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Connecting Schools and Communities: A Spatial Approach to Social Capital and Student Performance in the Albuquerque Public School District

Steven Bishop

Steven T. Bishop

Candidate

Community and Regional Planning

Department

This thesis is approved, and it is acceptable in quality and form for publication:

Approved by the Thesis Committee:

Dr. Claudia Isaac , Chairperson

Dr. Laura Harjo

Dr. Russ Romans

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By Steven T. Bishop
Bachelor of Political Science

The University of New Mexico

Albuquerque, New Mexico

THESIS

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Abstract

Locating services and accesses to opportunities is a growing trend in community schools. Having on-site health services, employment programs, after-school programs, and other social services for students, parents, and members in a community surrounding a school, strengthens the relationships between schools and the communities they serve. These relationships foster increased stocks of social capital in a community and with parents, and the link between parental and community social capital and student performance is strong. In order to make the most of limited resources, schools and school districts implementing community school models must identify which services and accesses to opportunities help to increase student, parent, and school bonds and relationships, in order to best improve student learning and performance. For my study I have identified and examined certain social capital indicators existing in communities surrounding elementary schools in the Albuquerque Public School District and analyzed their relationship to student test scores measuring proficiency in math and reading. I have found there is strong evidence linking parent involvement and the welcoming nature of a school and subsequent student performance.

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1. Introduction

Recently an experiment began in East Baltimore, Maryland. A new public primary school, Henderson-Hopkins opened, which offers elementary and middle schools classes. The school also offers an early-childhood center for infants and toddlers, as well as a library, an auditorium, a gym, and a community center—all open to members of the surrounding community. The school is a part of a larger redevelopment project, operated by Johns Hopkins University and Morgan State University, which brings science and technology buildings, retail units, and mixed-income housing, to a neighborhood with high rates of poverty, crime, and unemployment. The school "aspires to be a campus for the whole area" (Kimmelman, 2014). It is meant to be a hub, both educational and social, that offers multiple services to the neighborhood it resides in, with the hope that this hub will be a catalyst not only for economic revitalization, but also for the creation of a newly vibrant, healthy, stable community. Henderson-Hopkins is one example the concept of community schools. Clarence Perry, in his essay "The Neighborhood Unit" published in 1929, discussed locating schools centrally in a neighborhood, along with providing close and easy access to social centers such as parks and churches, as well as local commercial spaces (Perry, 1929). The idea for community schools has been around for a while, but it is an idea that has waxed and waned in popularity.

A community school, according to the Coalition for Community Schools, uses a public school as a hub, in order to "bring together many partners to offer a range of supports and opportunities to children, youth, families and communities" (CCS, 2014). Community schools attempt to integrate public schools and the resources of a community in order to achieve a number of goals, namely; student academic success; increased

parental involvement; ensuring the physical, emotional, and social health of students and their families; and creating stable, safe, and supportive communities. Community schools strive to be open environments, with resources accessible not just to students and teachers, but also to parents and members of the surrounding neighborhoods.

With this idea of community schools in mind, the purpose of my research is to engage in a preliminary identification and examination of certain quantifiable social capital indicators—parental involvement, neighborhood age, the presence of social organizations, and access to parks—that exist within the communities surrounding elementary schools within the Albuquerque Public School (APS) District, in Bernalillo County and southern Sandoval County, New Mexico. For my research I am utilizing the idea of social capital as a guide to identify and understand how certain community and familial factors affect student performance. I have engaged in an analysis to identify any relationships existing between the presence of these indicators in these communities and student performance at the public elementary schools serving these neighborhoods. Specifically, using ESRI's ArcMap GIS program, I have created demographic neighborhoods—via census tracts—surrounding each elementary school in APS. With the help of ArcMap I have also identified the social organizations and parks that exist within walking distance of each elementary school's boundary. With these points of data collected I have conducted a regression analysis looking for statistically significant relationships between my social capital indicators and the 3 year average of student proficiency in math and reading at each school. The goal of this research is to understand which social capital aspects affect student performance in order to pinpoint which social services and opportunity links located at a community school will be most effective at

raising student performance. To be clear, I am not equating social capital solely with social services present in a community. The indicators I am using are quantifiable representations of certain aspects of social capital; they are not the entire sum of what defines the idea of social capital. I have chosen my indicators on the theory that they can be used as a basis for determining the selection of certain services in a school with the hope these services will boost that aspect of social capital and thus boost student performance.

Henderson-Hopkins is an example of what can happen when a community school is created from the ground up, with a lot of funding and political will supporting a larger redevelopment project. More often than not, however, integration between schools and communities must be attempted with much smaller budgets and access to limited resources. The Elev8 program, partnering with middle schools in Baltimore, Chicago, Oakland, and New Mexico, is an example of efforts conducted on a smaller scale. Elev8's goal is to link schools, families, and communities. Elev8 "engages students, parents and community partners to offer carefully integrated supports in schools" (Elev8, 2014). This means creating partnerships and a unified vision between teachers, parents, social organizations, health providers, and community members. Understanding how student performance is affected by factors found outside of school can help to shape a unified vision.

