Representative Hiring in New Jersey's PreK-12 Public School Districts

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Abstract

Rooted in Donald Kingsley's foundational theories of representative bureaucracy (RB) which "considers how a public organization employs a bureaucracy that matches the population in terms of salient indicators of diversity, such as race, gender, or ethnicity" (Roch et.al., 2010, p. 42) this research continues the examination of racial representation in K-12 public education within the United States. Focusing on the principal-teacher-student relationship, I propose a new way to conceptualize the importance of hiring in schools by bringing to bear a statistical model for describing representation therein. Using quantitative methods, the first stage of this research uses state-reported data on certified staff and student demographics to calculate two indexes, one describing representation (R) and one describing homogeneity (H) for the relationships between principals/teachers, teachers/students, and principals/students. The stasis or fluctuation of R index describes the staff of the district as becoming more, less, or unchangingly representative in relationship to students served, teachers employed, and the principals who select which teachers serve which students, while the H index describes the match of factor groups within the representative index. The second stage uses survey responses collected from principals across the state to first describe hiring practices that put principals in their roles, and then correlates the data with representation indexes to explore whether significant relationships between representation and hiring practices suggest homosocial reproduction is occurring in New Jersey schools. Lastly, recommendations for moving districts toward becoming more socially just, representative organizations will be made.

Keywords: representative bureaucracy, hiring, cloning culture, fit, principal, leadership, quantitative criticalist, homosocial reproduction

Introduction

New Jersey is a state characterized by diversity in the racial and ethnic demographic of its citizens. Not only do schools in a racially-diverse society need leadership that can authentically interact and respond to the racial, cultural, and ethnic identities found in their communities, but they must actively maintain representation within the teaching force to leverage student achievement. The student population of NJ continues to grow increasingly multiracial; enrollment in PreK-12 public schools from 2012-2019 has shifted, with the percentage of White students decreasing from 50% to 42%; Black students have remained the same at 16%; Hispanic students have increased from 23% to 30% of the student body. Yet, the

White teaching force (85%) and White administrative force (77%) have remained both consistent and disproportionately homogeneous.

The relationship between principal leadership and student achievement undergirds substantial discourse across the field of education. While scholarship within educational research has cemented the significance teachers have as the largest, most direct impact on student achievement, the nature and degree of influence held by the principal has shifted as policymakers accelerated their prioritization of school improvement and high stakes-accountability as key to student success (Hallinger & Murphy, 1985; Hallinger & Heck, 1996).

In schools characterized by more difficult circumstances, principal effects on learning are significant. Such challenging learning environments are often associated with high-poverty, high risk, urban or rural communities, typically inhabited by minority students (Leithwood et al, 2004). Known obstacles to student achievement for Black and Hispanic students are manifested by underrepresentation in gifted programs, overrepresentation in special education programs, and over-referral for disciplinary actions and suspensions, which stand in contrast to the experiences of their white peers (Meier, 1993; Roch, Pitts, & Navarro, 2010; Grissom & Keiser, 2011). Evidence suggests that the impact of such systemic discrimination in schools can be mitigated by own-race-effect practices; minority students benefit from being taught by teachers of their own race, and are less likely to be labeled negatively (Dee, 2004). For minority students with own-race teachers, negative school elements such as disciplinary actions, non-promotion, and dropout rates were significantly reduced, while positive elements, such as assessment scores and gifted classes, had significant positive relationships (Meier, 1993; Meier, Wrinkle, & Polinard, 1999; Dee, 2004; Roch, Pitts & Navarro, 2010) The presence of such teachers engender positive student effects; principals have influence over who staffs their schools.

Public schools are the largest bureaucracy in the United States; while the influence of RB in schools is not new in social science literature, scholars' application of its mechanics to reveal classroom and school dynamics is more recent. Across the literature, representational effects between teachers and students were significant; for Hispanic students with Hispanic teachers, negative effects, such as non promotion, disciplinary referrals, and low-tracked classes were reduced; positive effects, such as gifted classes and assessment scores were observed (Meier, 1993; Meier, 1999; Pitts, 2007). For Black students with Black teachers, similar patterns emerged. Fewer students were in lower track classes, but more were in gifted classes and achieved higher on standardized tests, while also strongly correlated for less disciplinary actions (Meier & Stewart,1992; Meier et al., 1999; Pitts, 2007; Grissom, Nicholson-Crotty & Nicholson-Crotty, 2009).

