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FOREWORD -- E PLURIBUS UNUM: PILLARS FOR EQUITY AND SOCIAL JUSTICE

Mahmoud Suleiman
Editorial Director

The ideal notion of attaining a utopian pluralistic life has long been elegantly captured by the United States Motto: *E Pluribus Unum*--“out of many, one.” Originated in Latin, this phrase reflects the symbolic value of these three words which carry a great promise for approaching an optimal level of democratic life that ironically has recently proven to be fragile. Perhaps, the implied vision of this slogan might have not been fully heeded at the practical level nor taken seriously by society’s institutions. Educational institutions are expected to embrace this dynamic slogan as a framework for their effective role and function within the overarching framework of democratic principles. Indeed, the words are by no means cosmetic in nature to appear on our currency and the emblems of political landmarks and establishments; rather, they are living words that shape the interaction process in the American pluralistic society. Likewise, rituals and rites of democratic engagement have the power to enhance the dynamics of pluralism and strengthen the American civilization. The educational and social institutions have always adopted these as constant reminders of what the United States is about or should be like. While demographic mosaic has a special significance in the American society, it should not be the sole incentive for integrating multicultural education in schools and elsewhere. This is especially true when we consider diversity as a parallel to pluralism in a democratic society. This implies that pluralism is the most logical mode that shapes schools’ input and educational practices. In short, diversity and pluralism are the rule, not the exception.

Having this in mind, scholars and social justice activists have had high hopes that these symbols should drive our discourse, shape our dreams, advance our aspirations, and, most importantly, guide our actions. Perhaps, schools are the most vital places to establish the foundations of pluralism and democratic upbringing. They are also major civic and social labs that create citizens whose roles are to preserve the mission of *E Pluribus Unum*. Recognizing this premise, over three decades ago Cortés (1990) suggested a multi-faceted vision within this construct dictated by the American slogan. He outlined a Five-pillared Educational Vision that has been benignly neglected but sorely needed today. This vision includes the following:

1. *Empowering Acculturation* of all Americans to an all-inclusive, equitable *Unum*;
2. *Sensitizing Acculturation* to help all Americans develop better intercultural understanding and become more dedicated to living with concern and sensitivity in a multiethnic society where racial and cultural differences co-exist with national and human commonalities;
3. *Institutional Acculturation* of the multiethnic present and future;
4. *Resource Acculturation* of drawing on the strengths of both *Unum* and *Pluribus* to work towards a stronger nation and better world; and
5. *Civic Acculturation* by developing in the students a greater dedication to building a better, more equitable society for all.

In schools, students’ assets and cultural capital are critical elements of the acculturation processes. Thus, the pillars have direct implications for society’s educational systems, especially when working with diverse groups in schools. They serve as guiding principles to achieve a balance between collective unity and individual or group diversity. The common missions and goals of the global democratic society overshadow any racial, ethnic, linguistic, or cultural differences (Suleiman, 2014). In fact, the framework of *E Pluribus Unum* forms a keen intercultural bridge to overcome any socio-cultural or socio-linguistic barriers and narrows any cultural or racial gaps that might exist.

In order to promote unity through diversity, individuals and groups must fully engage in the democratic process based on their common goals. At the same time, cultivating diversity through unity requires interactions outside one's prism of background experience and cultural schemata. Therefore, opportunities for discourse should be amply provided to dialogue and reflect beyond any limitations that might be overtly or covertly imposed by the social stratification and the cycles of intolerance.

Nonetheless, these principles continue to be put to a severe test when denial of the reality persists by becoming numb to the "culture of predatory affluence" that accounts for inequities and gross disparities (Wise, 2015). Endemic racism continues to take root in institutions as all sorts of cracks and gaps widen. Failure to bring about desired change is attributed to many reasons. One of them is the resistance to change and coziness with the status quo as it has been assumed that changing schools is like moving a graveyard (Rickover, 1983; Fibkins, 2015). Other causes revolve around the deficit approaches of dealing with symptoms rather than treating the roots of the problem. In other words, *the issue is the tissue*. For example, recruiting a sizable number of diverse participants in a given institution is not sufficient unless these participants know and experience that these places are created for them with open access while responding to their aspirations and dreams. Thus, retrofitting of institutions can go that far but not far enough. Reform and transformation require de-construction and rebuilding from the ground up.

At the same time, complicity through silence is counterproductive in the face of destructive mainstream discourse and rhetoric. We are cautioned by many social justice activists such as Tim Wise, Jane Elliot, and many others against color-blindness and color-muteness (Wise, 2010). Instead, conversations about race, culture, and other human aspects should not be avoided in schools, but rather encouraged since they greatly matter in narrowing gaps and achieving civic acculturation in all students (Howard, 2020). Given the long history of racial oppression, America has become rich with anti-racist activism and resistance in a struggle to defeat bigotry and injustice (Wise, 2020). Everyone needs to do their part!

Over the past thirty years, I have always shared with my students including preservice, novice, and seasoned teachers Jane Elliott's experiment in which she courageously felt it was professionally and morally imperative to tackle the issue of bigotry head-on during the racially turbulent times. Based on William Peters' book, *A Class Divided*, Jane Elliott's (1968) blue-eyed vs. brown-eyed experiment illustrated in the *Eye of the Storm* documentary a courageous approach to unteaching prejudice and bigotry in young learners in a predominantly White mainstream school in Riceville, Iowa. While facing resistance, the experiment gained momentum for a while and became a major part of sensitizing and institutional acculturation at all levels throughout the seventies and decades afterwards.

At my previous campus in mid-America, I had the pleasure of meeting Mrs. Jane Elliott during the mid-nineties at the peak of media-hype fascination of Lorena Bobbitt's saga and the Monica Lewinsky drama with President Clinton, both of which she had to say much about as one can imagine. Like my past practices, I always required students to view Elliott's original blue-eyed vs. brown-eyed experiment, analyze it, and draw implications for working with diverse learners in an attempt to help achieve sensitizing and civic acculturation. For the most part, students never heard of Jane Elliott nor her experiment and the work that led to it--so much so that they were always shocked and intrigued by the power of such an activity in combating bigotry. One of these classes in which I showed the experiment and engaged students in anti-racist and culturally responsive activities, a couple of my students became anti-racism activists and decided to raise money to invite Jane Elliott to do a sorely needed workshop on my previous campus and its service areas schools in an attempt to promote all levels of acculturation. As we publicized the event, a huge number of participants attended the workshop from the university and public schools in the county. It was a transformative experience to say the least.

Recently and in the wake of the recent cultural and racial trauma that erupted during another kind of pandemic known as COVID-19, in the wake of the George Floyd's killing, Jane Elliott's experiment has become more visible on the radar screen of those who have no choice but to be drawn into taking action to do something about the steep cancer of bigotry and racism that has long been in the American society's DNA and its institutions. For example, many educators in K-20 schools have discovered this experiment which became a major part of the plethora of unconscious-bias trainings and anti-racist

sensitizing workshops both at individual as well as institutional levels. Only time can tell if these will bear fruit especially the continual need for this intervention such as Elliott's experiment and other antibias treatments is a crime in itself; i.e., these should not have been needed in the first place especially if we have taken the pillars of *E Pluribus Unum* seriously.

In any case, we will continue the fight to promote the anti-racist agenda, and, more importantly, to actualize the pillars of *E Pluribus Unum* outlined by Carlos Cortés. In addition, the team at the Center for Leadership, Equity, and Research (CLEAR) will continue to provide the platform for any concerned leaders serious about defeating racism, bigotry, and injustice. With the *Journal for Leadership, Equity, and Research (JLER)*, we will continue to bring to light the voices of the voiceless as we attempt to respond to the calls for action of social justice leaders like Nelson Mandela, John Lewis, Martin Luther King Jr., Cesar Chavez, and many others. At the same time, we hope to follow the steps of courageous pioneers such as Jane Elliott and Tim Wise to change minds and hearts that will hopefully bring about desired transformation and true acculturation in schools and beyond.

The authors contributed to this year's first regular volume share their research and efforts within the overarching principles of pluralism and acculturation pillars. In addition, the volume touches upon key themes and domains that appeal to us to sustain efforts and expect less than fair, respectful, just, equitable outcomes.

Having this in mind and based on the Racial Formation Theory Framework postulated by Omi and Winant's (2014), Conchas et al. have examined perceptions as racial projects in relation to Asian American college students putting to test institutional acculturation and how far we need to go. Their study of Chinese, Korean, and Vietnamese students provides further evidence to the structural disparities in higher education that may adversely affect their sense of belonging as equal Americans. Conchas and his colleagues advance the *Racial Formation Inequality Spectrum (RFIS)* which reveals how racial groups might view inequalities in the United States in relation to structural and cultural elements. They argue, it "is therefore a construct used to organize how Asian students perceive inequality as racial projects, highlighting how nuanced understandings of inequality inform ethnically distinctive interpretations and enactments of racial projects." The study is significant given its direct implications for higher education implementations of equitable policies that are keenly linked to diverse students' expectations as equal participants regardless of their color, gender, ethnicity, nationality, or socioeconomic conditions. Consequently, they put many pillars of acculturation to a pragmatic use to ensure more equitable opportunities for all students regardless of their sociocultural backgrounds and circumstances.

Similarly, Martinez et al.'s building on the classic work of Meyer & Allen's (1991) Organizational Commitment Theories, explored the impact of administrative support on early-career teacher retention. Using a technology-based intervention, the study underscores the power of collaborative dialogue between beginning teachers and administrators in promoting a supportive environment for their success in the long run. The researchers' approach can have promising consequences for examining the ways in which teacher retention, support, and professional collaboration can be promoted. Thus, it underscores the need to act upon the need for resource acculturation through collaboration and support to collectively serve all students.

Furthermore, Fortner et al. address key aspects of social justice leadership that are sorely needed in today's leaders. While providing a synthesis of literature focusing on funds of knowledge, cultural capital, and transformative leadership, the authors examine how leaders' dispositions and mindsets can impact students and their academic achievement especially in diverse settings. In particular, the authors focused on participants in high poverty schools as they examined the dispositions of school leaders in addressing students' needs living in poverty. Readers can't agree more with their affirmation that "...when creating *true equity*, the disposition of the educational leader plays an important role in developing, fostering, and enhancing the socially-just transformation of the school culture in attending to the needs of children living in poverty." It provides a testimony for the need to re-examine Cortes' dichotomy as guiding acculturation principles and serves as a reminder of Wise's caution that "the culture of predatory affluence" can still easily creep into the mindsets of many and adversely impact their roles unless they take courageous steps to achieve equity. In addition, true leaders set the right tone

by their belief system that should revolve around all pillars driven by *E Pluribus Unum* as we seek to set high expectations, make serious commitments to social justice, and take bold actions to promote a supportive climate and equitable opportunities.

At the same time, Mercado further reinforces the importance of social justice leadership needed to transform schools. He builds on his earlier work to advance the Wise-Compassionate Framework (WCF), which can serve as a blueprint for educators and education leaders seeking to enhance learning outcomes by cultivating students' assets while responding to their diverse needs. The reconceptualization of the classic Whole Child Framework in Mercado's account and argument is timely; he thoughtfully concludes that this is a "purposeful scientific approach that educational leaders in school settings can implement to transform the recursive effects of the racial trauma, poverty, and the negative experiences associated with COVID-19." Mercado's construct echoes the need for promoting empowering acculturation by creating all-inclusive and equitable *Unum*.

Closely related to the pillars outlined above, Charara and Miller provide an account of how project-based curricular activities can be implemented in diverse settings. Their research focused on teaching science through play in kindergarten classrooms and has implications for teachers seeking to harness their students' potential and maximize learning outcomes. The knowledge-in-use approaches are didactic and have pedagogical appeal for all teachers in multicultural settings. More importantly, the research findings reflect that Charara and Miller are thorough practitioners who successfully put the national and state standards such as the NGSS to effective use as they created rigorous opportunities for their students to engage them emotionally, socially, intellectually, and academically while helping young learners "develop understanding of core ideas, scientific practices such as modeling and data analysis, and cross cutting concepts."

Moreover, Settles-Tidwell et al. provided a profound commentary on the recent dangerous efforts of the previous administration at the federal levels to legitimize white supremacy and destroy the pluralistic essence of the American democracy through legislative means and executive orders. The commentary reflects an outcome of courageous conversations that should take place in every social and educational institution on a daily basis, especially when the discourse of power moves us in the wrong direction. The authors conclude with a practical call to action: to move away from destructive rhetoric and adopt an actionable anti-racist agenda by not only acknowledging the social ills that continue to plague society, but also to take concrete steps to eradicate racism and bigotry. They showed themselves to be thorough students of Cortes, Wise, Elliott, and others given their stance of tackling here-and-now issues that impact schools and society at large. In particular, they act upon Cortes' (2017) work in which he cited Plato's adage that "those who tell the stories, rule society." We have seen the recent coup attempt that has been brewing for the past few years as a result of some media-fed brain washing of the minds of many that have been ruled by the destructive and false rhetoric.

Finally, the volume concludes with an insightful book review compiled by Monreal, Cervantes-González, and Torres who represent authentic and rich Latinx experiences. They provide a touching review of Flores' (2017) book, *Latina Teachers: Creating Careers and Guarding Culture*, while intertwining their powerful *testimonios* with their analysis of the themes at hand. The reviewers remind readers by way of drawing upon implications from Flores' work that "future teachers must also understand the racialized and racist realities that remain entrenched in systems of white supremacy."

Once again, readers of this edition will find a rich variety of contributions by authors sharing their expertise and voices about pressing issues facing all of us. The authors will provoke the readers' thinking and hopefully entice them to join the anti-racist mission and approaches. Finally, on behalf of the JLER team, we are grateful to the contributors, reviewers, editors, and everyone who assisted in the production of the edition with their alacrity and synergy.

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**PERCEPTIONS OF INEQUALITY AS RACIAL PROJECTS:
UNCOVERING ETHNORACIAL AND GENDERED PATTERNS AMONG FIRST-
GENERATION COLLEGE-GOING ASIAN AMERICAN STUDENTS**

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ABSTRACT

Through a Racial Formation Framework, this article explores how Chinese, Korean, and Vietnamese American first-generation college students at a large research university perceive inequality in the United States. Drawing on 129 interviews, our findings suggest that students operate under a *Racial Formation Inequality Spectrum* in which they conceptualize contemporary racial projects through distinct structural-to-cultural explanations. Korean American students in this sample deploy a cultural understanding of inequality embedded within structural frames, while Chinese and Vietnamese American students employ more structural perspectives integrating critiques of cultural explanations. We also find that gender shapes these factors, as most women respondents are more likely than men to view inequality from a structural lens and utilize more sophisticated conceptualizations where they critique purely cultural explanations. Ultimately, we argue that the discourse about perceptions of inequality can serve as a form of racial projects. The results of this research shed light on how social locations such as ethnorace and gender contribute to divergent understandings of inequality in the United States as described by Asian American college students. The findings have direct implications for student sense of belonging and success in higher education contexts.

Keywords: *Asian American college students, higher education, first-generation, gender, social inequality, racial formation, racial projects*

Introduction

“I actually think America is a very equal country. As a capitalist country, we get what we deserve. Our success is a reflection of our hard work. We are living in the land of opportunity.” – John, Korean American

“Inequality in America means that certain people do not have the same rights or opportunities as other people. This inequality derives from our social economic class, our race, our physical abilities, our age, our gender, and our attitude. Most factors, unfortunately, are not in our hands to determine.” – Emily, Vietnamese American

Inequality in the United States (U.S.) has been widely explored by scholars. Numerous studies highlight how historical processes and social locations influence one’s position in the U.S. social hierarchy (Almaguer, 2008; Bonilla-Silva, 2006). Because inequality plays a pervasive role in U.S. society, scholars have also turned their attention to exploring Americans’ consciousness of social inequality. In this work, scholars note that Americans tend to underestimate the actual level of inequality and treat Americans as a homogenous and, often, generalizable group (Norton & Ariely, 2011). Limited work explores how different members of U.S. society experience and perceive inequality and the nuanced ways they manifest in their understandings of the sources of this inequality. For instance, John and Emily, both members of the Asian American pan-ethnic group, expressed distinct conceptualizations about U.S. inequality in the two quotes above. Further unpacking groups’ understandings of inequality based on their social locations in society and placing attention on these differences can help scholars theoretically understand how people explain inequality and how higher education institutions can respond accordingly.

Drawing on 129 interviews with Asian American first-generation college students at a large research university, this paper examines how Chinese, Korean, and Vietnamese Americans conceptualize contemporary inequality in the U.S. In so doing, this article makes two key theoretical contributions to Omi and Winant's (2014) Racial Formation Theory. First, we argue that the discourse of the perceptions of inequality can serve as racial projects. Our case of Asian American college students demonstrates that respondents operate through distinct structural-to-cultural explanations as the basis to conceptualize contemporary racial projects. We find ethnoracial and gendered variation in Asian Americans' conceptualization of inequality. Whereas Korean Americans in this sample often deploy a cultural understanding of inequality embedded within structural frames, Chinese and Vietnamese American students employ more structural perspectives critical of narrow cultural explanations. Gender further complicates these perspectives, as women are more likely to view inequality from a structural lens and push back against purely cultural experiences of inequality compared to men. These findings highlight how ethnorace and gender contribute to variant conceptualizations of contemporary racial projects in the United States.

Second, we conceptualize the *Racial Formation Inequality Spectrum (RFIS)* to elucidate how inequality is defined along a discourse of racial projects as an axis of structural-to-cultural dimensions. We define structural explanations of inequality as a matter of political economy—e.g., how social, political, and economic capital are organized and stratified within the United States (Conchas, 2006; Kucsera & Orfield, 2014; Yano & Akatsuka, 2018). Cultural explanations refer to ideologies, values, norms, and beliefs of ethnoracial communities (Conchas, 2006; Louie, 2012). Each ethnoracial group's unique sociohistorical process of marginalization shapes their development of racial projects where social locations (i.e., race, class, and gender) often play a major role in shaping one's life outcomes and one's position in the social strata (Almaguer, 2008; Tran, 2016). The differential conceptualizations of racial projects shape where Korean, Chinese, and Vietnamese American students fall on the spectrum.

This article, fundamentally, sets out to understand how Korean, Chinese, and Vietnamese American college students' discourse of their perspectives of inequality function along an RFIS that employs both structural and cultural explanations of stratification. We call for educators and educational leaders to consider that, through the RFIS, intersecting identities allow Asian American students to see various structural inequities and critique institutional processes that reproduce marginalization. Ultimately, if the aim is to foster the sense of belonging and academic success of Students of Color, then institutional leaders must be attentive to students' experiences in society as racialized people in order to provide them with quality, equitable, and relevant resources at the college level.

The Racialization of Asian Americans in the United States

Omi and Winant's (2014) Racial Formation Theory (RFT) addressed the limitations of racialization paradigms such as ethnicity, class, and nation. While these concepts have been useful in describing specific racial formations in the United States, none of these concepts were equipped to singularly account for the complex racialization processes experienced by racially othered peoples. RFT attempts to address these limitations by highlighting how racialization processes, racial categories, and racial politics are constructed, destroyed, and reproduced within the entanglements of structure and signification. For purposes of this work, racial formation is applied to understand perceptions of inequality and opportunity in contemporary society among Asian American pan-ethnic groups. To be clear, this work is not focused on racial identity or racial

ideology (see the works of Bonilla-Silva, Goar, & Embrick, 2006 and Trieu & Lee, 2018), but rather we are focused on these students' understandings of inequality writ large through a racial formation frame.

For Omi and Winant (2014), racial formations are animated through racial projects, which are described as the "...interpretation, representation, or explanation of racial identities and meanings, and an effort to organize and distribute resources (economic, political, cultural) along particular racial lines" (pg. 125). The idea of the Asian American model minority can be understood, for instance, as a racial project that emerged during the Cold War (Cheng, 2013; Hsu, 2015) and was cemented during specific historical moments in the United States after 1965. As one of the fastest growing ethnic groups in the U.S., Asian Americans are often deemed the "model minority." In popular discourse, Asian Americans are praised for their high achievement and their ability to integrate into mainstream America. Asian immigrants and their descendants are often regarded as an ethnic group that possesses the appropriate cultural values to assimilate and to be successful. To this end, the "model minority" stereotype of Asian Americans "may be most succinctly characterized by its passive conformism, which is keeping quiet, playing safe, and thus being 'good'" (Yano & Akatsuka, 2018, p. 11).

In fact, Claire Jean Kim's (1999) seminal work on racial triangulation illustrates how the racialization of Asian Americans has resembled a dialectical process of ostracization and valorization relative to whites and Blacks. Kim (1999) elaborates on how Asian Americans have been civically ostracized as foreigners in relation to whites. Simultaneously, Asian Americans have also experienced relative valorization as meritocratic subjects in relation to Black communities. Furthermore, in the wake of decades of social movements, the model minority myth has been useful for white conservatives in curtailing and thwarting racial justice policies and demands (Omi & Winant, 2014). For example, traces of this racial project have been integral to long-standing debates about affirmative action practices in higher education institutions (Allred, 2007) and have emerged during recent efforts to desegregate highly selective public high schools (Kucsera & Orfield, 2014).

In other words, the "model minority" myth as a racial project has been predicated upon maintaining racial capitalism (Robinson, 2000), white supremacy, and anti-Black racism (Poon et al., 2016). Whichever political ideologies are at play, these projects embody an interpretation that links certain meanings to race. The circulation of model minority tropes continues to inform the contemporary racialization of many Asian American groups as a hegemonic obfuscation (Lee, 2015). Whether or not an individual accepts these stereotypes as true is immaterial since it will always shape their everyday experience and society at large.

Inequality among Asian Americans and Racial Formation

Racial projects not only confer qualitative traits onto groups of racialized people, but they also have consequences for their material conditions—including their relationships to the state. Thus, racial formation is captured by the synthesis of these racial projects, large and small, as they interact on a societal level. Since racial formation is always understood in its historical context, this allows for a dynamic and changing perspective of race in modern times. With regards to Asian Americans, the model minority typology has become a powerful force behind their racial project and the consequent racial formation. Yet, it often masks the great heterogeneity of this population.

In fact, the term "Asian American" is pan-ethnic and encompasses over 17 million members of nearly 50 different national-origin groups with different ethnicities and historical experiences, such as Cambodians, Hmong, Chinese, Vietnamese, Japanese, and Koreans. Yet, the

great diversity among these groups is often overlooked due to such singular categorization. Intra-Asian heterogeneity has important implications for the ways in which Asian Americans understand inequality, especially in relation to their educational experiences and opportunities. At the aggregate level, Asian Americans have been racialized as the model minority, partly due to the hypervisibility of certain groups who are deemed as high achieving, such as the Chinese and Koreans (Tran et al., 2018). Nonetheless, this monolithic understanding of Asian Americans and their structural and cultural positioning in the larger U.S. society masks important areas of inequality and dissensions among Asian Americans (Conchas, 2006; Felicinao, 2005; Kibria, 1996; Lee & Zhou, 2015).

Although categorized and racialized similarly as pan-ethnic Asian Americans, Chinese, Korean, and Vietnamese groups have emigrated and settled in the U.S. under different circumstances. As one of the oldest Asian ethnic groups to settle in the United States as migrant laborers, Chinese Americans have been direct victims of racist policies like the Chinese Exclusion Act of 1882. They were also crucial facilitators in forging pan-ethnic alliances and solidarity with other Asian ethnic groups (Le Espiritu, 1992). Once the 1965 Immigration and Naturalization Act was passed, a large influx of highly skilled and educated Korean and Chinese immigrants began and their fast integration into the larger society through upward social mobility is well documented (Le Espiritu, 1992; Lee & Zhou, 2015).

On the contrary, most of Vietnamese immigrants immigrated to the U.S. as refugees with limited social and cultural capital (Conchas, 2006; Okamoto, 2014; Portes & Zhou, 1993; Zhou & Xiong, 2005). As refugees, Vietnamese immigrants are predominantly under-educated and low-skilled, and their resettlement in the United States was facilitated by the federal government. As a result, large groups of Vietnamese refugees are concentrated in areas that were not previously populated by Asian ethnic groups. Despite such hardships, Vietnamese youth who are well integrated into their ethnic communities have achieved remarkable academic success (Conchas, 2006; Zhou & Bankston, 1998; Zhou & Xiong, 2005). Some scholars argue that the immigrant culture of Vietnamese families and ethnic communities that emphasize the importance of education, strong work ethic, and achievement facilitates Vietnamese socioeconomic and educational mobility (Ngo & Lee, 2007; Zhou & Bankston, 1998).

However, downward mobility of many Vietnamese refugees and their children settled in heavily racialized urban centers are also well documented, such studies have found disadvantaged Vietnamese youths tend to identify with and are racialized similarly to structurally disadvantaged African American youth in their neighborhoods (Ngo & Lee, 2007; Zhou & Bankston, 1998). In addition to their differential educational experiences from their Chinese and Korean peers, Vietnamese immigrants also have different experiences with race. Zhou and Xiong (2005) argue that Vietnamese immigrants' "visibly large group size and high ethnic concentration may galvanize group-based discrimination against individual members" (p. 1143).

Despite such differences in immigration contexts, histories, and experiences in the United States, Asian Americans' socioeconomic and educational trajectories are still largely portrayed as that of the "model minority." This monolithic representation has important implications for the ways in which Asian Americans understand what inequality and success mean in the ethnic communities as well as the larger U.S. society, especially in relation to their ethnoracial identities. Straying from the typical Asian American "model minority" stereotype often leads Asian Americans to disidentify pan-ethnically—consider themselves "not Asian (enough)," develop pan-minority consciousness, and/or see themselves as "acting black/white" (Lee & Zhou, 2015; Ngo & Lee, 2007; Ocampo, 2014; Yano & Akatsuka, 2018). Then, the Asian Americans'

conceptualization of racial projects, while grounded in the model minority typology, may vary by ethnically heterogeneous experiences of inequality, which pan-ethnic approaches cannot adequately capture.

We seek to address this gap in the literature. *For the purposes of this paper, we conceptualize racial projects as the simultaneous interaction between the material (structural) and the discursive (cultural), and we extend the racial project concept to understand how students speak race through their description of their perceptions of the sources of inequality among ethnoracial groups in the U.S.* Consequently, we examine how Asian American students discuss inequality as a type of racial project precisely because the students inform us as to *why* some ethnoracial groups do better than others in U.S. society.

We have laid the groundwork for using the RFT to explore how ethnic-specific racial projects may influence the ways in which Asian Americans assign meanings to inequality in the U.S. and how racial projects are employed differently across social location. In so doing, we advance RFT by illustrating that racial projects for Asian American first-generation students are situated along a structure-to-culture inequality spectrum or what we subsequently coin the *Racial Formation Inequality Spectrum*. By placing emphasis on the individual meaning-making process, we move away from the pan-ethnic approaches to Asian American experiences and instead, focus on how diversity in ethnicity may operate differently at the individual and (pan-ethnic) group levels (see Brubaker, 2004 and Jiménez et al., 2015 for similar approaches to ethnic diversity). After presenting our findings, we will discuss in more detail how we situate the sources of inequality within the *Racial Formation Inequality Spectrum*.

Methodology

The project was an exploratory and comparative case study of first-generation students at a large, four-year university in the United States. Case study design methodology was employed because it allows the researcher to focus on a phenomenon within its real-world context (Yin, 2017). “The First-Generation College Student Inequality and Opportunity Project” ascertains college students’ understandings of the factors they perceive as contributing to inequality and opportunity in the U.S. The data for the current study come from this larger study exploring differences in perspectives of 226 Mexican, Chinese, Korean, Vietnamese, and white American identified first-generation college students, from 2014-2016²—see **Table 1**—at a selective, public research-intensive university classified as an Hispanic Serving Institution (HSI) on the West Coast.

Table 1. Demographics of participants, 2014-2016

Race/ethnicity	Men	Women	Total
White	19	24	43
Chinese American	21	19	40
Korean American	24	17	41
Vietnamese American	22	26	48
Mexican American	26	28	54
Total	112	114	226

These groups were selected because they are the largest ethnoracial groups at the university. It is important to note that all the students identified as first-generation college students in the U.S. Moreover, many Chinese and Korean American identified students in this sample

classified their immigrant parents with positive and highly selective premigration selectivity³, such as obtaining technical skills and vocational credentials in their home countries, but not postsecondary degrees. As such, we consider students with parents who attended technical and vocational institutions outside of the U.S. (but not obtaining postsecondary degrees) as first-generation college students in the U.S.

Participants were recruited through associations with multicultural education courses, ethnic studies courses, social science courses, STEM majors, campus organizations, and involvement with community organizations. Snowball sampling, use of social networks, and direct approach in public situations were used. This sampling technique was employed to attain a reflective portrait of the larger population of first-generation college students on the university campus that were also from one of the five ethnic groups under study. The final group of student participants represented a wide range of majors on campus, and the racial breakdown reflected the larger demographic profile of the student body. Of importance to note is that all these students entered college with similarly strong academic profiles despite mixed K–12 public schooling experiences, as we will highlight in phase two of the study (not presented in this article). The sample reflected primarily upper-class juniors and seniors.

Open-ended interviews were conducted that consisted of three main foci of interest: (1) How students explain inequality and opportunity in America, (2) What ethnic group they believe does best in society and why, and (3) What students believe are the consequences of inequality. Interviews lasted an average of 45-60 minutes, and all interviews were transcribed verbatim. The interview data was coded into three different waves. First, open coding was conducted to capture the major themes and recurring words and phrases that were related to the informants' perceptions of inequality. Then, the long list of open codes was re-coded and collapsed into three significant groups: (1) same opportunity, (2) sources of inequality, and (3) consequences of inequality. Lastly, these three significant groups were further taken apart and coded into thematic responses. We then organized these themes into percentage of respondents who stated each as a reason.

Of the 226 students in the larger study sample, most of them were between 18 and 26 years of age. In terms of gender, 50.5% (114) identified as women and 49.5% (112) identified as men. The racial/ethnic identification of students in the larger study sample included 24% (54) Mexican American, 21% (48) Vietnamese American, 19% (43) white American, 18% (41) Korean American, and 17.6% (40) Chinese American students. A substantial number of Mexican American students in this sample reported being raised in low-income households, as 94% reported that they received free or reduced cost lunch during their K-12 education and identified themselves as lower income based on their parental education and occupation. Of the 129 interviews with Asian American respondents, Chinese American and Korean American students in the sample tended to self-identify as middle- to upper-income, and Vietnamese American primarily self-identified as lower- to middle-income. Among the Asian American students in the sample, 48% (62) identified as women while 52% (67) identified as men. With the exception of the white respondents and a few Mexican American students who identified as 3+ generation in the U.S., the majority of the students in this sample were children of immigrants whose parents were classified as 1st generation or 1.5 generation immigrants in the United States.⁴

For purposes of this paper, we concentrate on coded data derived from group (2) sources of inequality, and the 129 interviews with Asian American respondents. Given our interest in racial projects and understandings of inequality, we paid close attention to codes or phrases related to cultural and structural explanations of inequalities based on the Racial Formation Theory. First, we present descriptive data of students' responses to sources of inequality on the overall Asian

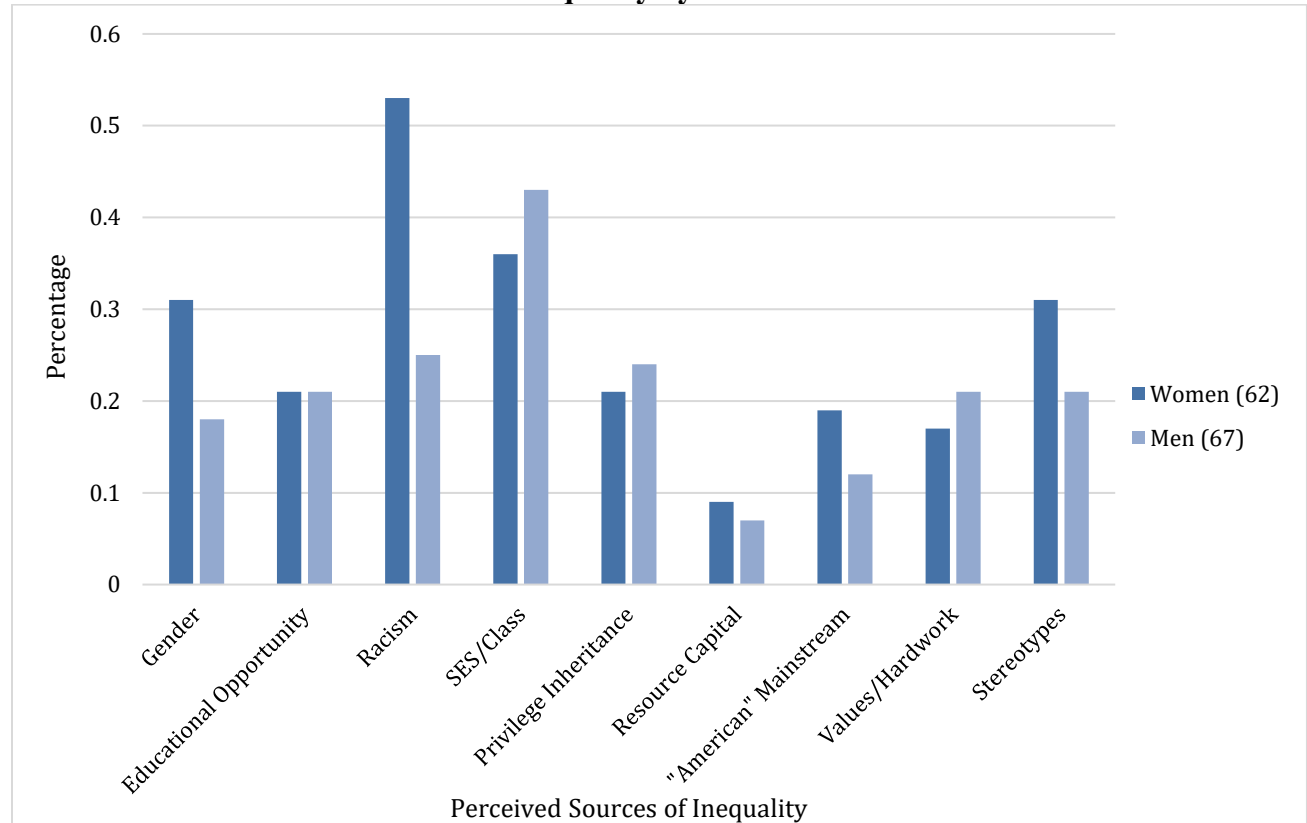
American sample by gender, and then we present responses separately by gender and ethnicity. We end the chapter with an articulation of the findings captured in a structure-to-culture spectrum that best captures Asian American first-generation students' perceptions of inequality as racial projects.

