the shift in leadership practice and providing accommodations and access for local stakeholders to participate, the iterative process of critically analyzing school level resources using CSLR will take time over school years and can bring many tensions to the surface. Schools and their resources are not neutral and are reflective of race, intersectionality, and ideologies, meaning that the process of examining them will be messy and conflictual. This may be particularly true in light of the polarization in today's political climate. Local stakeholders using CSLR to analyze school resources over time may shed light on difficult historical contexts, racialized practices, and embedded racism or hegemony in the ways resources are conceptualized, utilized, evaluated, and allocated. Tension and conflict may arise from using CSLR; however, consensus, coalitions, or bridges can be developed amongst divided local stakeholders through the process of using CSLR with clear expectations, goals, and commitment.

Last, using CSLR may not be a useful tool for comparing resources across different schools, especially in quantifiable ways or through metrics. Much of the literature's call for better systems of recording school-level resource data is based on the purpose of accurately comparing resources across schools. CSLR will have limits on how one school's analysis of resources can be compared with another school's analysis. However, school and district leaders may be able to identify key trends, practices, or resources that are worth noting to inform their future policies or for other schools to explore and analyze.

Use-Value and Motivation

The lead author of this article led the development of CSLR. The inspiration for the framework stems in part from personal experience as a Chicago public school (CPS) teacher. I primarily taught at two elementary schools in the Chatham and South Shore neighborhoods that share similar, yet unique contexts with vastly different school conditions. One common thread between the schools is the policy on local school councils (LSCs), which are school-level leadership teams composed of administrators, select teachers, and parent representatives. LSCs have considerable power in decision-making at their respective schools, such as hiring, evaluating, and renewing principals and approving the school's academic plan. However, I perceived that LSCs were limited by the number of stakeholders involved and the capacity of their roles. With only a few teachers and parents in each school's LSC, often decided by the administrators or by the limited number of volunteers, I viewed LSCs as not truly representative of the larger school community. Although LSCs have the authority to approve their school's budget alignment to the academic plan, they do not have the capacity to conceptualize, utilize, and evaluate resources or make fundamental resource allocation decisions at their school.

Throughout my experience as a teacher in CPS, teachers outside of key leadership positions were hardly, if ever, involved in any discussions relating to resources. Most conversations regarding resources at my schools pertained to not receiving a particular resource or asking if getting a certain resource was possible. We never sat down as teachers, administrators, and families to analyze our resources, evaluate them, and make allocation decisions for the next school year. While this experience may not align with others, and the literature documents effective school improvement teams that have authority of school resource allocation (Sorenson & Goldsmith, 2017), I perceived a need in the literature for a new framework that school improvement teams could use to better understand local school resources. In particular, the lack of transparency, capacity for input, and processes to reconcile with the resources at my schools were major inspirations for me to develop CSLR.

In looking for frameworks of analyzing school resources, I found that there was a dearth of frameworks relating to school resources overall. Odden's school expenditure structure was the closest approximation to a framework focused on school-level resources. Other school resource frameworks usually amounted to different funding models, formulas, or resource allocation practices. The absence of holistic approaches to analyzing school resources was missing, let alone approaches that are critical and contextualized at the school level. This missing piece further inspired me to develop CSLR as a tool to analyze school resources that was adaptable to different US school contexts, whether it was a primary or secondary school, private, public, or charter, integrated or segregated, or urban, suburban, or rural.

Going back to CPS and my schools with CSLR means that our schools host resource analysis sessions with teachers, families, and administrators to talk through the resources that matter and impact us and our students the most. Let us take curriculum as an example. Prior to the start of the new school year, rather than administrators using the same mathematics curriculum or implementing the new district-mandated curriculum by focusing on their fiscal qualities through simple and compound categories, what if the administrators brought in the teacher team and an open and, more importantly, accessible door for families to interrogate the mathematics curriculum? What if interrogating the curriculum entailed more than just sequencing mathematics standards, learning objectives, and assessment goals as outlined by the curriculum? What if analyzing curriculum with CSLR and with local stakeholders meant that we unpacked the racialized nature of the curriculum by evaluating its standards, learning contexts, and pedagogical recommendations? What if we analyzed the effectiveness of the curriculum beyond teacher evaluations and test scores by identifying its interconnectedness or lack thereof with other subjects and the lived experiences of our students and school community? What if we reconciled with the curriculum quarterly, rather than at the end

of the school year when the administrators planned for the next school year? What if we, as local stakeholders, concluded that we could develop our own mathematics curriculum that better suited the needs of our students and community.

Our hope for CSLR is to break the mold of either utilizing or not utilizing given school resources by critically analyzing school resources in relation to local stakeholders' needs and aspirations for students and empowering local stakeholders to make meaningful decisions regarding resources. CSLR has clear implications for human resources in schools because of its emphasis on empowering teachers and families to examine the material and relational conditions around them at their school. This includes analyzing human capital, evaluation processes, PDs, leadership, and hiring practices, which all affect the conditions of human resources. By critically looking into school-level resources, local stakeholders are able to better reckon with their school community and learning environment of their students. Our hope for CSLR is to extend the agency of our teachers and families to shape the conditions of our schools to better support our students and community.

Conclusion

The school finance literature demonstrates the importance of school resources and shows that funding is not always equitably distributed. Even when districts or states target additional funding to higher-need schools, disparities may persist in more complex and abstract resources such as high-quality leadership and culturally relevant pedagogy. Although many of the decisions for allocating and analyzing resources are conducted on the state and district levels, school principals have significant decision-making capacity to utilize their budgets and resources and influence their environments for teachers. However, there is limited research examining the specificity of resource allocation in individual schools, how those resources relate to each other, and how stakeholders understand those resources. More importantly, there is a missing link between school-level resource analysis and criticality. There is limited understanding of how local stakeholders can analyze school-level resources in a way that challenges dominant ideologies, acknowledges the centrality of race, racism, and intersectionality, commits to social justice, and values experiential knowledge and transdisciplinary perspectives.

With these limitations in mind, we propose the CSLR framework to provide a means for researchers and local stakeholders both to capture a snapshot and to take a deep critical look at resources at individual schools ranging from elementary to high schools. Examining the school level is important for educational policy makers and governments because they often lack detailed information and insight into actual resources and usage on the ground. Looking at school-level resources critically may provide means and agency for local stakeholders to have more control over their schools and resources. One possible explanation for

teachers and parents' limited influence is that they have limited access to information or knowledge about school budgeting and resources. The purpose of this research and CSLR is to address these issues and to provide a way to empower key local stakeholders in school-level resource research and to create a means to critically analyze and record a school's resources, thus expanding their capacity to make their voices heard and make informed decisions that impact students.

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