In contrast, there is disagreement on representative effects between principals and students. Notably, when there is more representation by Black principals, Black students are more likely to receive disciplinary consequences (Meier, 1992). While no effects on Black students in either gifted or special education classes or assessment achievement were found, positive effects on promotion and dropout prevention were seen (Pitts, 2007; Roch, 2010; Grissom, 2015). Representation by Hispanic principals was positively correlated with negative consequences or experiences for students, such as severe disciplinary actions, yet positive correlations for positive experiences were demonstrated, such as gifted education and assessment scores(Meier & Stewart, 1992; Meier, 1993; Roch, 2010). Meier's work revealed that some effects, such as those for lower track/special education classes changed from negative to positive

effect once a critical mass (between 16-25%) of managerial representation was reached. Therefore, cumulative effects are of interest within organizations, suggesting that not only do representative effects occur across the principal/teacher/student dynamic within an individual school, but that taken in sum across an organization such as an entire school district, a cohort of representative principals may have an impact as well.

Discussion and Hypotheses

Hiring

Hiring is a social process, characterized by gathering information about candidates to assess how they fit with the organizations' implicit and explicit needs. Drawing from research around teachers' job search process, Cannata (2011) characterized schools as unlike the business sector, where information about the working environment in an organization may be deliberately made public as a facet of its market presence. Instead, schools are places that have very unique cultures which often remain unseen except to the intimate school community. Such privacy contributes to the hiring process in education as being characterized as information-poor, a status indicating that both the publicizing of working conditions being shared out to potential candidates, and the exchanges between candidates and those responsible for hiring as less than robust (Cannata, 2011).

In Liu's (2002) work exploring hiring practices from the teaching force, findings suggest the hiring process in education is flawed; it is reasonable to generalize findings to the hiring of administrators when parallels are evident. Contributing to this flawed process, superintendents demonstrated broad discrepancies in their mindsets and behaviors when engaged in hiring principals (Hooker, 2000). Lack of hiring protocols may be the most significant factor; while studies support that although superintendents agreed on the attributes of successful principals, they lacked the ability to assess those characteristics within the recruitment and selection process (Baron, 1990; Rammer, 2010). Recruitment strategies used by districts can play a determining factor in opening leadership programs to women and minorities, or to the contrary, reinforcing the status quo. Within large districts, where the size factor of the district may cultivate pockets of sponsorship, power is passed among connected individuals, and enforces gatekeeping against others (Valverde, 1980). Sponsorship entails the identification of a candidate, passing on the experiences of the sponsor on to the candidate, and shaping the attitudes and perspectives of the candidate to continue similar administrative attitudes and dispositions. Rather than cultivating leadership practices, the process instead reproduces what is desirable along lines of ethnicity, gender, sexual identity, and age (Sherman, Tooms, Lugg, & Bogotch, 2010).

Quantitative Critique

The critical quantitative researcher is charged with two tasks: first, to "use data to represent educational processes and outcomes on a large scale to reveal inequities in such processes and outcomes;" secondly, the researcher must "question the models, measures, and analytic practices of quantitative research in order to offer competing models, measures and analytic processes that better describe the experiences of those who have not yet been adequately represented" (Stage, 2007, p 10). Rather than simply verifying any existing model, I offer a competing model of the situations and populations in NJ schools for whom the traditional models and assumptions of justice just are not true.

Research Questions

If the ability to maintain minority teachers is the work of those who supervise them, and shared backgrounds between teachers and principals predict employment and satisfaction outcomes, looking at representation across principals may illuminate suggestions for practice in their hiring. Although implications of both systemic gender and racial biases are worthwhile for exploration, this study will look only at the racial/ethnic representation among New Jersey principals in relationship to that of teachers and students, guided by the following questions:

- 1. How representative are New Jersey schools?
- 2. What are the hiring practices in New Jersey school districts?
- 3. Does the relationship between a district's representation and hiring practices suggest a cloning culture exists?