Beyond the explicit attempts community schools make to integrate schools and communities, they are an implicit response to the idea that student performance can be improved solely via the internal operations of schools, an idea that became popular in the past two decades in the United States. With the passage of the No Child Left Behind

(NCLB) act in 2002, a decades long push to increase accountability in primary schools across the United States came to its political fruition. By the 2013-2014 school year, according to the NCLB's measures of performance, all elementary, middle, and high school aged children in the US had to be proficient in both reading and math, at their respective levels. States across the nation implemented measurement processes (i.e. high stakes tests) that would keep schools and educators accountable to government officials and to the public, and would insure students met the proficiency goals outlined in NCLB (Hess & Petrilli, 2006). The implication of NCLB and its resulting policies is that internal school factors are the sole determinant of student performance (Dee & Jacob, 2011). I feel Community schools are a response to this implication.

Central to the concept of community schools is the belief that a community's environmental factors play a role in impacting student performance. Community schools thus must attempt to utilize neighborhood assets to positively affect learning. These programs take the approach that neighborhood and school cannot be separated, that what occurs in a student's neighborhood and home will affect the learning ability of that student. By strengthening ties between the school and the community, and locating services and links to opportunities at a public school—thus creating an educational and social hub for a neighborhood—it is hoped that the overall environment of a neighborhood will become more positive, healthy, and supportive, for all community members.

So what services and links to opportunities should be located at such a community school? Access to health services is an obvious choice. The Elev8 program partners with existing healthcare providers and offers "school-based health services, including primary,

preventive, dental, behavioral health and family planning" (Elev8, 2014). Elev8 also focuses on after school and summer programs, attempting to carry over learning opportunities beyond the traditional school hours of operation. Elev8 also tries to locate social services at their community schools as well, such as employment services and financial literacy training programs. It is these social services that I am interested in. Which social services should a community school attempt to provide, to locate at the school? Which social organizations within a community should be partnered with? In a perfect world a community school would be all things to all people in a community, but in today's world it is important to identify which aspects of a community's social capital should be tapped first and foremost to make the most out of limited resources and limited budgets.

Community schools attempt to be educational and social hubs for neighborhoods. Ultimately the goal is to improve student performance, however. For the purpose of my research, I wish to identify and define certain indicators of social capital that exist in a community in order to identify which aspects of a community might influence student performance. The hypothesis is that the larger footprint these specific indicators have within a community transfers to higher performing students. If links between certain indicators and student performance can be teased out, then specific aspects of social capital can be focused upon, and thus services representing these aspects of social capital can be located in community schools. For example, if parental involvement, a key aspect of social capital according to Coleman (1988), has a demonstrable effect on student performance, then services could be provided at community schools that encourage parents to become more involved with school activities and student learning.

Understanding which social capital indicators most affects student performance will help to shape the future organization of community schools in the APS District, such as the three middle schools operating under the Elev8 program, and, hopefully, lead to quantifiable, positive results.

2. Literature Review

Social Capital

Coleman (1988) defines social capital as a parallel to human, physical, and financial capital. Financial capital is essentially the socio-economic status of an individual or family, human capital correlates to educational attainment, and physical capital being "tangible tools, machines, and other productive equipment" (Coleman, 1988). For him social capital exists in three forms, obligations and expectations, information channels, and social norms. These intangible aspects facilitate 'productive activity' via relations among actors in a community, increasing cohesion and the social links of a community; "the function identified by the concept of 'social capital' is the value of these aspects of social structure to actors as resources that they can use to achieve their interests" (Coleman, 1988). These aspects of social capital give actors the resources they need, via relations and connections with other actors, to achieve more stable, positive, and healthy positions in life. According to Coleman, lack of social capital, in a community and within a family, can lead to deterioration of community health and thus student performance. Coleman identifies the concept of closure—that is, how many parents of a child's friends are known by that child's parents—and identifies how the lack of social capital in a family and educational setting negatively affects not just student performance, but indicators of success in society as a whole. Coleman purports that social capital is inherently linked to educational success.

According to Putnam social capital "refers to features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit. Social capital enhances the benefits of investment in physical and human

capital" (Putnam, 1993). Putnam agrees with Coleman that social capital exists parallel to human, financial, and physical capital. In fact, investments in all forms of capital in a community are complimentary, "investment in jobs and education, for example, will be more effective if they are coupled with reinvigoration of community associations" (Putnam, 1993). Communities with high levels of social capital work together more efficiently and easier. There is cohesion existent that fills the gaps in performance at the social level, educational level, employment level, and so on. Basically, Putnam argues that communities with high amounts of social capital step in, either individually or institutionally, to offer help when other members of that community are seen to be struggling.