Descriptive Results

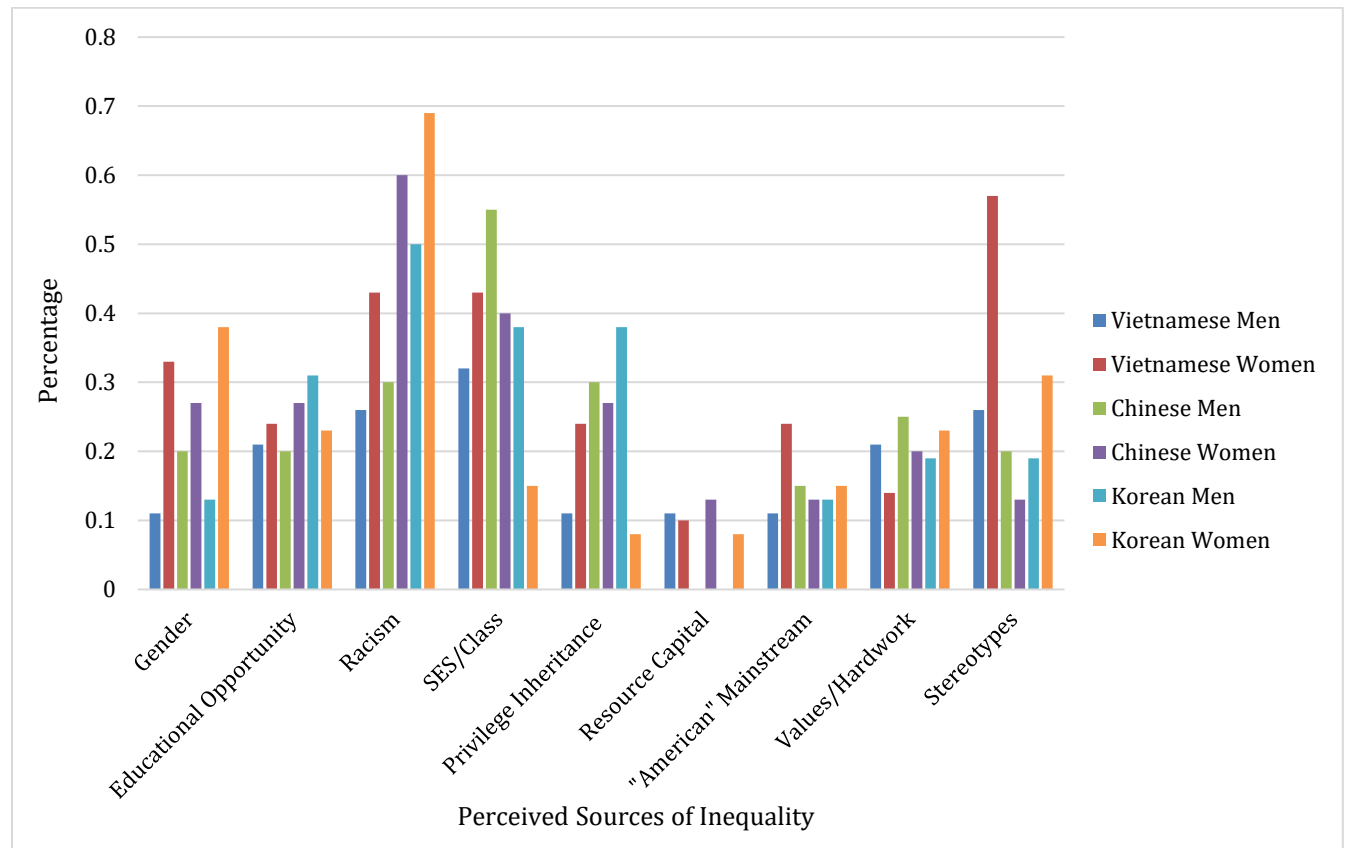
From the 129 interviews with Chinese, Korean, and Vietnamese American first-generation college students, we identified the nine most discussed themes as the main sources of inequality. These include gender, educational opportunity, racism, SES/class, values/hard work stereotypes, privilege inheritance, resource capital, and "American" mainstream.⁵ We further organized these nine themes according to the structural-to-cultural continuum. We placed **gender, educational opportunity, racism, SES/class, privilege inheritance, and resource capital** on the side of **structural** as these themes reflected ways that students spoke of the material conditions of sources of inequality. Privilege inheritance was placed on the structural part as it was described as inequities beginning from birth since certain people were simply born into more advantaged conditions. Resource capital reflected the community level conditions that students felt contributed to inequality and is understood as access to better schools, hospitals, parks, and other community resources. Educational opportunity was broadly defined as inequality in educational opportunities.

The **cultural** aspects of the spectrum refer to the discursive manner in which students discussed sources of inequalities. We placed elements of ideology or values in the cultural end of the spectrum. **Values/hard work** were identified by students as cultural dispositions that groups had that encouraged success and in the case of the Asian American group spoke in terms of "Asian" values and a hard work ethic. **Stereotypes** reflected ways students discussed negative expectations for advancement of groups. **Mainstream** reflected students' positions on traditional "American" ways of being and described that there was an "American" mainstream and "othering" of groups and that being identified as part of the mainstream conferred advantages. While there is slight variation among Chinese, Korean, and Vietnamese American respondents, we find structural factors—such as racism, socioeconomic status, and privilege—and cultural factors—such as stereotypes and values—as the most salient explanations students offered for sources of inequality among groups.

Table 2 shows that Asian American identified men and women had varying opinions regarding factors of inequality. More than half of Asian American women (53%) identified racism as the main sources of inequality, whereas only 25% of Asian American men held the same perspective. Conversely, higher proportions of men (43%) perceived socioeconomic status/class as one of the main sources of inequality compared to women (36%). The third most frequent source of inequality identified among Asian American women were stereotypes and gender with 31% of the women respondents identifying these as a main source of inequality. On the other hand, the role of privilege inheritance was the third most popular response among Asian men (24%). We further disaggregate by ethnic group below.

Table 2. Perceived Sources of Inequality by Asian American Women and Men

When exploring differences among ethnorace groups, each had nuanced gendered responses—see **Table 3**. For instance, the majority of Chinese American women (60%) identified racism as an important factor of inequality, whereas Chinese American men were more likely to identify socioeconomic status as a main source of inequality (55%). Similarly, Korean American men and women had different opinions regarding sources of inequality. More than two thirds of Korean American women (69%) and half of Korean American men perceived racism to be a top factor that contributes to inequality. Many Korean American women also identified gender (38%) and stereotypes (31%) as top contributing factors to inequality. Korean American men noted that socioeconomic status (38%) and privilege inheritance (38%) were important sources of inequality. Vietnamese American respondents highlighted stereotypes as important factors for inequality more so than Korean American men or Chinese American men or women. More than half of Vietnamese American women (57%) and slightly over a quarter (26%) of Vietnamese American men identified stereotypes as an important factor in what they perceived were sources of inequality. The Vietnamese American men and women both perceived SES/class as a source of inequality.

Table 3. Perceived Source of Inequality among Asian American Students by Ethnorace and Gender

Taken together, our descriptive findings show that there exist nuanced differences in what Asian American students perceive to be important contributing factors to inequality by both gender and ethnicity. Whereas women are more likely to name the roles that racism and gender may be playing in (re)producing inequality, men are more likely to attribute inequality to disadvantages, such as socioeconomic status and privilege inheritance. With regards to ethnicity, more Korean American respondents focus on racism as their understanding of sources of inequality, while Chinese and Vietnamese American respondents exhibit more heterogeneity in what they consider the most important factors of inequality. While the majority of respondents perceived structural factors as the most salient, many of the Asian American students noted important cultural factors such as (negative) stereotypes and “Asian” values as what they perceived were sources of inequality.

Explanations of Inequality as Racial Projects Among Asian American Students

In the following sections, we further explore ethnic and gender differences as representations of racial projects whereby student perspectives are viewed as *the simultaneous interaction between the material (structural) and the discursive (cultural)*, and we extend the

racial project concept to understand how students speak race through discourse of their perceptions of the sources of inequality among ethnoracial groups in the U.S. This process allows us to explore how ethnic-specific racial projects may influence the ways in which Asian Americans assign meanings along a structure-to-culture inequality spectrum—that we will illustrate in a figure after we introduce the findings—where movement along this continuum reflects either a larger critique of structures to the opposite end where individual actions or efforts are implicated. The following further unpacks how these three different groups fit within such a conceptualization of inequality. We present findings separately by each ethnoracial group to illustrate these perceptual differences in explanations of inequality as racial projects.

Racial Projects among Chinese American Identified Students: “The Current Structure of American Society Creates Inequality”

Among Chinese American identified respondents, inequality in the United States was constructed through larger forces that produced stratification for individuals of various backgrounds. To build on their structurally formulated racial projects, Chinese American respondents noted the ways in which inequality was institutionalized and rooted in imbalances of power. These respondents suggested that People of Color deal with this structure and must navigate unequal structures. Tony illustrates how inequality is perpetuated through U.S. society:

The current structure of American society creates inequality. Individuals can be both oppressed and enabled by structures outside, and larger, than themselves. Those that have the most representation have the most power in institutions such as government and media, and therefore control present discourse. Minorities generally do not benefit from their current discourse, and this creates inequality in opportunities in America.

His sentiments, much like other Chinese American respondents, push back against narratives that suggest that individuals are at fault for their own inequality. Tony’s and many other Chinese American students’ perceptions of inequality are not only created by larger forces, but also reinforced and maintained through society. From his account, there are uneven power imbalances that impact how certain groups are able to perform. His response also sheds light on how these power dynamics impact minority groups differently than those in positions of power such as whites. Tony is representative of the way Chinese American respondents pushed back against individualistic perspectives of inequality. The racial projects employed by Chinese American respondents identified the ways race and power impacted how individuals were able to do in their life and educational trajectories. More importantly, they mentioned the ways these power imbalances served as a way to either help or prevent people from acquiring certain positions.

Our data revealed gendered differences in perceptions between Chinese American men and women. Compared to Chinese American men, Chinese American women were more likely to identify inequality through an intersectional lens. That is, Chinese American women were more apt to mention the impact of race, class, and gender on one’s life prospective and outcomes. When Chinese American men talked about inequality, they included broader terms such as “limited opportunity” or “privileged positions” without naming the social locations that either produced or limited opportunity. Such as in this case, Steven, a Chinese American student, mentions, “Good and bad opportunities exist for everyone, however, some people are born with certain privileges and having those privileges fosters a feeling of superiority.” His broad response to inequality suggests that he is aware of social hierarchy but does not mention *how* “good” and “bad”

opportunities manifest themselves in people's lives. On the other hand, Chinese American women's responses, like Ashley, reflected a more intersectional perspective on inequality:

Inequality means individuals faced different obstacles which hindered them from acquiring [the] same amount of success others do. Opportunity is a kind of life events that brings along risks and gains. Inequality occurs because of many reasons. Socioeconomic and race are two essential elements. America is seemed to be an equal society but it is not exactly. People of color still encounter various degree[s] of discrimination in many aspects of life.

Chinese American women, compared to Chinese American men, were more likely to identify concrete social locations that impacted how individuals experienced inequality. While Chinese American men broadly identified the existence of inequality, Chinese American women were able to talk about inequality in relation to intersectionality. To this end, the racial projects Chinese American students used to explain inequality differed by gender.

Chinese American students employed racial projects that shed light on the ways they perceive inequality shapes the lives and outcomes of Americans. In their descriptions, they highlighted the structure of U.S. society as their perceived reasons as to why inequality persists and why minoritized groups are disproportionately affected by this stratification. Chinese American women were more likely than Chinese American men to identify other social locations, such as race and socioeconomic status, in their formation of racial projects. To this end, Chinese American men drew on sociocultural definitions of inequality and opportunity, whereas Chinese American women operated under a structural framework that acknowledged a systemic problem of inequality but also discussed its impact across varying social locations. The descriptions and formulations of racial projects for Chinese American students were often rooted in structural explanations. Chinese American women's racial projects centered on how one's positionality influenced inequality; albeit, in dichotomous terms.

Racial Projects among Vietnamese American Identified Students: "The Color of My Skin Affects How Much Equality I Have"

Vietnamese American students conceptualized a more nuanced understanding of racism by placing their own experiences of discrimination in their conceptualizations of inequality. For instance, compared to the Chinese and Korean American respondents (except Korean American women), Vietnamese American students were more likely to mention that stereotypes were a top contributing factor to inequality. Vietnamese American women were more likely (57%) than Vietnamese American men (26%) to report [negative] stereotypes as a source of inequality. When asked why stereotypes were an issue, Megan described the ways in which her experiences of racism as a Vietnamese American individual shape the opportunities she is presented with:

The color of my skin affects how much equality I have and also opportunity like jobs and other aspects of life. Inequality always accompanies opportunity, especially when an opportunity is desirable and limited. I don't think I have the same amount of opportunities as white people do. As an Asian, I still feel excluded from the main society.

Megan, like other Vietnamese American college students, was able to draw on her lived experiences—racism and working-class backgrounds—to showcase her perceptions of how inequality continues to be pervasive in the U.S. More importantly, responses like Megan's demonstrate the diverse experiences of racism (both lived and understood) that take place among these three ethnoracial groups. While Chinese and Korean Americans suggested that racism is an

important contributor of inequality, they were less likely to personally identify themselves with racism. On the other hand, Vietnamese American respondents placed their lived experiences at the forefront of racism to demonstrate the ways ethnic prejudice affects their community.

Both Chinese and Vietnamese American respondents operated under more of the structural perspective on the inequality spectrum. However, Chinese American women and Vietnamese American women in this study often employed more nuanced conceptualizations of their understandings of the various inequalities that shape the lives of individuals in the U.S. Vietnamese American women were more likely than Vietnamese American men to select [negative] stereotypes as a top contributor to inequality. Vietnamese American women's responses illuminate the ways stereotypes among/against the Asian community erase the unique experiences of other Asian Americans.

Vietnamese American students were more likely to detach themselves from the "Asian" category and identify with their national origin category. Their responses shed light on the ways the "Asian" term undermined the great diversity of this group. These respondents were more likely to share their unique experiences as Vietnamese-identified individuals in their discussion of inequality in the United States. Conversely, Chinese and Korean American respondents identified with the category of "Asian" and did not address the homogenization of Asians in their discussions of inequality. Korean American respondents were more likely to report that Asians and whites were the ethnic groups to do the best in the United States, subscribing to Asian exceptionalism views. And while Korean American women (as we will observe below) named stereotypes as a source of inequality, they often referenced stereotypes but only within groups. That is, of the Korean American women that spoke of stereotypes, it was about the men culturally being provided with more opportunities than women receive in Korean families.

Vietnamese American respondents suggested that their unique experiences within the Asian community were often neglected and overlooked through Asian stereotypes. Cynthia pushes back against the notion that all Asians fall under the model minority myth:

I believe white does better in the society. Some people may say Asian is model minority. However, not all Asians are the same. Maybe some Chinese and Japanese do better in the society. I still find so many Vietnamese families have quite low standard of living. Sometimes I am embarrassed because of the stereotype of Asian, such as good at math, exam takers. Some of them even believe all Asian American can earn a good living. Maybe, but I am from low-income family.

Vietnamese American respondents were more likely to push back against ideals of homogeneity among Asian groups. Cynthia's narrative sheds light on how her background as a low-income student also impacts her ability to do well. While she suggests that whites are an ethnoracial group that do the best in society, her response also suggests that Asians are culturally expected to perform well. However, Cynthia felt that her ethnoracial identity as a Vietnamese American individual impacted her experiences in a way that deviated from other Asian groups. Cynthia is representative of the ways the Vietnamese American students in this sample perceived inequality from both the larger United States context and among the Asian American community.

Vietnamese Americans in this sample, in general, and Vietnamese American women, in particular, were able to articulate nuanced understandings of inequality and stratification compared to the other Asian groups. They were more likely than the other groups to not only shed light on racism and class differences, but also to push back against the model minority stereotype. Students shed light on how they did not feel as though that the model minority myth captured their experiences. More importantly, they felt that this image minimized their unique experiences as

ethnoracialized Asians. The racial projects used by Vietnamese American men and women employed a framework that centered their own experiences as minorities both within their Asian ethnoracial group and the larger mainstream society. While ethnoracial groups had different conceptualizations of inequality, gender provided further nuance in their understandings of inequality.

Racial Projects among Korean American Identified Students: “Our Success is a Reflection of Our Hard Work”

Korean American respondents, much like Chinese and Vietnamese American respondents, identified inequality as a systemic issue—rooted in the fabrics of the U.S. However, when prompted further about inequality, many Korean American respondents pushed back on the question of inequality and offered a more positive outlook, qualitatively placing cultural representations as an important piece in the inequality puzzle. For instance, when asked to explain inequality, John responded:

I actually think America is a very equal country. As a capitalist country, we get what we deserve. Our success is a reflection of our hard work. We are living in the land of opportunity. This nation gives credit to those who worked hard.

While the interview question prompted their perceptions of inequality, John, much like other Korean American first-generation college students in our sample, opted to completely change the question by providing a response that elicited rhetoric of opportunity and success. Similarly, Andrew echoed these sentiments as John:

Well, I believe opportunity is almost equal for everyone, and it is up to each individual to take the opportunities to succeed. Also, inequality is the outcome of the success of each individual; those who did not take opportunities to succeed will see inequality against them, and those who saw success through opportunity will see inequality favoring them!

Korean American respondents subscribed to ideals of meritocracy; that is, ideals that promote the notion that one can achieve anything they work for (Bonilla-Silva, 2006). These ideals of meritocracy are rooted in individualism and subscribe to beliefs of “Asian” values. While not explicitly stated, their beliefs in meritocracy posit that racism is merely a “thing of the past” and that all individuals are able to achieve their aspirations due to the structure of opportunity they perceive in the U.S.

Compared to the Chinese and Vietnamese American respondents, Korean American respondents were more likely to acknowledge structural inequality but also suggest ways in which America can provide opportunities for upward mobility. Sophia shares these sentiments as she describes how background factors, such as race, class, and gender, may shape one’s outcomes. She notes that while inequality is present in the United States, one’s dexterity and talent is enough to supersede issues of oppression:

America is extremely unequal. Half how hard you work, and half what your background is. So, for example, for African Americans, if they know that they’re not gonna get jobs or something like that, they are less inclined to try, but if you try harder, you would do better.

Sophia illustrates her point by drawing on racism against African Americans. While 47 percent of Korean American respondents identified racism as a top factor that contributed to inequality, they were also likely to report that these were things they could overcome. Noted by Eddy, “There may

be racial inequalities that may hinder opportunities to certain individuals, but that can all be overcome through effort and discipline.” These participants acknowledge that racism is present and opportunities are unevenly distributed between those with power and those without power. Sophia pushes back against notions of inequality to suggest that African Americans are still able to overcome these obstacles, if they simply worked harder. To this end, first-generation Korean American college student respondents identified the existence of inequality, but suggested work ethic as a method to navigate the inequality present in the United States.

Both Korean American men and women shared a similar discursive view on their understandings of the sources of inequality. Like Chinese American women, Korean American women were more likely to discuss explicit examples of inequality. However, Korean American women, unlike Chinese American women, were more likely to discuss the ways in which opportunities to overcome these obstacles were present. Several sentiments captured the ways in which the notion of “half hard work and half inequality” was pervasive among Korean American men and women respondents who self-identified as middle- to upper-income and thus resource-rich.

Nearly 60% of Korean American respondents reported that Asians were the ethnic group that did best in the United States. For these respondents, Asians did better because of “Asian” values. Lacy shares her reasoning as to why Asians do much better:

Asians, because I feel that Asians dominate the population in America. Even though there are a lot of Americans because it is America, Asians get their education and I feel that they have an advantage when starting businesses because they know how to globalize. They didn’t just grow up in America, they grew up in a different nation, so they know each respective culture, knowing how to approach people in each country, so they know how to globalize.

Korean American respondents deemed Asians as successful because, on the surface, they appeared to be doing quite well. To them, they perceived that Asians dominated in educational attainment, had high incomes, and excelled in careers compared to other ethnic groups as this was most noticeable in their social circles. The only other group to do better that was mentioned was whites. In addition to this, they also identified with the term “Asian” and felt themselves represented in that category.

In their responses of inequality, Korean Americans further utilized a cultural perspective to describe stratification in the U.S. While they acknowledge the presence of racism, stereotypes, and discrimination, Korean Americans are more likely to fall under the cultural perspective of the inequality spectrum. Korean Americans formulated their racial projects centered on discursive attitudes of inequality. While gender impacted the ways Chinese and Vietnamese American discussed inequality—as we noted in the previous sections—Korean American women and men both implemented cultural explanations in their discussions of inequality.

Situating the Discourse of Racial Projects Within a Racial Formation Inequality Spectrum

The findings suggest that Chinese, Korean, and Vietnamese American students conceptualize inequality in the U.S. in ethnically distinctive ways. Korean American students acknowledge structural inequality but use culture to explain the prevalence of inequality. Chinese American students mentioned how society privileged certain individuals through socioeconomic status and race. However, their conceptualizations of inequality were often described in dichotomous terms between the rich and the poor and Black-white racism. Vietnamese American

students centered their own experiences in their discussions of structural inequality. These findings fill important gaps in present literature on inequality consciousness and the importance of investigating ethnic heterogeneity among Asian Americans (Chambers et al., 2014; Conchas, 2006; Cruces et al., 2013; Lee & Zhou, 2015; Norton & Ariely, 2011; Ocampo, 2014; Okamoto 2014).

Based on the findings, we advance the *Racial Formation Inequality Spectrum* (RFIS). The RFIS best captures the ways Asian American respondents conceptualized racial projects regarding inequality in the U.S. We shed light on *how* Chinese, Korean, and Vietnamese American identified students conceptualize the factors that contribute to their understandings of inequality in the RFIS as racial projects that simultaneously link the material (structural) and discursive (cultural). Our descriptive data suggest that Korean, Chinese, and Vietnamese Americans view inequality in the U.S. as a product of unequal power distribution, racism, income inequality, lack of resources and opportunity, and stereotyping. However, further analysis of the interview data suggests that their perceptions of inequality differ across ethnic and gender lines. We suggest that the **Figure 1**, the RFIS, best captures how the respondents describe their understandings of inequality in the United States vis-à-vis structure and culture and hence as racial projects.

Figure 1. *Racial Formation Inequality Spectrum*

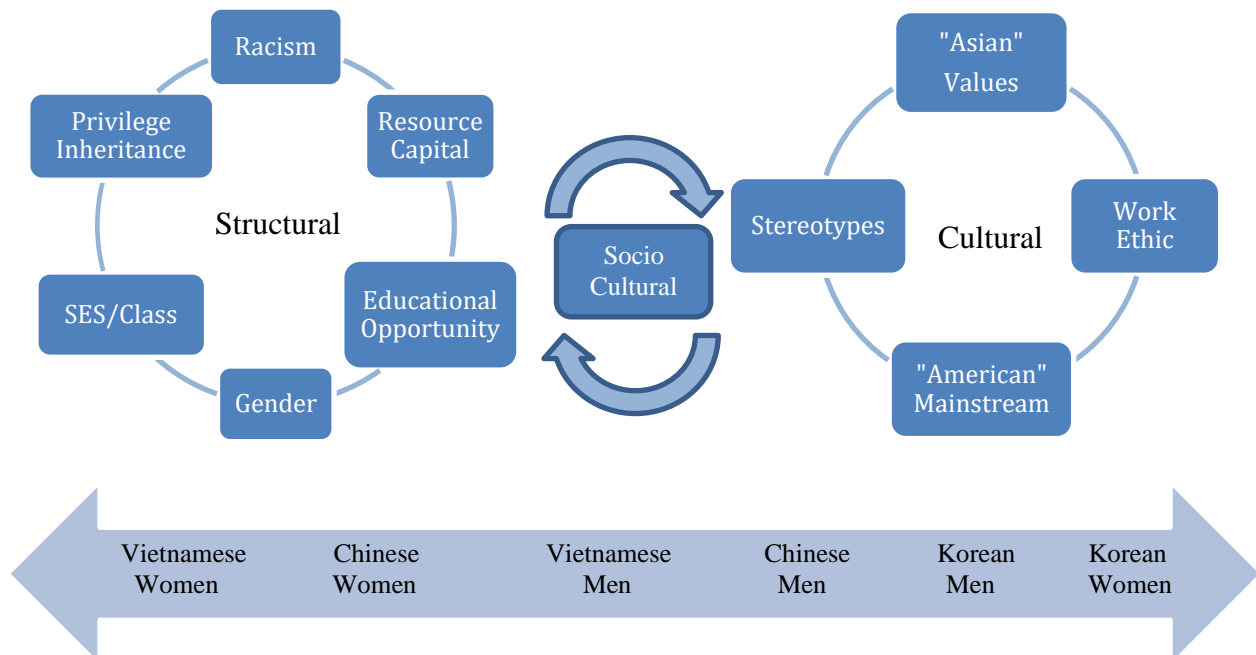


Figure 1 captures how our respondents' racial projects on sources of inequality shape where students fall on the spectrum. Vietnamese American women demonstrated the most intersectional descriptions of structural inequality as they repeatedly described the ways that institutionalized racism, socioeconomic status, and the lack of resources shaped the outcomes of minoritized groups—including their own ethnic group. Chinese American women are also positioned on the structural side of the spectrum because their racial projects centered on how material differences in society influenced life outcomes for individuals. Vietnamese American

men and Chinese American men were placed in the center of the spectrum as they perceived inequality through a sociocultural lens. These students mentioned structural issues but also referenced how culture influences one's experiences with inequality. Korean Americans are on the cultural side of the spectrum. While Korean American students acknowledged the presence of inequality, these respondents were more likely than Chinese and Vietnamese American students to suggest that one could overcome inequality. Many Korean American respondents suggested that "Asian" values, work ethic, and cultural traits could be used to overcome barriers individuals faced. For instance, while Korean American students acknowledged that structural conditions such as racism continued to infiltrate today's society, they simultaneously posited that minoritized groups would be able to overcome these barriers through hard work and discipline. Both Korean women and men employed cultural understandings as representations of inequality in their responses.⁶

Together, we show that Asian American students perceive racism, socioeconomic status, and privilege as uniform factors that impact inequality; however, these factors are discussed differently across ethnic lines, reflecting ethnically heterogeneous characteristics and histories among Asian Americans. For instance, Korean and Chinese American students' conceptualizations of inequality as structurally contextualized cultural experiences may be explained by their positive immigrant selectivity—these immigrants enter the United States with higher levels of education than the general American population on average (Feliciano, 2005, 2006). Being positively selected allows immigrants to transmit high levels of human capital to their offspring. The group-level positive selectivity among Asian immigrants has significantly contributed to the establishment and reinforcement of the Asian American model minority archetype. Yet, Vietnamese immigrants, on average, do not present the same level of immigrant selectivity as their Korean and Chinese counterparts (Lee & Zhou, 2015). The demographic profile of the respondents in this sample primarily resembles what scholars have reported in past studies; that is, Korean and Chinese American students identified as middle- to high-income family background while the Vietnamese sample described themselves as lower- to middle- income.

Immigrant selectivity and relevant structural dis/advantages among Asian Americans shape their cultural understandings of inequality. Most notably, the "Success Frame," a narrow and specific interpretation of what "success" looks like (Lee & Zhou, 2015), may inform ethnically distinctive conceptualizations of inequality and ways to overcome structural constraints found among our respondents. Frames are analytical tools by which people observe, interpret, and make sense of their social life (Snow et al., 1986). The Asian American success frame narrowly defines success in material and structural senses, as getting straight As in high school, attaining a degree in a prestigious university, and securing a well-paying job in one of the four coveted professions: science, engineering, medicine, or law (Lee & Zhou, 2015). Relatedly, scholars have found that Asian Americans buy into the "American Dream" as they believe that upward mobility is both possible and achievable (Zhou & Kim, 2006) and that Asian students are able to draw out advantages from positive stereotypes (Ochoa, 2013). Therefore, the interaction between structure and culture that establishes Asian Americans' racialized positioning and experiences in the larger American society may also shape their interpretation of inequality as structurally established, but culturally driven, as found in this study.

Simultaneously, our findings suggest that Vietnamese immigrants and their children, who on average do not have the resources to do as well as their Korean and Chinese counterparts (Zhou & Bankston, 1999; Zhou & Xiong, 2005), may experience and understand their racial positioning as well as inequality in the larger society differently. Unrealistic expectations of achievement and

success without proper material and structural support and resources can lead to increased feelings of psychological distress (Yano & Akatsuka, 2018), difficulty navigating internalized racism (Gupta et al., 2011), and pressures of invisibility beliefs among Asian groups—particularly for Asian groups who do not feel as though they belong in the “Asian” category. Thus, while success frames and the relevant model minority stereotype may appear positive on the surface, inability to establish and reinforce such frames with material resources and structural advantages among relatively disadvantaged Vietnamese Americans may explain their different conceptualizations of inequality from Korean and Chinese American students as captured in this study. These differences may also account for why Vietnamese American students are the only Asian American group in this study to openly discuss their own experiences of inequality.

Given this, we argue that the *RFIS* captures how inequality is conceptualized across first-generation Asian American college student respondents and informs contemporary racial projects that link both representation and social structure. More specifically, the *RFIS* reveals not only that structural and cultural forces interactively inform individuals’ understandings of inequality, but further variation among these individuals in their social locations and characteristics influence the ways in which members of the same pan-ethnic group perceive different realities of social inequality. *RFIS* is therefore a construct used to organize how Asian students perceive inequality as racial projects, highlighting how nuanced understandings of inequality inform ethnically distinctive interpretations and enactments of racial projects.

Conclusion and Implications

This study builds upon Omi and Winant’s (2014) Racial Formation Theory by exploring the conceptualizations of inequality and opportunity among three pan-ethnic Asian groups through what we advance as the Racial Formation Inequality Spectrum. We find that Chinese, Vietnamese, and Korean American first-generation college-going students develop and employ different racialized meanings of inequality in the United States. These distinct racial projects among Asians are important for several reasons. First, the different conceptualizations of inequality and opportunity demonstrate the important role of sociohistorical processes in the development of these perspectives. These three Asian groups have different migration histories and contexts of reception to the United States—and these factors shape how they perceive the social world they live in. Second, these formulations of stratification carry consequences for each Asian group. Korean Americans who employ more cultural understandings of inequality can further perpetrate misguided notions that shape equity and inclusion efforts on university campuses. For instance, the reproduction of merit-based success can minimize the unique struggles and experiences of marginalized communities, within and outside their ethnic group—especially within higher education contexts. Third, Vietnamese American students discussed structural barriers that shaped the lives of minoritized groups. They placed their own experiences as Vietnamese American students at the center of their discussions of inequality and opportunity; thus, shedding light on the importance of intersectionality that higher education leaders ought to take into consideration to truly promote diversity, equity, and inclusivity efforts.

Employing a comparative case study of Asian American students from three distinctive ethnic backgrounds, we have shown that ethnically-specific individual social locations complicated students’ viewpoints and conceptualizations of disparities. In so doing, we show that their understandings of inequality are simultaneously informed by ethnically-specific sociohistorical processes of racialization and integration, regardless of one’s awareness of such processes, which are often overlooked in the discussion of Asian Americans. Employing a *Racial*

Formation Inequality Spectrum reveals such nuance that exists within a pan-ethnic group and sheds light on the importance of understanding racial formation among and across ethnic groups to fully capture the development of racial perspectives among members of U.S. society. Therein lies the utility of racial projects to understand contemporary explications of how ethnic groups perceive inequality in the U.S.