Hypotheses

The student population of New Jersey is becoming increasingly non-white and it is widely known that having same-race teachers is beneficial to them. Shared demographic backgrounds between principals and teachers predict critical teacher employment outcomes, such as lower turnover and greater likelihood to stay in the same school over time; both develop teaching and school-culture experience, shown to impact job satisfaction (Meier,1993; Grissom, 2011; Grissom 2015). Because principals and school districts want what is best for students, they would increasingly hire Black and Hispanic teachers. Since a shared demographic between teachers and principals predicts teacher employment outcomes, to sustain Black and Hispanic teachers, Black and Hispanic principals would be employed by the school district. Interweaving these key ideas leads me to my first hypothesis.

H1: Districts in New Jersey with Black and Hispanic students will have Black and Hispanic teachers and be more likely to have Black and Hispanic principals.

Each year, a school district graduates, while also enrolling, a fraction of its student body, ensuring an annual, incremental, changing demographic. Teacher and principal attrition, retirement, or transfers also provide yearly opportunities for the hire of representative teachers and principals.

H2: Representative relationships between students, teachers, and principals should be increasing (approaching 1) within districts over time.

RQ2 asks: What are the hiring practices in New Jersey school districts? The data from survey responses will be subjected to descriptive statistics. RQ 3 asks: Is a cloning culture suggested by the relationship between the representativeness of districts and their hiring practices? Organizational theory provides that organization seeks sameness to reduce risk, with new hires likely to reflect the normative identity of those already employed (Dressel, 1994). When succession practices such as hiring from within, sponsorship or tapping prevail over time, they produce cloning cultures(Valverde, 1980; Dressel, 1994; Essed, 2002; Sherman, 2005; Schein, 2010, Myong, 2011), while pipeline process present an alternative course (Gill 2016; Gates, 2019). Therefore the variance over time of a district's representativeness correlated with the hiring practices might reveal whether a cloning culture is occurring.

H3: Districts with diminished or static representativeness over time utilize more organizational fit practices within their hiring.

An understanding of their own hiring trends quantified over time can inform those organizations looking to affect student outcomes in a sustainable way using socially-just practices.

Study Design

This study has two stages; first, I describe the representational relationship between the students, teachers, and administrators in New Jersey school districts over time to answer RQ1: How representative are NJ schools? Secondly, to answer RQ2: What are the hiring practices in New Jersey school districts? I describe practices and impressions from principals drawn from their own hiring experiences that may contribute to the representation trends revealed in stage 1 of the study. Lastly, to answer RQ3: Does the relationship between a district's representative relationships and hiring practices suggest a cloning culture exists, I examine correlational relationships between the indices from stage 1 and the hiring practices from stage 2.

Data collection

Data for stage 1 was retrieved from archival reports accessed via the NJDOE website. Based on its annual data collection process, NJDOE describes the ethnic and gender totals for certificated and non-certificated staff working in the schools, available via NJSMART reports on its website. Within reports on certificated staff, NJSMART data uses the position identifiers *Administrator, Support Services, Teacher*. Current NJSMART data exist for the years 2011-2019, and therefore also defined the chronological parameters of this research. Categorical data are reported by county, district, and staff type; within the certificated staff report, data is stratified by position (administrator, support services, teacher), gender (female, male), and ethnicity/race (White, Black, Hispanic, Asian, Native American, Hawaiian Native, two or more races); the data also indicates minority percentages for each position by gender. Based on the small proportion of students, teachers, and administrators who self-report as Native American, Hawaiian Native, or Two or more races, for the purposes of this study, they were grouped together.

The second data sample is being collected through survey. The purpose of the survey design is to capture the responses from individuals currently holding the role of principal in any of the 584 public K-12 school districts in New Jersey (NJDOE) based on their own experiences of being hired for the role, and their beliefs about they hiring they do. Published state policy demonstrates that although schools are governed by several regimented and proscribed policies in the evaluation and dismissal of employees (NJ TEACH laws) there are no mandated practices for recruitment and hiring beyond the requirements for certification and background checks. My own prior pilot studies utilizing both qualitative and quantitative methods conducted during doctoral coursework have informed this tool. Both pilot studies were predicated on my own generalized assumptions: first, that all administrators go through a "traditional" recruitment and hiring process; that once a job became open, candidates would submit an application, and that these applications would be screened for the best experience; next, candidates would participate in interviews, with competent committees evaluating candidates on objective, measurable criteria; and lastly, that the most experienced candidate would be offered the job. Second, I assumed that aspiring principals spent a great deal of time preparing to be eligible for this role.