Portes (2000) offers a critique of how the definition of the term has evolved over time. He claims social capital emerged as a term defining individual attributes and individual objectives, but has evolved, or been manipulated, wrongly, into a term defining attributes of a collective (Portes, 2000). Portes believes social capital fits solely into the realm of individual, not civic, interests. Portes says that, for Coleman, social and community ties "were important for the benefits they yielded to individuals" and that Putnam started shifting the importance of social capital to the benefits it yielded to communities (Portes, 2000). He is contending that social capital is important in how it affects the individual and should thus be defined as an attribute of an individual; it is flawed to define the term as being an attribute of a community. Portes' own use of the term 'collective' points to a flaw in his argument. A collective, of anything, is made up of individual units and measurements. A community's social capital is its stock of the social capital possessed by its individual community members. An individual actor

benefiting from the successful utilization of the social capital they possess is a goal that is not achieved in isolation from any other actor operating in that community. It might be that an individual goal has been achieved, but the utilization of services, organizations, individual networks, and social ties—certain assets of social capital—by an individual actor draws on and reinforces the strength of these assets, creates opportunities within these assets for other individual actors to utilize, and increases the collective social capital of the community.

These 'capitals' mentioned above, human, financial, physical, and social, are all aspects of a larger community capital, the assets and resources found within a neighborhood. For my research I am interested in social capital—the relationships, trust levels, and overall social connectedness—of a community, especially the services and organizations that might provide increased levels of these aspects of social capital. As Putnam hints at, social services, organizations, and institutions that invest in the financial, human, and physical capital of a community are also investing in the more intangible social capital of that community. Programs at a school that encourage parent participation in the classroom or at after-school programs will not only increase parental investment in student success, but will increase closure among parents, as they meet and build relationships with the parents of other students. It is my goal in this research to define indicators of social capital that correspond to certain services, organizations, and institutions that might build social capital within a community.

School Assessments and Accountability Measurements

In 1965 President Johnson created the Elementary and Secondary Education Act, which increased spending drastically on Title I schools, schools that were deemed to be failing students. The subsequent failure of the act to lift school achievement led to the growth in the national assessment and accountability movement that culminated in the No Child Left Behind (NCLB) act. NCLB mandated each U.S. state to create standards and assessment procedures, and to introduce consequences for schools and school districts that failed to meet these standards. The act also introduced teacher evaluation guidelines, meant to eventually connect teacher performance to pay (Hess & Petrilli, 2006). Again, the implication of this act was that student performance could be improved solely via internal structures of schools (Dee & Jacob, 2011).

A few states, including New Mexico, have opted out of NCLB, the policies it outlined, however, continue to shape assessment and accountability measurements that are being implemented today (Hess & Petrilli, 2006). New Mexico's waiver to opt out of NCLB, the Elementary and Secondary Education Act Flexibility Request, outlines the 3 principles the New Mexico Public Education Department (NMPED) will follow to boost performance and ensure accountability in the state's public schools (and thus be able to remove itself from the NCLB mandates); college and career ready expectations for all students, state developed differentiated recognition, accountability, and support (the A-F letter grades given to each public school in the state), and supporting effective instruction and leadership (teacher evaluations). Student achievement and school performance in New Mexico's public elementary schools is still measured almost solely via student proficiency on math and reading exams, however. According to the NMPED's waiver

opting out of NCLB, "in elementary and middle schools, student achievement constitutes 90% of a school's grade" (NMPED, 2012). Value added models and individual student growth models are also used to determine the letter grades that the NMPED assigns to each school in the state, but these are still mostly dependent on reading and math test scores to set baselines. The waiver outlines what the NMPED will do to encourage student and school performance, including identifying low-performing schools and the interventions that will be executed to improve these schools' performance. The NMPED is attempting to accurately assess the internal structures that are affecting student performance, such as school size and teacher effectiveness, but there is little measuring how external factors might be effecting school performance. The equation behind the grades the NMPED administers to schools does take into account student and parent engagement, but these account for a possible 5 bonus points, that can be added to the total score a school receives (out of a possible 100 points—so a school with a perfect score plus the bonus points could theoretically achieve 105 points). The NMPED is still following the trend of the past couple of decades, as encapsulated by the NCLB, that a school and student performance can be measured and affected almost solely based on internal school structures.

Assessments and School Performance

There have been multiple attempts to research the positive or negative effects resulting from assessment procedures implemented by states after the passage of NCLB. Dee and Jacob examine US states that had assessments in place prior to NCLB and states that did not. Their study finds that the "achievement consequences of NCLB are

decidedly mixed" (Dee & Jacob, 2011). They find some evidence that the idea that changing a schools internal structure and increasing school accountability can bring increases in student achievement. Dee and Jacob look into National Assessment of Educational Progress (NAEP) test scores to see if states improved academically after the implementation of NCLB. The NAEP consists of tests taken by students nationwide on a yearly basis, before and after the implementation of NCLB, and are considered 'low-stakes' since they are simply a measure of performance, with no consequences attached. Comparing NAEP data from schools before NCLB and after, Dee and Jacob find statistically significant increases in average fourth grade math performance after NCLB's policies were implemented, as well as improvements at the lower and higher percentile. The authors did not, however, find that NCLB had any effect on increasing reading levels among fourth graders. According to Dee and Jacob, supporters of NCLB and its school accountability measurements might find good news in their study, as fourth-grade math scores substantially increased post-NCLB, but critics can just as easily point towards the lack of any change in reading scores. And, as the authors state, "more than 60 percent of fourth graders still fail to meet the math proficiency standard defined by NAEP" (Dee & Jacob, 2011).