Given this, the employment of *RFIS* could benefit future studies of other minoritized groups in investigating nuanced and heterogenous conceptualizations of inequality as an interactive discursive process between structural and cultural forces, contributing to the larger process of racial formation. Moreover, this study found gender-specific variation in understandings of inequality in the United States among Asian American students included in the study. Future studies employing *RFIS* should take explicitly intersectional approaches in investigating the relationship between gender and other relevant socio-demographic factors like sexuality and disability status and individual conceptualizations of inequality and its implications for the larger societal racial formation processes. Lastly, we have shown *how* Asian American students conceptualize inequality and posited that such conceptualizations may be rooted in the socio-historical processes that are ethnically distinctive. Yet, exactly *why* students' conceptualizations vary along *RFIS* remains unknown. Future studies should build on current research by examining this variation and justification that occurs at individual level as well as ethnic-group levels.

As social and economic inequality continue to pervade the everyday lives of Americans, it is important to take into consideration how different groups in the U.S. understand the current structure of inequality to inform higher education success. While much of social science research centers on the consequences of societal inequality, incorporating the voices of Americans can help illuminate how inequality is experienced at the ground level. Understanding societal inequality from various angles can help scholars and higher education stakeholders implement policy that addresses the concerns of various American groups and ensures their ultimate success.

NOTES

¹ With the exception of the first author, the listing of authorship is in alphabetical order and does not represent the level of contribution from each coauthor—all contributed equally to the final article.

² Data collection occurred prior to the election of Donald J. Trump.

³ See the seminal work of Cynthia Feliciano for a thorough explication of positive premigration selectivity. Feliciano, C. (2005). Does selective migration matter? Explaining ethnic disparities in educational attainment among immigrants' children. *International Migration Review*, 39(4), 841-871.

⁴ First generation refers to immigrants who arrive in the United States as adults, whereas the 1.5 generation refers to immigrants who arrived in the United States as children. For further elaboration, see Feliciano (2005; 2006).

⁵ Because respondents were allowed to freely discuss their opinions regarding factors that contribute to social stratification in interviews, they were allowed to identify more than one factor as the "top" factor. As a result, combined percentage of each response categories are over 100.

⁶ This is not to suggest a binary between Korean American interpretations between culture and structure, instead Korean Americans can be seen more like inequality straddlers. That is, they

locate material (structural) forces as inequality in their responses but complicate this through discursive interpretations of culture; thus, the interaction of the discursive and material.

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**EFFECTS OF A COLLABORATIVE, TECHNOLOGY-BASED INTERVENTION
INVOLVING SCHOOL PRINCIPALS TO RETAIN EARLY-CAREER TEACHERS: A
SCALED, QUANTITATIVE RESEARCH STUDY**

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ABSTRACT

Statistics have shown that at least 50% of all teachers leave the profession within the first five years, with higher departure rates in certain subjects (e.g. science and mathematics, special education, English language development) (Ingersoll, 2003) and in under-resourced schools with traditionally underserved students of color (Redding & Henry, 2018). Moreover, lack of administrative support is cited as a significant factor in teacher job satisfaction (Borman & Dowling, 2008; Donaldson, 2013). To investigate principal and early-career teacher attitudes regarding support, an intervention was conducted to investigate the degree that a single, brief meeting involving school principals and their early-career teachers had on feelings of support. Informing policy-makers and practitioners alike, results of this pilot study indicated that, 45 days after the intervention, teacher and principal participants reported a general increase in perceived levels of support, relative to control participants.

Keywords: administrator, teacher, retention, intervention, survey, support, technology

Introduction

Over the past 20 years, retaining teachers in certain subjects (e.g. science and mathematics, special education, English language development) and in low-resourced schools serving disadvantaged students has been a challenge for school district leadership (Carver-Thomas & Darling-Hammond, 2017; Fantilli & McDougall, 2009; Ingersoll, 2003; Kraft & Papay, 2014; Redding & Henry, 2018). Many early-career teachers are assigned to courses which serve higher percentages of minoritized students in courses for which they are not adequately trained (Ingersoll, 2002). District office spending on teacher replacement, estimated at approximately \$20,000 or more for each teacher in urban schools (Sutcher et al., 2019) could be reallocated for instructional materials, salary increases, enhancement of facilities, professional development and community outreach. Moreover, lack of administrative support is cited as a significant factor in teacher job satisfaction (among others, such as inadequate pay and job stress). Early-career teachers, defined for the purposes of this paper as those serving in first two years in the profession, require a great deal of support from their administrators as they assume the responsibilities of the profession. Administrative support can take many forms, from the purchasing of instructional resources, to addressing disciplinary issues with particular students, to serving as a “buffer” between novice teachers and unreasonable parents, to simply providing moral support for these teachers.

Although many early-career teachers are provided additional professional development in the form of targeted induction/mentoring, these supports are generally focused on curriculum, instruction, and assessment and rarely—if ever—on specific strategies that teachers can use to collaborate more effectively with administrators in their schools (Smith & Ingersoll, 2004). Many site principals struggle to fill teacher vacancies at their schools and are limited to mentor those they do find (Guarino et al., 2004). The intervention used in this study requires no specific training for the administrator and takes only ten minutes to implement, with no additional cost to the schools.

Researchers involved in this study implemented an intervention to investigate the degree to which a single, brief meeting (referred to from this point forward as a “Ten-Minute Meeting, or TMM) involving school principals and their early-career mathematics teachers had on feelings of support and job satisfaction. These Ten-Minute Meetings required that principal-teacher pairs watch a video highlighting best teaching practices on effective classroom discourse and, after watching the video, engage in a focused conversation about the degree that the highlighted strategies were used in the teachers’ classrooms. Results of this pilot study indicated that, 45 days after the intervention, teachers and principals that had participated in the activity reported an increase in perceived levels of support, relative to control participants.

Literature Review

Substantive research in the past fifteen years highlights the increase in teachers leaving the teaching profession within the first few years of their careers (Ingersoll & Strong, 2011). Moreover, Science, Technology, Engineering and Mathematics (STEM) teachers and those serving students in urban schools with limited resources are departing at even higher rates than national averages (Carver-Thomas & Darling-Hammond, 2017; Fantilli & McDougall, 2009; Goldring et al., 2014). Early-career teachers cite lack of support from school administrators as a major reason for their decision to leave the profession (Borman & Dowling, 2008; Boyd et al., 2011; Donaldson, 2013; Hanselman et al., 2016; Ingersoll & Strong, 2011; National Commission on Teaching and America's Future, 2002). Ladd (2011), for instance, explains, “...teachers’ perceptions of working conditions at the school level are highly predictive of an individual

teacher's intentions to leave a school, with the perceived quality of school leadership the most salient factor" (p. 253).

Many teachers also have expressed feeling pressure from administrators to perform well on standardized tests, which might factor into teachers' leaving the profession (California Mathematics Project, 2012; Carver-Thomas & Darling-Hammond, 2017; Podolsky et al., 2016; Tye & O'Brien, 2002). In an evaluation of teachers in Georgia who left teaching in the first five years, Owens (2015) reported that "teachers overwhelmingly list standardized tests...as reasons (Georgia) loses so many educators in a short period of time" (p. 3).

A majority of literature published in peer-reviewed journals since 2000 that focused on the connection between school administrators and teacher satisfaction; these studies effectively made use of quantitative analyses of large datasets furnished by the National Center for Education Statistics (NCES) (Carver-Thomas & Darling-Hammond, 2017; Djonko-Moore, 2012, 2016; Grissom, 2011; Ingersoll, 2003; Ronfeldt & McQueen, 2017; Tickle et al., 2011). These studies investigated responses to survey questions by a nationally representative sample of participants who completed the NCES Schools and Staffing Survey (SASS), the Teacher Follow-Up Survey (TFS), and/or the Principal Follow-up Survey (PFS). Other researchers confined their investigations to data collected in certain states, like Georgia, Texas, North Carolina, Florida, Tennessee, Maryland, Colorado (Gates et al., 2019; Grissom, 2019; Ladd, 2011; Redding & Henry, 2018) and large cities like New York, Washington, D.C., Los Angeles and Chicago (Boyd et al., 2011; Dee & Wyckoff, 2013; Hanselman et al., 2016; Jacob, 2013). To a much less degree, peer-reviewed qualitative research completed since 2000 that investigates the administrator's effect on teacher retention (Donaldson, 2013; Johnson & Birkeland, 2003; Lochmiller, 2016; Mawhinney, 2008; Painter, 2000; Robinson, 2017; and Schaefer, 2013) has employed interviews, surveys with open-response questions, and observations. There is a lack of peer-reviewed literature, however, which makes use of data collected as a result of interventions involving teachers and principals.

Theoretical Framework

The theoretical framework for this study is organizational commitment theory (Meyer & Allen, 1991). The authors describe three main themes of organizational commitment as: (a) needs, values and work experiences of the employee (affective commitment), (b) recognition of the cost(s) associated with employees leaving an organization (continuance commitment), and (c) recognition of the importance of employees remaining at the work site (normative commitment). The degree that school administrators support professionals (i.e. teachers) at their site connects to all three themes. A prominent research study that included a nationally representative group of teachers (Djonko-Moore, 2012), found that "teacher control in the classroom and administrative...support significantly decreased the odds of teacher dissatisfaction" (p. 8). Serving as an example of all three themes of organizational commitment, a school administrator who promotes autonomy in the classroom, enhances work experiences, decreases the potential for teachers to leave the profession, and recognizes that emphasizing autonomy will increase the stability of the teaching force at the school. Figure 1 below describes factors that affect organizational commitment theory, based on the framework formulated by Meyer and Allen (1991).



Figure 1. Organizational Commitment Theory (Meyer & Allen, 1991)

Methods

There were two research questions for this study, both of which relate to the effects of the previously described Ten Minute Meeting (TMM) involving early-career teachers and their principals. They were: (1) to what degree will a TMM affect teachers' feelings of being supported by their site principal, and (2) to what degree will a TMM affect principals' feelings about the degree to which they support teachers at their school sites? The hypothesis for the first research question was that TMMs will substantively improve teachers' feelings of being supported by their principal, and the hypothesis for the second research question was that TMMs will substantively improve principals' feelings about the degree to which they support teachers at their school sites.

This study used a quantitative approach that gathered data from pre-and post-intervention surveys and an experimental research design involving randomly selected intervention and control participants. Members of the research team recognized that any proposed intervention would need to take into account that teachers and administrators, in general, are limited in terms of unstructured time. Therefore, the research team promoted intervention ideas which: (a) would not overly burden the participants with regard to time and effort, and (b) would include a monetary incentive (i.e. gift card) to encourage participation in the study. The researchers devised an intervention that paired early-career mathematics teachers with their site principals to engage in a ten-minute, in-person collaborative meeting held in the teacher's classroom that focused on specific ways to increase teaching effectiveness.

After securing a letter of support from a school district, researchers gained approval from an Institutional Review Board prior to participant selection. A pre- and post-intervention survey and associated Ten Minute Meeting (TMM) intervention were created by the research team to investigate ways that school administrators could increase retention among first- through third-year secondary mathematics teachers. The intervention required that principal-teacher pairs watch a five-minute video highlighting best mathematics teaching practices and afterwards, engage in a five-minute conversation about the degree that the strategies presented were used in the teachers' classrooms. A detailed, PowerPoint presentation, embedded with the video and other instructions, led the study participants through the in-person, collaborative session. The meeting was arranged by the teacher during a time when it was convenient for the principal, and when both parties had confidence that they would not be interrupted. The pre-meeting surveys were administered within a week of the in-person meetings, and the post-meeting surveys were taken 45 days after the in-person meetings.

Setting

Gamma School District (GSD) is a public school district in the Southeast United States, serving students in a city named Arborville which has a metropolitan population of approximately 200,000 persons.¹ With a mix of urban, suburban, and rural communities, Arborville is home to families with a variety of socioeconomic statuses. The racial composition of the city is approximately 75% white, 20% African American, and 5% Hispanic with fewer percentages of Native American, Asian, and Pacific Islander residents. Although there are a number of private and parochial schools in Arborville, the GSD serves the majority of the city's residents. Over ninety schools serve almost 60,000 students in elementary, middle, and high school settings, as well as adult learning centers. The GSD employs over 8,000 professionals, half of whom are classroom teachers with the other half administrators, district office management, certificated and classified/hourly staff.

Recruiting

For simplicity, the research team decided that the school principal would serve as the administrator participant, regardless if that person evaluated the early-career teacher participant. Teachers were restricted to those who taught middle and high school mathematics as there are a number of references in the literature that highlighted the urgency to retain teachers in this subject area. To initiate the recruiting of participants, GSD's Mathematics Supervisor determined which of the 18 middle and high schools had at least two early-career mathematics teachers. The supervisor then sent an email to the principals and early-career (i.e. first and second year) mathematics teachers at these schools, outlining the research study and encouraging participation. Interested teachers and principals contacted the study's principal investigator (PI) by email, expressing their intent to participate. The PI grouped all potential participants by school, and if there were fewer than two early-career mathematics teachers interested in participating from a single site, the site was excluded from the study. If the principal and two teachers at the same site expressed an interest, that school was automatically selected as a study site. If the principal was interested in participating in the study and more than two teachers expressed an interest, the PI randomly drew teacher names, selecting an intervention teacher, and designating the other teacher(s) as control participant(s).

Participants

At the end of the recruiting process, only three schools (out of 18) including seven teachers met all criteria with at least two early-career mathematics teachers and their site principal expressing interest in participating. Although limited in size, the participant group met the study goal of implementing a targeted intervention as a "proof of concept." All the teacher participants were female, and two of the three principal participants were male. The range of ages for the teacher participants was between twenty-two and twenty-six years, and the range of ages for the principal participants was between forty-two and sixty years.

All the teacher participants were in their first or second year of teaching mathematics at the secondary school level. Table A provides the participant and school names (pseudonyms), each participant's sex and age, and specific roles at their schools. For the teacher participants, the table also designates whether the teacher participated as the intervention teacher or a comparison teacher, as well as number of years of experience as a teacher.

Table A

Study participant demographic information

Participant Name (pseudonym)	School Name (pseudonym)	Role at School	Intervention or Comparison	Sex	Age	Years of Experience as Math Teacher
Meredith	Back Bay M.S.	Teacher	Intervention	Female	25	1
Sharon	Back Bay M.S.	Teacher	Comparison	Female	23	<1
Mason	Back Bay M.S.	Principal	N/A	Male	42	0
Khloe	Harbor H.S.	Teacher	Intervention	Female	25	1
Kerri	Harbor H.S.	Teacher	Comparison	Female	26	<1
Susan	Harbor H.S.	Principal	N/A	Female	60	21
Esther	Ocean M.S.	Teacher	Comparison	Female	23	<1
Angela	Ocean M.S.	Teacher	Comparison	Female	22	<1
Sasha	Ocean M.S.	Teacher	Intervention	Female	25	<1
Chris	Ocean M.S.	Principal	N/A	Male	47	3

Instrument

The research team developed survey questions that allowed the participants to express feelings of being supported (from the teachers' perspectives) and feelings of serving as a supporter (from the principals' perspectives). Questions were based on the review of previously administered pilot studies, with a particular emphasis on determining the degree that the 10-minute, in-person collaborative meeting between the mathematics teacher and principal had on perceptions of being supported (teachers) and of supporting (principals). It was decided that for comparison purposes, the survey questions included in the pre-meeting survey would be the same as those in the post-meeting survey (except for demographic questions which would only be included in the pre-surveys). The initially crafted survey questions were further revised by members of the research team during online, collaborative meetings in the fall of 2018. Additionally, draft questions were provided to educational researchers, secondary mathematics teachers, and school administrators known by the researchers who served as objective evaluators of the content. These reviewers provided suggestions for edits to the initially developed questions, many of which were incorporated into the final version. After all revisions were completed, the early-career teacher survey included 16 questions, and the principal survey included 14 questions.

For ease of access, the surveys were converted to electronic form, using the Qualtrics™ computer application. Pre-meeting surveys were taken by study participants within a week of the in-person meeting, and the post-meeting surveys were taken 45 days after the in-person meetings. Besides the teacher-principal pair who were involved in the intervention, at least one early-career mathematics teacher at each school site was included as a control participant. These teachers, who took part in normal interactions with their mathematics department colleagues and school administrators, did not participate in the intervention meeting with the principal but completed the pre- and post-meeting surveys for comparison. Data collected from the Qualtrics™ computer application were downloaded into Microsoft™ Excel, analyzed, and converted into descriptive tables.

Video

After a search of both online and commercially available productions, the research team decided to utilize an open-source video entitled "Encouraging Debate," based on content and length. This open-source, five-minute video contains teacher and student interviews, as well as footage of actual classroom interactions, promoting the importance of increasing discourse among students during mathematics lessons, where the teacher serves as a facilitator to these discussions (Learning Media Service, 2018).

Findings

The pre- and post-intervention surveys, while limited in terms of sample size, revealed the degree to which: (a) teacher participants felt supported by their principals and (b) principal participants felt they supported their teachers. In the post-intervention surveys, all seven teacher and three principal participants stated that there were no unusual events (aside from the intervention related to this study) that affected their feelings of being supported (teachers) and providing support (principals).

Overall, the results revealed a “ceiling effect,” showing little change between the pre- and post-survey responses for both teachers and principals. For example, principal participant responses varied little in the degree that they felt they were interested in the personal lives of teachers in their school and were even more consistent in their understandings of what best instruction “looks like,” regardless if they had: (a) prior educational coursework in mathematics or (b) had taught mathematics prior to becoming an administrator. Survey responses from teachers showed a connection to administrative careers, stating consistently that advancement opportunities (i.e. administrative openings) factored prominently with their decision to remain in the profession. Detailed accounts of select questions follow, which compare results between pre- and post-survey responses. These results are descriptive in nature, as the sample size was insufficient to establish inferential statistical correlations.

Principal Results

In comparing the pre-survey to the post-survey, two of the three principals (66%) in the study increased the level (from “agree” to “strongly agree”) that they felt they “provide(d) teachers the support they need.” With regard to the principals’ feelings that they “take time to recognize the work teachers do,” all three principals agreed to this statement on the pre-survey. One principal (Chris) expressed an increase between the pre- and post-intervention survey, (from “agree” to “strongly agree”) in his response to the statement “I provide teachers the support they need,” while the others two principals remained the same in their responses. Table B highlights these results.

Table B

Principal pre-and post-survey results for survey questions 1(b) and 1(f).

Principal (pseudonym)	Pre-Survey Response I provide teachers the support they need.	Post-Survey Response I provide teachers the support they need.	Pre-Survey Response I take time to recognize the work teachers do.	Post-Survey Response I take time to recognize the work teachers do.
Mason	Agree	Strongly Agree	Agree	Agree
Susan	Agree	Agree	Agree	Agree
Chris	Agree	Strongly Agree	Agree	Strongly Agree

One of three (33%) principal participants (Mason) also revealed a marked increase in efficacy as an instructional leader, from “disagree” to “agree,” when stating the degree that he “consider(ed) (him)self an effective instructional leader.” Others remaining the same, it was surprising that one principal (Chris) who participated in the intervention expressed a decrease between the pre- and post-intervention survey, (from “strongly agree” to “agree”) in his response

to the statement “I communicate regularly with teachers in my school.” These results are provided in tabular form in Table C.

Table C

Principal pre-and post-survey results for survey questions 1(a) and 1(c).

Principal (pseudonym)	Pre-Survey Response I consider myself an effective instructional leader.	Post-Survey Response I consider myself an effective instructional leader.	Pre-Survey Response I communicate regularly with teachers in my school.	Post-Survey Response I communicate regularly with teachers in my school.
Mason	Disagree	Agree	Agree	Agree
Susan	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Chris	Agree	Agree	Strongly Agree	Agree

Other differences were evident in the principal participant pre- and post-intervention survey responses. For example, one of three (33%) of the principal participants (principal Susan from Harbor High School) increased in the degree, from “agree” to “strongly agree”, to which “(she) value(d) teacher input,” while the others remained in “strong agree(ment).” In addition, this same principal increased the degree that she “provide(d) meaningful feedback to teachers in (her) school.” Results for these two questions are shown in Table D.

Table D

Principal pre-and post-survey results for survey questions 1(e) and 1(g).

Principal (pseudonym)	Pre-Survey Response I value teacher input.	Post-Survey Response I value teacher input.	Pre-Survey Response I provide meaningful feedback to teachers in my school.	Post-Survey Response I provide meaningful feedback to teachers in my school.
Mason	Strongly Agree	Strongly Agree	Agree	Agree
Susan	Agree	Strongly Agree	Agree	Strongly Agree
Chris	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree

Teacher Results

Similarly, responses in both the pre- and post-intervention survey questions posed to teachers showed discrepancies evidenced in principal survey responses. With regard to teachers, however, it is important to distinguish between responses expressed by teachers who participated in the intervention and responses by those who did not (i.e. “comparison” teachers). As examples, teacher survey responses to “my principal supports the work I do” and “my principal appreciates my efforts” are included in Table E. All teachers responded, both in the pre-survey and post-survey that they either “agree(d)” or “strongly agree(d)” with both statements. However, while all the study comparison teachers expressed the same level of support to the statement “My principal supports the work I do,” one of the three (33%) intervention teachers (Meredith) responded with increased affirmation, from “agree” to “strongly agree,” to this statement in her post-survey. With regard to the perception that the site principal appreciated teacher efforts, one of the three (33%) intervention teachers (Sasha) responded with increased affirmation, from “agree” to “strongly

agree,” while one of the four (25%) comparison teachers (Sharon) changed her response on the post-survey from “strongly agree” to “agree.”

Table E

Teacher pre-and post-survey results for survey questions 1(a) and 1(d).

Teacher [pseudonym] (I=Intervention; C=Comparison)	Pre-Survey Response	Post-Survey Response	Pre-Survey Response	Post-Survey Response
	My principal supports the work I do.	My principal supports the work I do.	My principal appreciates my efforts.	My principal appreciates my efforts.
Meredith (I)	Agree	Strongly Agree	Strongly Agree	Strongly Agree
Khloe (I)	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Sasha (I)	Strongly Agree	Strongly Agree	Agree	Strongly Agree
Sharon (C)	Agree	Agree	Strongly Agree	Agree
Kerri (C)	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Angela (C)	Agree	Agree	Agree	Agree
Esther (C)	Agree	Agree	Agree	Agree

Other survey questions revealed the degree to which teacher participants, whether they be those who collaborated with their principals in the intervention or not, felt that their principal “(communicated) with (them) regularly” or “(valued their) input.” Detailed results for teacher participants are included in Table F. While six of the seven teachers responded with the same level of agreement (stating they agreed or strongly agreed) on the pre-intervention survey and the survey administered 45 days afterward, one intervention teacher (Khloe) increased her response from “agree” to “strongly agree.”

A similar result was seen when the teachers were asked to express the degree to which “(their) principal (valued their) input.” Again, six of the seven teachers responded with the same level of agreement (stating they agreed or strongly agreed) on the pre- and post-intervention surveys. However, comparison teacher Sharon, who did not participate with her principal in the collaborative intervention, responded with “agree” on the pre-intervention survey and “disagree” on the post-intervention survey. The degree that Sharon was envious of the attention given by her principal (Mason) to the intervention teacher (Meredith) as a result of the intervention was not measured. It is interesting to note that Sharon responded to the post-survey question, “Approximately how many interactions (personal, electronic, etc.) did you have with the principal REGARDING MATHEMATICS INSTRUCTION² (during) this study?” with “none.”

Table F

Teacher pre-and post-survey results for survey questions 1(b) and 1(c).

Teacher [pseudonym] (I=Intervention; C=Comparison)	Pre-Survey Response	Post-Survey Response	Pre-Survey Response	Post-Survey Response
	My principal communicates with me regularly.	My principal communicates with me regularly.	My principal values my input.	My principal values my input.
Meredith (I)	Agree	Agree	Agree	Agree
Khloe (I)	Agree	Strongly Agree	Strongly Agree	Strongly Agree
Sasha (I)	Agree	Agree	Agree	Agree
Sharon (C)	Agree	Agree	Agree	Disagree
Kerri (C)	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Angela (C)	Agree	Agree	Agree	Agree
Esther (C)	Agree	Agree	Agree	Agree

Surveys constructed for this study included questions that investigated the degree to which teachers felt their principals “care(d) about (them)” and “(were) aware of (their) outside interests.” As with other survey questions for teachers in the study, there was near-perfect alignment of responses between the pre- and post-intervention surveys. Teachers consistently “agreed” or “strongly agreed” that their principals “care(d) about (them),” with one notable exception (Angela)--a comparison teacher who increased her level of agreement from “agree” or “strongly agree.” It is important to be reminded that Angela, along with all other teachers in the study, stated that during the study, “(there were no) unusual event(s) not associated to this study that affected the way that (they felt) supported by your principal.”

In terms of the degree that the teacher participants felt that “(their) principals (were) aware of (their) outside interests,” responses from all participants were either expressed as “agree” or “disagree,” with no “strong” associations recorded. There were only two instances where teachers changed their responses between the pre- and post-survey administrations. One of the study’s intervention teachers, Sasha, disagreed with this statement on the pre-intervention survey, while agreeing on the post-intervention survey. On the other hand, comparison teacher Kerri agreed with this statement on the pre-intervention survey, while disagreeing on the post-intervention survey. Detailed results for these questions are included in Table G.

Table G

Teacher pre-and post-survey results for survey questions 2(b) and 2(c).

Teacher [pseudonym] (I=Intervention; C=Comparison)	Pre-Survey Response	Post-Survey Response	Pre-Survey Response	Post-Survey Response
	My principal cares about me.	My principal cares about me.	My principal is aware of my outside interests.	My principal is aware of my outside interests.
Meredith (I)	Agree	Agree	Disagree	Disagree
Khloe (I)	Strongly Agree	Strongly Agree	Agree	Agree
Sasha (I)	Agree	Agree	Disagree	Agree
Sharon (C)	Agree	Agree	Agree	Agree
Kerri (C)	Strongly Agree	Strongly Agree	Agree	Disagree
Angela (C)	Agree	Strongly Agree	Agree	Agree
Esther (C)	Agree	Agree	Disagree	Disagree

Two additional questions on the pre- and post-intervention surveys, both related to teacher efficacy, resulted in teachers either “agree(ing)” or “disagree(ing),” with no “strong” associations recorded. These tightly aligned responses were expressed by teachers when asked to respond to the degree to which each felt they “think of (themselves) as an effective math teacher” and “sometimes doubt (their) ability to teach math.” Results for these two questions are included in Table H. All but one teacher participant agreed that they “think of (themselves) as...effective math teacher(s),” both on the pre- and post-intervention surveys. The one change noted was with comparison teacher Sharon, who stated she agreed with the statement in the pre-intervention survey but disagreed 45 days later on the post-intervention survey.

In responding to the statement “I sometimes doubt my ability to teach math,” five of the seven teachers had alignment with their pre- and post-intervention surveys. Two of the three intervention teachers and one of the three comparison teachers consistently disagreed with this question. In contrast, two of the four comparison teachers agreed with this statement. Of the teachers whose assessment changed, Meredith, an intervention teacher, originally stated she agreed with her assertion that she “sometimes (doubted her) ability to teach math” but then disagreed in responding to the same statement 45 days later on the post-intervention survey. The degree that this study’s intervention contributed to this change in perspective for this teacher was not assessed. In contrast, comparison teacher Sharon originally stated that she disagreed that she “sometimes (doubted her) ability to teach math” but later agreed with this statement. Again, it would be speculative to assert that participating in the study’s intervention would have affected Meredith’s post-intervention survey response.

Table H

Teacher pre-and post-survey results for survey questions 3(a) and 3(c).

Teacher [pseudonym]	Pre-Survey Response	Post-Survey Response	Pre-Survey Response	Post-Survey Response
(I=Intervention; C=Comparison)	I think of myself as an effective math teacher.	I think of myself as an effective math teacher.	I sometimes doubt my ability to teach math.	I sometimes doubt my ability to teach math.
Meredith (I)	Agree	Agree	Agree	Disagree
Khloe (I)	Agree	Agree	Disagree	Disagree
Sasha (I)	Agree	Agree	Disagree	Disagree
Sharon (C)	Agree	Disagree	Disagree	Agree
Kerri (C)	Agree	Agree	Disagree	Disagree
Angela (C)	Agree	Agree	Agree	Agree
Esther (C)	Agree	Agree	Agree	Agree

Finally, in the post-intervention survey, teachers who participated in the collaborative intervention with their principals were asked to “... (indicate) your perceived change in support from your principal as a result of your collaborative (video watching and discussion) session.” These intervention teachers were provided the following options to respond to this question: (a) greatly improved, (b) improved, (c) neither improved or diminished, (d) diminished, and (e) greatly diminished. In contrast to a majority of their responses to other questions on the surveys that revealed an increase in feelings of support, collaboration, and efficacy, all three responded to this question with “neither improved nor diminished.”

Discussion and Limitations

Overall, the experimental design of the study allowed the researchers an opportunity to measure the degree to which a ten-minute intervention involving early-career teachers and their principals affected their feelings of support. As a pilot study, the number of participants was small—seven teachers and three principals—a manageable group for the researchers to study in detail. In terms of measured change, the results of this study showed slight, but meaningful, differences between the pre-intervention and post-intervention responses expressed by teacher and principal participants. Results revealed that at least one of three principals expressed an increase in the degree to which they provided support to and recognized the work of teachers, as well as how much they valued teacher input and provided meaningful feedback to their teachers. Additionally, with few exceptions, teachers who participated in the study's intervention increased their feelings about being supported by their principals.

In terms of the theoretical framework used in this study, our data support two of the three main themes of Meyer & Allen's Organizational Commitment Theory (1991), namely the affective and normative commitments. The affective commitment, associated to the needs, values and work experiences of the employee, was affirmed by participant increases in feelings associated to survey questions related to "[administrator] valuing [of] input" and "[administrator] knowing [them] as (people) and caring about (them)". The normative commitment, connected to recognizing of the importance of employees remaining at the work site was demonstrated by participant increases in survey questions related to "[administrators] supporting and appreciating work", "[their] professional strengths [being] utilized at work" and "connect[ions] to...teaching colleagues at school". The continuance commitment, which is associated to the recognizing the cost(s) associated with employees leaving an organization, was not directly demonstrated by the results of this study, but is expressed, both qualitatively and quantitatively in related research (Sutcher et al., 2019; Schaefer, 2013) and was used as motivation by the research team to conduct this study.

Although all teacher and principal participants reflected that there were no unusual events (aside from the intervention related to this study) that affected their feelings of support between the times they responded to the pre- and post-intervention surveys, it is reasonable to assume that there could have been any number of confounding factors external to the study that could have affected their responses (e.g. gender/ethnicity similarities/differences between the administrator and teacher participants, personal events, day/time surveys were taken). All survey questions employed the use of Likert scales with four distinct, but limited, intervals (strongly disagree, disagree, agree, and strongly agree). Increasing the number of Likert scale intervals in future administrations of these surveys would provide a more granular view of the differences in feelings expressed by participants. Forty-five days between the pre- and post-survey administrations may have also diminished the desired effect of the collaborative meeting, reducing the effect over time. For this study, effects that disappear over short periods of time (i.e. less than a week) were not of interest to the researchers.

After incorporating minor changes to the participant surveys used in this pilot study, the researchers have secured a much larger group of early-career teachers and their principals from other school districts in another state (approximately 500 teachers and 200 principals), allowing the researchers the opportunity to more precisely study the effects of this study's intervention. The long-term, aspirational goal is to formalize and provide access to readily available and easily implemented, technology-based interventions that effectively retain teachers through substantive teacher-principal collaborations.

Due to the limited number of participants and the demographic qualities of the schools they served in, certain factors could not be investigated within the constraints of this study. For example, a larger sample could provide the basis for investigating variations of the intervention on participant race, age, sex, years of experience teaching, and the like. These factors, as well as other dispositional qualities of participants, could have an effect on the degree that collaborative interventions of this type would be impactful on feelings of support. More importantly, including a greater range of schools which serve more diverse student populations has the potential to inform the degree to which collaborative, technology-based interventions affect attitudes of support for teachers and administrators serving students from varied racial, ethnic, and socioeconomic status schools. In addition, the effects of having principals and their teachers view video presentations focused on topics not associated with classroom discourse (e.g. equity/social justice, classroom management), but still of interest to both parties, would be of interest. Finally, areas for further study include investigating the effects of having non-teaching staff (e.g. office managers, counselors, health technicians, custodians, librarians, campus supervisors), participate in a ten-minute meeting with their site principals.

Conclusions

This study, while limited in scope, provided an opportunity for researchers to determine the degree to which a single, brief meeting involving school principals and their early-career mathematics teachers had on participant feelings of support and job satisfaction. Teachers and principals participating in the activity reported an overall increase in perceived levels of support, relative to control participants. In terms of methods and instruments, the three research design goals were met, namely: (a) the study tested an intervention that could be applied without on-site supervision by the researchers; (b) the study involved personal interactions with the early-career teacher and their principals; and (c) the intervention incorporated a design that could be scaled to a larger population.

This exploratory case supported two of Meyer & Allen's Organizational Commitment Theories (1991), namely the affective and normative commitments which are connected to employee needs, values and work experiences, as well as the importance of retention in the profession. In addition, there are a number of advantages in having formulated a research design which combines an electronically administered pre- and post-survey that measured aspects of support with a collaborative, technology-based intervention that is not overburdensome to teacher and administrator participants. The most significant of these, in the estimation of the researchers, is the ability to scale this intervention to larger populations, which would allow for more detailed investigations to measure the degree that brief, content-focused collaborations involving teachers and administrators can increase feelings of support and retention.