My findings led me to interpret that something different is quite common, made more obvious to me because amidst my very small samples, I collected experiences that greatly deviated from these presuppositions. On the contrary, there was little uniformity to the hiring and recruitment processes as described by the personal experiences of my respondents, from their own personal accounts of being hired, to their experiences of being part of the hiring/recruitment team in their district. Moreover, evidence suggested that current principals attributed their attainment of the position to factors outside of experience, with typical responses indicating tapping, relationships, and merit as significant instead.

TABLE 1: Independent variables for stage 1 from NJSMART reporting

S=students	T=teachers+support staff	P=principals
WS=proportion of whites in students	WT=proportion of Whites in teachers	WP=proportion of Whites in principals
BS=proportion of Blacks in students	BT=proportion of Blacks in teachers	BP=proportion of Blacks in principals
HS=proportion of Hispanics in students	HT=proportion of Hispanics in teachers	HP=proportion of Hispanics in principals
AS=proportion of Asians in students	AT=proportion of Asians in teachers	AP=proportion of Asians in principals
OS=proportion of Others (Native American, Hawaiian Native, Two or more Races) in students	OT=proportion of Others (Native American, Hawaiian Native, Two or more Races) in teachers	OP=proportion of Others (Native American, Hawaiian Native, Two or more Races) in principals

The survey is cross-sectional and was only administered one time via email during the month of July, with reminder emails sent in October and November 2020. The non-random population was not stratified, and based on the responses still being received, the usable sample of 2530 of eligible NJ principals has yet to be determined. The survey will be closed in December 2020; responses will be coded, and subjected to descriptive statistical analysis. Lastly, to answer RQ 3: *Does the relationship between a district's representation and its hiring practices suggest a cloning culture exists?*, correlational analysis will be conducted to determine whether statistical significance can be found between the representative and homogeneity indexes found in stage 1, and the responses reported in stage 2.

Methodology

As a novice researcher, to answer RQ 1: *How representative are New Jersey schools?* I began with a model designed by Pitts (2007) in his work examining the link between representation and performance. In his model, Pitts created two variables designed to examine the effects of ethnic representation on performance, constructing a manager representation variable and a teacher representation variable. The manager representation variable provides a value between 0 to 1, where 0 represents an organization with a perfect mismatch between manager ethnicity and that of the target population, while 1 represents a perfect match. Likewise, the teacher representation variable is calculated from how closely teachers match the target population. Within Pitts' equation (2007, p. 509):

 $R = \{I - \sqrt{[(HS - HA) + (WS - WA) + (AS - AA) + (Os - OA) + (Os - Om)^2]}\}$ the value of R provides a degree of match, overrepresentation or underrepresentation of minorities in the organization. I expanded Pitts' model to calculate the proportionality, or homogeneity, H, across each combination of factors (student-teacher, student-principal, teacher-principal) within the relationship. For each district, the result of each of the three sub-index calculations will be averaged to determine one representative index, R. Weighted variables were considered, to account for the research-supported finding thus far that administrator-student effects less significant than student-teacher or administrator-teacher effects(Meier & Stewart, 1992; Meier, 1993; Pitts, 2007); but because this study does not include empirical work on student effects, I am unable to construct a reliable weight, and therefore did not do so. Next, H is calculated. The importance of the homogeneity index is in revealing what the representative index may mask. For example, a district where R=1 is highly representative; the closer the ratio of Rcm:Rsm:Rcm, the more homogeneous, and therefore less diverse a district is. If the ratio is imbalanced, a disproportionate match between two factor groups is present. The variance for each pair of factors was computed for each district over time to describe trends in movement

