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Achievement Gaps: Learning Disabilities, Community Capital, and School Composition

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1. Introduction

A fundamental defining characteristic of students with learning disabilities (LD) is a difference between expected and actual achievement in one or more academic areas (Cortiella, 2009). In identifying these students, professionals document that disabilities related to vision, hearing, or physical impairments, mental retardation, emotional disturbance, and environmental, cultural, and economic disadvantage are not the primary cause of the underachievement (Interagency Committee on Learning Disabilities, 1987; U. S. Office of Education, 1977). While this distinguishing feature has been widely accepted, it has not been easily implemented. For example, after 5 years of research on decision making in schools, Ysseldyke et al. (1983) concluded that “there currently is no defensible system for declaring students eligible for LD services;” and, among the problem facing professionals when identifying students in need of special education services was the consistent finding of “no reliable psychometric differences between students labeled (with LD) and those simply considered low achievers” (p. 79, 80). Of course, addressing differences and gaps in achievement across groups of students is not new in America education.

Racial diversity has been a concern in America’s schools for many years. Dunn (1968) focused attention on what has become known as the disproportionality problem evident in the over-representation of children from diverse ethnic, linguistic, and cultural backgrounds in special education. Once the alarm was sounded, disparities of placement and performance were widely and continuously documented (cf. Blanchett, Mumford, & Beachum, 2005; Donovan & Cross, 2002; Educational Researcher, 2006; Harry & Klingner, * Portions of this chapter are from the authors’ previously published or to be published work. *
Historically, concern related to differences in achievement across groups of students arose when the U. S. Supreme Court made it clear in the decision of *Brown v. Board of Education* that equal educational opportunity for all was expected when states, in providing education, must make it “available to all on equal terms.” The reasoning was that “educating all children together would increase the availability of high quality schools to all students” (Southworth, 2010, p. 3) but educators have struggled to achieve this goal (Aud, Hussar, Kena, Bianco, Frohlich, Kemp, & Tahan, 2011; Coleman, 1969; Evans, 2005; Frankenberg, Siegel-Hawley, & Wang, 2011; Goldsmith, 2011; Leithwood, 2010; Rumberger & Palardy, 2005). Rather than a systematic and productive effort resulting in reduced inequities associated with racially-segregated schools, “equal educational opportunity” has been a cobbled together plan that continues to fail in achieving promised and desired benefits (Ball, 2006; Boger & Orfield, 2005; Lyons & Chelsey, 2004; Mickelson & Bottia, 2010; Smith & Kozleski, 2005; Southworth, 2010).

Interest in equal opportunities is given renewed life by continuing analyses and documentation of academic performance and efforts to bring about change in intractable schools (Aud et al., 2011; Leithwood, Patten, & Jantzi, 2010). Once again, despite some changes in policy and approaches, there have been persistent and pervasive gaps in educational achievement across and within America’s schools and communities (Anderson, Leithwood, & Strauss, 2010; Aud et al., 2011; Ball, 2006; Borman et al., 2004; Cartledge, 2011; Evans, 2005; Ferguson & Mehta, 2004; Frankenberg, Siegel-Hawley, & Wang, 2011; Hess, 2005; Leithwood, Patten, & Jantzi, 2010; Mathis, 2005; Morris & Monroe, 2009; Smith & Kozleski, 2005; Wraga, 2006). The modern-day *Brown* issues are in play when schools can choose to consider race in efforts to achieve equity for important purposes, including improved academic outcomes for all (Bourdieu, 1986; Hong & Youngs, 2008; Olneck, 2000).