Hemelt (2011) also finds mixed results of NCLB policies—specifically Adequate Yearly Progress (AYP is a mandate of NCLB)—to positively affect student performance. Hemelt examines student performance gains or losses after a school fails to meet AYP as a whole, or in certain of its subgroups (a subgroup is a group of students of the same race or ethnicity, as defined by NCLB), in the state of Maryland. Hemelt finds that when schools fail to meet AYP as a whole, performance fails to increase significantly or at all

in subsequent years, despite the tangible consequences of this failure (public shaming, forced expenditure on private tutoring, or complete district or state takeover of the school). However, if a school meets AYP as a whole, but a subgroup fails, it is likely this subgroup will make advances in achievement the following year (Hemelt, 2011). School-wide failure may be indicative of wider problems however, problems that are not addressed by internal school policies, and are ignored by internal assessment and accountability procedures. Hemelt says "for schools facing broad and often chronic failure, it appears that they need additional help to prioritize, navigate, and implement strategies that will improve the performance of students within those schools" and that "schools facing broad failure may be surrounded by similarly struggling schools "(Hemelt, 2011). Hemelt briefly flirts with the idea that the communities surrounding a school might be leading to chronic low student performance, but he still clearly believes internal structures of a school, despite the mixed results of his research, are enough to positively impact student test grades.

Beyond the inability to quantitatively affirm success or failure of NCLB policies, a major critique of the act is the questionability of how accurate high stakes tests (HST) are at measuring performance, especially among minority and low socio-economic status students. Hursh (2007) provides examples from the HSTs used by Texas and New York prior to, and concurrently with, NCLB, identifying occurrences by school districts to manipulate data in order to meet AYP, such as HST score manipulation, lowered standards, etc. By comparing state data with the NAEP, he concludes NCLB and its mandated assessment and accountability procedures are not actually increasing student achievement across the nation (Hursh, 2007). Hursh contends that the goals of NCLB are

not being achieved, saying that the Texas and New York test data indicates "that the achievement gap between advantaged and disadvantaged students, white students and students of colour, students without and with disabilities, and students for whom English is a first and second language has increased" (Hursh, 2005).

The mandatory accountability measurements as outlined by NCLB have not raised student proficiency in reading and math. Using assessments to gauge student performance is not an inherently flawed idea. Problems arise when these assessment scores are the sole means used to determine student achievement, and schools and teachers have no other recourse to attempt to positively impact student learning because they can only 'teach to the test,' "the curriculum is narrowed and simplified, students who score low on tests are abandoned, poorly constructed tests lead to mass failures, and students are pushed out of schools" (Hursh, 2005). Assessments are here to stay, as even Hursh (2005) acknowledges, but greater dialogue is needed between policy makers, schools, parents, and communities. Creating community schools that are open and integrated into the community, by providing necessary services on-site, can help strengthen this much needed dialogue.

Community Schools and Student/School Performance

A number of school systems across the U.S. have implemented community schools and are seeing positive results. According to the Coalition for Community Schools, a study conducted in Oklahoma, found that schools in the Tulsa Area Community Schools Initiative (TACSI) "that had deeply embedded the community school model scored significantly higher than comparable students in non-TACSI schools

on math (+32 points) and reading (+19 points) achievement tests" (CCS, 2014). They study compared 18 TACSI schools to 18 non-TACSI schools and defines a school as embedding reforms via surveys returned by teachers recording their perceptions of how diffuse reform practices were, and structural conditions implemented in the school reflecting these reforms. The study also found that levels of trust between students and teachers, and between parents and the school, as well as school outreach and instructional agency, were higher when compared to the non-TACSI schools (CCS, 2014).

In Redwood City, California, Castrechini and London found students attending community schools lifted their scores in math, and English language learners lifted their English language development scores (Castrechini & London, 2012). The authors found these gains in scores both in elementary schools and middle schools were a result of the positive attitudes towards learning and parent engagement fostered by the community school programs; the authors found that "students with family engagement in elementary school entered middle school more likely to say that their school provided a supportive environment compared to those without family engagement" and that once these students entered middle school "frequent participation in extended learning programs was linked to increases in students' perceptions of their school as a supportive environment" (Castrechini & London, 2012). The result of these positive community school programs were directly linked to the increases in student scores the authors recorded.

A study conducted in Boston, Massachusetts, to evaluate the community school model entitled City Connects (CCNX) used in 15 of Boston's public schools, found that students in these CCNX schools, on average, outperformed non-CCNX students in every subject (City Connects, 2010). CCNX community schools, like the Redwood schools

cited above, were also particularly adept at boosting English language learner (ELL) scores, "by third grade, ELL students in City Connects schools demonstrated similar Reading and Writing report card scores to those proficient in English in the comparison schools, thereby eliminating the achievement gap in Reading and Writing between ELL and non-ELL students" (City Connects, 2010). The City Connects model actively involves community agencies and services in its programs, creating partnerships between parents, schools, and the community, and this engagement seems to be paying off with higher student performance.