TABLE: Equations for calculating indexes

Student to teacher	$RST = \{I - \sqrt{[(WS - WT)]^2 + (BS - BT)^2 + (HS - HT)^2 + (AS - AT)^2 + (OS - OT)^2}\}$
Teacher to principal	$RTP = \{I - \sqrt{[(WT - WP)^2 + (BT - BP)^2 + (HT - HP)^2 + (AT - AP)^2 + (OT - OP)^2]}\}$
Student to principal	$RSP = \{I - \sqrt{[(WS - WP)^2 + (BS - BP)^2 + (HS - HP)^2 + (AS - AP)^2 + (OS - OP)^2]}\}$
Representative index	R=(RST+RTP+RSP)/3
Homogeneity Index	Variance of RST, RTP, and RSP: $\frac{\sigma^2 = \sum (x - \mu)^2}{N}$

International and managerial implications

While the research on representation effects between students and principals demonstrates inconsistent implications, the effects between principals and teachers suggest

strong, consistent effects which indicate minority representation in the supervisory ranks supports the retention and satisfaction among minority bureaucrats (Grissom & Keiser, 2011; Grissom, 2015). No research currently exists that examines the cumulative interplay across the principal/teacher/student dynamic within public school districts. While public schools cannot choose their students, principals exercise considerable judgement over the hiring and retention of their teachers. Therefore, while representation of minorities within the bureaucracy at the streetlevel increases the ability for the bureaucracy to address the needs of the clients, the ability to maintain street-level minority bureaucrats is the work of those who supervise them. In the case of schools, this is the work of the principal. Shared backgrounds between principals and teachers predict critical teacher employment outcomes, such as lower turnover and greater likelihood to stay in the same school over time. The deliberate hiring of principals who select and retain those teachers able to directly influence effects for students may reveal new practices for increasing student experiences, access, and achievement. While existing research explores the impact of representative principals on students, the impact of representative teachers on students, and the impact of representative principals on teachers, this study questions the cumulative effects of all three relationships by describing representative trends over time within New Jersey school districts, and looks for relationships between trends and the hiring practices of principals in the state.

This study uses data interpretation to transform education by providing a descriptive model of the racial/ethnic balance or mismatch among the students, teachers, and principals in a district, while illuminating the hiring practices that may have contributed to existing situations. When correlated with school achievement, graduation, or disciplinary data, this model and the resulting indexes may reveal patterns of inequity. Additionally, these data relationships should suggest avenues for school leaders to better match representation across the principal/teacher/student dynamic by informing both recruitment efforts and assignment distributions for existing personnel.

Significance

The regional setting of this study contributes a new context to the existing scholarship on RB within education, as the current body of research is geographically isolated to the southern U.S. Therefore, consideration of this question in the northeast expands the social justice inquiry of representational effects further afield in the U.S. Certainly, bringing awareness to the hiring trends that characterize NJ schools, and providing all schools with an objective model for indexing their representation is instructive to school leaders looking to leverage personnel dynamics for student gains. A second contribution made by this study is the development of the homogeneity index, derived from the representative index, which further interprets the representative relationship in terms of the proportionality across student, teacher, and administrative demographics, interpreted as a function over time.

Recent research set in the school context has focused on the connections between representation and student discipline(Meier &Stewart, 1992; Meier, 1993; Grissom et al., 2009; Roch et al., 2010); representation and access to gifted programs (Meier et al,1999; Pitts, 2007; Grissom et al., 2009); representation and referral to special education services(Meier et al.,1999; Pitts, 2007); and representation and student achievement outcomes (Meier et al,1999; Pitts, 2007). Scholars thus far have focused on specific groups within a small sample of states; in

Florida, Meier and colleagues looked at Hispanic representation (1993), and Black representation (1992); Pitts examined representational effects in Texas (2007). Notably, the canon of research on RB in schools has used the southern United States as its sample; in contrast, this study looks to describe representation effects in New Jersey, describing social or organizational conditions in a northeastern state. The development of a representation index is a useful tool in school and district-based decision-making, particularly in influencing student outcomes through hiring a representative workforce. Furthermore, the homogeneity index describes the interplay of proportionality across the student, teacher, and administrative demographics. In doing so, this study provides a fresh and valid lens through which to frame reform efforts and strategies (Grissom et al., 2015). Possible implications include guidance to district human resource personnel looking to improve their representation profiles while paving the way for further inquiry into linkages between human resource allocation and student achievement.

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