NOTES

¹ To protect the identity of the study participants, Gamma School District (GSD) and Arborville are pseudonyms.

² Capitalized for emphasis.

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Appendix A – Teacher Survey Questions

1. For each of the following statements, PRINCIPAL refers to the administrator most responsible for evaluating your work. Please click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
My principal supports the work I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal communicates with me regularly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal values my input.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal appreciates my efforts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have the resources necessary to do my job well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. For each of the following statements, click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
My principal knows me as a person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal cares about me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal is aware of my outside interests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. For each of the following statements, click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I think of myself as an effective math teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am successful at communicating math concepts to students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes doubt my ability to teach math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a strong background in mathematics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes struggle to find the right teaching strategy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. For each of the following statements, click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
At the school where I teach, I feel like part of a team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My professional strengths are utilized at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel connected to my teaching colleagues at school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My work gives me a feeling of professional accomplishment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend my school as a good place to work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. For each of the following statements, click the column which indicates your level of agreement.

	Always	Often	Seldom	Never
I feel overwhelmed at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching is stressful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There isn't enough time in the day to do what I need to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think about quitting teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>


6. When you think about whether you will remain in the teaching profession, how important is each of the following to your decision? Rank them from most important (top) to least important (bottom).

- _____ Salary
- _____ Job satisfaction
- _____ Connection to colleagues
- _____ Support from administration
- _____ Love of subject matter
- _____ Desire to work with young people (students)
- _____ Advancement opportunities
- _____ Lack of other career options
- _____ Status of teaching as a profession
- _____ Workload

7. With which gender identity do you most identify?

- ☐ Female
- ☐ Male
- ☐ Transgender female
- ☐ Transgender male
- ☐ Gender variant/non-conforming
- ☐ Other (please specify) _____
- ☐ Prefer not to answer

8. What is your age in years?

	0	10	20	30	40	50	60	70	80	90	100
Age											

9. Are you of Hispanic, Latino, Or Spanish origin?

- ☐ Yes
- ☐ No

10. What is your ethnicity? Check all that apply.

- ☐ American Indian or Alaskan Native
- ☐ Black or African American
- ☐ Native Hawaiian or other Pacific Islander
- ☐ Asian American/Asian
- ☐ White
- ☐ Other _____

11. What is your highest level of education so far?

- ☐ Bachelors
- ☐ Masters
- ☐ Specialist
- ☐ Doctorate

12. Do you have a degree in mathematics (that is, a full major in math)?

- ☐ Yes
- ☐ No (Please specify your undergraduate major field.) _____

13. How many years of grades 6-12 math teaching experience do you have?

14. Please complete the following: I teach in a city/town whose population is...

- ☐ Greater than 500,000.
- ☐ Greater than 100,000 but less than 500,000.
- ☐ Greater than 50,000 but less than 100,000.
- ☐ Greater than 15,000 but less than 50,000.
- ☐ Less than 15,000.

15. At what grade level do you teach mathematics? (Check all that apply.)

- ☐ 6th
- ☐ 7th
- ☐ 8th
- ☐ 9th
- ☐ 10th
- ☐ 11th
- ☐ 12th

16. In what type of school do you teach?

- ☐ Public
- ☐ Private non parochial
- ☐ Parochial
- ☐ Charter
- ☐ Other (please specify) _____

Appendix B – Principal Survey Questions

1. Please click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I consider myself an effective instructional leader.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I provide teachers the support they need.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I communicate regularly with teachers in my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I solicit teacher input in decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I value teacher input.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take time to recognize the work teachers do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I provide meaningful feedback to teachers in my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. For each of the following statements, click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I make an effort to get know the teachers at my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I value my relationships with the teachers at my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take an interest in the personal lives of teachers at my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. For each of the following statements, click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Unable to Judge
Math teachers at my school utilize effective strategies for teaching math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math teachers at my school need more professional development in instructional practice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. For each of the following statements, click the column which indicates your level of agreement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I know what effective math instruction looks like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with current best practices for teaching math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with NCTM's Mathematical Teaching Practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes doubt my ability to evaluate math teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. With which gender identity do you most identify?

- ☐ Female
☐ Male
☐ Transgender female
☐ Transgender Male
☐ Gender variant/non-conforming
☐ Other (please specify) _____
☐ Prefer not to answer

6. What is your age in years?

	0	10	20	30	40	50	60	70	80	90	100
Age											

7. Are you of Hispanic, Latino, Or Spanish origin?

- ☐ Yes
- ☐ No

8. What is your ethnicity? Check all that apply.

- ☐ American Indian or Alaskan Native
- ☐ Black or African American
- ☐ Native Hawaiian or other Pacific Islander
- ☐ Asian American/Asian
- ☐ White
- ☐ Other (Please specify) _____

9. What is your highest level of education so far?

- ☐ Bachelors
- ☐ Masters
- ☐ Specialist
- ☐ Doctorate

10. Do you have a degree in mathematics (that is, a full major in math)?

- ☐ Yes
- ☐ No (Please specify your undergraduate major field.) _____

11. How many years of *grades 6-12 math* teaching experience do you have?

12. Please complete the following: I am a principal in a city/town whose population is...

- ☐ Greater than 500,000.
- ☐ Greater than 100,000 but less than 500,000.
- ☐ Greater than 50,000 but less than 100,000.
- ☐ Greater than 15,000 but less than 50,000.
- ☐ Less than 15,000.

13. In what type of school are you a principal?

- ☐ Middle school
- ☐ Junior high
- ☐ High school
- ☐ K-8 school
- ☐ K-12 school
- ☐ 6-12 school
- ☐ other (please specify) _____

14. In what type of school do you work?

- ☐ Public
- ☐ Private non parochial
- ☐ Parochial
- ☐ Charter
- ☐ Other (please specify) _____

Appendix C – Effective Mathematics Teaching Practices (NCTM)

1. Establish mathematics goals to focus learning. Effective teaching of mathematics establishes clear goals for the mathematics that students are learning, situates goals within learning progressions, and uses the goals to guide instructional decisions.
2. Implement tasks that promote reasoning and problem solving. Effective teaching of mathematics engages students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies.
3. Use and connect mathematical representations. Effective teaching of mathematics engages students in making connections among mathematical representations to deepen understanding of mathematics concepts and procedures and as tools for problem solving.

-
4. ***Facilitate meaningful mathematical discourse. Effective teaching of mathematics facilitates discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments.***
 5. Pose purposeful questions. Effective teaching of mathematics uses purposeful questions to assess and advance students' reasoning and sense making about important mathematical ideas and relationships.
 6. Build procedural fluency from conceptual understanding. Effective teaching of mathematics builds fluency with procedures on a foundation of conceptual understanding so that students, over time, become skillful in using procedures flexibly as they solve contextual and mathematical problems.
 7. Support productive struggle in learning mathematics. Effective teaching of mathematics consistently provides students, individually and collectively, with opportunities and supports to engage in productive struggle as they grapple with mathematical ideas and relationships.
 8. Elicit and use evidence of student thinking. Effective teaching of mathematics uses evidence of student thinking to assess progress toward mathematical understanding and to adjust instruction continually in ways that support and extend learning.

**EMBRACING ASSET-BASED SCHOOL LEADERSHIP DISPOSITIONS IN
ADVANCING TRUE EQUITY AND ACADEMIC ACHIEVEMENT FOR STUDENTS
LIVING IN POVERTY**

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ABSTRACT

The dispositions of school leaders play an integral role in dismantling inequities that hinder the academic achievement of students, particularly students living in poverty. Recent studies bring to light the importance of an asset-based understanding of what children bring to the classroom and how to draw on these assets in creating opportunities for student success. A paradigm shift is taking place whereby school leaders must lead with equity as a foundational thought when assisting teachers in recognizing, valuing, and honoring the assets that students bring to the classroom. This paper attempts to discuss critical issues pertaining to educational equity by using related literature on the topics of poverty and transformative leadership as well as data collected from 15 participants consisting of administrators, teachers, parents, community members, and students who were interviewed in the study employing qualitative narrative inquiry. Additionally, it makes recommendations relative to the dispositions school leaders must employ, embrace, foster, and practice in addressing the social, cultural, and emotional needs of students to elicit and enhance effective engagement in school.

Keywords: asset-based dispositions, equity, social capital, cultural capital, transformative leadership, culture of poverty

Introduction

According to educational and social science research, poverty based on income inequality is a strong influencing factor that creates obstacles for public school students in regard to their social, emotional, and academic development and success and the quality of living conditions (Bomer et al., 2008; Akom, 2011; Almy & Tooley, 2012; Berliner, 2013; Johnson et al., 2018;). According to Wise (2019), if the educational system can pay attention to the needs of children living in poverty and children of color, the barriers may be lifted and success for all students, regardless of socioeconomic status or family income, may be guaranteed. Attending to the needs of children from low-income families may be achieved by professionalizing teaching and, by implication, developing school leaders who must make sure that effective skillful teachers are accessible to these traditionally marginalized students. However, it will take perseverance and brave work to work with marginalized students and also to be courageous to incentivize teachers to work in marginalized communities, challenge the inequitable status quo (Brown, 2018) and support the courageous conversations from awareness to a deeper understanding of school leaders' leadership disposition in dealing with students.

According to Ullucci and Howard (2015), children living in poverty, who are located in low-income neighborhoods, experience disproportionate levels of high crime, gang violence, drug influence, death, and health issues. In addition, a recent report indicates that poverty plays a huge role in perpetuating the achievement gap in math and English between students from low-income families and those not from low-income families as measured by the Smarter Balanced Assessment Consortium (SBAC) (Flint, 2018). More than ever, this achievement gap, which reflects an opportunity gap or a gap in social class highlighted in the disproportionate impact of COVID-19 pandemic (Cummins, 2020; Sellery, 2020), needs to be mitigated through the efforts of school leaders who possess caring and transformative leadership dispositions.

Rawlinson (2011) states that, "many students in poverty have spotty-to-poor academic records that can often be linked to the poverty mindset that strips students of ambition and enthusiasm and makes them indifferent" (p. xiii). Poverty mindset is a viewpoint that students living in poverty can develop within themselves and is defined as an insidious way poverty can negatively impact the shaping of a child's mind and can be made perceptible by undesirable behaviors displayed in the classroom. Students who have a poverty mindset, according to Rawlinson (2011), can experience feelings of powerlessness, lack control over their lives, and internalize failure as a lack of ability, rather than skill, which can lead to feelings of hopelessness for a successful future. Although not all students from low-income neighborhoods may develop this mindset, it is important to acknowledge that, "the poverty mindset is one of the most difficult and pervasive challenges to overcome" (Rawlinson, 2011, p. xv) due to its deficit-based thinking, beliefs, and attitudes (Anyon, 2012). Inevitably, hopelessness is made visible in students living in poverty through the manifestations of high dropout rates, low student achievement, illegal drug use, high teenage pregnancy rates, and high rates of imprisonment (Blankstein, Noguera, & Kelly, 2016; Berliner, 2013). While the barriers to student achievement and quality of life, the prevalence of violence and drug use, and the perennial poor performance of students living in poverty are challenging issues, they can be addressed by school leaders who are sensitive to their social and cultural needs and the daily realities of the communities that they live in (Berliner, 2006, 2013; Rawlinson, 2011; Ullucci & Howard, 2015).

Many leaders and reform efforts over the past 50 years have attempted to assist in ending the “War on Poverty” through various education movements and policies such as Title I, Elementary and Secondary Education Act (1965), A Nation at Risk Report (1983), No Excuses (1999), NCLB (2001), and ESSA (2015). These educational reforms have all made similar surmountable claims that students living in poverty can achieve at high levels through increased accountability without taking into consideration the institutional inequities that exist and the lack of awareness and attention paid to their social, cultural, emotional, and historical barriers. Many other attempts at the local (city/school) level have also been unsuccessful in increasing and sustaining the educational achievement of students attending schools in low-income communities (Anyon, 2005; Blankstein et al., 2016). The paradox lies in the reality that these accountability movements inevitably prevent and decrease creativity, critical thinking, collaboration, and communication needed to increase academic achievement in all content areas (Csuvarszki, 2016). In addition, research demonstrates that the prevailing and pervasive out-of-school factors, macroeconomic systemic inequities, and the disposition of educational leaders continually negate and supersede any and all educational policy and reform efforts (Anyon, 2005; Berliner, 2013; Kozol, 2005).

This research paper attempts to discuss critical issues pertaining to educational equity by using related literature on the topic of poverty and transformative leadership and makes recommendations relative to the dispositions educational leaders must employ, embrace, foster, and practice in addressing the social, cultural, and emotional needs of students to elicit and enhance student’s engagement in school that leads to academic success (Lalas & Strikwerda, 2020).

Impact of “Culture of Poverty” in Educating Children

Poverty and its impact on education has been viewed from different perspectives. A widely accepted view in education comes from Ruby Payne (1995/2019) in her book, *A Framework for Understanding Poverty*, that defines a “culture of poverty” as unacceptable cultural and social behaviors that are inconsistent with the attitudes of the middle class, schools, and employers, rather than a matter of income. Earlier, Lewis (1966) who coined the term “culture of poverty” asserted that people who belong to this culture showed behavior that “seems clearly patterned and reasonably predictable” (p.19). He added that the “concept of culture of poverty may help to correct misapprehensions that have ascribed some behavioral patterns of ethnic, national or regional groups as distinctive characteristics” (p.19) as he asserted that “much of the behavior accepted in the culture of poverty goes counter to cherished ideals of the larger society” (p.19).

Consequently, Payne (1995/2019) explained that students living in poverty have their own distinct culture with “hidden rules,” language, and values that are unfamiliar to the predominantly white, middle class teachers who work in urban schools with high populations of children living in poverty. Payne’s work continues to gain popularity across the United States despite its stereotypical and deficit view and its absence of scholarly research (Bomer et al., 2008). In the newest edition, Payne (2019) continues to define poverty as “the extent to which an individual does without resources” (p. 7) and explains how children living in poverty create a culture which influences their own social cognition. She expands her definition of resources to include emotional, mental/cognitive, spiritual, physical, support systems, relationships, knowledge of hidden rules, and language use, and she argues that one has an ability to escape poverty, but that ability is dependent upon these resources, more than solely on finances (Payne, 2018).

Bomer and colleagues (2008) offer an additional critique of the ways in which Payne defines poverty by arguing that her definition “permits her to move poverty out of the material

realm and into a behavioral one” (p. 2511). Following this notion of “culture of poverty,” claims have been made that low-income students often lack cognitive and cultural resources which does not favor learning (Bomer et al., 2008). Educators who believe that students are unwilling to learn embrace classic forms of deficit thinking (Valencia, 1997), where they blame the students and treat them as victims for their predictable poor academic performance due to the existing social and structural inequalities (Bomer et al., 2008; Ullucci & Howard, 2015). In doing so, educators absolve their responsibility from participating in and contributing to the educational failure that many children living in poverty may endure (Flint, 2018; Flores et al., 2019). This makes it easier for educators to accept the reality of the achievement gap as a manifestation of an intelligence deficit, rather than an educational systemic deficiency of effective teaching, leading, student counseling, and managing schools.

Similarly, Ullucci and Howard (2015) discuss how students and educators often buy into “culture of poverty” frameworks without knowing much about the child’s actual culture, as a way to deflect personal responsibility for the continuous gap that describes the academic achievement and academic potential for children living in poverty. While various myths have been used to counter poverty based on personal observations and misinformation, Ullucci and Howard (2015) explain four prevalent myths about poverty and its consequences: 1) anyone can pull themselves out of poverty; 2) those who are in poverty are lazy, “welfare queens,” and/or irresponsible; 3) poor children are not particularly smart or school-ready; and 4) people in poverty share a common “culture.” These and other deficit-based myths continue to infiltrate schools, bringing with them beliefs and practices that often relegate children living in poverty to feelings of hopelessness and perpetual educational and structural inequalities.

Contrary to this deficit perspective is the understanding that individuals living in poverty are only socially, culturally, and linguistically different and have their own vital abilities, skills, and life experiences, called “funds of knowledge,” that they have acquired from their diverse experiences and life struggles (González et al., Amanti, 2009). Although we acknowledge that there are many out-of-school factors (Berliner, 2009) and larger economic, social, and racial systemic deficiencies that go beyond education which impact student success (Anyon, 2005, Ullucci & Howard, 2015), a funds of knowledge orientation shows that teachers can use the practical and intellectual tools, knowledge, and experiences that students have as resources for learning in the classroom (Macias & Lalas, 2014). Gee (2013) calls this the diverse student’s primary Discourse with capital “D,” which reflects:

their ways of using language, acting, interacting, valuing, knowing, dressing, thinking, believing, and feeling as well as ways of interacting with various objects, tools, artifacts, technologies, spaces, and times so as to seek to get recognized as having a specific socially consequential identity. (p.55)

Effective teachers and school leaders recognize and value diverse students’ funds of knowledge that they bring into the classroom by adapting and applying their students’ experiences to the content that is being taught. Thus, they acknowledge their students’ socially and culturally situated backgrounds and experiences as cherished resources for learning (Lalas & Strikwerda, 2020).

There has been widespread failure in explaining the achievement gap for students living in poverty as possible predictable outcomes of the inequitable ways schools are organized, school programs are implemented, and school funds are distributed (Flint, 2018). To address these and other prevailing inequities, one must gain a deep understanding of what providing *true equity* for students living in poverty entails. According to Lalas, Charest, Strikwerda, & Ordaz (2019)

providing *true equity* means offering relevant, appropriate, and meaningful school activities and strategies that are culturally and socially situated to meet the program or instructional needs of every student. They enumerated that the important functions of equity are 1) attending to the needs of the historically marginalized and deprived populations of students; 2) redressing disadvantages in terms of opportunity and social mobility; 3) providing fair and open access to all especially to students living in poverty; and 4) recognizing and honoring differences and providing opportunities by redistributing resources and services, particularly to those in greatest need. Implicit in these functions is the link between students' personal attributes and how they are influenced by social, cultural, historical, economic, and many other environmental factors.

When applying the notion of *true equity*, one could recognize, identify, and understand the intersection of poverty, race, gender, and economic power relations and its impact on social problems and generational poverty. If the impact of this intersection is manifested in the realities and circumstances that children living in poverty face, what specific steps can school leaders take to mitigate the resulting negative conditions that may affect the achievement of students? What leadership disposition qualities must school leaders possess to address these inequities? How can one develop leadership dispositions that support equity work? We believe that to address poverty, caring leaders must obligate and challenge one another to do something about changing systemic practices in education that continually perpetuate achievement disparities.

Social and Cultural Capital: Tapping Into the Assets of Students Experiencing Poverty

Before diving even deeper into discussing the dispositions of leaders in addressing the plight of students experiencing poverty, the influence of Bourdieu's notions of cultural capital and social capital on the topic must be taken into consideration. According to Bourdieu (1979, 1986), disposition is the habituated way one behaves, acts, thinks, and influences the identity, actions, and choices of the individual. It is attained unconsciously through socialization in family, school, and cultural environments. It shapes a person's individual actions, aspirations, expectations, attitudes, and perceptions consistent with the social, political, economic, historical, and cultural conditions under which it was produced (Swartz, 1997).

Bourdieu (1979; 1986) postulated that an individual's lived experience or habitus, though fairly resistant to change, generates new practices, perceptions, and aspirations that are consistent with the original social realities under which they were produced (Maton, 2010). However, habitus also "adjusts aspirations and expectations according to the objective probabilities for success or failure common to the members of the same class for a particular behavior" (Swartz, 1997, p. 105). Individuals react and adjust to varied social situations or "fields" which comprise a network of social contexts where people occupy certain dominant and subordinate positions based on types and amounts of social, cultural, and economic capital (Bourdieu, 1979; 1986). Bourdieu's habitus and fields are explanatory notions about a person's development of cultural capital and social capital that drive one's disposition which represents that person's beliefs, values, and perceptions. Bourdieu's set of lenses are briefly described below:

Types of Capital	Brief Description
Social Capital	The durable network of social relationships of mutual trust that values respectful connections, sharing of information or potential or actual resources, and obligations which strengthen and institutionalize membership in a group

Cultural Capital	High-status cultural and linguistic knowledge, skills, and dispositions passed from one generation to the next (long-lasting habits of mind and body or certain kinds of a work, literature, or sculpture or a form of objectification, as certificates and degrees)
------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Pragmatically, social capital refers to the network of relationships and social connections that provide additional opportunities or resources available for individuals who are members of the group. Specifically, it provides students with access to educational resources, services, as well as curriculum and instructional support by social connections and ways of whom they already know in a particular class or by their familiarity with the teacher and the school. It is, therefore, a set of networks of social relations and resources that provide the cognitive, social, affective, and academic support that the students and their families can use to navigate through the school system. Social capital provides students with the necessary feeling of belonging in school as a comfortable place with friendly and supportive teachers, administrators, and classmates. It also fosters positive interaction with teachers and peers and as a result, promotes positive social and affective growth as well as increased student achievement. Applied to dispositional leadership, school leaders must make sure that all students develop their social capital including their positive and caring relationship with the school personnel and their peers in order for them to gain a sense of belonging in the school community and a feeling of being cared for to increase their school participation and pride.

Cultural capital refers to culturally based or culturally situated common practices and/or resources that individuals may possess that put them at an advantage over others (Lalas et al., 2019). Examples of culturally based resources, materials or practices include understanding the school tradition and philosophy of teaching, cultural awareness of the regional origins of the students in the class, knowledge about educational and school discipline practices, going to museums and art exhibits, educational credentials of teachers and administrators, academic qualifications or degrees, access to computers, aesthetic preferences on music, art, food, and other creative forms etc. Cultural capital could be identified easily as one's set way of doing things, disposition accumulated from childhood, or as a possessed set of skills, works of art, and scientific instruments that require specialized cultural knowledge and abilities to use (Lalas et al., 2019). Contrary to the common view that American public schools are melting pots where students from diverse cultures assimilate into the dominant American culture, students bring with them valuable diverse ways of knowing, learning, thinking, and acting into their classroom environments. Applied to dispositional leadership in educating students and working with teachers, other administrators, and parents, all leaders must make sure that all of their school personnel, regardless of socioeconomic status and other social and cultural identities, acquire or be exposed to cultural capital or practices that match the content, culture, and rigor of the school curriculum and instruction (Lalas et al., 2019).

Bourdieu's concept of social and cultural capital focuses on the assets that diverse students and their families have acquired and passed down generationally, which can be recognized and celebrated as an inherent embodiment of their backgrounds. His notion focuses on the strength found in one's diverse cultural capital. Lareau (2011), in her book *Unequal Childhoods: Class, Race, and Family Life*, reported that social class influences the way families approach the rearing of their children in areas that include the organization of daily life, language use, the way they view interventions for children, and consequences pertaining to sense of entitlement or constraint. According to Lareau, "children should have roughly equal life chances. The extent to which life

chances vary can be traced to differences in aspirations, talent, and hard work on the part of individuals” (p.235). She added that, “social scientists acknowledge that there are systemic forms of inequality, including, for example, differences in parents’ educational levels, occupational prestige, and income, as well as in their child-rearing practices” (p. 235). This significantly differentiates from Payne’s view of poverty that highlights the lack of financial, family, and community resources, and the stereotypical characterization of how one lives in poverty instead of acknowledging that children living in poverty bring with them a wealth of knowledge that educators can tap into to help create a sense of belonging, engage in the classroom, and obtain academic success.

Towards an Asset-Based Paradigm Shift in Educating Students Experiencing Poverty

Contrary to the deficit-based paradigm that has driven the status quo in educational reform producing continual epic failure for students living in poverty is Bourdieu’s theory of social and cultural capital. Bourdieu’s theory is an equitable and asset-based paradigm manifested through the valuing and recognition of the variety of socially and culturally situated ways of knowing and doing that students bring into the classroom (Flores et al., 2019). Viewing equity from a socially and culturally-situated context is an asset-based paradigm as the focus is on honoring the common practices and resources that students bring with them into the classroom as assets and being knowledgeable of the school’s philosophical approach to teaching as it relates to the students’ identities (Lalas & Strikwerda, 2020). Funds of knowledge (Macias & Lalas, 2014) is also an asset-based approach that acknowledges the ways educators recognize and value the strengths and diverse experiences students bring with them into the classroom that are found in their home environments. In addition, Gee’s (2013) description of Big “D” Discourse is an asset-based approach that values student individuality, social identity, and diverse ways of knowing, thinking, and understanding the world. These asset-based philosophical approaches include mindsets, ideology, theoretical frameworks, and models which reflect our habitus regarding the particular “phenomena” pertaining to the schooling of children living in poverty. These belief systems that influence a society and the ideology of its members are defined as paradigms (Bourdieu, 1998).

Foundationally, Kuhn (1962) states, “A paradigm refers to the shared images, assumptions, and practices that characterize a community of scholars in a given field” (p. 80). Additionally, Bourdieu (1998) discusses paradigms through the shaping of state bureaucracies in the two forms of objective realities and institutionalized realities through rules, agencies, offices, and ways of thinking that reinforce and reproduce social belief systems. Furthermore, Giroux (2011) identifies how educators’ paradigms encompass their worldviews and beliefs about their position in the world based on their prior experiences and perceptions and is reinforced politically through the education they receive. The concept of a paradigm is important because it frames and guides the practitioner’s work and is related to the social and political values in the larger society as a whole (Giroux, 2011).

As Kuhn (1962) continued to discover the connotation behind the word paradigm, he postulated that a “paradigm shift” occurs when the methods legitimized by the paradigm go wrong, becoming counter to what was expected to happen--causing a crisis. A paradigm shift begins as a solution to the new crisis is needed, resulting in an extraordinary amount of new research where new ideas, methods, and theory arise which creates a shift in thinking. Importantly, Kuhn (1962) emphasizes that to accept a new paradigm, one must let go of the old paradigm.

Recently, philosophical approaches in education have been classically redefined, and one’s paradigm can be described as, “our beliefs, assumptions, and attitudes that not only guide our

perceptions about the phenomenon, but also direct our everyday schooling actions/activities, such as instructional practices, curriculum, and types of assessment used” (Flores et al., 2019, p. 10). It is challenging to talk about one’s belief system pertaining to the inherent social and cultural embodiment of children living in poverty, especially since it involves the inevitability of categories of difference found inside the classroom, which privilege some in society while marginalizing others, including differences found in race, ethnicity, language, social class, religion, gender, sexual orientation, ability and disability conditions, and citizenship status (Lalas, et al., 2019).

When these categories of difference go unattended, they naturally result in unequal situations depending upon the groups that are structurally empowered or disadvantaged due to their diverse backgrounds (Lalas et al., 2019). According to Lalas and colleagues (2019), “... inequality, when not addressed appropriately, persists and turns into inequities, it is imperative that equity work focuses on repairing harm, restoring voice, dignity and agency and increasing democratic participation for all” (p. 44). Educational leaders must be courageous and interrogate the current deficit-based paradigm manifested in low-simplified expectations, activities, and texts, and dare to transform it into an asset-based paradigm through high-amplified opportunities for critical engagement with literacy, content, and academic concepts (Walqui & Bunch, 2020). The discussion of paradigm is significant because leaders must provide spaces for educators to name, identify, and let go of deficit views, creating an educational paradigm shift on how we work with and perceive children living in poverty. A leader’s disposition should reflect an asset-based understanding in viewing the world shaped by valuing who our students are and what experiences they bring with them that can be bridges between what they know and what they are learning as an effective and equitable way of providing what each student needs as they need them (Lalas & Strikwerda, 2020).

Transformative Leadership as an Equitable Approach

Transformative leadership is an adaptation of the seminal work of James McGregor Burns (1978) where he expounded the difference between transactional and transforming leadership. Clarifying the understanding of transactional leadership, which focuses on exchange of benefits, he goes on to define transforming leadership as leadership that focuses on attitudes, norms, institutions, and behaviors that structure daily life. Transformative leadership theory is one of two leadership theories that emerged from Burns’ (1978) work (Quantz et.al., 1991; Shields, 2009, 2010, 2013, 2018, 2020; Starratt, 2010). Shields (2011) explains transformative leadership as, “begin[ning] with questions of justice and democracy; it critiques inequitable practices and offers the promise not only of greater individual achievement but of a better life lived in common with others” (p. 2). It responds to the call by Capper (1989) for school leaders to “encourage social justice” using “transformative leadership which can transcend the intellectual bias in democratic schooling to the benefit of all students and staff” (p. 5). Additionally, transformative leadership has roots in various critical leadership concepts and theories including culturally relevant leadership (Khalifa, 2018) and social justice leadership (Brooks et al., 2017; McKenzie et al., 2008; Theoharis, 2007). One feature that distinguishes transformative leadership is the manner in which it explicitly addresses the importance of knowledge frameworks and mindsets needed to dismantle and disrupt inequity and reconstruct equitable spaces (Van Oord, 2013) .

Transformative leadership (Shields, 2013, 2018) is used as a model of equitable leadership that acknowledges the existence of the unequal playing field in education. It recognizes the chasm between socioeconomic levels that grow steadily, which often requires extraordinary efforts on the part of children living in poverty to achieve academic success in school (Shields, 2011, 2013,

2018). The transformative leader works to dismantle barriers and inequities found within the “culture of power” addressed by Delpit (1988) that advantages some children while marginalizing others within our school system. “Culture of power” implies the built-in advantage is driven by a set of values and beliefs of groups of people or individuals with elevated sociopolitical status. The transformative leader moves away from the traditional deficit-based paradigm and shifts to an asset-based paradigm focused on addressing inclusion, equity, excellence, and social justice while critiquing inequitable practices in school settings. They become a bridge for helping children get what they need to be successful based on individual social and cultural identities. According to Shields (2018), this work begins with the realization that students cannot fully engage in the learning process when they have negative feelings of marginalization and exclusion as inequitable practices continue to prevail in schools. To this end, the transformative leader considers “the situations of the marginalized and oppressed and seeks to offer remedy” (Shields, 2018, p. 16).

A Case Study to Highlight Dispositions Educational Leaders Need When Addressing Students Living in Poverty

Methodology. The study utilized narrative inquiry as the qualitative research methodology. Qualitative research is best when researchers desire “to understand the contexts or settings in which participants in the study address a problem or issue” (Creswell & Poth, 2018, p. 48). Describing the centrality of human experience within narrative inquiry studies, Connelly and Clandinin (1990) argue that humans are storytelling organisms who individually and socially lead storied lives. These lived experiences narrated in powerful stories were the focus of this inquiry.

Conle (2001) emphasized that narrative inquiry focuses on the study of a lived experience. He explained that narrative inquiry is a rhetorical exercise based on the art of persuasion best served to study personal experiences rooted in practice.

In this current study, narrative inquiry was used to study, understand, and reconstruct experiences while staying within narrative modes of expression throughout the process (Conle, 2001). The participants’ personal experiences were chronicled in circular dimensional practices of inquiry and discovery (Conle, 2001). The current narrative inquiry aimed to bring understanding and clarity of participants’ stories through the telling of their lived experiences (Connelly & Clandinin, 1990). As the stories were told and recalled from memory, themes emerge through the interpretation of data sets (Conle, 2001).

Participants. The study took place in a school district in Southern California. A purposeful and convenient sampling was used to select participants as they purposefully inform an understanding of the focus in the inquiry (Creswell & Poth, 2018). A sampling of 15 participants consisting of administrators, teachers, parents, community members, and students were interviewed in the study. The research endeavored to answer the following question: What dispositions must school leaders must employ, embrace, foster, and practice in addressing the needs of children living in poverty?

Data Collection and Analysis. Data was collected through semi-structured, face-to-face conversational interviews in groups and individually. Interviews lasted between 40 and 90 minutes. Interviews were recorded, transcribed, and then organized, coded, and analyzed using NVivo 10, a software used to aid in finding and interpreting emergent patterns, themes, and categories. All data was triangulated for validity.

In the research, we used four (Tenets 1, 3, 5, and 7) of the eight tenets of transformative leadership to extrapolate the dispositions that school leaders embrace, foster, and practice in addressing educational equity issues for students living in poverty. We chose these four tenets that

were closely related to the set of dispositions applicable to school administrators. The remaining four tenets, that were not chosen, aligned more with the skills and knowledge that transformative leaders use as they do their work in schools.

Tenet 1 specifies what a transformative leader does in resolving to undertake the task of affecting equitable change for all students, especially those who have been marginalized or disenfranchised, through reflection of their personal beliefs, examination of the school data, and the social, cultural and political landscape. Tenet 3 addresses the equitable distribution of power and questions the uses, types, and changes in power that need to take place to provide equity for all students. Tenet 5 focuses on dismantling institutional inequities such as discrimination, prejudice, oppression, and subjugation through emancipation, democracy, equity, and justice with the intent to establish access for opportunities with inclusion and freedom. Tenet 7 highlights the necessity of balancing critique with promise through critical examination of policies, procedures, and structures with the understanding that action must take place for equitable change to occur. From these four tenets 1, 3, 5, and 7, we extrapolated the dispositions aligned with the themes that emerged from the data collection.

We looked at the data gathered and related them to the social capital and cultural capital of district administrators, school site administrators, teacher leaders, parents, and students in a California high school setting. The specific student population at the site ranged from children living in poverty situations to students living in upper middle- and upper-class economic levels. Historically at this site, the work of the leadership team resulted in gains in academic achievement for these students as measured by increment in grade point averages (GPAs), graduation rates, and college enrollments. As a result, students' GPAs moved from 1.7 to 3.89, with the graduation rate increasing to ninety-nine percent, and the matriculation rate to 4-year institutions increasing to ninety-five percent. Using Nvivo, we looked at the emerging themes related to the extrapolated set of dispositions that aligned with the four tenets selected from the transformative leadership framework of Shields (2013, 2018).