2. Factors affecting student achievement

Conventional wisdom holds that differences in achievement across groups of students are a school problem, often defined as “disabilities” requiring special education, and the belief has fueled historical and current efforts to bring about reform in the American educational system (Evans, 2005; Southworth, 2010). Placing the blame by blaming the place has at its core the logic of equity and equality of opportunity:

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“All children are created equal, but all children are not performing equally in school; the gap typically worsens as children advance through the grades; the fault must therefore be the schools; ‘so the solution must lie in the school; the necessary knowledge and tools are available, and schools must be pressed to apply them.” (Evans, 2005, p. 583, emphasis added)

Guidance from this view suggests that if achievement gaps spring from the structure of and practice within schools then changing aspects of schooling (e.g., new curriculum, reducing class size, increasing student motivation, implementing response-to-intervention practices) will provide a way to reduce disparities in educational attainment. In this context, laws and legislative mandates are seen as ways to bring about change viewed as necessary and possible but, for projected and/or undefined reasons, unrealized. For example, America’s No Child Left Behind (NCLB: 2002) Act is based on the belief that setting high standards and establishing measurable goals can improve outcomes in education and it sanctions states for schools that fail to document adequate yearly progress for their students. In contemporary special education practice, driven in large part by reauthorizations of Public Law 94-142 now codified as the Individuals with Disabilities Education Act (IDEA), identification of learning disabilities is now embodied in response-to-intervention (RtI) methods that have emerged as the preferred practices for improving education for the “most vulnerable, academically [emphasis added] unresponsive children” in schools and school districts (Fuchs & Deshler, 2007, p. 131). We take a different view of the base for differences in achievement and direct attention to community capital and school composition as powerful predictors of performance and the intractable gaps among student groups. Our view does not see children as the source of problem but more their problems are a result of where they go to school and what happens or does not happen there.

The resources contributed by the institutions (e.g., family, school, and labor) within a community and the interactions that emerge from them reflect the context in which children learn rather than defining the potential of individual students (Bourdieu, 1986; Furstenberg & Hughes, 1995). From this view, we believe that community capital and composition of the student body interact to explain academic achievement differences at the school level; that is, the academic potential of the student body not only serves to improve raw educational advancement, but it also shapes other aspects of the learning climate like classroom behaviors and values that bear on their educational advancement. A student body that has the capacity to successfully perform academically is more likely to engender a set of values, beliefs, self concepts, and behaviors (Bear, Minke, & Manning, 2002; Hoge & Renzulli, 1993) that promote the learning environment because on a core level humans prefer to engage in activities that are aligned with their capacities (Ford, 1994; Harker & Nash, 1996; Harker & Tymms, 2004). Impoverished schools with a more academically-capable student body should, therefore, be better able to overcome the maladaptive forces associated with diminished community resources much more effectively than schools with less academically-capable students. On the contrary, wealthy schools would exhibit less of a difference on the basis of differences in the academic capacity of their student body because the environmental benefit served by academic potential is likely to be completely diminished by the benefit of a wealthy community.
3. Evidence supporting theory

The importance and value of studying factors in urban schools and school systems in the South that disproportionately disadvantage African American students has been demonstrated (cf. Cartledge, Yurick, Singh, Keyes, & Kourea, 2011; Morris & Monroe, 2009; Lo, Mustian, Brophy, & White, 2011). In recent research, we documented that increases in the academic potential of a school serve as a protective feature decreasing the negative influence or “power rating” of low socio-economic characteristics as reflected in the community capital of a school; we used aggregated composites of community and school characteristics in a large southeastern city to predict school-level (N = 80) achievement (Porfeli, McColl, Wang, Algozzine, & Audette, 2011). We provide a summary of our work in the rest of this chapter.

3.1 Context

We completed our research in one of the top 25 largest public school systems in the United States (cf. Sable & Hoffman, 2005; Sable, Plotts, & Mitchell, 2011) and the largest in the state, with an enrollment of over 125,000 pre-kindergarten through 12th grade students. The ethnic distribution was approximately 43% African-American, 40% White, 10% Hispanic, 4% Asian, and 3% Native American or Multi-Racial. The elementary schools we studied were located in urban, suburban, and rural neighborhoods.