Jean Grossman and Zoua Vang (2009) survey a number of studies looking into positive links between community schools and student health and performance. They find that relationships between parents and schools are strengthened when health services are located at schools, that "parents come to trust the school more and to actively support its goals for their children" (Grossman & Vang, 2009). Locating health services at schools can increase the links between parents and schools and better connect students to their learning centers. Locating out-of-time (OST) programming on school sites can further connect students to their teachers and to fellow students, and foster a sense of belonging, thus decreasing school-related disobedience. Grossman and Vang cite a number of studies that show when "youth participate in school-based OST programs, parents are more likely to communicate with teachers and attend school meetings, which enhances a family's involvement with the school community" (Grossman & Vang, 2009). The authors also research showing that students participating in structured OST activities see a boost their academic achievement. Overall, Grossman and Vang, as well as the other studies mentioned in this section, point to the positive effects of utilizing

community resources by locating services and links to opportunities in schools. These services build and strengthen sustained relationships and links between students and their schools, and between parents and teachers; "by making the school a place that helps parents—with their income, employment and other needs—integrated service models ameliorate the alienation that many parents in underserved communities feel toward schools in general" and can lead to "greatly enhancing the potential for parental involvement in children's learning and improve overall academic achievement" (Grossman & Vang, 2009).

Social Capital and Student/School Performance

A critical piece of a community's social capital is parental capital. Identifying certain cultural norms and differences that affect parental involvement in student schooling is critical when identifying aspects of parental capital. Lee and Bowen (2006) look into social capital defined as parent involvement in student academics, among different families according to three different demographic variables, race/ethnicity, socio-economic status, and parental educational attainment. Parents from different demographic backgrounds had varying levels of participation in their children's formal school life, but all were involved in their children's education. Lee & Bowen (2006) say that what might look like an attitude of indifference among parents could actually be social barriers keeping a parent with low educational attainment from increasing contact with a child's school. The authors do, however, end up suggesting families across all demographic groups increase participation and contact with their children's schools.

Ream and Palardy (2008) also examine the socio-economic status of parents of school-age children and the social capital these parents possess. Ream and Palardy link the possession of social capital to student achievement, but they also identify the ability of parents of high, middle, and lower socio-economic status to convert this social capital into increased educational performance of their school age children. Parents of higher and middle socio-economic status do in fact possess higher degrees of social capital, but the educational utility of this social capital is not necessarily dependent on class (Ream & Palardy, 2008). Parents with more human and financial capital might possess more social capital, but that does not mean that the social capital possessed by parents with less human and financial capital are less effective in helping the educational performance of their children. According to Ream and Palardy, social capital is helpful in increasing student performance across the spectrum of SES. If parental involvement plays such a crucial role in student success, as these two studies suggest, locating services and events at a school can make it a more welcoming place for parents that might feel intimidated, and increase linkages between the school, social organizations in the community, and community members themselves.

Misra, Grimes, and Rogers (2013) take a spatial approach to social capital and its effect on elementary schools throughout Mississippi. They define social capital as the number of social organizations within a certain mileage of each school (5 miles, 15 miles, and 25 miles). Their analysis of social capital, that it is created via "connectedness among individuals through social organizations and clubs" is useful for the argument that locating certain social organizations within community schools can increase a community's social capital and lead to higher levels of student success (Misra, Grimes &

Rogers, 2013). The growth of social capital in a community is dependent on individual actors creating networks and increasing trust levels with other individual actors, in pursuit of their own individual goals, as Portes believes, but social organizations are a key factor in this networking, this bridging of social ties; "individuals optimize their relatedness with social organizations based on their personal goals, but all social organizations serve the common purpose of networking" (Misra, Grimes & Rogers, 2013). Social organizations, such as places of worship, community centers, and social service centers, are areas of opportunities for individual actors within a community to link with other community members and increase their social network, thus increasing the community's overall social capital. Misra, Grimes, and Rogers ultimately find that higher incidence of social capital does play a part in school achievement, but a small one. They conclude that the cost of building more social capital is not worth the small reward. This attitude is a little defeatist. If investing in a community's social capital can bring about even minor positive changes in student performance, it seems the costs should be worth it. As stated previously, investments in the social services and organizations that are essential to the formulation of a community's social capital are also investments in that community's other capitals, human, financial, and physical; locating services at a school that will increase social capital in that school's community, in order to promote student learning, will have positive consequences that will not just raise school success, but strengthen the whole of a community.