Limitations. Limitations for this study were a small sample size and the sample population which was specific to people directly associated with the research problem. Additionally, the limited scope of the study being located at one specific school, in one specific area, and one specific time period limits the ability for the researchers to generalize the findings for all populations.

Research Findings:

The emerging dispositional domains for school leaders we extrapolated from Shields' tenets (2013, 2018) matched the identified issues found in children living in poverty. We operationally labeled four of Shields' tenets into four emerging dispositions for school leaders which are 1) creating equity; 2) creating learning environments that are representative of the demographics, equitable, and socially just; 3) arguing for democracy; and 4) addressing assumptions, biases, and stereotypes to affect change. These emerging dispositions were influenced by the themes of social capital and cultural capital that include 1) responsibility to others; 2) empowerment; 3) understanding the institutionalized culture; and 4) care--have high expectations/set priorities for action/change as captured in the chart below.

Table 1

Leadership Dispositions of School Leaders

<p align="center">Disposition Chart with Textual Evidence</p>

Emerging Dispositions for School Leaders	Themes of Social and Cultural Capital	Textual Evidence: Voices of Participants
Disposition 1: Creating equity	Responsibility to others	<p>- “We do whatever we need to do to get students caught up to speed so that they can graduate.” “The responsibility of our kids is ours.”</p> <p>- “And they committed themselves to being the village elders. Despite the fact that they no longer have a personal investment in the program, which tells the students, they do care about you.”</p> <p>- “Like this year we (adults on campus) are all taking at least one struggling kid to personally mentor and help them to do better in school.”</p> <p>- “The school reaches out to the students in any way it can. The most important thing is that we continually follow up on the kids”</p>
Disposition 2: Creating democratic, equitable and socially-just environments	Empowerment	<p>- “It empowers the parents and the community to say it’s our responsibility. They are ours. They feel empowered to go to the school and ask questions because ...they felt welcomed.”</p> <p>- “So when I met these guys I gave them carte blanche access to the campus”</p> <p>- “You need a teacher who not just cares about his students but loves his students and doesn’t want to see any of them fail. And is dedicated and is willing and can put in time to follow up with these kids. These are the type of teachers we hire.”</p>
Disposition 3: Arguing for democracy	Understanding the institutionalized culture	<p>- “We’re breaking down suspicion and building bridges.”</p> <p>- “You need somebody on the inside, somebody on the inside who’s familiar with the campus and who can help you gain access to the school district.”</p> <p>- “We worked together to support students.”</p> <p>- “...make it so those who have a problem with what we are doing understand that all students deserve a chance to succeed. We allow this group to pull students out of class, find out the problem and let these students know that they are cared about, that they are being watched and are not going to be allowed to walk around on campus in a vacuum where nobody checks on them.”</p> <p>- “... so we’re able to get face time with key organizations, the superintendents, the city council, and other people,, so we benefited from that.”</p> <p>- “We gained support from the top. The superintendent and administration had to see that there was a need, and that this could work. They must support it.”</p>

Disposition 4: Addressing assumptions, biases, and stereotypes in order to affect change	Care-- Have high expectations/set priorities for action/change	<i>- “I’d help with the grade checks and talk with the kids, try to understand why they were not getting good grades, and offer advice, counseling, and support. We would have a verbal contract with them to do better, you know. We show them that we care... say ‘hey, you know, I know you can do better’”</i> <i>- “For our kids who are slipping through the cracks, we make every effort to catch them early hopefully and get them on the right track. And we do whatever we need to do to get them caught up to speed.”</i> <i>- “We’re not angry at anybody. We are not here to blame anybody. We just want to take care of our kids. Along with that, we want to take care of other kids that want to go along on this journey with us. It’s not just going to be for Black kids, it’s going to be for all kids that want or need to make use of our services.”</i> <i>- “I am meeting with students before their grades, finals, midterms, making sure they are in for tutoring. I’m checking their GPAs on a regular basis. If a student becomes ineligible to play in sports, I work to help them... I try to support and encourage their efforts.”</i>
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The following discussion of dispositions captured by the narratives demonstrate how the participants acknowledge and value their students’ social and cultural capital and their funds of knowledge as an asset. By using this set of dispositions, we attempt to provide a shift from the failing deficit-based paradigm towards an asset-based paradigm that is anchored and grounded not only in the recognition, but also in the celebration of one’s social and cultural capital in order to create hope and success in a continual misfiring educational system for children living in poverty (Flores et al., 2019).

Disposition 1: Create Equity

Educational leaders who embrace, practice, and foster this disposition to support an educational system that focuses on equity, democracy, and social justice educate themselves on issues of equity and have a sense of responsibility to ensure equitable policy, practices and procedures for their campus. This disposition is grounded in an ethic of critique (Shapiro & Stefkovich, 2018), questioning the possibilities and opportunities that could enable children living in poverty to grow, learn, and achieve. This leader challenges inequities around barriers like power, language, oppression, privilege, and authority in their school and district. They take responsibility to make sure that equity is not only embedded in their vision and mission but also enacted.

In the current study, participants talked about how they took ownership of ensuring their students’ success, demonstrating the transformative leader’s disposition to create equity. One district leader talked about how they looked at the specific population of students that were designated to enter a particular school and intentionally included the needs of those students who were at risk of failure in their plans for student success. She talked about how knowing the varying needs of students in the district; they were able to include supports by way of counseling, language supports, and extracurricular options that supported student engagement. She explained:

Closing the achievement gap.... we started, probably as early as everyone, looking at the data, getting it really disaggregated. Our teachers were given time to work in teams to plan lessons. So ,when kids were starting to struggle finding they could find ways to reteach them. We intentionally built-in collaboration time. This wasn't just about support for English learners. It was for all struggling kids.

Another district level leader recalled how during the planning of the school there was an intentional awareness pertaining to how students from a low-socioeconomic neighborhood could attend their school and the need to ensure success for these students. A principal participant discussed personal involvement with students who had previously slipped through the cracks, and the principal described how connections with the campus community provided early interventions supporting students for graduation. This participant stated, “We do whatever we need to do to get them caught up to speed so that they can graduate.” Many participants stated that they felt a “responsibility to the students” to provide opportunities for learning in a variety of modalities and needs. The leadership was dedicated to attending to the needs of their students and providing space for others on the campus to assist. One participant, a student, stated, “They (speaking about parent leaders) committed themselves to being the village elders. Even though they no longer have a personal investment in the program, which tells the students, they do care about us.” This student had been talking about how teachers and parents supported students academically as well as socially and emotionally. They worked to create a space where students felt that they could grow and achieve.

Disposition 2: Create Democratic, Equitable, and Socially Just Learning Environments

Educational leaders who embrace, practice, and foster the disposition to create learning environments that are democratic, equitable and socially-just empower school personnel to be agents of change. They provide trainings and resources for teachers that identify learning needs to specifically address barriers that hold students living in poverty back from succeeding. They no longer ignore institutionalized inequities, but rather, they intentionally take action and they use their positional power to empower teachers, parents, and students to change their way of thinking about what an academic learning environment can look like.

Similarly, participants in this study emphasized the need to empower school personnel, students and parents when working toward student success, indicating the transformative leader’s disposition to create democratic, equitable and socially-just learning environments. Participants discussed how they took responsibility for the work and used a “village” mindset to involve others in creating learning environments that contributed to student engagement and academic growth. These learning environments supported students’ sense of belonging and demonstrated the adults’ care for them and their success. One participant, a teacher, shared how each adult on campus became a mentor to an at-risk student through an initiate of the principal to create connection between the students and the adults on campus. She talked about the opportunity that she had to get to know the student and encourage the student along their path to academic success. The participant stated, “This is not an opportunity that you get at all schools. This is intentional work that gives voice to both teachers and students.” A parent participant stated, “I’m proud that when times get tough, students come first. I feel everybody does a good job of keeping the students front and center.” This parent’s comment points to the idea of an environment that is strategically focused on supporting students’ needs. One principal stated:

You need a teacher who not just cares about his students but loves his students and doesn’t want to see any of them fail. And is dedicated and is willing and can put in time to follow up with these kids. These are the type of teachers we hire.

The principal solidifies the understanding that taking action and using one’s positional power to create democratic, equitable, and socially-just environments happens when it is done intentionally.

Disposition 3: Argue for Democracy

Educational leaders who embrace, practice, and foster the disposition to recognize the inequitable distribution of power that perpetuates oppression in schools use their influence and knowledge of the institutionalized culture to dismantle institutionalized inequities that exist within it. The educational leader uses their positional power to make decisions that respect and advance freedom for students, teachers, and parents. This leader knows and understands the institutional culture of their school and makes every effort to argue for democracy and empowers others to have a voice.

Participants in this study shared how they used their institutional knowledge for the success of students, advocating and arguing for democracy. The participants spoke about how the leader gave teachers, students, and parents a voice in the decision-making process. One participant, a principal, emphasized how he listened to the voices of frustrated parents and knew that he had to find a way to involve them in the work that the school was doing to change the culture of the school. The principal helped the parents to understand the function of the school and encouraged them to work alongside the school to support students. He assigned a teacher to work with the parents to help acclimate them to the school's structure and culture. One parent described, "You need somebody on the inside, somebody on the inside who's familiar with the campus and who can help you gain access to the school district." The teacher shared that the principal asked that he work with the parents to help them to better understand the school community and how the school functions. The teacher and the parents both shared how they did book studies and had conversations together about the district's structure. One participant emphasized how the knowledge that they gained helped them to work with the teachers, counselors, other parents, community members, and district personnel to support students' success. He said, "We gained support from the top. The superintendent and administration had to see that there was a need, and that this could work. They must support it." Another participant noted, "We worked together to support students," and then added how important it was to:

...make it so those who have a problem with what we are doing understand that all students deserve a chance to succeed. We allow this group to pull students out of class, find out the problem and let these students know that they are cared about, that they are being watched and are not going to be allowed to walk around on campus in a vacuum where nobody checks on them.

This type of shared decision-making only happens when school leaders are not afraid. The principal said it this way: "We're breaking down suspicion and building bridges." He said, "All I try to do is support the efforts of all students, teachers and parents."

Disposition 4: Address Assumptions, Biases, and Stereotypes to Affect Change

Educational leaders who embrace, practice and fosters a disposition to address assumptions, biases, and stereotypes in order to affect change must garner an ethic of care – have high expectations and set priorities for change. Shapiro and Stefkovich (2018) present the ethic of care as one paradigm used for ethical decision making. Using the ethic of care, school leaders focus on building relationships through values such as loyalty, belonging, self-worth, trust, and self-efficacy in their decision making. The educational leader provides spaces for interactions that build trust and collaboration throughout the community, which dismantle harmful assumptions and biases that hinder high expectations for students living in poverty situations.

Participants in this study exhibited how they address assumptions, biases, and stereotypes to change the culture of the school and for the success of students by building relationships, setting high expectations, and demonstrating care. One participant, a principal, talked about a group of

African American parents who came to visit him at school one day. He remembered that his secretary had called them “a group of angry Black men” as she announced that he had visitors. He recalled that when the parents came to speak with him they said:

We're not angry at anybody. We are not here to blame anybody. We just want to take care of our kids. Along with that, we want to take care of other kids that want to go along on this journey with us. It's not just going to be for Black kids, it's going to be for all kids that want or need to make use of our services.

These parents came to the principal with a plan to support all students at risk of failing. They believed that students could be successful with the right supports in place. They carried no negative assumptions of what students could do. The secretary's assumption of the parents could have halted their efforts to affect a much needed change for struggling students. However, once the plan was implemented the parents were able to mentor and encourage students by setting expectations for success. One participant, a parent leader, stated:

I'd help with the grade checks and talk with the kids, try to understand why they were not getting good grades, and offer advice, counseling, and support. We would have a verbal contract with them to do better, you know. We show them that we care... saying, 'Hey, you know, I know you can do better'.

A principal spoke about how every teacher and adult on campus mentored one or two struggling students providing academic and personal support. He challenged the adults, who were working with struggling students saying, “we make every effort to catch them early hopefully and get them on the right track. And we do whatever we need to do to get them caught up to speed.” One participant, a teacher talked about his efforts to support students and the imperative to “find out the problem and let these students know that they are cared about, that they are being watched and are not going to be allowed to walk around on campus in a vacuum and nobody checks on them.” This teacher continued to share:

I am meeting with students before their grades, finals, midterms, making sure they are in for tutoring. I'm checking their GPAs on a regular basis. If a student becomes ineligible to play in sports, I work to help them... I try to support and encourage their efforts.

The participant made it clear that all students were important and that expecting student success could only happen when the adults on campus set aside their biases and assumptions and truly care about the students and their academic success.

CONCLUSIONS: Where Do We Go From Here?

Our study shows the importance of school leadership dispositions that 1) recognize and esteem the social and cultural capital of the students living in poverty; 2) embrace democratic principles in honoring and valuing student voices from a culturally relevant view (Howard & Rodriguez-Minkoff, 2017); and 3) care about all students, especially those who are from low-income families (Cummins, 2020). We also imply that educational leaders must engage in shifting their dispositional paradigms to an asset-based mindset in addressing the needs of children living in poverty. Our qualitative data supports the notion that the mandate for deep and equitable change requires reflective educational leaders who know themselves and their organizations, as well as the communities they serve (Shields, 2018). In our research, the leaders were reflective of their own knowledge and understood that to transform their schools they needed to grow in knowledge of themselves, their organization, and their students. Clearly, our research findings provided support and advanced knowledge in understanding the research literature in the areas of poverty,

the inherent embodiment of the social and cultural capital of students, transformative educational leadership, and shifting towards an asset-based paradigm.

As our study implied, school leadership may consider the dispositions addressed above to improve the practices and behaviors of all school personnel involved in the organization and allow the shift towards an asset-based paradigm to begin. The language of inclusion, equity, and social justice became the language of all involved in the transformation process of the school. The understanding that each child brings assets in the form of cultural capital, social capital, and funds of knowledge to support academic success negates the deficit-based views of education. The leadership dispositions we described in this current study support the notion that transformative educational leaders must have the capacity to create educational equity as a foundational priority for all students, argue for the emancipation and inclusion of student voice, and create democratic, equitable, and socially-just learning environments where all students can have hopeful opportunities to experience access, sense of belonging, competence, and autonomy for academic success (Deci & Ryan, 2015).

When creating *true equity*, the disposition of the educational leader plays an important role in developing, fostering, and enhancing the socially-just transformation of the school culture in attending to the needs of children living in poverty. Equity-minded leaders are bravely committed to dismantling the institutionalized inequitable practices that exist in their schools. They acknowledge that the cultural and social capital of all students should be recognized and honored, especially when working to engage and empower children living in poverty in order for them to envision and embrace the reality that they themselves are a valuable part of the school culture and community. Finally, they do so with the understanding that educational equity is a long-lasting advocacy fastened to the hope that change is attainable with the resolve and courage found inside the redemption of the struggle.

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KNOWLEDGE IN USE: DESIGNING FOR PLAY IN KINDERGARTEN SCIENCE CONTEXTS

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ABSTRACT

Decades of research support integrating play in kindergarten to benefit young students' social, emotional, and cognitive development. As academic readiness becomes a focus, time for play has decreased. As a result, there has been a demand for integration of play with content. This study modifies a project-based science curriculum about how living things grow to include both child-initiated play and teacher-guided play to meet disciplinary learning goals. The curriculum was initially designed to address reform science standards based on knowledge-in-use. We explore how play invites all students to access and understand the phenomenon. The qualitative study involves 18 kindergarteners and their teacher in a Great Lakes state in the U.S. highlighting four lessons during the enactment that emphasized play. Data include observation, audio recording, transcription of interviews, children involved in play, classroom dialogue, and the examination of artifacts. Thematic coding and analysis of field notes, interviews, and dialogue suggest that child-initiated imaginary play and teacher-guided play can promote the science practice, science ideas, and crosscutting concept of patterns needed to explain the phenomenon.

Keywords: science education, diversity, equity, kindergarten, play, phenomena, three-dimensional learning

Introduction

There is international consensus that play is necessary for early childhood development (Al-Mansour et al., 2016). As the hours in kindergarten are increasingly squeezed due to concerns of

academic readiness (Miller & Almon, 2009), scholarship moves to integrate play-based learning in kindergarten classrooms to support academic learning (Bassok et al., 2016; Wood, 2007). Teachers lack curriculum that can support the teacher introducing play for meeting learning goals in these settings (Weisberg et al., 2013), and the teachers cite lack of curriculum as one of the main reasons they do not incorporate play during social or academic learning. Although there is some literature on the use of play to meet learning goals, much of this work centers on integration for literacy development and social emotional development (Samuelsson & Fler, 2008). There is a notable lack of research about how to go about integration of play with science in early childhood education (Andrée & Lager-Nyqvist, 2013).

Recently science education has shifted globally, and learning science has become practice-oriented presenting a new challenge, and opportunity, to integrate science with play. Understandings of science education and science learning processes have been reformed to promote a knowledge-in-use perspective (Pellegrino & Hilton, 2012). Knowledge-in-use describes science understanding commensurate with the doing of authentic science and solving problems with others, rather than knowing facts and procedures. The knowledge-in-use perspective describes students making sense of ideas in science by using them to understand a science phenomenon. Knowledge-in-use is the basis of international education policy documents in countries such as Germany, Finland, Thailand, and the U.S. (Finnish National Board of Education, 2016; Kulgemeyer & Schecker, 2014; NRC, 2013; OECD, 2016). This study examines the potential for integrating play as part of a four-week learning set in kindergarten to promote knowledge-in-use. The research question for our study is, “How can play be incorporated into science instructional materials to support kindergarten students in accessing, engaging with, and explaining phenomena?”

Theoretical Framework

We use the sociocultural theoretical frameworks of constructivism (Vygotsky, 1967). According to Vygotsky’s theory, children learn within social interactive contexts by reconciling what they already know with novel experiences. Constructivism entails the creation of a personalized developmental arc of learning tasks, that, according to Vygotsky, includes imaginative play for young children. Personalized learning, meaning that the individual is creating meaning and can meet demands based on prior knowledge, is further refined through the feedback from others. Vygotsky described play as critical to children’s social and cognitive development: Play is the manifestation of students’ knowledge construction and their access to emergent understandings. We build on the theory of Knowledge-in-use (Pellegrino & Hilton, 2012, which is the foundation of the Framework for K-12 Science Education (NRC, 2012). Knowledge-in-use reflects contemporary views of learning that value understanding which can be applied: “Learners who understand, can use and apply novel ideas in diverse contexts, drawing connections among multiple representations of a given concept” (NRC, 2007, p.19). To achieve these goals, scholars have called for the development of science education learning environments that provide opportunities for students to grasp how the application of scientific knowledge and practices relate to everyday events.

Literature Review

Importance of play

Research overwhelmingly supports play as critical in the early grades to foster students’ interest in school and to help them develop coping and learning strategies needed for success in

school (Miller & Almon, 2009; Nicolopoulou, 2010; Rogers, 2010). Research about play primarily focuses on free play, or imaginative play, which is spontaneous free improvisation. Free play contrasts with play integration—play that is structured by integrating teacher prompts—disciplinary events, ideas, or materials (Fink, 1976; Pyle et al., 2018). For example, in their ethnographic study, Stipek and colleagues found that children in classrooms where free play is regularly supported worry less in school, have a better view of their abilities in school, choose more difficult problems in math, and are self-motivated, rather than dependent on the teacher, to begin academic tasks (Stipek et al., 1995). This imaginative free play in early grades leads to cognitive, social, emotional, imaginative, and physical growth -- all aspects of the child's development (Hirsh-Pasek et al., 2009). Through free play, children explore their emotions (Singer & Singer, 1992) and learn to manage themselves and others. Integrated play is seen as an essential component for early language and literacy skills, especially as play incorporates print materials (Van Oers and Duijkers, 2013). Van Oers' and Duijkers' study (2013) describes a growth in student vocabulary development when the teacher directed attention to objects during play, or inserted contributions to the shared dialogue. Research supports that students involved in imaginative free play have more advanced language skills, social skills, and can understand what other people mean better than students who do not play (Darling-Hammond & Snyder, 1992; Wohlwend, 2015). Because make-believe play engages students in the rich back and forth dialogue needed to invent scenes and dialogues of characters, students have to negotiate parameters of the imaginary world with one another.

Play integration to support academic readiness

Recent attention to kindergarten education in the U.S. has been on the lack of priority of play in kindergarten because of policy decisions that focus on academic readiness (Moyles et al., 2002; Singer & Singer, 1992). Studies show that most hours spent in kindergarten are focused on early numeracy and literacy development, relegating time for play to 30 minutes a day at most (Howes et al., 2013). In many schools in the U.S., play does not occur at all in kindergarten (Miller & Almon, 2009). Although this is a common pattern among many schools, the lack of play integration in schooling is pronounced more significantly in school districts with low income and non-white student populations (Bassok et al., 2016). Play, therefore, becomes an opportunity for some students who have access to resources when play should be a right for all students. Opportunity gaps are often mistaken for achievement gaps and children in lower-income settings are denied the privilege of play. The argument is that more rigorous academic expectations will close the achievement gap between low-income/non-white students and higher-income/white students. White and higher income students have the advantage of receiving play in their curricula because there is no preconceived notion among teachers and leaders that remediation is needed (Souto-Manning, 2017). Even though this disparity is more pronounced in schools that serve more low-income and non-white students, there have still been substantial reductions to time in kindergarten spent on playing in general (Bassok et al., 2016).

One way to compensate for lack of hours is to use play to bridge learning in key areas. Although there is lack of consensus about how integration is instantiated, even when curriculum uses play as pedagogy (Synodi, 2010), there is increasing support for play integration to foster key literacy goals (Pyle et al., 2018). Thus, an integration of play with disciplinary learning goals has potential (Wood, 2017). Similarly, data suggest that teachers can support mathematics by guiding play using materials and contexts (Seo & Ginsburg, 2004).

There are few research articles that describe the integration of play to support science

learning for young students. One study in kindergarten compared direct instruction with science taught through active participation with phenomenon. The researcher found that “playful-learning” (Bulunuz, 2013, p. 229) significantly improved development of science concepts when compared with didactic instruction, according to a rubric. In another study, Andrée and Lager-Nyqvist (2013) used the context of chemistry of food to explore spontaneous play with sixth-grade students in Sweden. These scholars counter the narrative of play as detrimental to the academic activity by describing spontaneous play as a productive vehicle for students to make sense of the social, conceptual, and historical meanings of science. Andrée and Lager-Nyqvist (2013) describe:

Students’ spontaneous play may allow them to interpret their experiences, dramatise, give life to and transform what they know into a lived narrative.

Students’ spontaneous informal play (is) part (of) ...the processes of learning science in school science practices. (p. 1737)

The authors rely on Vygotskian theory to define play as when a person or an object is imagined to be someone or something other than who/what it is. They collected video and audio recordings of group work across two classes, which enacted a Swedish science curriculum over 12 lessons. The data collected showed that almost half of the group work involved students initiating imaginary play. For example, one student imagined his group members were scientists and they played along, while another group pretended to be bakers. The authors suggest that play removes the barriers that students encounter socially and conceptually in science.

There is only one study that uses the Next Generation Science Standards (NGSS) (NRC, 2013) —the reform science standards in the U.S.—as the context for the integration of reform science using dramatic play. Lozon and Brooks (2019) designed a playful preschool curriculum with science and engineering. As the students were involved with self-motivated imaginary play using paint materials, the teachers inserted questions meant to leverage the crosscutting concepts in the NGSS. The students were tasked with creating a green monster and were given the opportunity to explore solutions and figure out how to make the color green out of primary colors. The teacher asked questions to leverage scientific thinking. For example, one question motivated thinking of energy and matter: “The sample seems to look different to me in different light. Does it to you?” (Lozon & Brooks, 2019, p. 92). The authors suggest that there is room during imaginary play to insert questions and problems related to science and, in particular, the crosscutting concepts, math and literacy; however, they argue that young students need repeated experiences to develop the ideas coherently.

Definitions of Play

There is not wide acceptance about what defines play (Pyle et al., 2018), and it can range from entirely student-guided and motivated (Singer & Singer, 1992) to play that is launched and guided by the teacher and through selected academic teaching materials (Weisberg et al., 2013). To respond to the question “what is play?,” one interesting study from Hong Kong sought young students’ perspectives in defining play (Wong et al., 2011). In this study, students in kindergarten through second grade were given cameras and asked to take pictures of students involved in play and in schoolwork. The students were then interviewed about what they selected to photograph. The researchers found that students had a consistent view of play—It should be fun, intense and focused, include materials that are used as something they are not, and have little direction from the teacher related to how the play unfolds. According to Darling-Hammond, a leading U.S. expert

on early child education and teacher evaluation, these are the features essential for play to be taking place: Play is child motivated, intensely focused, and people and objects stand for something they are not (Darling-Hammond & Synder, 1992). Many authors add Vygotsky's perspective on play, which emphasizes the negotiation of rules. He theorized that play occurs when children engage in the negotiation and renegotiation of rules for imaginary worlds (Vygotsky, 1967). Definitions of play are concerned with the level of guidance, or structure, from adults that leverage "intentional make-believe play" (Bodrova & Leong, 2007) to enrich the academic learning experience (Bulunuz, 2013).

In this work, we apply more constrained definitions of play that include teacher-guided play, as well as child-initiated imaginary play within structured settings. We consider both integrated play and teacher-guided play. Hence, in this manuscript, we describe play as occurring at varying degrees of teacher guidance in classrooms, according to levels of teacher intervention. (Miller and Almon, 2009). In our study, we added to the definitions featured in the 2009 Alliance for Childhood (ibid.) to extend the two approaches to incorporating play in the units for science.

We extend their framework by including a representation of science as a playful activity that is child-centered, with guidance from the teacher toward the use of teacher-guided creative play to solicit clear science-related learning. We have developed definitions of play adapted from Miller and Almon (2009). The first is **Classroom Rich in Child-Initiated Play**, which we define as exploring the world through play with the active presence of teachers, and fostering student engagement in imaginative creative play through purposeful selection of materials that correspond to the science lesson and the phenomenon under study. The second definition of play is **Playful Classroom with Focused Learning**, which consists of teachers guiding learning with rich, experiential activities. Teachers guide the exploration of the phenomenon using creative play as a connection to the science and by using guiding questions to focus the learning.

There is a remarkable parallel between the teacher-guided and child-initiated play and the reform science and its knowledge-in-use, practice-based approach to science learning. The reform science curriculum supports a pedagogy of students creating and testing the rules of science collaboratively and dialogically. The teacher may guide the activity, provide materials, and scaffold the inquiry with questions and prompts. The teacher enables the students to figure out explanations and the relationships that lead to a science event themselves. We proposed a design for integration of play in science that promotes knowledge-in-use, and that there be both approaches toward play integration--child-initiated and teacher-guided play. Including child-initiated play and teacher-guided play in science instruction extends opportunities for young students to work on the social and self-regulatory skills needed for developing scientific practice, as well as clear learning goals for rigorous science.

Integration Design: child-initiated play and teacher-guided play. Child-centered play enables students to use imagination and rule creation to place themselves in the socially situated world of science (Nicolopoulou et al., 2009). Young students use child-centered play to work out ideas, roles, and rules, which is a separate activity, uninfluenced by the teacher. The rule orientation of the non-imaginary world implicitly belies the students' own rule making and their imaginations and spontaneity. There is some consensus that science carries urgency for students to work out the particulars of that science world, including aspects of positionality and identity. "Play offers opportunities for sensemaking...Play also offers students opportunities to create situations in the school science classroom that meet their needs and interests" (Andrée & Lager-Nyqvist, 2013, p. 1735). The benefits to guided play, however, contrast with child-centered play

because play is teacher-initiated and directed toward predetermined outcomes. Guided play carries potential to marry motivation and interest with targeted learning goals. Although guided play is condemned by some as inauthentic (Singer & Singer, 1992), difficult content can be made accessible through guided play (Weisberg et al., 2013).

Methods

Case Study

We use Merriam's (1998) approach to case study design which highlights a case as a "bounded system" (p. 27), and further elaborates on the case as "a phenomenon of some sort occurring in a bounded context" (p. 33) where there is focus on the process for causal explanations of impact or outcomes. In this way, case study is a particularly suitable design. In this article, we explore how both child-initiated imaginative play and a playful classroom with focused learning can support science learning as described in the reform standards. Our field setting is a Young 5 kindergarten class in a suburban public school in a Great Lakes state in the U.S. The state adopted the reform science standards (NGSS) five years prior to the study. Young 5 is a state-endorsed early kindergarten program for children who turn five between September 1st and December 1st. The study began before school closings due to COVID-19. Data was to be collected from a kindergarten classroom and would have been coupled, but due to school shutdowns for COVID-19, the data remain unfinished. Ideally, using data from a kindergarten classroom would have strengthened the case of this argument as it would have taken into consideration the current curriculum pressures and time constraints facing kindergarten teachers. Young 5 teachers do not face the pressures kindergarten teachers do since Young 5 students are preparing for entrance to kindergarten the following year.

Context of the School Setting

The school that was chosen for this research is located in a middle-class neighborhood. Houses near the school that are for sale range from \$89,000 to about \$175,000. The parents of students who attend this school work in a wide range of professions or don't work at all. Some parents are engineers, pharmacists, mechanics, foundry workers, medical professionals, stay-at-home parents, and unemployed parents. The demographics in the vicinity of the school are as follows: white 82%, Asian 2%, Hispanic 9%, and Black 7%. The statistic describing 82% of the population as white does not take into consideration the Arab-Americans in the classroom. On census forms, Arab-Americans are racialized as white, however, they deal with many similar issues as other minorities, such discrimination and negative stereotyping (Suleiman, 2001). Several of the students in the class were English Language Learners.

Fifty-three percent (53%) of the students in this school receive free/reduced lunch. Fifty-six percent (56%) are English Language Learners. This site was chosen because of the flexibility in the Young 5 program. The class consists of 18 students (13 boys and 5 girls). This classroom, in particular, consisted of 7 white students, 7 Arab American, 1 Latinx, and 3 African American students. The teacher is female and has 20 years of teaching experience. The teacher is animated, entertaining, spirited, kind, loving, and empathetic towards her students.

Data Sources and Collection

Data for this study was collected in January after all students turned five years old. Another reason this particular classroom was chosen is because the teacher has a strong passion for play

and science at the early childhood level. The teacher volunteered to be a part of this study. This teacher was followed over the course of two weeks. Within these two weeks, the class participated in three lessons that took four days to complete.

Young students can be very verbal, but easily distracted as they were challenged to describe their thinking and motivations for learning. Therefore, we relied on multiple data sources to triangulate interpretations of the data. The lead author collected audiotapes of semi-structured interviews with students during each of the four lessons and with the teacher after the lesson set was concluded. The interviews with the students consisted of questions like “Can you tell me about what you are doing?” and other related follow up questions. The questions for the teacher were “Tell me about what you noticed today?”; “What, if anything, surprised you?”; and “Can you tell me about how students were, or weren’t, learning today?”.

All four lessons were audiotaped, including small group work during the play and discussion. During the small group work, students used the practices of analyzing data and carrying out investigations. Subsequent discussions were transcribed. The author recorded conversations while the students were playing and asked the students the semi-structured interview questions during their moments of play. Field notes were also recorded during the observation. Each field note described what happened in each lesson and overall impressions related to play and science learning, events that were surprising, and how the students made use of the ideas presented in the lesson for making sense of the phenomena.

Data was collected over the course of two weeks, comprised of **two stages**:

Stage one: The lead author met with the teacher and observed her teaching a math lesson with her students. Information was collected on the classroom environment and the educator’s teaching style.

Stage two: The lead author attended four science class sessions and observed the lesson facilitation. The lead author collected observational data, audio recording, and interviews of the students. The author took pictures of student models and student play stations. At the end of each day, the lead author wrote memos (Birks et al., 2008) related to themes of play and science learning that emerged during the lesson enactment.

Multiple Literacies in Project-based Learning (ML-PBL)

The study context includes the use of a widely used science curriculum that is aligned with the reform-based science standards in the U.S. called Multiple Literacies in Project-based Learning (ML-PBL) (Krajcik et al., 2015). ML-PBL is a science curriculum that is rooted in the following precepts:

- It has project-based learning and reform science at its core;
- the combination of project-based and reform science means that units have driving questions that are meaningful to students and promote the need to know;
- the units engage students in figuring out phenomenon and solving problems and they culminate in artifacts that are authentic to the community;
- there is an integration of literacy;
- the units are tested for eliciting interest and motivation from students; and
- the units and the lessons have a coherent design, meaning that each lesson builds meaningfully and strategically toward the lessons that follow them, and each unit builds on knowledge developed in the previous unit.

In this section, we first describe the modifications made to the design of the project-based

learning science curriculum. Then we describe the context for the study.

The modifications to the unit involve the introduction of two different manifestations of play, supported in the literature:

1. As imaginary, self-motivated, creative play, where students build scenes and dialogue; and
2. Play that is guided by the teacher through questioning strategies related to three-dimensional learning.