The total number of students enrolled in participating schools was over 55,000, and among them, 18% were kindergarteners, 17% were first graders, 16% were second graders, 16% were third graders, 17% were fourth graders, and 16% were fifth graders. The average student enrollment in the schools was 629 (Range=226-1372). Minority enrollments (65%) as well as socioeconomic (53% free or reduced lunch) and second language markers (6% students with limited English proficiency) reflect the overall district demographics and represent similar characteristics to those of the 100 largest public elementary school districts in the United States (cf. Sable & Hoffman, 2005; Sable, Plotts, & Mitchell, 2011). We obtained data from publicly-accessible web-based resources maintained by the school district. This information included many variables (e.g., percentage of student passing the reading and mathematics state-wide standardized tests, percentage of parents with incomes below $25,000, percentage of students within each category of ethnicity groups, percentage of students identified as gifted and as having disabilities) including indicators of the community capital, academic achievement, and the student potential at the school level as well as control factors with potential moderating effects.

We defined community capital using a combination of variables that reflected financial, human, and social conditions of schools in our study. Financial capital was the percent of children receiving free or reduced lunch and the percent of parents who earn less than $25,000. Human capital was the percent of mothers with some college education. Social capital was the percent of parents’ attending parent-teacher conferences and volunteering in the school, the percent of children who reside is single parent households, and the percent of parents with limited English proficiency. Our measure of community capital also included elements pertaining to the neighborhoods and surrounding areas in which the school was expected to educate children. School-level academic potential was operationalized as the...
percent of children with a “gifted” classification and the percent of children with a recognized disability that could interfere with academic development (e.g., learning and other disabilities). We added the percent of African American children in each school and the total enrollment of each school to the regression models to represent the potential confounding impact of race and school size on the prediction model (see below). Others have used information on these variables similarly in research on predictors of academic achievement (Coladarci, 2006; Ilon & Normore, 2006; Olneck, 2000; Sirin, 2005).

We were interested in the characteristics of schools rather than the characteristics of students in them as predictors of overall achievement. The percent of students at the school who passed state-mandated end-of-grade reading and mathematics tests was available for these analyses. We calculated the difference between current and previous pass rates and used it to estimate the progress that schools made across a single academic year.

The end-of-grade reading test assessed components of the state’s Standard Course of Study. The test consisted of eight reading selections with three to nine associated questions for each selection. Each student was asked to read five literary selections (two fiction, one nonfiction, one drama, one poem) and three informational selections (two content and one consumer). The variety of selections on each form allowed for the assessment of reading for various purposes: for literary experience, to gain information, and to perform a task.

The end-of-grade mathematics test assessed the goals and objectives in the state’s Standard Course of Study. On the test, students demonstrated knowledge of important principles and concepts, and related mathematical information to everyday situations. In order to align with the mathematics curriculum’s addressing inquiry instruction and higher-order thinking, the test had an increased focus on processing information and higher-order thinking.

For the purposes of our research, we averaged the math and reading achievement to yield an overall indicator of the academic achievement of each school, because the correlation between reading and math pass rates for the elementary schools was 0.92. Our achievement variable reflected the average passing rate for each school on the mathematics and reading test and was used as an estimate of the “performance” of the school.

We employed a correlation design to test a theoretical model suggesting that community and school characteristics influence academic outcomes. Since we were interested in identifying the magnitude of the relationship between academic outcomes and other characteristics such as the community capital and academic potential, a multiple regression technique was used to investigate these relationships and to identify the relative impact of the characteristics on school-level academic outcomes independent of two control variables believed to influence achievement. Given that we were also interested in assessing the moderating impact of academic potential on the relationship between community capital and academic achievement, an interaction term (community capital by academic potential) was also included in the regression model.

3.2 Findings

Community capital was the strongest independent predictor of school-level academic achievement, with profound predictive power ($R^2 = .81$) particularly given that the model
did not directly account for aspects of the teaching situation (e.g., qualifications of the teachers or quality of the instruction) that schools aim to change as a way of boosting academic achievement. In other words, predictors that personnel at the school-level are generally unable to influence accounted for about 81% of the variability in achievement across the 80 elementary schools. Our regression results also suggested that the academic potential of the student body moderates the relationship between community capital and overall academic achievement while controlling for the total enrollment and race of the study body of the schools.