Porfeli, Wang, Audette, McColl, & Algozzine (2009) find that community capital is a strong predictor of student performance. Porfeli et al. sum up the importance of studying a community's social capital and its effect on student performance, "where you

go to school and who goes with you bears a strong relationship with your school's performance and how other [sic] will perceive it as evidence of the quality of the education you received" (2009). They find that schools with high populations of academically gifted students continue to perform well on assessment tests, even as levels of students with behavior problems and mental retardation rise. The inverse is true for schools with low levels of academically gifted students, as populations of students with behavior problems and mental retardation rise, school achievement suffers noticeably. (Porfeli et al., 2009). This illustrates the fact that the achievement gap might not be something that can be narrowed just by influencing internal structures of schools through assessment and accountability procedures. It is important to take into account the needs of the community whose children are attending that community's school. As Porfeli et al. state, "we found strong support for relationships between achievement and school, student, and community demographics—an outcome that speaks against changes in curriculum, motivation, and class size making big differences in achievement in some schools" (Porfeli et al., 2009). The environmental aspects of a community surrounding a school impact the educational success of the students attending that school.

Residential stability—what I'm defining as neighborhood age—as an indicator of social capital, also affects student success. Hagan, MacMillan and Wheaton (1996) find negative effects of family migration on grades. They find family migration can have an adverse effect on student achievement, "low maternal support and a family move, and low paternal participation and a family move re-duce the chance of college completion and overall educational attainment, while low paternal participation and family move also reduces the chance of high school completion" (Hagan et al. 1996). Hagan et al. believe

this reduction in educational success occurs because when these families with an already low stock of social capital move, they cannot compensate for the resulting loss of social capital from community sources. Meier (1999) sums up Coleman's analysis of the negative effects of frequent moves on student success, "by moving often, parents are less likely to have relationships with teachers or with other parents and children are less likely to have relationships with friends, teachers, and other adults in the community" (Meier, 1999). She analyses residential stability, finding that students do better when they live in the same neighborhood and attend the same school for a relatively long period of time (Meier, 1999). This success is a result of greater relationships with schools, not only between students and teachers, but between parents and teachers; students who reside in the same place for a while, who experience residential stability, find the quality of their relationships increase and find greater assistance, in learning and in socialization, from these relationships; "residential stability preserves the social networks, friendships, and contacts within which children and parents operate" (Meier, 1999). If this social capital indicator of residential stability can improve a student's ability to learn, then maybe certain services can be located within a school that can encourage parents to remain in a single location during their children's academic life, by providing help with finding affordable and quality housing options.

3. Methods

In order to tease out which indicators of social capital are most influential in impacting student performance—in order to understand what services and accesses to opportunities to locate at community schools—I have utilized ESRI's ArcMap GIS software to identify, collect, and visually analyze data. I identified five indicators of social capital and have created neighborhood profiles, via census tracts from the year 2012, of every elementary school in the APS district that includes these indicators. To these profiles I also joined demographic data collected from the US Census' American Community Survey (ACS) 2012 5 year estimates. However, this aggregation of census tract data around school boundaries creates a problem with the robustness of the results from my analysis.

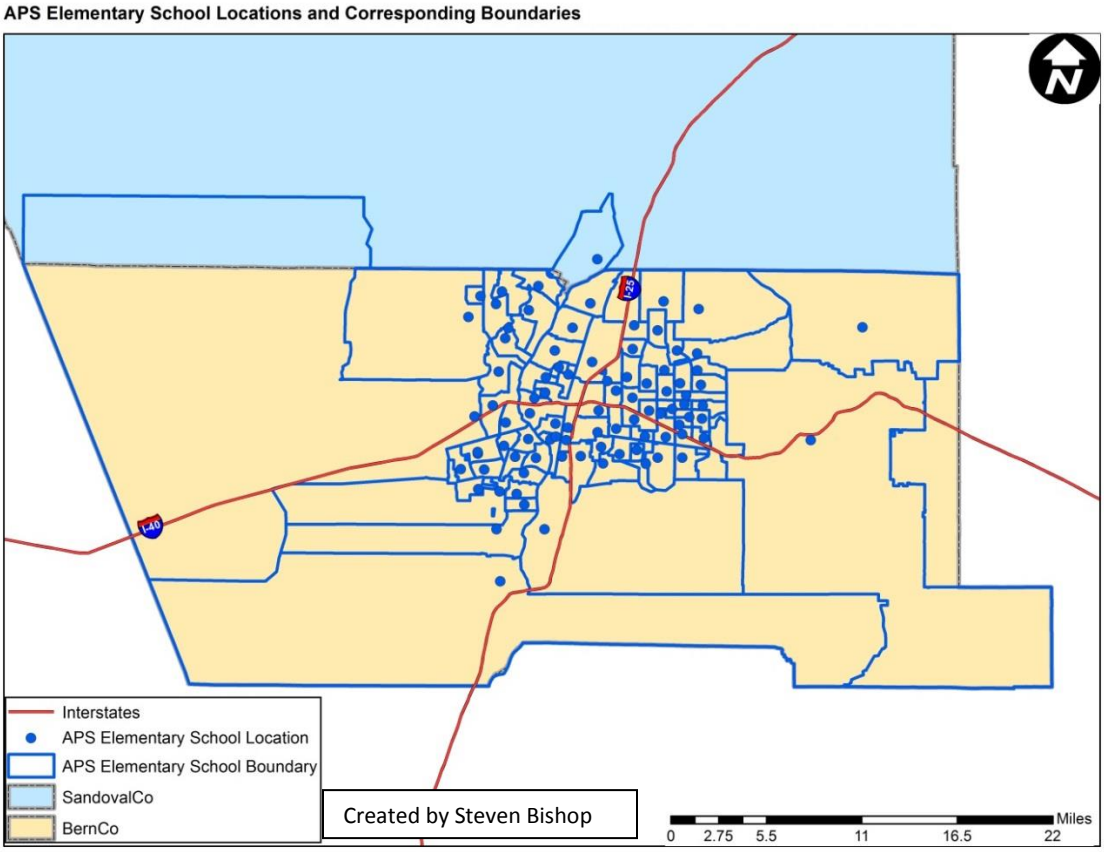
The issue has been dubbed the Modifiable Areal Unit Problem, or MAUP. MAUP refers to the fallacy of conclusions based on data aggregated to one particular 'district' or boundary, because of the fact that those conclusions are likely to change when the same data is aggregated to a different boundary (Yang, 2005). Essentially MAUP is an issue of scale; data-sets tied to geography change in nature when these sets are aggregated to different sizes and geographical boundaries, and thus affect analysis outputs (such as a multiple regression analysis). MAUP has two components, aggregation problems and zoning problems; aggregation problems concern "the different statistical inferences and estimates generated by the same data set that is aggregated into different spatial resolutions," and the issue of zoning concerns "the variation in analytic results due to alternative grouping of the areal units at the same spatial scale" (Yang, 2005). This all means that any resulting conclusions from a spatial analysis using