ML-PBL does not have a theoretical approach to play. This project investigates play as a useful vehicle for young students figuring out the phenomenon and answering the driving question.

The lesson-level driving question that begins the NGSS-aligned unit is, “Why do some things start small and get bigger?” Using phenomena in the unit to drive instruction is important when considering how all students can access the science learning. More importantly, the phenomena selected for instructional materials should be strategically established in a way that meaningfully connects to students lives. This means that there is an observable event in the universe that students authentically want to make sense of. Keeping in mind that this unit was designed for five-year-olds, we looked to select a phenomenon that almost all of the students in the class have wondered about: growing up. Kindergarteners often imagine the things they will do when they get older. As students engage in these ideas and when used concurrently with the science, students are compelled to figure out how things, including themselves, get bigger.

The phenomenon, “Why do some things start small and get bigger?” would not be genuinely authentic from the students’ perspective if students are not wondering about it first. Oftentimes, phenomena can be teacher-directed in units where teachers come up with the phenomena with which students will engage. The writers, therefore, designed the first lesson of the unit in a way that would inspire curiosity about the phenomenon. Students were asked to bring in baby pictures and look for how they have changed since they were young. All the students in the class have a firsthand and direct experience with the phenomenon. Doing this was a deliberate strategy to ensure that every student in the class could experience the phenomenon, ask questions, and wonder together with their peers without any student being excluded. All students can make connections to the phenomenon because they all have experienced it before. They can connect to their prior knowledge and their homes. Students begin to talk about what it was like being young. This is what we use to launch the learning so that all students can take part in the learning.

Later in the unit, students wonder, “What can stop some things from getting bigger and how can humans help?” The phenomenon that was to be explored in the unit was that some things, including animals and people, get bigger, and some things never get bigger. Students complete the first learning set of this unit where they build toward the following performance expectations:

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
- K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

By the end of the first learning set, students develop understanding of what plants and animals (including humans) need to survive and a simple model of this idea. The second learning set allows students to continue to make sense of what plants and animals need in order to survive and in relation to the places they live. The second learning set will have students use the core ideas and patterns they figured out in learning set 1 about what it takes for a plant or animal to grow in order to plan how they can care for living things. Students will participate in firsthand and meaningful

experiences to do so. The third learning set allows students to explore what happens when humans remove plant and animal resource needs from a system. The culminating final project asks students to communicate a solution to others about how people can reduce their impacts on water, land, and other living things.

The lead author drafted the four integrated lessons that would be used in the study. The lessons, worksheets, and PowerPoint slides were designed by the lead author. The materials were then gathered and organized by the author as well.

Play integration

Building on the literature, we identified four lessons that would be strengthened by imagination, creativity, or exploration which include features of child-initiated and student-motivated, or teacher-guided play. Each of the instances were part of the larger cohesive unit with a driving question (“Why do some things get bigger?”), science practices, core ideas in science, and crosscutting concepts. It is important to note that play does not take the place of scientific practices, but rather fosters the integration of the science performances in a relaxed and student-centered, highly focused, and socially situated environment. By integrating play into these science lessons, more students have the opportunity to connect to, relate, and share their access to the phenomena. This in turn, provides the teacher with another method of assessment. The teacher is able to observe the student making sense of ideas without the student having to say or write their thinking. Play provides another modality for students to share their thinking, which all children, especially young children, need. Children’s interest and growing ideas become visible in children’s actions as they play. Offering varied and alternative assessments is a key approach to achieving equity (Lee et al., 2010).

Data Analysis

We employed qualitative data analysis, using a philosophical position of critical realism (Maxwell, 2013). Our position brings together two perspectives often thought to conflict--critical realism and epistemological constructivism. According to Maxwell, we accept that there is a world that exists apart from our beliefs. At the same time, we hold that we construct and shape our understanding of the world. We seek to straddle the two perspectives to acknowledge the reality that exists while simultaneously acknowledging that what we portray represents a perspective. To further the study, we present triangulated data that consists of multiple data sources, observations, artifacts, and transcribed dialogue. Additionally, our perspectives are shaped by our cultural histories and by the system of injustice that sustains the society in which we live. We also recognize the contradiction between our goals for social justice as we participate in academia--an institution that perpetuates racist, classist, and ethnically biased practices. Because we rely on observational and interpretive stances, we feel it is appropriate to position ourselves.

The first author is an Arab American woman who taught for three years as a classroom teacher before becoming an elementary science resource teacher. She has been in this position for two and a half years and identifies as working class. This author recognizes that by law, she is considered white and is afforded some opportunities although denied others because she is a visibly Arab and Muslim woman. The second author is a white woman, who has been an elementary teacher for two decades and identifies as working class. Even as the author was dissuaded from academia because of her socioeconomic class, she recognizes that she has been afforded many opportunities that come from whiteness.

First, the observation data and audio recording to identify moments of play were analyzed.

Next, the authors looked across the transcripts, field notes, interviews, and memos for emerging themes that responded to our inquiry related to knowledge-in-use and play: “How can play provide support to help students access, engage, and explain phenomena?” The authors looked for evidence to reinforce emerging and anticipated themes, how they could be supported, and how some could be nested within others. Next, the authors re-read each field note, and generated separate analysis notes for the purpose of discussing with the other authors the evidence to support the themes. Two key themes related to learning in knowledge-in-use through play emerged across the different episodes of play (see table 2). Through close analysis, the researchers noticed that some of the developing themes were less well supported by evidence. For example, the anticipated themes, “play supports science language,” and “play provides access to sensemaking” were not backed by strong evidence.

The authors arranged the data across the two approaches to play and organized data according to those themes that were supported across play contexts:

Table 1. Key Themes across Episodes of Play

Themes	Child-initiated imaginative play	Teacher-guided play
Theme 1: Play bridges the figuring out of phenomena through making sense of patterns.	Data sources: Students used and described patterns of feeding and watering animals and plants during free play.	Data sources: Teacher prompts and questions when using the felt board support ideas about patterns.
Theme 2: Play supports knowledge-in-use through application of core ideas.	Data sources: Exploration of materials in free play resulted in modeling different relationships to getting bigger.	Data sources: Testing and sorting of materials with the teacher enabled the students to negotiate “rules” and make claims about organisms.

Throughout the research, moments recorded as play and used in the analysis met the following criteria:

- **Child-initiated play:** Opportunities where students are engaged in imaginative creative play through purposeful selection of materials that loosely correspond to the science lesson and the phenomenon under study (unstructured play).
- **Teacher-guided play:** Teachers guiding the exploration of the phenomenon using creative play as a connection to science ideas and focusing student learning with guiding questions (structured play).

The research question examines how play can be incorporated into science instructional materials to provide support to help students access, engage, and explain phenomena. To answer the question, the researchers used student dialogue during play and student models to identify whether students were able to access, engage, and explain the phenomenon, “Why do some things get bigger?” The researchers looked for moments where students were starting to explain the science ideas related to the performance expectations. Students were making sense of these ideas through teacher-guided play and child-initiated play. The results demonstrated that both types of play enabled the students to figure out the phenomenon and are commensurate with the literature on the academic potential of play. We found that child-initiated play motivated engagement and interest more than teacher-guided play.

The science ideas associated with the phenomenon that were used to determine whether the data could be accounted for as evidence are as follows:

1. All animals need food to live and grow.
2. Plants need water to live and grow.

The crosscutting concept that students apply during the lessons was patterns: Students used reasoning and modeling to describe aspects of these science ideas and build toward a full understanding of the performance expectations.

Findings

Below the authors first describe what occurred as the students interacted with the curriculum and engaged in child-initiated play and teacher-guided play. Next, the authors describe the affordances of child-initiated play and the themes related to this kind of play for figuring out phenomena and for knowledge-in-use. Next, we examine the affordances of teacher-guided play and the themes according to that kind of play integrated with science. Our research question, “How can play provide support to help students access, engage, and explain phenomena?” has two parts. First, the question is related to the integration of play in design, and secondly, we want to know how the integration serves as a vehicle for meeting expectations that students use practices, science ideas, and crosscutting concepts to explain phenomenon.

Description of classroom lessons

Day 1 On day 1, lesson 1.1 began with the teacher showing pictures of herself as a newborn and when she was five years old. She asked if anyone noticed any differences. The students noticed differences in outfits and hair color but did not pay much attention to size. The teacher prompted the students to pay attention to size asking, “What about my size has changed?” The students collectively answered saying their teacher got bigger. The students then sat in a circle holding their own baby pictures. They brought in pictures of themselves as newborns and themselves at 2 years old. Students took part in a gallery walk and looked at everyone’s pictures. The students were then partnered up and asked to discuss the differences they saw in their baby photos compared to what they look like now.

After exploring, the students were brought together as a whole group to discuss some common differences that were noticed. Students readily acknowledged that their sizes had changed over time. Next, the phenomenon for the unit was presented to the class. The teacher said, “I wonder, do all things get bigger?” Students then discussed whether they thought so or not. They found they were not all in agreement and could not come to a consensus. The students then wrote their claim about whether they thought all things get bigger. They did this by writing their name on a post-it and placing it on an anchor chart. The anchor chart was titled, “Do all things get bigger?” Below the title was a t-chart. One side was labeled yes, and the other was labeled no. The students placed their post-its on the side of the t-chart that matched their claims.

The discussion on day one set the stage for the phenomenon to be explored and answered through the science practices in upcoming lessons. The teacher found that students were unsure about whether they themselves actually grew, and if there was a way to definitely separate the things that get bigger from those that stay the same size. They also had a simple understanding that food is somehow connected to getting bigger. This lesson included no play, neither teacher-guided play nor child-initiated imaginary play.

Day 2 On day 2, lesson 1.2 began with a review of what the students did last time they met for science. Students remembered that they were discussing things that get big. Each student brought in an object for show and tell. Most students brought toys. The students sat in a circle and were asked what they brought from home and whether it could get bigger. Some described what would help it grow. For example, one boy brought a stuffed snake. When asked if the snake grows, he said if it were real, the snake would grow but because it was not real, he would not. Some students had trouble answering the question.

After show and tell, the teacher told the students that she brought in baskets of random objects. They were told to sort the objects into two piles, things that get bigger and things that do not. The students worked in groups discussing which things get bigger and which things do not. Students continued to move objects around even after they had finished sorting. Some students put pictures of animals and plants in the piles that did not get bigger. When asked why they placed them there, they said pictures do not get bigger. Other students thought that maybe if the animal were real and it ate something, it could get bigger.

At first, when students were prompted to explain why they had moved objects into certain piles, the students were hesitant to answer the questions. As students continued at the stations, they began to use reasoning to explain their placement of the objects. It took about five minutes into the activity before students started to go back and revise their thinking.

Figure 1. *Students Sorting Objects*



Afterwards, students sat at the carpet and the teacher projected a picture of how a group sorted their objects. The teacher asked the students if they agreed or disagreed with the way the group had sorted their objects and why. Students had trouble staying on task, so the teacher stopped the lesson.

This lesson used teacher-guided play, involving prompts and questions to support play. The play had explicit rules—the students sorted objects in two piles and they developed and explained a rule for how the objects should be sorted. At the same time, the activity involved some negotiation among the students of science-based rules. Some things stood for other objects (i.e., the pictures stood for real animals), which promoted children's imaginations (Nicolopoulou et al., 2009). There were two levels of rule negotiation, but it is important to note that the student motivation to determine the rules for the animals (pictures or real animals, for example, needed to be determined) was part of the engaging in the scientific practice and making sense of the phenomenon. Another rule related to the phenomenon, that needed to be determined by the students, was if blocks could stand for many blocks. There were students who felt that blocks should go in the "gets bigger" pile because they could be made big if there were many.

Day 3 Day 3 was a continuation of lesson 1.2 which started at the beginning of the following week. The teacher began with looking at a projected picture of how one group sorted the objects in the basket. The teacher asked the class if they agreed or disagreed with the placement of objects into their respective piles. The teacher then held up the objects from the basket and the class arrived at consensus deciding together which things get bigger and which do not. Students shared their thinking and their reasoning.

The teacher wrote the names of the objects on a t-chart. The students were then told to choose an object from the side labeled “Things that get big” on the t-chart and develop a model that showed how it gets bigger.

Figure 2. *Things that Get Big*

Things that get big	Things that don't
Plants balloons babies seeds turtles bunnies	toys blocks oranges books

This lesson provided the opportunity for the students to build on the experience of playing with the objects and interrogate some of the ideas that they brought from prior experiences. Play, discussion, and sorting enabled the students to dialogue about science “rules” to develop an understanding of what living animals and plants have in common.

Day 4 On day 4, lesson 1.3 began with the teacher reviewing the t-chart of things that get bigger and things that do not. The teacher told students that she brought some of the things from the chart so the students could play with them. Students rotated between six stations (two baby doll stations, two gardening stations, and two pet care stations) and were asked at each station, what they were doing and why they were doing it.

After students played with the toys at each station, they came back to the carpet for reflection and debriefing. The teacher mentioned to the students how she noticed similarities between what the students did at each station and what they said they did. She continued, “We gave plants and the horse water. Also, we gave the animals food and the babies food.” She asked the class to think about why they did those things. One student shouted, “to help them get big!” The teacher then made a t-chart. She explained that plants, animals, and people are all living things that need certain things to help them get big or grow. Then the class returned to the list of items of things that get big and reviewed the list. The teacher asked the students about the balloon they had placed on the side labeled “Things that get big.” She asked the class, is it a living thing? Students said no because it needs air to get big, not food. The teacher continued this questioning down the list asking students to identify whether the items were living or nonliving things and to give their reasoning for their thinking. Together, using a felt board, the class came up with a

consensus model showing how plants, animals, and people need certain things in order to grow. Lastly, the teacher asked the students to choose a living thing and to model it growing. In this model, the students were to also include what it needed to grow.

Students at the end of this lesson knew some of the needs of plants, animals, and people, however, they still did not have a complete model. In the next learning set, students would explore seeds, plants, animals, and people to identify all the resources they need to grow. Students will come back to their models to revise and add the new ideas they learn. This lesson, specifically, included two kinds of play, teacher-guided play, with the felt board, and child-initiated imaginary play, using the stations. The child-initiated imaginary play was focused and rich with student language. Students were discussing what they needed to do to make sure the plants grew, and they found dog food (blocks) to feed the puppies so they could play. The teacher brought their attention to their prior knowledge to elicit thinking about patterns between organisms and how they grow.

Affordances of child-initiated imaginary play

Students engaged in child-initiated imaginary play through purposeful selection of materials that loosely corresponded to the science lesson and the phenomenon under study (child-initiated play). As described in the classroom observations, during lesson 1.3 on day 4, students participated in child-initiated play. Students were placed into small groups of three and played at each toy station for 5-10 minutes. At the gardening stations, some students explicitly recognized that they were watering plants to help them grow or “get bigger.”

Transcript 1

Teacher: What are you holding?

Student 1: I don't know what is

Student 2: A shower pot

Teacher: What does the shower pot do?

Student 1: You put on there and the water makes it big

Transcript 2

Teacher: Hey, what are you doing?

Student 1: Shoveling

Teacher: And what are you doing with the spray bottle?

Student 1: Watering it so it will grow

Student 2: We gotta water the flowers so it will grow

After students played at each station, the class met at the carpet for a class discussion. During the whole class discussion, students were able to connect what they learned from playing at the stations back to the phenomenon.

Transcript 3

Teacher: So last time we talked about things that get big and things that don't. Today, you guys

played at these different stations. What did you do while you were playing? If you played at the baby doll station, what did you do with the baby doll? What did you do there?

Student 1: We fed them so they ate food

Teacher: Why would you feed them?

Student 2: Because they are hungry

Student 3: So it can be happy

Student 4: So they don't cry

Student 5: Because they can be big

Student 6: So it can grow

Teacher: So how about the plant station? What did you do there? How did you play there?

Student 7: Put water in it

Teacher: And why did you do that?

Student 7: I put water in it so it could grow

....

Teacher: Let's look back at our list. We said balloons get bigger. Is a balloon a living thing?

Think about that for a second.

Student 10: It is not a living thing

Teacher: Can you say why?

Student 10: Because it has air in it not food

Teacher: Do I have to feed a balloon so it can get bigger?

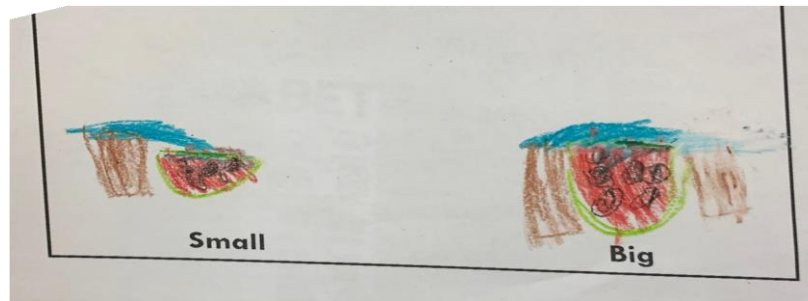
Students: NO (laughing)

This discussion indicated that the child-initiated play allowed students to capture and explain parts of the phenomenon. Students made connections between the imaginary games they invented while playing with the toys and what certain things need in order to grow. During the child-initiated play, students accessed prior knowledge and began imitating what they had either seen or experienced.

Students therefore used patterns to apply what occurs in the real world to the imaginary game they played at their stations. The child-initiated play was key in helping students combine their understanding of real-world applications and the scientific ideas that emerge in the unit. One specific example emerged from the only African American girl in the classroom who was also a selective mute. During this lesson, she began to speak as she played, asking the baby dolls or pets if they needed more food or water. This student felt comfortable to speak because of the opportunity to play.

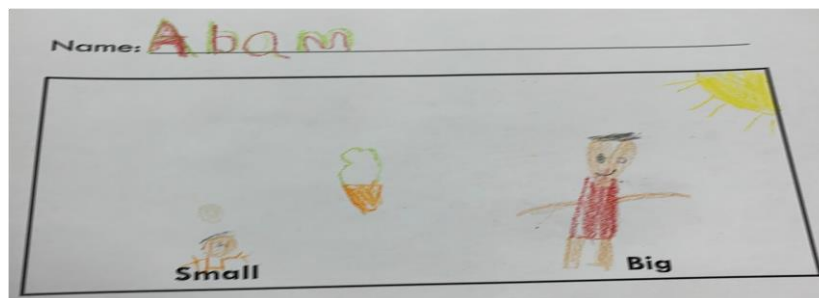
Further evidence to prove that students had acquired the science ideas after participating in child-initiated play can be seen in student models at the end of lesson 1.3 on day 4. Student models depict people, plants, and animals. Each model now also includes a pictorial representation of what each living thing needs in order to grow.

Figure 3. A Watermelon Growing



This student modeled a watermelon growing when it is watered.

Figure 4. A Child Growing into an Adult



This student modeled a child growing into an adult when he eats carrots.

Figure 5. A Bunny Growing into a Rabbit



This student modeled a bunny eating carrots and growing into a rabbit.

Each model is a clear representation that students were able to draw living things growing when one need is met. Later in the unit, students will add to this model as they make sense of more ideas and move closer to fully understanding performance expectations. Regardless of student race or socio-economic status, each student was able to play and engage in learning. Below we describe three themes that emerged during analysis.

Theme 1: Play supports the figuring out of phenomena through making sense of patterns.

During the child-initiated imaginary play, students negotiated the rules for the imaginary

world that closely align with some of the rules in the non-imaginary world. In this way, they are using play as a safe, interesting, and child-initiated context to engage in sensemaking about the natural world and to make sense of the driving question, “Do all things get big?” This was depicted in transcript 3.

Theme 2: Play supports knowledge-in-use through application of core ideas.

Child-initiated, imaginary play supported the application of ideas. The students applied the core ideas about water and food and living and non-living things as topics of exploration during the play. The teacher preselected materials, such as animals and watering cans, which fostered agentive engagement in the core ideas.

In addition, the students were enabled through play to be the agent of the phenomenon. When they “watered” the plants, they imagined that the plants got bigger. The authors saw this depicted in transcripts 1 and 2 as well. Similarly, when they fed the puppies, they imagined that the puppies ate the food and grew.

During the child-initiated imaginary play, students made initial claims, one of the scientific practices that is necessary for students to figure out the scientific events in the real world.

The students used their imagination to change roles and become persons who take care of plants, and they acquired agency in the event. The students were considering the phenomenon from a new and active perspective. The core idea, living things have things in common, was being applied across the stations to figure out how they could cause things to grow in an imaginary world.

Theme 3: Alignment free play with the definition of child-initiated imaginary play.

The play featured in the lesson approximated, but did not entirely reach, the definition of child-initiated imaginary, or free play. Although the young students used the imaginary play to work out ideas, roles, and rules, the setting for the activity was designed by the teacher in terms of time, task, and materials. Also, the rules of the classroom remained salient. We suggest that the newness of the activity impeded the students’ ability to completely orient to the imaginary world, where turn taking and classroom norms for materials such as tables and social space remain intact. Hence, there were aspects of the imaginary play that overlapped with the teacher-guided play, particularly since the setting was intentionally designed by the teacher to promote children’s self-initiated engagement with the toys.

Nevertheless, there were sufficient aspects to the play that existed squarely in the realm of child-initiated play. For example, many objects had imaginary uses, and there were some rules of interaction among the students (i.e., moving around the room, talking to objects and for objects, and inner focus) that align with the definition of child-initiated imaginary play. In addition, the interactions with the materials, even as they were chosen by the teacher, were entirely student-motivated. This discrepancy between intention of design for play, and student use of the setting as designed, may be a contradictory aspect to imaginary play in any context that is designed by an adult.

Affordances of teacher-guided play

There were three instances where teacher-guided play took place in the lessons. The first was the show and tell activity done on day 2 at the beginning of lesson 1.2. This form of play was guided by the teacher. Students brought an object from home and shared it with the class. To connect the play experience back to the phenomenon, the teacher asked students if the object the students brought from home could get bigger. All answers were accepted and students were not

pressed to explain reasoning as this was an introductory activity and used as an assessment of their current understanding. Answers varied between yes and no.

The second teacher-guided play activity also occurred on day 2 in lesson 1.2. Students were given baskets filled with random items. The students sorted the objects into two piles on a large piece of butcher paper. The students were asked to make two piles: things that got bigger and things that did not. The teacher walked around, circled the piles, labeled the piles, and commented on student identifications. The teacher was careful not to reveal whether the objects were placed incorrectly. Again, all student answers were accepted, however, the teacher did press for reasoning. The teacher asked open-ended questions to enhance student learning through the teacher-guided play. For example, students looked at a plastic spider toy and worked on trying to determine whether it could get bigger. Here is a portion of the students' conversation with the teacher:

Transcript 4

Teacher: How about this spider?

All students: No

Teacher: Ok

Student 1: Wait! Actually it does, it turns into a tarantula

Teacher: Do you agree with that? What does it do to get bigger?

Student 2: It eats webs

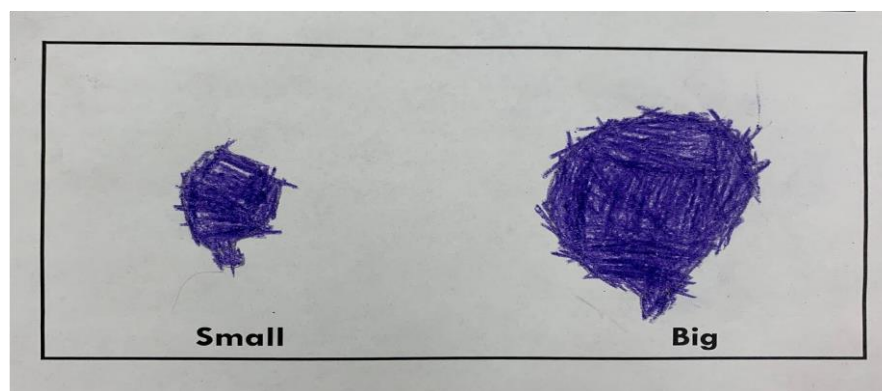
Student 3: and plants

Teacher: Which side do we put it on?

Students: Bigger!

Through this teacher-guided play item sorting activity, students recognize that the spider needs food in order to grow. Students recognized a pattern between the spider toy and the other animal objects in the basket that they had previously sorted into the "bigger" pile. Students then modeled to show how an object gets bigger. These models depict student thinking and whether students were able to recognize the difference between something growing and something just getting bigger.

Figure 6. A Balloon Getting Bigger



This student modeled a balloon getting bigger. He explained how but did not include this in his model. His explanation is quoted below.

Transcript 5

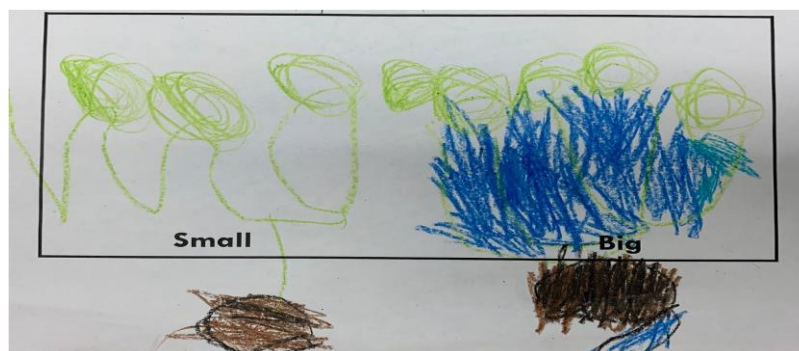
Teacher: What did you draw?

Student: I drew a small balloon and a big balloon

Teacher: What makes the balloon get bigger?

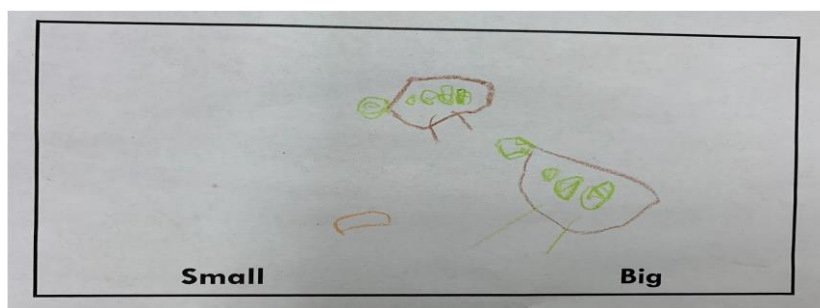
Student: When air goes into it, it will get bigger

Figure 7. A Plant Getting Watered but Not Getting Bigger



This student drew a plant getting watered but didn't necessarily draw it getting bigger. He only drew what the plant would need to grow. The model indicates that the student has some understanding that plants need water.

Figure 8. A Turtle Eating Food to Get Bigger



This student drew a turtle eating food to get bigger. This model represents different scales that the student was able to describe as a small turtle who gets bigger after it has eaten food.

All three students listed in the examples demonstrated some understanding of the scientific ideas. However, at this point in the unit, the students are not yet able to fully explain that these living things need food and/or water in order to live and grow.

The third instance of teacher-guided play used in the lesson set was the felt board modeling activity. This activity was led during the end of lesson 1.3 on the fourth day of observation. The students worked with the teacher to come up with a consensus model describing how the three things students observed in play (animals, children, and plants) could get bigger. The teacher had food, water, animals, plants, and people cut out into felt pieces. The students were asked to come

up to the felt board and to use the pieces to make their thinking visible and to serve the purpose of displaying to the whole class a summary of learning thus far.

Transcript 6

Teacher: Here is a little girl (holds little girl felt piece). What does the girl need to get big?

Students: Food!

Teacher: Ok, can she eat this carrot (holds up carrot felt piece)?

Students: Yes

Teacher: Let's put the carrot there... so she starts small and if she eats this carrot what will happen?

Students: She gets bigger!

Teacher: So is she a living or nonliving thing?

Students: Living thing

Teacher: Let's put her getting bigger on the board (adds an adult felt piece to the board). How about this bunny? What does the bunny need?

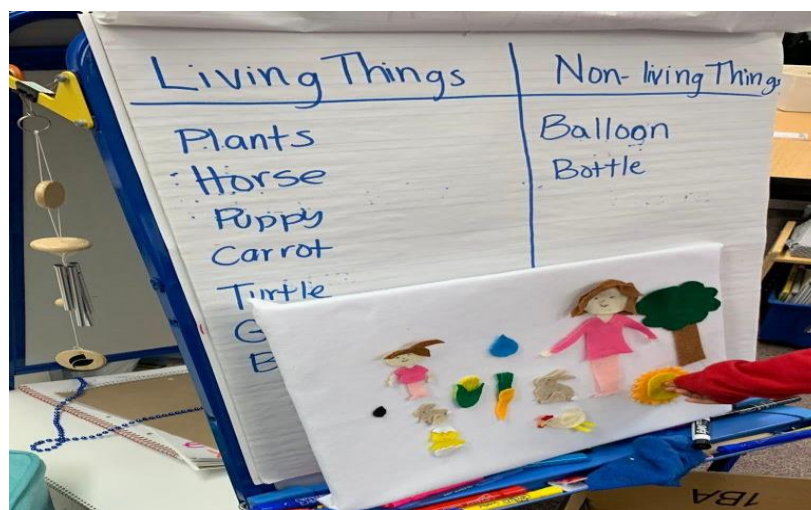
Students: Carrots!

Teacher: Oh people eat carrots too! And after the bunny eats the carrot what happens?

Students: It gets big!

Teacher: Can someone come and put these up for me?

Figure 9. Felt board of Living Things and Non-Living Things



This process continued until the students finished discussing each different felt piece, where the felt piece should be placed on the board and why. The results of this guided modeling play activity indicated that students were able to display the needs of certain living things to grow. Students demonstrated their understanding of the scientific ideas and were beginning to develop an understanding of the phenomenon. Students were active in participating in the sensemaking experience. Student ideas came from the play investigations conducted during science time and from their own prior knowledge. Direction was not delivered by the teacher. Thus, all three instances of teacher- play supported students in accessing the science ideas that would be needed

to fully explain the anchor phenomenon. Below, we return the themes found throughout the analysis of enactment.

Theme 1: Play bridges to the figuring out of phenomena through making sense of patterns.

Teacher-guided play enables the students to make sense of the implicit patterns that they were using during the activity. Considering the patterns between living and non-living objects that get bigger was the main objective of the teacher during the two instances of guided play, the playing with objects and sorting them, and the felt board. Students were interested and discussed the sorting of the objects prior to the teacher questioning.

The sorting was designed to elicit the negotiation of some of the core scientific rules of life science, which ultimately became a focused and guided game. The teacher prompts and questioning served to allow the students to make the rules explicit.

Transcript 7

All students: this one (points to bigger pile)

Student 3: This pumpkin gets bigger on Halloween

Teacher: What happens?

Student 2: If you water it, it will get bigger

Teacher: How about this spider?

All students: No

Teacher: Ok

Student 1: Wait, actually it does, it turns into a tarantula

Teacher: Do you agree with that? What does it do to get bigger?

Student 2: It eats webs

Student 3: and plants

Teacher: Which side do we put it on?

Students: Bigger!

Teacher: Do sponges get bigger?

Students: No

Theme 2: Play supports knowledge-in-use through application of core ideas.

The guided play with the sorting of objects and the felt board both resulted in the students enthusiastically modeling first that animals and plants that get bigger, and next what causes the scientific event. The guided play, through questioning and prompts, enabled the students who were troubled by the balloon and the blocks, both of which were in the bigger pile at different times, to come up with a difference between objects and living things. Without questioning by the teacher and the engaging context, this question may not have been resolved.

Figure 10. A Spider Getting Bigger

The student drew a spider that can get bigger when it eats



Theme 3: Alignment of free play with the definition of teacher-guided play

The integration of teacher-guided play in a science curriculum was also not a seamless fit with our definition of teacher-guided play. There is a small but important discrepancy between our description of teacher-guided play and the classroom activities. The activities described as teacher-guided play include children sorting objects into two categories: "things that get bigger" and "things that do not get bigger," as well as a group discussion of living and non-living things while the teacher recorded students' answers by attaching pictures to a felt board. These activities (sorting and group discussion) are nearly aligned to the definition of teacher-guided play (Weisberg et al., 2013). Teacher-guided play means that adults design the setting and augment child-initiated play by asking open-ended questions and inserting definitions for concepts. There remains some question as to the extent that the play was instead teacher-guided and augmented by child-initiated play, rather than the reverse.

Regardless of this small discrepancy, the teacher supported play by offering guidance through prompts and open-ended questions. The setting extended permission for the engagement and motivation of children's imagination adequately for the activity to fall under the definition of teacher-guided play. Although there was negotiation for driving the activity between students and the teacher, there was sufficient self-motivation and creative play, where students built scenes and dialogue. The newness of the activity, especially within the science classroom, was the probable cause for the tension between student and teacher motivation. It makes sense that there would be a transition, due to an unfamiliarity for teachers and students to disciplinary play.

Discussion

In this paper, we explore how guided play can be used to promote science learning, and we add to a small set of research articles that support the integration of play in academic contexts. There is a particular affordance for play to supplement, even enrich, the practices in science as students have the time to adopt agency in imaginary contexts and engage in conversation with one another about rules for events in science, as well as explore ideas about the world that they understand intuitively, such as patterns, but need teacher support to express.

Play is a necessary activity for emotional, intellectual, and social development for young students. To refer back to our theoretical framework, we know that children learn within social interactive contexts by reconciling what they already know with novel experiences. This includes imaginative play for young children. We have expanded this vision of knowledge-in-use when

finding that students were motivated to engage in science learning because of play.