The community capital influence was greater in schools with less academic potential and weaker in schools with more potential. Recalling that academic potential is a construct combining the percentage of student with academic gifts and those with academic disabilities, overall academic achievement of schools was more influenced by community capital in schools that had a lesser fraction of gifted children and greater fraction of children with disabilities than schools reflecting the reverse proportions. Although statistically significant, the impact of this moderating influence was relatively weak. Schools with the least amount of community capital and academic potential demonstrated the greatest gains in overall academic achievement, yet the schools with the least amount of community capital and relatively high academic potential demonstrated the greatest declines in overall academic achievement. The schools in the wealthiest communities (e.g., 1 standard deviation above the mean on the community capital variable) generally demonstrated declines, with the greatest decline occurring in those schools with lower academic potential.

4. Discussion

Schools in America are segregated and many are composed “almost entirely of either White, African American, or Latino students” (Goldsmith, 2011, p. 508); and, data indicate that students from schools serving communities with disproportionally more minority students have lower academic profiles than their peers in other schools (Goldsmith, 2009). Almost 60 years after the Supreme Court ruled that “equal educational opportunity” was every person’s right, the evidence of persistent and consistent educational inequality refuses to go away. We believe that learning more about the connection between community capital and achievement will help schools and communities to better understand the problem and thereby direct better solutions to it. If community capital is important, then what can communities and schools do to strengthen it? What can school boards do to more evenly distribute it? How should it affect the location of new schools? How should it influence the student assignment plan? These decisions that connect diversity, community capital, and educational achievement could be at the heart of the school district’s mission.

The persistent difference between the performances of groups of students (i.e., the “achievement gap”) is perhaps the “most stubborn, perplexing issue confronting American schools today” (Evans, 2005, p. 582). Evaluating the impact of community capital on educational achievement is an opportunity to reframe the perspective on blame for this problem and visit and project the benefits of intentional diversity and integration on the educational advancement for all children. Community capital, as operationalized in our research, was significantly related to school-level achievement. This outcome cannot be completely overcome by simply flooding impoverished schools with financial capital or boosting human and social capital by enticing more experienced and proficient teachers.
Using Coleman’s (1988) concept of “public good,” we believe it is important to consider all capital that is available to the school and the learning environment (i.e., community capital). As Sirin (2005) argues, the capital of a neighborhood should also be considered. This ideally captures the socioeconomic status (SES) of the neighborhood, which reflects the potential of businesses and residents to contribute resources to the school. Families, for example, can share financial capital with the school through support of the parent-teacher organization or through other opportunities to directly donate resources. Parrish, Matsumoto, and Fowler (1995) illustrate this fiscal capacity in their study that found that the higher neighborhood SES, measured by the value of owner-occupied housing and residents’ educational attainment, correlated significantly with greater school expenditures per student. Another element of the neighborhood capital is the stability of the neighborhood and its capacity to create societal norms that may have an impact on the school. Coleman also includes safety as an element of social capital. A neighborhood in which parents feel that other adults will keep their children from harm’s way has more social capital than one in which parents are fearful for the safety of their children.

Our research supports a hypothesized interactive impact of community capital and academic potential on achievement. The academic potential of the student body reduced the “power rating” of community capital (Coladarci, 2006). Moreover, the overall achievement gap between schools is slightly narrowing, but is being largely offset by the declines in the impoverished, higher potential schools. Academic achievement change at the school level may, therefore, hinge on the issue of consistency when comparing configurations of higher or lower community capital and higher or lower academic potential. If a school with higher potential is situated in a neighborhood with more capital or a school with lower potential is in neighborhood with less capital, then the schools exhibit changes not exceeding ±1.3%. If a school with higher potential is situated in a lower capital neighborhood or a school with lower potential is in a higher capital neighborhood, then the achievement change across time is consistently a negative number (in the range of -1.7 and -4.3%). Where you go to school matters when summative and formative comparisons of performance are used to drive policy and decision making.