aggregated data-sets should be taken with a grain of salt. The only sure-fire way around this issue is to use individual-level data, especially if you are attempting to make inferences about individuals. But this data comes with privacy and confidentiality problems. For the purposes of my research, I feel a caveat regarding the robustness of my conclusions is adequate. My data most likely suffers from the issue of MAUP and any conclusions I infer from my results will be limited by this mitigating factor.
With that said, after creating these neighborhood profiles for each elementary school, I conducted a multiple linear regression analysis on these social capital indicators and demographic data and will discuss the results below. First I will discuss my process of neighborhood profile creation for the elementary schools, the indicators I identified, the demographic data, and my methods of analysis.

The Schools

For the purpose of my study I wanted to focus on elementary schools. Elementary schools set a foundation for learning for students. "Children are launched into achievement trajectories when they start formal schooling or even before, and the patterns of these early trajectories are highly stable over childhood and adolescence" (Entwisle et al. 2005). If community schools are to be effective it is important that they try to affect student trajectories early on by locating services linked to social capital indicators at public elementary schools. Using ArcMap I created a profile for every elementary school in APS. Each school has a boundary determining who attends and who does not. There are a total of 89 public elementary schools in APS, but only 88 have AYP scores, as Helen Cordero elementary only serves pre-Kindergarten thru 2nd grade

students. Since the AYP averages I compiled are for school years 2009 thru 2012, I used the school boundaries that were implemented during the 2011-2012 school year[1].