As a result, we suggest an innovative solution to the problem of decreasing time for play in school due to emphasis on academic readiness. When both child-initiated and teacher-guided play are integrated in science contexts there are affordances, which are aligned with knowledge-in-use. Using a Young 5 classroom makes it more feasible than a kindergarten classroom to insert play-based curriculum. However, integrating play into kindergarten science curriculum could support the effort to ensure more students have time for play during traditional instructional time in school. All students should have the right to high quality instructional materials. The goal is to complete this science unit and provide it openly to all teachers. The unit will be developed to include science as the base of access to literacy and play at the kindergarten level.

Which type of play was more engaging?

Engagement in play was measured by the discussions students had and how long students continued to stay on task. The richer discussions between peers or the student and teacher were coded as more engaging; and the richer the discussion, the more engaging the play was. Both types of play revealed evidence to support that students were engaged and gained access to the phenomenon through play. Both types of play allowed for rich discussions between the teacher and the students. However, students were more engaged during the child-initiated play than the teacher-guided play. This is possibly due to the fact that students were playing with new toys and were excited to have time to explore. Using child-initiated play does not necessarily mean there needs to be specific manipulatives for the lesson. Leaving open-ended manipulatives and materials for the students to interact with could drive more open-ended conversations and questions than this lesson allowed. For instance, giving the students gardening toys, dolls, and pet toys limited students to just role playing their prior knowledge. Although this did bring out student experiences, we acknowledge that not all classrooms can afford these materials.

Using the same dialogue that occurred after the teacher-guided play activity, it is evident that students were able to follow along with the teacher during the discussion and come up with conclusions together. After the teacher-guided play where students had to sort objects from the basket, students had a hard time staying on task.

Transcript 8

Teacher: What did you want to say about the sponge? He put the sponge on the side that does not get bigger. Who else did that? Raise your hand if you put the sponge on the side that does not get bigger. Why doesn't the sponge get bigger?

Student 8: Because it get bigger?

Teacher: It does?

Student 8: Yes

Teacher: Does a sponge get bigger?

Student 9: No

Teacher: Why not?

Student 9: Because it's a sponge

Student 10: Like spongebob

Student 11: Why did you open my shoe?

Teacher: Do we notice anything about the things that get bigger? We just said a sponge is a sponge... it will not get bigger?

Students murmuring

Student 12: We forgot that...

Student 13: If it got a baby

Teacher: I think we have exhausted them

All three lessons were coherent and relied on one another to help students access the phenomenon. By incorporating both types of play, the students were able to use imaginary instances to make connections with their prior knowledge about the needs of living things. Teacher-guided play and child-initiated play both provided students with opportunities to gain deeper understandings of concepts needed to acquire the phenomenon. Through each version of play, students recognized patterns between the objects and occurrences in the real world to make sense of the phenomenon. It was evident to the teacher which students had more background knowledge on certain ideas based on how they answered the teacher's questions. Some students, for example, knew plants also needed light as well as water to grow. Others were unable to relate light to the needs of plants. These ideas were exposed as students were playing. The teacher questioned student thinking and asked for reasoning as they played. Based on this assessment, the second learning set will begin with guiding students through a plant observation and question what exactly plants need in order to live and grow.

Child-initiated and teacher-initiated play helped students learn from others around them and access vocabulary words. We started the unit asking the class if objects get bigger. Then, students began to distinguish between things getting bigger and things growing. This language was brought to the surface as students participated in play. Students began attaching words like “grow,” “living things,” and “nonliving things” to concepts after students had experienced them.

Implications of play for further study

The potential for teachers to use play as a learning and assessment opportunity has implications for improving equity in schools—schools that offer widely disparate opportunities for students. Thus, in schools where hours are a commodity, the integration of play with content may be necessary to respond to students' emotional and cognitive needs (Dickey et al., 2016). As, in well-resourced schools, young students are often given more time to play than in schools influenced by poverty, both imaginary play and guided play, we see a viable solution to disparities between wealthy schools and those affected by poverty. Instead of a singular focus that results in didactic teaching, where students suffer from the push for academic readiness, play and disciplinary integration offer social, developmental, and academic benefits. Souto-Manning (2017) from Teachers College asks if it is ethical that play be a privilege, rather than a right for all students. This practice reflects the ability to prioritize what students need and should be available to students attending lesser-resourced schools.

In this example, young students learned core science ideas, practices, and cross-cutting concepts through play, and the teacher was able to ‘see into the students’ scientific minds’. Building on play for assessment has rich potential to evaluate learning goals with informal and formative assessment practices, a critical lever for equity (Lee et al., 2010). Further research is needed to understand how assessment and play can be utilized in classrooms, particularly with diverse students, English Language learning, and as culturally responsive pedagogy.

Lastly, the authors acknowledge that true child-initiated play did not happen in these lessons. Pure play in the classroom could be possible with the incorporation of more open-ended activities that the students could explore. For instance, if students were to play in a sandbox or at

a water table, lessons could be designed around what students are doing and how they interact with sand or water. In this way, a phenomenon from the students' perspective could arise and be explored.

More research about how to accomplish this integration and prepare teachers is needed. Aspects of play and the role of play that need to be further researched include:

- Play in science and language acquisition (language development fostered through play)
- Play in science as a bridge to the three dimensions of learning
- Can play help improve student sensemaking and reasoning?
- How can curriculum be designed to help support teachers in using less structured play in their classrooms?
- Play as an assessment opportunity for disciplinary and cross-disciplinary learning goals

Conclusion

As a case study of a Kindergarten unit that places play within the discipline of science, this study makes several contributions to our understanding of science teaching and learning. Our inquiry describes initial patterns of play that engage young students in an interdisciplinary context. Young students were able to immerse themselves in imaginative and teacher-structured play while also accessing and applying rigorous science ideas. The results of this study suggest that three-dimensional learning of science and engineering need not be siloed in objective, empirical, and non-imaginative spaces. While playing, students develop understanding of core ideas, scientific practices such as modeling and data analysis, and cross cutting concepts. Young students can interact with their world socially and imaginatively and at the same time develop understanding along the evidence-base trajectory required of the NGSS and other science reform initiatives. This finding supports the idea that play fosters the carrying out, testing, using and evaluation of ideas—including disciplinary ideas—that young students encounter in the world around them. Knowledge-in-use presents a vision of science learning that positions students as the users of science ideas, and places them in situations where deep knowledge is required to solve a problem and explain a phenomenon. We offer the field a new question to consider: How can we better understand knowledge-in-use in imaginative spaces, and spaces for play?

The results of this study can inform and improve science access, participation and outcomes for students who are underserved in science education. Contrary to initiatives that remove play from the school day, suggesting that play is not academically crucial, play is the impetus for motivating children of all backgrounds and critical for their emotional and social development. Much of the discussion around equity in science education has been centered on test scores, academic achievement, and other markers found in upper grade levels. We suggest a new framing: one that focuses on equity and rich opportunity for play within educational contexts. This framing for equity merits the ubiquity that test scores have attained. With this study we hope to open the door to deepen discussion around justice, and we propose justice might look something like integration of creative play within the contexts of science. We see equity as an important and unique discussion with respect to younger students. This framing moves knowledge-in-use to be about applying science ideas during play, and other essential aspects to develop social and emotional learning. The integration of play with content can be one direction to afford younger students, including students from underserved demographic groups, the opportunity to develop

into fully actualized people, who can harness their science knowledge, social experiences, and creativity toward access, participation and opportunity.

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**WISE-COMPASSIONATE FRAMEWORK: A LEADERSHIP GUIDE TO
EDUCATIONAL EQUITY**

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AUTHOR NOTE

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ABSTRACT

A Wise-Compassionate Framework (WCF) was designed to offer educational leaders a recognizable and comprehensive approach that embodies critical race theory as a guide to the academic, social-emotional, health, cultural, and behavioral needs of all students. The WCF complements and builds upon Multi-Tiered Systems of Support (MTSS) and the Whole School, Whole Community (WSCC) model by infusing compassionate research and social-psychological approaches called wise interventions. The design of the WCF was developed during the onset of the COVID-19 pandemic. The WCF is an educational model that seeks to increase systemic compassion through wise interventions and best practices, both in person and in online settings. Trauma-informed practices, social justice responsibility, and evidence-based research are embodied throughout the tiers of the WCF. This article provides an overview of how the WCF can be utilized in an educational environment. A compassionate approach anchored in evidence-based research can support schools to heal through the COVID-19 pandemic and realize the racial tension amplified from witnessing the murder of George Floyd by a police officer.

Keywords: wise interventions, compassion, covid-19, multi-tiered systems of support, wise-compassionate-framework

Wise Interventions Infused with Compassion

Bradshaw et al. (2012) suggest that transferring knowledge rooted in neurological, cognitive, and emotional regulatory factors in the educational field can lead to effective preventative programs which also support learning. However, the absence of preventative approaches in the educational field confounds the growth of theory as well as the advancement of educational practices (Anderson et al., 2016). Strengthening theoretical practice through clinical

preventative programs can enrich experiences for all students in all educational settings (Duckworth & Yeager, 2015). Social-psychology research has revealed that the practice of “wise” interventions can offset the negative educational and societal effects of students who remain underprivileged and underserved (Wilson, 2011). Through wise interventions, well-crafted psychological theory can pinpoint and understand specific phenomena that target the individual’s value system and specific psychological process in a real-world setting. (Walton, 2014).

When students are disconnected from their environment, specifically in school, it is essential for educational and social science researchers to generate innovative scientific interventions that eliminate the social-class achievement gaps that create achievement gaps in education (Stephens et al., 2014). A student’s views on school in relation to their own skills or connectedness can have either a negative or positive emotional impact on their academic goals, motivation, and achievement (Dweck, 2006; Dweck et al., 2014; Farrington et al., 2012). Researchers have begun to use experimental designs to observe the effects of wise interventions within a social context coupled with distinct psychosomatic approaches, in order to determine how to inspire a human beings psychological process in any given environment. Wise interventions can also be used to offset trauma experienced from poverty, racism, or any other stimuli in an educational setting (Anderson et al., 2016; Aronson et al., 2002; Blackwell, et al., 2007; Good et al., 2003; Linnenbrink, 2005; Mercado, 2017; Mueller & Dweck, 1998; Walton & Cohen, 2011; Yeager & Walton, 2011). Wise interventions have been found to promote a sense of belonging in marginalized populations (Yeager & Walton, 2011). These interventions suggest improved adverse conditions within an individual for extended periods of time, making the present moments more pleasurable and easier to succeed and navigate through (Yeager & Walton, 2011). Although wise interventions are still in their infancy in the field of research, they intend to uncover the challenges of racial stigma and the many complex issues that impede on an individual’s right to thrive. Those working in educational settings can benefit from the use of wise interventions as they can be essential for implementing a connection to the social and psychological constructs; which have historically hindered students of color from succeeding or reaching their fullest potential. Research suggests that wise interventions be explored for a thorough understanding about the interactions materializing within a person’s social environment and not be focused solely on individual traits (Yeager & Walton, 2011). This analysis on the potential impact of a wise intervention draws on a core tenet of social-psychology, that every attitude and behavior exist in a complex field of forces—a tension system—in which some forces promote a behavior, whereas other forces restrain that behavior. It is the structure of a system that determines an individual’s potential for change. Yeager and Walton (2011) explain, “...an intervention that increases students’ motivation to learn or that removes barriers to learning will improve academic outcomes only when learning opportunities exist in the educational environment” (pp. 274-275).

Wise interventions are finding that they can have positive effects on populations of students and for individuals over long periods of time (Walton & Cohen, 2011). Approaches to interventions such a wise intervention are described as relating to that of the Lewinian mantra, which states that there is nothing as practical as a “good” theory (Walton, 2014). Drawing into this mantra through recurring cycles of action and reflection, academic researchers can gain the ability to address deep-rooted organizational and historical issues. The outcomes that result from using wise intervention approaches can create positive and long-lasting transformations in underserved, underprivileged populations. Walton (2014) theorized that these precise forms of intervention introduce recursive, or self-reinforcing dynamics, which can help to transform a student’s mindset and reaction to unpleasant incidents throughout their life. Wise interventions focus on

psychological phenomena that elicit recursive dynamics which can optimize a participating individual's potential in school settings (Garcia & Cohen, 2012). More recently, wise interventions, which varied from just a few minutes to an hour, found that positive social-psychological interventions can improve non-cognitive skills and academic outcomes in ethnic minority populations and can last three years and even longer (Cohen et al., 2006; Garcia & Cohen, 2012; Kenthirarajah & Walton, 2013; Stephens et al., 2014; Walton & Cohen, 2011; Yeager & Walton, 2011).

Wise interventions were first introduced and designed to capture the anticipated worries of minority students in specific social contexts (Walton & Cohen, 2011). Wise interventions have the potential to provide all students with an alternative narrative to help them understand their adverse experiences and provide a sense of belonging to support these students reflect on the impact of how school, home, work, and life has changed and how it can be improved overtime. Walton and Cohen (2011) reported that reflection and learning about similarity and belonging in others through positive exercises lasting one hour increased the grades of African American college students for several years throughout their time on campus. In the same study, researchers reported asking students to keep a daily diary to establish a method of sharing and expressing any sense of belonging. Using this approach of reporting and reflecting, the researchers found that the racial achievement gap had been cut in half, primarily at the campus where the study had been performed. The outcome of the shared experience led to students reporting an increase satisfaction in health at the end of their college experience. This review suggests that wise interventions can foster methods for school systems to bridge the achievement gap in specific populations, especially post-COVID (Walton & Cohen, 2011). Wise interventions have the positive impact and improve negative outcomes for multiple years, while proving to be extremely cost effective (Walton, 2014). It is critical to contemplate how an intervention changes a specific instance, how the interventions' processes develop throughout time as well as to understand how the interventions' strategies generate positive results (Kenthirarajah & Walton, 2013).

Infusing Compassion Research with Critical Race Theory

Kristen Neff (2003b) defines compassion as a kind and caring emotional response to a perceived suffering that acknowledges the shared human experience of imperfection, and it involves an authentic desire to help. Compassion encompasses three components: (1) self-kindness, (2) common humanity, and (3) mindfulness (Neff, 2003a; Neff & Germer, 2013). The Harvard Business Review, in their 2018 May Leadership collection highlighted that compassion is one of the most foundational aspects of leadership in the 21st century (Hougaard et al., 2018). Compassion Cultivation Training (CCT) has recently been shown to reduce work-related burnout and interpersonal conflict, as well as increase mindfulness, compassion toward the self, and job satisfaction (Scarlet et al., 2017).

Interventions that promote self-compassion are proving to decrease shame, thought suppression, negative stress, and over-analyzing in individuals who partake in these precise forms of interventions (Neff & Lamb, 2009). In congruence, compassion cultivation interventions are also demonstrating increases in psychological wellbeing such as optimism, happiness, and life satisfaction (Mantelou & Karakasidou, 2017; Neff, 2009). Self-compassion interventions support adaptive communication behaviors in school settings—such as participating and asking questions in class, seeking help from instructors or classmates, and speaking with instructors outside of class (Long & Neff, 2018). Neuroscientists have revealed that having self-compassion lowers rates of depression, anxiety, and stress and increases rates of happiness and improves function (Doty,

2017). In a study on veterans, researchers found that people who had served in Iraq and Afghanistan, who scored higher on self-compassion interventions were less likely to develop PTSD or commit suicide (Hiraoka et al., 2015). BMC Medical Education conducted a study which found that medical students who underwent compassion training also reported that they were able to manage work stress and had more positive interactions with patients (Weingartner et al., 2019).

Wise interventions can be infused as a method of developing compassionate practices in educators and facilitators alike so that recursive contextual, positive shifts can occur and be learned and sustained in any setting (Walton & Cohen, 2011). A compassionate approach guides the Wise-Compassionate Framework (WCF) through rigorous cognitive and psychological practices which can help shed light on racial injustices and disproportionately in underserved communities. The philosophy behind a compassionate approach is to guide reflective conversations that focus on the individuals in their environment that create spaces to restore humanity for all children in schools; especially for students of color or that have been traditionally marginalized (Harris, 2018). Experts suggest that producing positive sustainable change depends on the leaders (those at the top of the hierarchy of decision and money distribution) ability to craft coherent context for change (Senge, 2006).

As tradition inclines to ignore past researchers' intellectual development of comparable notions, leaders in education fail to recognize that many popular approaches in K-12 education lack scientific inquiry (Anderson et al., 2016). Educational approaches have been created for centuries with the aim of transforming Eurocentric curriculums which continue to perpetuate and have upheld racism and discriminative acts in the United States because they lack the clinical approach necessary to support the individual in the environment (Love, 2019). The WCF is values-based approach that is anchored by the social-ecological perspective which honors an understanding of how individuals relate to themselves, the people and the social contexts they are surrounded by, how people influence their environmental sphere, and how individuals are influenced by their environment (CDC, 2018). Bettina Love (2019) suggests that by design schools are stuck in the mode of reporting on outcomes, rather than meeting the needs of all of their students. A wise-compassionate educational model calls for the development of a kind of 'abolitionist educator' to pursue educational freedom for all students and educators alike and to challenge the status quo of the educational system (Love, 2019). School closures and the coronavirus (COVID-19) continue to change the landscape of the education system in America. Many challenges remain that must be considered at all system levels. This phenomenon has presented people working in education with more challenges. There is an opportunity to reimagine an educational environment that represents a microcosm of what can be done for the future of all students. There is opportunity to offset the hurt, suffering, and discrimination which is derived from the disenfranchisement of education for students who live in poverty, students who come from marginalized backgrounds, and specifically for students of color (Love, 2019; Payne et al., 2006; Sanchez, 2016).

Suppers (1974) identified that knowledge has been built and recognized in the more established sciences such as physics and natural sciences. Yet the knowledge discovered in these established sciences do not solve or fix a problem, which contradicts the way education uses theory by separating the individual and their social context (Anderson et al., 2016). Rarely are theories "homegrown" in the field of education. Yet, there are scholars who label theories as "grand theories" that then become popularized in education as "fashion of the nonsense" (Niss, 2006, p. 4). These "grand theories" or ideas insult the field of education because these popularized notions do not effectively address the root of a problem experienced by many marginalized groups and

causes more unnecessary challenges and suffering for people. Research suggests that “most schools are functioning under a simply antiquated model” which no longer serves as a student’s connection or sense of belonging within the school (McDonald & Farrell, 2010, p. 218). Compelling and innovative research from the rapidly growing field of positive psychology has implications about our understanding of student success in all educational domains, yet little of this knowledge has been rooted in evidence-based approaches within schools or codified through educational policy (Anderson et al., 2016). The lack of exploration into evidence-based approaches causes a barrier between what the research would recommend, what schools should do, and how educational policy aligns with social justice frameworks which can include both economic redistribution and cultural recognition (Eisenberg, 2006).

The WCF recognizes the sense of group consciousness and collective identity that serves as a resource aimed to advance an entire group identified as cultural capital (Franklin, 2002, p. 177). The WCF also proposes intersectionality as an academic and practical project, a tool for analyzing and implementing real-world interventions (Crenshaw, 2010). Focusing on the cultural capital of our students, school staff and community within an educational setting, can help leaders move beyond a dominant white, middle-class value system (Yosso, 2005). Critical race theory helps us begin to see students of color as assets and appreciate their strengths. Compassion cultivation techniques suggest that it can change an individual’s physiology and raise an individual’s capacity for introspection (Hougaard et al., 2018; Scarlet et al., 2017). The combination of critical race theory and compassion cultivation within WCF can support an educator in changing how they practice, what they value, how they look at policy. It can also be responsible for the individuals desire to create inclusive and safe environments for others with this new outlook and understanding.

Self-Reflexivity and the Conceptual Process as Method

Through the lens of the whole child framework designed in 2018, Felipe Mercado fused the whole child framework in his practice. This framework seeks to transform the dismal outcomes realized in education over the last century; particularly for students of color who live in poverty (Love, 2019; Mercado, 2018; Walker, 2019). In response to the COVID-19 pandemic, Mercado began to redraft the Whole Child Framework with the needs of those students who often go unnoticed and who continue to be amplified with racial and global health concerns. Mercado was leading an elementary school that was once ranked in the top 10 for concentrated poverty (Cytron, 2009) during the time that COVID-19 began to emerge. Unearthing research, Mercado began to fuse concepts from wise interventions (Walton, 2014), compassion cultivation (Scarlet et al., 2017; Weingartner, et al., 2019), MTSS (CDE, n.d.) the Whole School, Whole Community (ASCD.org, n.d.), the Whole Child Model (Valois et al., 2011), as well as theological scientific practices (Mercado, 2018) into the development of a WCF. The concept of a WCF was created to help leaders in educational settings transform the history of racial injustices and systemic oppression perpetuated by centuries of repression and poverty (Yosso, 2005). WCF also considered the impact of COVID-19 on education pre and post COVID.

Over the last decade, there have been new discoveries which have revolutionized how scholars witness human learning within an educational setting. The methods to these findings can be explored and engineered within the public education system with the aim of elevation and advancement of all students (Anda et al., 2016). The whole child initiative developed by Gene R. Carter and the CDC emerged to support schools in meeting the needs of their students using a holistic approach. The “whole child model” has expanded to what is now known as the WSCC model (ASCD.org, n.d.). Inspired by the WSCC model, MTSS, the whole child framework, and

compassion-cultivation, Mercado created a WCF. The intention is to enhance educational stakeholders' awareness of how to combat social injustices and transform the suffering we have experienced from witnessing the murder of George Floyd. By elevating and enhancing educator's awareness and understanding, the field has the potential to attain equity in today's educational settings by providing wise and compassionate approaches that are research-based and generally not considered in traditional educational settings. Utilizing these concepts as a guide for educators to understand the complexity of what is needed to be responsive in today's educational climate, Mercado's intention was to expand practice by creating a recognizable and comprehensive approach that capture critical race theory, as well as the academic, social-emotional, health, cultural, and behavioral needs of a diverse range of students.

A Wise Compassionate Framework Design

The WCF can guide educational leaders who seek to increase cultural capital for underserved, underprivileged populations. It aims to support leaders in educational systems to become responsive to the adverse needs of all their students whether in-person or in a virtual setting. Creating an educational system as a place to cultivate a spectrum of effective, community-based services and resources can help build meaningful partnerships between the schools and families (Hong, 2019). Community partnerships allow for educational institutions to support and address cultural, health, and linguistic needs that are unique to a specific community. As students sit and wait for the education system to return post-COVID-19, there will be many distinct issues and concerns that will place tremendous impact on the educational systems traditional academic outcomes. The current state of humanity has been adversely affected and people remain in trauma from witnessing the murder of George Floyd by a police officer. The ramifications of the pandemic are still unknown, and what we do know is that traumatic events impact an individual's entire physiology as well as their ability to learn and feel safe (Harris, 2018).

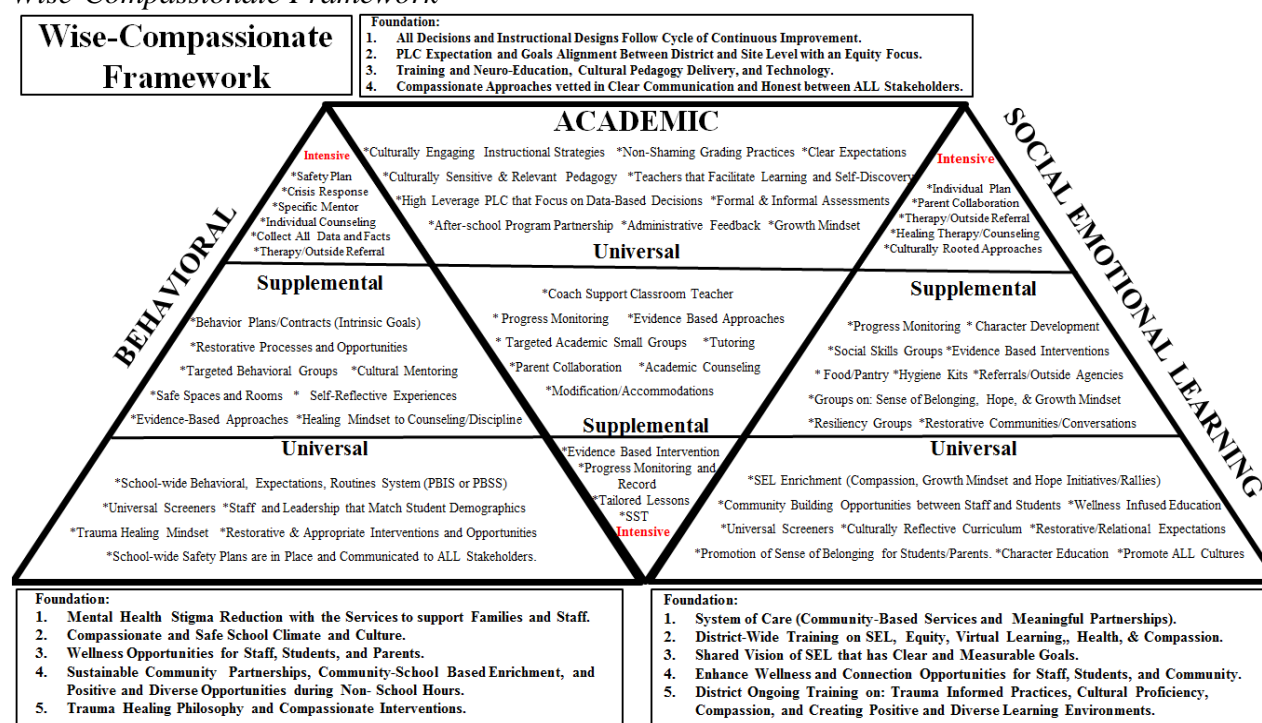
The philosophy behind a WCF is to distinguish the educational realm from the behavioral domain and Social-Emotional Learning (SEL) domain, as they are often combined in a singular traditional model. The WCF intentionally separates the academic, behavioral, and SEL domains by tier: universal, supplemental, and intensive. The WCF honors evidence-based practices to behaviors and social-emotional learning which have not traditionally been taught or properly implemented in public educational environments. The academic, SEL, and behavioral construct, within its various tiers, include research-based approaches that support educational settings in achieving equity, helping to grow the whole person within their setting by infusing a wise-compassionate approach. Those working in educational environments must demand active participation, and there must also be vigilance to aid with the mental health disparities and create safe places for students and families. By establishing system-wide policies and expectations, a WCF can help create a critical focus on positive, safe, and culturally competent environments. Partnerships with community organizations and holistic health and wellness agencies who utilize a referral process can be indispensable to students' non-school needs (Thorsborne & Blood, 2013). The following sections break down the WCF model by domain: academic, behavior, and SEL domains (see Model 1). Each domain is represented by three tiers: universal, supplemental, and intensive. Each of the WCF domains, tiers, and its foundation draw on compassion and precise forms of intervention utilizing scientific theory to elevate social justice in school settings.

A trapezium shape is used to illustrate the levels within the WCF and explain the need for advancement and evolution of educational approaches in today's current educational climate. The WCF was designed in a way where it creates a sense of familiarity to Multi-Tiered Systems of

Support (MTSS) for educators and facilitators alike. MTSS have often guided K-12 educational settings in discovering methods of increasing equitable practices and leverages the implementation of science, universal design, and the whole child approach to address issues of equity (California Department of Education, n.d.). The WCF lays out key fundamental elements which serves as the foundational starting point and lists the considerable factors necessary for implementing wise-compassionate approaches. The fundamental elements are non-negotiable items that will serve as the work to be commenced to reach success within each domain and throughout each tier. This is because this work is targeting the individuals' value system, rather than just strategies that may not reduce racial tension, embody compassion, or seek to repair the harm perpetrated by traumatic events.

Model 1

Wise-Compassionate Framework



Inclusive Academic Domain

The academic domain presents itself in a capsized pyramid situated in the center of the SEL and behavioral domains (see Model 1). The purpose of a WCF is to show educators that SEL and behavior systems do not stand alone. In order to have robust academic programs, school systems must honor the needs of the whole child (Valois et al., 2011). A WCF uses familiar academic language and builds on practices that will support and provide equity, critical race theory, and compassion. There are four foundational principles listed which help to begin the work of the academic domain:

1. All Decisions and Instructional Designs Follow Cycle of Continuous Improvement.
2. PLC Expectation and Goals Alignment between District and Site Level with an Equity Focus.
3. Training and Neuro-Education, Cultural Pedagogy Delivery, and Technology.

4. Compassionate Academic Approaches vetted in Clear Communication and Honesty between ALL Stakeholders.

Universal-Tier I

- Culturally Relevant and Engaging Instructional Strategies for ALL Students
- Non-Shaming Grading Practices
- Health Accommodations
- Clear Expectations
- Culturally/Linguistically Sensitive & Relevant Pedagogy
- Facilitate Learning and Self-Discovery for Educators
- High Leverage PLC with Focus on Data-Based Decisions
- Formal & Informal Assessments
- After-school Program Partnership
- Administrative Feedback
- Growth Mindset

Supplemental-Tier II

- Academic Coach Support Classroom Teacher
- Progress Monitoring
- Evidence-Based Interventions
- Targeted Academic Small Groups
- Small-Group Tutoring
- Parent Collaboration
- Academic Counseling
- Modification/Accommodations

Intensive-Tier III

- Evidence-Based Academic Intervention (Culturally and Trauma Intelligent)
- Intentional and Specific Progress Monitor & Record
- Tailor Curriculum to Student's Learning Style using a Compassion Lens
- Student Success Team (SST)

Inclusive Behavior Domain

Schools have traditionally handled misbehavior by implementing suspension, expulsion, and other forms of punitive discipline. Discipline generally shames, reproduces trauma, and creates resentment and hate within an individual. This can generate negative stimulus to anything involving disciplinary action or punishment (Thorsborne & Blood, 2013). John Hopkins University used the term “Neuroeducation” to combine learning, arts, and the brain. This approach to learning is providing researchers in education with new insights into how human beings process stimuli in academic settings (Mihalas et al., 2009). It is important to establish new frameworks in the educational system that refrains from punitive experiences for students by creating interventions that repair the quality of life for students now and as they progress into the future. The behavior domain uses a healing and cultural approach to serve students. This is because educators' implicit biases do not allow them the opportunity to shift mindsets about the new behavioral paradigm of teaching students, therefore “valuing” the traditional form of punishing

and disciplining students (Thorsborne & Blood, 2013). Mental health, safe environments, and cultural connections are suggested to help address a student's behavior. In more recent years, non-cognitive abilities such as compassion, growth mindset, hope, and resilience have been dominant forecasters of having positive effects that remain malleable throughout teenage years, ensuring healthy development and coping skills later in life for individuals with these specific types of attributes--under-served and under-privileged (Heckman & Kautz, 2014). A WCF focuses on treating the behavior of the student from a cultural and mental health standpoint, as research demonstrates that positive approaches can positively impact the student and the system (Shochet et al., 2006; Trickey et al., 2012). The WCF highlights five areas that can impact academic outcomes which traditionally are overlooked in education and can have the greatest impact on a student's holistic development now and in the future (Doty, 2017; Harris, 2018; Scarlet et al., 2017; Thorsborne, & Blood, 2013; Weingartner et al., 2019):

1. Mental Health Stigma Reduction with Services to Support Families and Staff.
2. Compassionate and Safe School Climate and Culture.
3. Wellness Opportunities for Staff, Students, and Parents.
4. Sustainable Community Partnerships, Community-School Based Enrichment, and Positive and Diverse Opportunities during Non-School Hours.
5. Trauma Healing Philosophy and Culturally Healing Wise Interventions.

Universal-Tier I

- School-wide Behavioral Expectations, Routines, and Practices rooted in Trauma-Informed Practices and Compassion
- Universal Screeners
- Classroom Management Plans
- Health Accommodations
- Attendance Policy/Initiative
- Trauma Healing Mindset
- Restorative and Appropriate Interventions and Opportunities
- School-wide Safety Plans are in Place and Communicated to ALL Stakeholders

Supplemental- Tier II

- Behavior Plans/Contracts (Intrinsic Goals)
- Restorative Processes and Opportunities
- Targeted Behavioral Groups /Evidence-Based Intervention
- Healing Mindset to Counseling/Discipline
- Safe Spaces, Clubs, Cultural Experiences, and Arts
- Self-Reflective and Restorative Experiences
- Cultural Mentoring

Intensive- Tier III

- Safety Plan/ Threat Assessment
- Crisis Response
- Collaborate with Experts
- Individual Counseling

- Collect all Data and Facts to form a Wise Intervention
- Therapy/Outside Referral
-

Inclusive Social-Emotional Learning (SEL) Domain

A WCF supports the idea that social and emotional variables have the most powerful influence on academic performance and achievement. The SEL domain is generally the most misunderstood and underdeveloped area in education. SEL is crucial in educating the whole child as it helps to ensure that the child holistically has the best chance to thrive now and into adulthood. Here is a guide to follow showing that SEL meets the needs of all students. Listed below are the five foundational elements that must be met to progress into and through each tier within the SEL domain.