The large urban district school examined in our study, therefore, appears to be making good progress in impoverished schools with high concentrations of students with disabilities, but they may be leaving their schools with higher concentrations of gifted students in impoverished neighborhoods behind. On the contrary, the district school is having greater success maintaining their achievement levels in wealthier schools with higher concentrations of gifted students, but the district may be struggling to meet the needs of wealthier schools with higher concentrations of students with disabilities. The interactive influences of community characteristics and school composition represent a clear area for further investigation.

4.1 Implications for the use of community capital

In addition to considerations related to student assignment, concepts of community capital could be incorporated into many kinds of decisions made by local boards such as location of schools, approaches to financing schools, and community and parental involvement approaches to more equitably distribute these resources. By choosing to pay attention to community capital, the board can refine its decision making in these areas.
The location of schools and funding strategies are interconnected. Typically, local boards have control over the selection of sites for schools. There are important exceptions to this. For example, a publicly-passed bond referendum may set criteria for the school location or even specify the location. Or the local government responsible for collecting local property taxes or other funds used for school construction may set conditions on funding. Or if the state has stepped in to take a larger role in funding school construction, it also may exercise some oversight over the school location (Dewees & Hammer, 2000; McColl & Malhoit, 2004; MGT of America, 2001; Parrish, Matsumoto, & Fowler, 1995). Whoever is setting the conditions, the tendency is to focus on population density and travel patterns. Advocates for strong rural schools have urged a broader focus on site location, including the importance of school buildings to the overall vibrancy of a community (Dewees & Hammer, 2000; McColl & Malhoit, 2004). Similarly, local boards, or these other governing entities can consider the type of community capital that would exist for a particular school given the surrounding community and likely student assignment patterns. School boards sometimes consider various funding strategies in order to meet needs. If community capital becomes a priority, it also might help drive the strategies for funding schools based on the options that most likely would best allow consideration of community capital.

“Policymakers need to find ways to desegregate schools” (Goldsmith, 2011, p. 531). By better understanding the impact of community capital and the inequities in school composition potentially created by it, local boards can take steps to change. If it must maintain a school location in a neighborhood that is relatively poor, unstable, and high in crime, then members must recognize the significant challenges that this school will face and must make greater efforts to involve the broader community or nearby business community in the school (e.g., schools located in poor neighborhoods could reap the benefits of localized business leadership and the board could be part of a larger effort to give support to that neighborhood in order to help). In this context, community capital is a tool for helping a board assess its priorities and making its decisions align with them. Or, put another way, it helps a board and its community better understand factors contributing to gaps in achievement across schools to more fully impact policies and outcomes for students.

4.2 Caveats and limitations

We need to underscore that our information was from publicly available datasets. Our aim was to use our conceptual model of community capital and student composition of schools to model extant data. The student potential variable is one variable that could benefit from refinement given that some schools may have higher identification rates not only because more of such students attend the schools but also because their educational practices may lead to over identification. Therefore, one cannot attribute these special education identification rates solely to student characteristics. Fortunately, the statistical model that we used controls for this problem to the extent that these rates correlated with race, school size, and the community capital of the school. This statistical control does not however, completely resolve the measurement limitations of this variable. Future research should, therefore, employ the presented conceptual models to design a measurement protocol that more effectively assesses the conceptual space defined by our conceptions of community capital and potential.
5. References


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Learning disability is a classification that includes several disorders in which a person has difficulty learning in a typical manner. Depending on the type and severity of the disability, interventions may be used to help the individual learn strategies that will foster future success. Some interventions can be quite simplistic, while others are intricate and complex. This book deserves a wide audience; it will be beneficial not only for teachers and parents struggling with attachment or behavior issues, but it will also benefit health care professionals and therapists working directly with special needs such as sensory integration dysfunction.

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