1. System of Care (Community-based services and meaningful partnerships)
2. District-wide training on SEL, Equity, Virtual Learning, Health, and Compassion
3. Shared Vision of SEL that has Clear and Measurable Goals
4. Enhance wellness and Connection Opportunities for Staff, Students and Community
5. District ongoing Reflective Practices on: Trauma-Informed Practices, Cultural Proficiency, Compassion, and Creating Positive and Diverse Learning Environments

Universal- Tier I

- SEL Enrichment (Compassion Cultivation, cultural enrichment, and safe environments)
- Universal Screeners
- Real-life Content in Classroom
- Restorative/Relational Approach
- Community/Team Building Opportunities for Staff and Students
- Social-Emotional Content Infused into Academic Routine
- Health Accommodations
- Character Education
- Promotion of ALL Cultures

Supplemental- Tier II

- Character Development
- Social Skills Groups/ Evidence Based Interventions
- Food Pantry and Hygiene Kits
- Referrals to Outside Agencies
- Groups that infuse Sense of Belonging, Hope, & Growth Mindset
- Strength-Based Approach Supporting Others to Look at Whole Child

Intensive- Tier III

- Individualized Plan
- Parent Collaboration
- Healing Therapy/Counseling
- Therapy/Outside Referral
- Gather Facts and Data to form a Wise Intervention

Discussion and Implications

The knowledge and awareness of positive scientific one-hour wise interventions having long-term positive academic effects on disenfranchised students participating in precise forms of interventions are gaining popularity in academia (Garcia & Cohen, 2012; Stephens et al., 2015; Walton, 2014; Walton & Cohen, 2011; Yeager & Walton, 2011). A well-designed comprehensive system can positively impact the trajectory of all students' mental health and academic careers in addition to their life as a whole (Colorado Education Initiative, 2014). A WCF establishes wise-compassionate approaches to help educational leaders learn how to heal the trauma, the racial injustices, and disproportionate effects for which the educational system has been notorious for (Love, 2019). Infusing compassion and wise approaches into educational practices such as a WCF can help leaders become aware and more equipped with skills when developing equitable opportunities in education. It is necessary that educational systems recognize the strengths that all students bring to a specific campus and utilize those dynamics as a means for diversity, self-discovery, and culturally alert spaces in our 21st century (Fullan, 2013). As principals or any leader serving the education system, there are many challenges in the quest to promoting as well as implementing social and racial justice within K-12 education. The WCF provides systemic awareness to help all the stakeholders involved create compassionate and evidence-based approaches be used in educational systems collectively. This positive approach to interventions is critical for a student's success as it has been the norm for social-emotional, health, academics, and behavioral needs to become isolated within a school setting.

The National Center for Educational Statistics (NCES) (2020) estimated that 50.8 million students were enrolled in public education system in the U.S. in 2019. Now more than ever there remains a need for real, honest, and authentic approaches to education rooted in scientific research and cultural sensitivity, not those from conventional popular trends (Anderson et al., 2016). Compassion incorporates common humanity, mindfulness, and self-love (Neff, 2003a). Compassion cultivation is being further explored in research to observe how its approach to healing can transform the recursive effects of the racial trauma we continue to face in our nation. Wise interventions have challenged the racial stigma and the many complex issues that impede on an individual's right to thrive. Compassion cultivation and wise intervention approaches combined with MTSS and WSCC influenced the WCF. A WCF has promise to bring important stakeholders, resources, and scientific inquiry to support educational systems in becoming more responsive to equity and social justice in its totality. This WCF requires further exploration in school settings using fidelity to bring awareness to the exact impact it can have on education, educational leaders, and student outcomes. It should also be noted that the WCF must be a system wide commitment. This means that the district, school site, and surrounding community must all have a commitment to the WCF. Educational systems also must look at methods that target educators' value system through reflective practices (Artzt, Thomas, 2002; Margolis, 2002). This process can allow for the individual to change their overall appraisal of situations, rather than just gain knowledge or skills that have no direct impact on direct practice or human connection. Forming a collaborative can help gain the resources and create the synergy necessary to reimagine a educational system that is compassionate and rooted in humanity which the WCF suggest.

Conclusion

Leaders in education are now compelled to reimagine how their systems would serve their students and community with the various needs that are yet unknown post COVID-19. In the past century, schools had not been forced to shut down to a pandemic, as they did with COVID-19 in

March of 2020(CDC, 2020). As the landscape of education changes, educational leaders will be impacted by the practical challenges associated with the ripple effect of COVID-19 and its aftermath on society. The murder of George Floyd has observably intensified the conversations within the people of America who advocate and promote for educational leaders to reexamine the history of its educational practices and movements which continue to illuminate the mistreatment of people of color (Love, 2019). With the complex trauma that schools can and should become responsive too, a new approach must be considered. It is essential that we do not return to business as usual in the field of education, for that has generated learning gaps, disproportionality, and racial conflict for decades (Love, 2019). The education field must provide time for reflective practices, healing, and innovation. It must examine its structure, and ask what has been done, what has existed, and what needs to be done for change. The education field needs compassion to forgive itself for the past suffering it has caused and heal by helping others heal as well. The WCF supports leaders in accomplishing this by providing a comprehensive guide in attempting to address the complexities of the whole system and the traditions that maintain the status quo.

A WCF proposes that compassion cultivation, critical race theory, and wise interventions can be infused in education to transform the trauma associated with televised racial killings and the global pandemics (Harris, 2018). A wise-compassionate framework intends to chip away at the inequalities and disparities in educational settings by infusing mental health, neuroscience, and well-crafted compassionate approaches to transform how we deliver education at all system levels. Providing time for reflective practices can have an impact on an individual's value system, rather than professional development that generally has no impact on an educator's value system or how they carry out their practice day to day. The WCF has the potential to positively impact and enhance a MTSS philosophy by design, as it addresses the needs and disparities that are often not cultivated in success for underserved and underprivileged communities. The WCF unconditionally honors the differences that we all come with as strengths. Through this lens there is support for educators to create community cultural wealth and collective identity aimed at the advancement of an entire group. The WCF intentionally leverages compassion cultivation to support conversations and the process of change as a means to offset power and political dynamics that often impede progress and growth. Lastly, the WCF encourages all leaders to promote meaningful collaborations, reflective practices, honest communication, and feedback with all stakeholders. Leaders must understand that they must be the first involved with compassion cultivation, promoting cultural capital, and demanding wise approaches to meet the needs of their students if transformation in education will occur in a given system. The WCF is a purposeful scientific approach that educational leaders in school settings can implement to transform and heal the recursive effects of the racial trauma, poverty, and the negative experiences associated with COVID-19 pandemic.

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**COMMENTARY -- AN ANTI-AMERICAN BAN ON CRITIQUE: A CRITICAL POLICY
COMMENTARY**

By

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“I love America more than any other country in this world, and, exactly for this reason, I insist on the right to criticize her perpetually.” (Baldwin, 1955, p. 9)

We are a group of educational leaders who are doctoral candidates and faculty members in the [Educational Leadership for Social Justice EdD program at California State University, East Bay](#). Our work centers around 1) creating shared knowledge about inequities and how they are reproduced by institutional systems, such as education, and 2) finding ways to address these systemic issues to create a more equal, healthy society. This work is informed by multiple critical perspectives, such as critical pedagogy (Freire, 1970; hooks, 1994), critical race theory (CRT) (Ladson-Billings & Tate, 1995), and Black feminisms (Collins, 2002; Crenshaw, 1989). These perspectives, while varying somewhat, offer a common thread guided by the understanding that the world operates via power relations that privilege some groups while subordinating others; but these relationships, and the oppressions that result, are masked by the dominant culture’s insistence on painting reality with a brush of neutrality and a failure to engage with our history in a way that helps us understand and act on its repercussions on humanity.

As a diverse group of educators dedicated to the ideals of equality and democracy, we have become increasingly concerned by the Trump administration’s legitimizing of white supremacy, which culminated in a white-supremacist led insurrection on the Capitol on January 6, 2021. It was out of this concern that we wrote the following critical policy commentary regarding Donald Trump’s executive order, [“Combating Race and Sex Stereotyping.”](#) a crowning action in a long-waged war against critical social perspectives, in general, and critical race theory, in particular. Issued by the president on September 22, 2020, the executive order alleges that, through workplace anti-racism education, a “destructive ideology” is being imposed that threatens the founding vision of the U.S. The executive order charges anti-racism educational efforts that draw on critical race and gender perspectives with “anti-American race and sex stereotyping and scapegoating” (Exec.

Order No. 13950, 2020, p. 60683). The document names specific examples of “offensive” educational content, including white and male privilege, the systemic nature of racism and sexism, and our nation’s history of race relations. To prevent this “malign ideology” from sowing division, the executive order bans anti-racism education in federal workplaces. It also prohibits any organizations or programs receiving federal funding from engaging in activities grounded in anti-racist principles and potentially threatens diversity and social justice education efforts taking place in our schools for teachers, students, or community stakeholders.

This executive order purports to protect the values of our democracy and the intentions of the founding fathers. Yet in practice, this federal action amounts to a sanction on critique, which infringes on the first amendment and denies knowledge to the U.S. citizenry—an egregious violation of those very foundational American values that the executive order claims to protect. It also plays into the spread of misinformation that has proliferated in the “fake news” era and serves as the kind of racist dog whistle that has emboldened white supremacists like those who stormed the Capitol on January 6th of 2021. We dedicate the balance of this commentary to pushing back on the assumptions and assertions of this executive order with the following arguments.

The Essential Role of Critique in Healthy Democracy

The critique of the British monarchy and its oppressive practices paved the way to create our current government. In the executive memo, the president invokes images of the Civil Rights Movement to point out historic heroism in the fight for equality: the Montgomery Bus Boycott, marches from Selma to Montgomery, the speeches of Martin Luther King, Jr. All of these occurred in critique of a system that gave disproportionate power and authority to white, propertied men, while denying People of Color basic human rights. The great minds of every generation have engaged in critique of our systems in light of our evolving society and have moved us forward as a nation. Today, [every ballot we cast](#) contributes to the common and necessary conversation of critique of our republic. Critique, then, is not only necessary for growth as a nation—it is quintessentially American and patriotic. In banning antiracism education efforts, this executive order takes aim at our most basic, precious liberty: the ability to critique our governing systems for the betterment of the republic.

Grappling with Our Inheritance of Racism

The executive order alleges that anti-racism education efforts stereotype and scapegoat white people, white males in particular, by labeling them as oppressors who are inherently racist and sexist. This misconstrues a key idea of these initiatives: anti-racism efforts do not seek to indict individual white people or white men; they ask us to acknowledge historical fact and reckon with it. From 1619 until 1864, white slave owners brutally and inhumanely utilized millions of African “dark skinned” people as unpaid labor in the United States, which helped build the American economy (Roediger, 2010). Although in 1865, former president Abraham Lincoln signed the Emancipation Proclamation, [he simultaneously declared his opposition to the social and political equality of white and black races](#). For the next century, Black U.S. citizens experienced the denial of access to the same rights as white people through legal means such as [Jim Crow](#) laws. Even after the Civil Rights Movement, People of Color continued to be subject to racist policies and practices, such as [red-lining](#) and New York’s infamous [“Stop and Frisk.”](#) In the late spring and summer of 2020, the nation watched the National Guard and local police departments use violence, tear gas, and arrests to subdue [largely peaceful Black Lives Matter Protests](#) with impunity. These actions [stand in stark contrast to the January 2021 insurrection](#), when, despite pleas from local

officials, the government declined to provide more minimal police presence, and media documented police opening gates for the insurgents, taking selfies with them, and peacefully escorting them out of the US Capitol.

However, Black citizens are not the only group who have been subjected to multifaceted historic and current oppressions. Indigenous populations have endured physical and cultural violence from the U.S. government for centuries, including their systematic “removal” as a part of the U.S. campaign of “Manifest Destiny” and the erasure of their languages through Native American boarding schools (Dunbar-Ortiz, 2014). Latinx populations have also endured similar historical conditions. During the Jim Crow era, Mexican children in California were also forced to attend segregated schools, and new accounts documenting Latinx lynchings have begun to surface (Martinez, 2018).

The executive order identifies the idea that we are “responsi[ble] for actions committed in the past by other members of the same race or sex” as a “divisive concept” (Exec. Order No. 13950, 2020, p. 60685). Acknowledging our history of racism, sexism, and classism in America is not an indictment of white individuals, nor does it blame them personally for the transgressions of their ancestors. However, it does require that we *reckon* with these well-documented transgressions because they do not exist in isolation from today’s massive disparities between white people and People of Color. This history of oppression has long-term [economic](#), [political](#), and [wellness](#) impacts. From the cumulative impacts of racism/ethno-racism, multiple Communities of Color report experiencing massive trauma, including Latinx immigrants (Chavez-Dueñas et al., 2019), Black populations (DeGruy, 2017) and Native Americans (Ehlers et al., 2013). We must grapple with our inheritance of this history and its current impact, one that we all must acknowledge, confront, and address. We are not responsible for the past, but we must develop a collective consciousness about—and a collective responsibility for—the present and future.

Moving Beyond Black/White Thinking

The executive order condemns anti-racism education efforts for labeling rational, linear thinking as characteristics associated with white males. However, the reality is that “rational humanism,” a binary logic born out of the European Enlightenment (in other words, created by white men), *is* harmful because it doesn’t fully account for our complex realities. Take, for example, the executive memo’s issue with antiracist curriculum that identifies the ideas of meritocracy and color-blindness as harmful ways of thinking that perpetuate inequity. [Meritocracy](#)—the concept that if a person just works hard, they will achieve success—assumes that individuals have complete agency and does not take history or context into account (two characteristics of rational thought). The world does not work that way: people do not simply *choose* to work hard and be successful, or not (McNamee & Miller, 2009). As an illustration, merely consider the enormous number of citizens [who are currently unemployed and facing eviction as of the writing of this commentary](#). The logic of meritocracy does not hold up in the face of the reality that, despite working very hard, millions of workers lost their jobs when the coronavirus pandemic shut down many industries last spring.

The logic of color-blindness is similarly reductive: saying “I don’t see color” means that we are not acknowledging that those with Black and Brown skin have very different historical and current experiences than white people, nor how those different experiences have created enormous inequities (Gallagher, 2003). In fact, some current scholars (Annamma, Jackson, & Morrison, 2017) term this type of thinking “color-evasive” because it allows us to avoid having to address issues of race. Taking up the pandemic’s economic impact again, these job losses were not color-

blind or color-evasive: even a cursory glance shows that [Black](#), [Latinx](#), and [female](#) populations were more heavily hit. Yet, understanding why our marginalized groups have been disproportionately impacted during the COVID-19 crisis requires that we acknowledge that they may face very different realities than white, male, middle class and affluent communities. Moreover, the understanding that a multitude of causes—including historical oppressions and the ways that capitalism and racism/ethnoracism are intertwined—must factor into our analysis.

The black and white type of thinking underlying meritocracy and color-blindness also enables zero-sum narratives that offer false dichotomies, such as the executive order's allegation that critiquing U.S. race relations or history is "anti-American." As James Baldwin made clear in his earlier quote, it is absolutely possible to offer a critique of our country and love it at the same time—if we are more complex thinkers. However, our country is replete with these zero-sum, "either/or" ideologies, which also cause harm. For instance, a major challenge facing school systems is the education of multilingual learners, who have comprised one of the nation's fastest growing groups over the last few decades (Lucas et al., 2018). The approach to educating our multilingual learners has been a dualistic one: English is valuable, and the home language(s) students bring into the classroom are not. As a result, teaching centers on English only, and teachers often bring a deficit perspective that the multilingual learner is lacking or needs to be fixed because they speak a language other than English. An "English only" approach not only contradicts current research about language learning (García et al., 2017), but it also sends a message to students that their language, which is tightly bound up with culture and identity, is inferior (Villegas & Lucas, 2011), and often results in subtractive bilingualism (Menken & Kley, 2010).

The world is not dualistic, nor is it neutral—it is interconnected, multifaceted, and [suffused with power relations that matter](#). These power relations, which are informed by historic events as well as current legal and social systems, shape economic realities, knowledge, and institutions—every facet of American life (this is what we mean by "[systemic racism](#);" Feagin, 2013). Because it ignores differential power relations, the type of individualistic thinking that underlines the assertions in the executive order perpetuates and expands inequities. If we cannot admit that power imbalances and inequities exist, if we cannot move beyond thinking about racism as individual acts done by bad people rather than emerging from collective activity of multiple systems, we cannot address inequities at their roots—and so we will continue to live in a society where our espoused democratic ideals contradict our daily realities.

Critical Race Theory (CRT): Tool for Critique

In the executive order, the grounding perspectives of anti-racism education, such as critical race theory (Delgado & Stancic, 2017; Ladson-Billings & Tate, 1995), are described as "destructive" and "malign ideologies" seeking to "inculcate" federal workers with long-debunked racial myths (Exec. Order No. 13950, 2020, p. 60685). However, these theoretical lenses are not a means of indoctrination—they are tools for analysis and critique. As an analytical tool, CRT asks us to examine the central role race plays in the educational, economic, political, and social outcomes of all Americans—enabling us, for example, to understand inequities such as racial and gendered wage gaps and disparate educational outcomes (Ladson-Billings, 2006). If all individuals should have equal opportunities, then the use of CRT allows us to examine and understand whether this is true in practice.

Further, by considering the "funds of knowledge" People of Color have garnered through their experiences as real and legitimate (González et al., 2006), we are able to include more voices

in our analysis, which helps to construct a richer picture of the world. Stories told by Black and Latinx students have, for example, helped us better understand how teachers can make their practices more culturally responsive (DeNicolo et al., 2015; Kohli & Solórzano, 2012). Through examining the knowledge of Students of Color, we have also identified multiple types of “[community wealth](#)” (Yosso, 2005), or resources they bring that teachers can tap into for increased academic success. By legitimizing and valuing their knowledge, as well as providing analytic tools, CRT empowers multiple silenced, excluded, and disenfranchised groups—People of Color, poor whites, women, etc.—to interrogate systemic oppression and explore critical and innovative solutions that address the residual impacts and debt of a racialized and stratified America.

The anti-racism educational opportunities prohibited by the executive order teach how to use CRT to analyze our history and current reality, and have been informed by the stories and experiences of People of Color. As such, this ban amounts to a silencing of diverse voices as well as a denial of important lived knowledge we can use to address long-standing societal inequities. If we seek true equality in our democracy, we need tools to find out how social oppressions work and learn from the stories of those who have experienced them. Without the tools of theoretical lenses like CRT, we are only able to examine our world through one dominant (white, male) lens. Just as we would want our doctors to have the most expansive and effective set of tools available to keep us healthy, we need a similarly expansive and effective set of theoretical tools that offer the ability to analyze our social conditions from multiple perspectives and angles.

Implications for PreK-12 Schools and Beyond

This executive order, which fundamentally misunderstands and mischaracterizes critical race and gender theories, seeks to preserve whiteness and maleness at the expense of the progress we have made to make visible the ways that schooling tends to reproduce existing social inequities and the critical work it takes to disrupt those patterns. As such, it has multiple implications for PreK-12 schools and beyond. For one, the implementation of this executive order will perpetuate the silencing of Communities of Color and the amplification of the Eurocentrism that shapes curricula and teaching practices across all disciplines in public schools. Instead of a collective broadening that legitimizes multiple knowledges and ways of knowing/being, it is likely that the curriculum and core texts will be examined for anything considered “divisive” according to the guidelines of the executive order, which will further narrow the curriculum. Textbook writers will likely censor any “controversial” language that might call out racism for fear of limiting their sales, and textbook adoption committees, boards of education, and others could use the executive order to further limit the perspectives and voices of Groups of Color and veil the history of racism in the US. In social studies, for example, this means accounts of American history will be further filtered, which will perpetuate false narratives that will deprive both Students of Color and white students a rich, complex portrait of this nation’s history. These accounts will exclude ethnic contributions and sacrifices of ethnic groups that have contributed to building the United States and capitalism (e.g., African-Americans’ labor exploitation in cotton, sugar, tobacco, and other industries; and Chinese labor exploitation in the building of our railroads). Equally important, students will be denied the opportunity to think critically (Muhammad, 2020) about the past in ways that center the roles race and power have played, and continue to play, within society.

Further, recent gains in equity work that school districts and institutions of higher education are making—for example, adding explicitly anti-racist language and perspectives to their vision and mission statements, programming goals (e.g., in LCAPs-Local Control Accountability Plan in CA), professional development efforts, job descriptions, and curricula—may be hindered or

reversed. Administrators' and educators' ability to infuse an anti-racist agenda in their schools, which many are already reluctant to do, would likely be further stifled by fear that families, community members, or other accountability structures might use the executive order to launch complaints. Any public naming of this work will likely cease for fear of financial retaliation and pressure from agencies tied to federal funding. Additionally, federal funding for special programs that benefit Latinx and Black/Latino students (i.e., services that aim to improve specific groups' educational access, provide academic advising and interventions, etc.) could be in danger if improvement for these racial groups is named as a goal. Any training, whether directly associated with programs that identify racial groups or that merely aims to positively impact Students of Color, could be eliminated for being "divisive."

A Call to Action

Actions taken by the right to stifle anti-racist education, such as this executive order, constitute attacks on our basic rights as Americans and the healthy operation of our democracy. If we cannot understand our history, if we cannot analyze how our current systems are operating, if we cannot admit we have massive inequalities, if we cannot actively seek to address those inequalities, if we cannot listen to the people experiencing those inequalities—we cannot have true equality for each of our citizens, and we cannot have justice for all.

Further, this executive order must be understood in the context of our current political moment, as part of an agenda that has emboldened domestic terrorists and incited them to attack the Capitol on January 6th, 2021 to prevent Congress from approving the electoral college votes of the people. This attempt to overthrow democratic proceedings and silence the voices of the American people clearly demonstrated what the slogan "make American great again" really means—a reversal of the little progress we have made as a country toward anti-racism. This act of insurrection makes it even more important to elevate the tenets of CRT and use them not only to examine our nation's historical and social reckonings with racism, dominance, white supremacy, and oppression, but also to co-construct creative and critical solutions that can help us understand the foundational elements that allowed for the attempted coup witnessed on Capitol Hill and prevent it from happening again.

Although we hope that by the time this commentary reaches print, President Biden will have acted to null this executive order, it is likely that the enormous amount of work involved in addressing other immediate crises we are facing, like the pandemic, may take precedence. Therefore, we not only emphasize the importance of doing so as soon as possible, but also call on the Biden administration to move beyond mere reversal and to adopt a larger anti-racist agenda that affirms critical race theory as an important tool in understanding and addressing systemic racism.

Finally, we also urge readers of this commentary to take the time to learn about the [critical perspectives](#) that inform the anti-racism educational efforts attacked by the Trump administration and other conservative coalitions, and the tools these perspectives offer to analyze and critique our current conditions. We also invite you to get to know other anti-racism initiatives and programs that draw on these important perspectives, such as the [1619 Project](#), which also came under intense attack by the Trump administration. Other critical education resources include the [Zinn Education Project](#), [Being Black at School](#), [Abolitionist Teaching Network](#), the [Othering and Belonging Institute](#), and the [Center for Racial Justice in Education](#). These critical perspectives and resources are key for collaboratively confronting our past, grappling with our present, and building a truly equitable future for our nation.

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BOOK REVIEW

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Latina Teachers: Creating Careers and Guarding Culture

Glenda M. Flores

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We enter, perhaps even center, our reading of Glenda Flores' exemplary text through our own reflections and recollections of influential Latina teachers. Given that Flores' own understanding is influenced not only by her work as a public education teacher and academic researcher, but also by her observations that university colleagues saw Latinx cultural knowledge as a deficit, rather than an asset, we begin this review with our own *testimonios*.

Leslie, a current teaching credential student and high school math teacher shares: *I was first introduced to this book while taking one of my credential classes with Dr. Monreal. We read*

a section from the book discussing how math could be taught in many ways, that it is not a “universal language.” This contradicted what I was taught throughout my math education, but the text shares different examples of the Mexico and United States methods of solving long division and multiplication. I was amazed by the different teaching methods. I asked my parents, who both took grade school in Mexico, to solve a multiplication and long division problem while also having them explain how they were taught to solve these problems. Each used different methods but got the same results. This made me realize the need for equity in the classroom and the importance of valuing the Latinx community, our ways of knowing and schooling, and other minoritized peoples in our education system.

Adriana, a lecturer of teacher education and coordinator of a teacher residency program recalls an early schooling experience from kindergarten that has remained etched vividly in her memory to this day: *In reading this book, I was taken back in time to my Kindergarten year, when I met Mrs. Alcantara, the bilingual instructional aid from the Migrant Education Program who would be my cultural guardian throughout my entire first year of schooling. Mrs. Alcantara would also be the only person I would meet who could communicate with and who understood me in her native language. Without her, I felt completely lost at school. Kindergarten was a long time past, yet this has left an impressionable memory etched vividly to this day. This memory was brought back to life while I read this book.*

Tim, a current professor of teacher education, remembers a college summer session in Mexico: *Two Latina professors took our group on trips around central Mexico, taught Chicana Studies and Sociology courses, and introduced me to Chicana feminist thought. Perhaps more than anything, these two profesoras showed me that who I was, mattered. For the first time in my entire education, I had two teachers who explicitly called upon, and centered, the knowledges, songs, and people, los consejos y cuentos, of my family and region. For example, throughout my life, I knew my grandmother was brilliant, but they said it. Although this experience changed my life, I wondered why this had been my first time with Latina teachers.*

Even as Latina teachers impacted our own educational trajectories, and there has been a sharp numerical rise of Latinx, especially Latina, teachers in certain parts of the United States, there remains a wide gap between the number of Latinx teachers and Latinx students. This representation gap continues to balloon because the Latinx population is expanding, young, and entering schools in higher numbers (Boser, 2011, 2014; Irizarry & Donaldson, 2012; Putman et al., 2016). Thus, to make a large(r) dent in such trends, examine the academic and professional benefits of a larger Latina teacher workforce, and interrogate the structural forces that constrain Latina teacher advocacy and effectiveness, there is a need for deep study into the day-to-day lives of Latina teachers and their reasons for choosing (to stay in) the profession. Taking such a context as a charge for academic research, Flores’ text draws upon her own in-depth interviews and ethnographic engagement with Latina teachers who work in two scholastically underperforming multiracial school districts in the greater Los Angeles area. Her book, *Latina Teachers*, is thus the product and reflection of “the nuanced stories of how the intersection of race, gender, class, and immigration shapes their [Latina teachers] workplace experiences in a feminized white-collar job” (p. 24).

Latina Teachers consists of an introduction, six chapters, and a conclusion. Flores situates the book within the strengths Latina teachers bring to their spaces of employment (schools), the structures that shape (their own and others’) education (in)opportunities and professional

employment prospects, and the tension between the two. Thus, Flores begins Chapter One by referencing a grandmother's fear of losing communication with her granddaughter within a school system that promotes English speaking. This sets the stage for the rest of the chapter: a look at the often-deleterious education Latinx youth receive in U.S. schools, and the inequities and disenfranchisement Latinas face across a variety of professional workplaces. Chapter One offers a broad look into deficit-based educational perspectives that linger and "influence the measures Latina teachers take once in their workplaces" (p. 31).

Chapter Two explains the idea of "class ceilings"--how Latina teachers describe "falling into" teaching, despite dreams of law, medicine, or business careers, due to external factors such as providing for family, financial stability, and social linkages that steer them into the education field. Flores goes on to explain that *after* Latina teachers secure employment and gain experience, they realize they can impact their community, help the next generation attain higher education, and follow career dreams that they, themselves, could not achieve.

Chapter Three develops a central concept of the book--becoming cultural guardians. "Cultural guardian" is Flores' endearing term to illustrate the ways Latinas employ strategies to nurture and protect Latino children in hostile schooling contexts that (too) many Latinx immigrant families experience. Flores asserts that Latinas typically don't come into the profession with this sense of social responsibility, but rather they develop it as their careers progress. Noted in this chapter are also the socio-political constraints that Latinas encounter across the state, district, and school levels. Having experienced their own (schooling) marginalizations and the slowness of structural change, Latina educators use cultural guardianship to help Latinx children (and their families) navigate through the education system.

In Chapter Four, Flores explores how Latina teachers navigate the racialized perception of differing schools and school sites. Thinking through the racialized images of physical and symbolic geographic locations, what she calls "controlling images," helps us understand to whom and where Latina teachers perform cultural guardianship. As such, teacher perceptions of racialized space build understanding of localized racial hierarchies, their position within them at school sites, and how they might direct their (teaching) efforts towards undocumented Latinx who are often positioned as the least advantaged.

In Chapters Five and Six, Flores discusses the tensions Latina teachers face using their cultural guardianship and Chicana/Latina cultural pedagogies within the structuring forces of a school system that limits or even (re)appropriates their agency. As one such example, Flores contrasts cultural guardians' attempts to leverage the strengths of Latinx culture against the heroic, folkloric, performative, and symbolic varieties of culture emphasized by schools. The latter demonstrate ambiguous if not empty, notions of tolerance and diversity, which Flores calls "Heroic Folkloric Latino Culture." Another example is how Latina teachers, knowing the importance of standardized tests, write and translate "testing letters" about the importance of health during testing week. Latina educators implored students to try their best on "un exámen importante." In this way, teachers must negotiate structural impediments like standardized testing that limit their advocacy, shape their practice, and exert productive pressure toward an instrumental and rational subject position. Even within such structures (of racialized inequality), Flores once again emphasizes the creative and resilient acts of *cariño* by Latina teachers that might be a model that other teachers can incorporate within their own pedagogies to reach other minoritized students.

In the conclusion, Flores sketches the policy implications of her research, including the need to highlight the assets of Latina teachers, while also providing adequate resources to all racialized and minoritized students. She also dreams and hopes for a future, no doubt influenced

by current Latina teachers, when “the [Latinx] origin population will no longer be negatively stigmatized as a whole” (p.194). Taken together *Latina Teachers* makes a significant interdisciplinary contribution across the disciplines of sociology of education, educational studies, and teacher education. As current teachers and teacher educators, we highlight those that resonate most for our own teaching, learning, and research.

Most notably, Flores’ conceptualization of cultural guardians extends a long line of academic scholarship that asserts the necessity of asset-based frames in the education of Latinx youth (Moll et al., 1992; González et al., 2005; Yosso, 2005). While this work is important in itself, Flores’ gender-specific focus adds nuance to our understanding of such frames while also providing practical examples for classroom teachers. As such, this builds on previous work that focuses on Latinx teachers more broadly (Ochoa, 2007) and ties significant research on Latina/Chicana (feminist) pedagogies (Calderón et al., 2012; Delgado Bernal, 1998, 2001; Villenas, 2001; Villenas & Moreno, 2001) more explicitly to classroom praxis. From our opening testimonios, it is clear that such a move impacted how Leslie will approach her own teaching in the future. Relatedly, Flores’ study of Latina teachers’ views and experiences of teaching as a profession holds significant contributions for larger discussions of teacher representation. For there is certainly tension in her idea of class ceilings as these gendered pathways and filial obligations help produce more teachers but also steer Latina graduates away from other careers. Toward this point, it is important to understand that the realization of and drive toward cultural guardianship develops *after* teachers choose the profession. This a crucial reminder that, as a whole, simply adding more Latinx teachers or giving them a “fair chance” might not actually automatically or quickly “change the underlying truth regimes which simultaneously hail Latinx presence, but preclude their potential” (Monreal, 2020, p. 346). Finally, and to link together many of these insights, Flores’ work is an urgent reminder that the (micro)relations(hips) and networks within schools matter greatly to the impact and retention of Teachers (of Color), and correspondingly their long-term influence on students (Bristol, 2018; Bristol & Shirrell, 2019; Flores, 2011, 2015; Monreal 2020, 2021; Ortiz & Telles, 2012; Sun 2018).

In closing, we think of the risks of cultural guardianship, something that Flores explicitly mentions in the introduction but rather implicitly refers to in the rest of the text. How can Latina teachers work to change the structural demands like accountability regimes that restrict their agency? What are the limits of micro-activism? Being cultural guardians can come at a cost in spaces where advocacy and activism are not encouraged or welcomed. This is an important element for Latinas to be aware of when choosing to speak up and work on behalf of the Latinx children and families they serve. Latinas who take risks and lean into difficult conversations to address language and action that is othering, deleterious, and racist (subtractive language, deficit-oriented language) towards Latinx communities might bring alienation and professional repercussions. When Latinas highlight the injustices within school systems that continue to disenfranchise and view Latinx students through deficit lenses, they may encounter barriers to career mobility and upward advancement. To be sure, while Flores offers perspectives that Latina educators and other stakeholders can and should learn from, future teachers must also understand the racialized and racist realities that remain entrenched in systems of white supremacy. Importantly, *Latina Teachers* can also help educational leaders, administrators, and colleagues support Latina teachers, promote their advocacy and cultural guardianship, and work collaboratively towards a better understanding of how disenfranchised groups must be served in schools today. If and when teacher leaders, policy makers, and those in leadership roles choose to listen to Latina teachers, we can work collaboratively towards more socially just and

transformative school systems, all the while mentoring and supporting incoming teachers like Leslie. This book centers such efforts and is an important step towards acknowledging the need for, the brilliance of, and the brighter future made possible by Latina teachers like Mrs. Alcantara.

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The logo features the word "CLEAR" in a large, bold, black sans-serif font. To its right is a thin vertical line, followed by the words "Center for Leadership Equity and Research" in a smaller, bold, black sans-serif font. The text is positioned on a white background that is bordered by a blue area at the top and a grey area at the bottom, separated by diagonal lines.

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