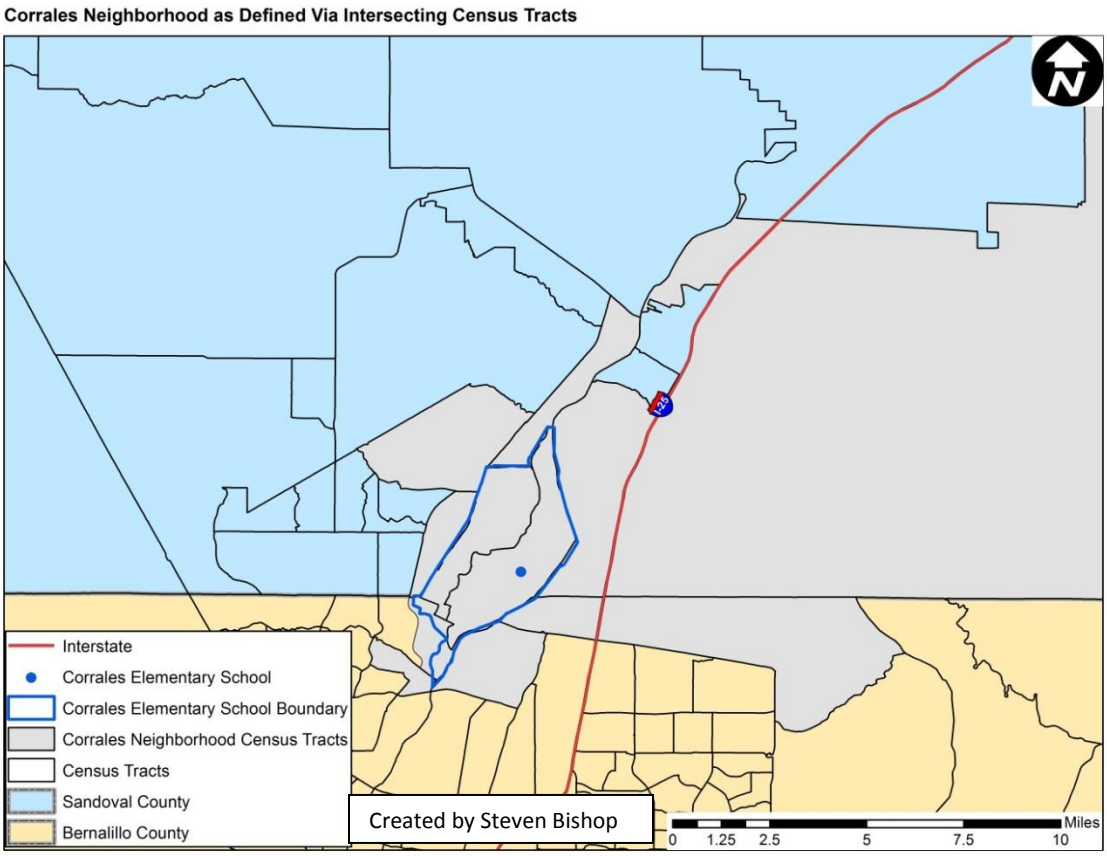


Map 1

For each school boundary I utilized a location command in ArcMap that identified every census tract in Bernalillo county and Sandoval county, if applicable that intersected that particular boundary. Map 2 illustrates and example of the neighborhood created via

[1] Since 2012 APS has added 1 boundary in the north and 1 in the south of the district.

census tracts for Corrales Elementary School, located in southern Sandoval County.



Map 2

With these census tracts identified I then recorded the demographic information surrounding each school, and thus created a demographic profile for each school; specifically, mean income, the percent of households that moved into the area pre-2000, the percent of the population below poverty level, the percent of the population 16 and up unemployed, the percent of the population 25 and up with a high school or bachelor degree, and the total population for the census tracts surrounding each school. Again, this demographic data was all retrieved from the US Census' ACS 2012 5 year estimated.

In essence I identified and recorded the demographics of each neighborhood surrounding each elementary school in the APS district. To these neighborhood profiles I added the social capital indicators (the demographic data giving the percent of households that moved into the census tract pre-2000 is one of my social capital indicators). Table 2 in the Appendix lists each of these demographic variables, as well as the social capital indicators defined below, for each elementary school in APS.

The Social Capital Indicators

Using the existing literature as a guide I have decided upon identifying five different indicators of a community social capital; two indicators for parental involvement, one for neighborhood age (the percent of households, both owners and renters that moved into the area pre-2000), one identifying the amount of social organizations present near a school, and one identifying park access.

Parental Involvement: Coleman (1988), Meier (1999), Portes (2000), Lee & Bowen (2006), and Ream & Palardy (2008), all find the social capital possessed by parents, basically the amount of time they involve themselves in their children's learning processes, to be strongly connected to the learning success of their children. For my study I use two indicators of parental social capital; the return rates for the 2012 Quality of Education (QofEd) surveys that APS distributes to parents in the district, for each school; and the rate that parents respond to the Strongly Agree option for question 14 for each 2012 QofEd survey, which asks "As a parent I am welcome at my child's school." I feel a link can be made between schools with high percentages of parents completing and returning these surveys and higher amounts of parental involvement in their children's learning. The logic goes: The more involved you are in your child's learning, the more

likely you want your opinion counted, and thus the more likely you will complete and turn in a survey expressing these opinions. This logic extends to the answers to question 14; the stronger you are in agreement that the school welcomes you, as a parent, the more likely you are to involve yourself in that school and connect with your child/children's teachers, social peers, and other parents (and thus increase Coleman's idea of closure). These are certainly not prime indicators for parental social capital. More qualitative information would be useful, such as surveys indicating how directly involved parents feel they are in their children's learning, and questions asking directly how many parents of child's friends are known to that child's parents—the amount of closure possessed by parents. Also, just because you agree that a school is welcoming, does not necessarily mean you will involve yourself more with a school and with your child's education. For a quantitative study such as mine however, these indicators will at least give a preliminary insight into parental involvement and student success.

Neighborhood Age: By neighborhood age I am referring to the percent of owner and renter households that moved into a census tract prior to the year 2000. For this indicator I am using the combined rate of owner and renter occupied housing units for all the census tracts comprising the neighborhoods that I designated surround each school. The data for this indicator is collected from the US Census' ACS 2012 5 year estimates data-set. The reasoning behind using the pre-2000 year is that the children of households that moved to a neighborhood prior to 2000 would have gone through elementary school, from kindergarten through fifth grade, during the school years for which I compiled the AYP averages. Higher percentages of households that moved into each neighborhood prior to 2000 imply that parents are moving less and that the students that undertook the

SBA proficiency exams for the years I compiled would have had a more stable learning environment, when compared to neighborhoods with a lower percentage of households that moved in pre-2000.

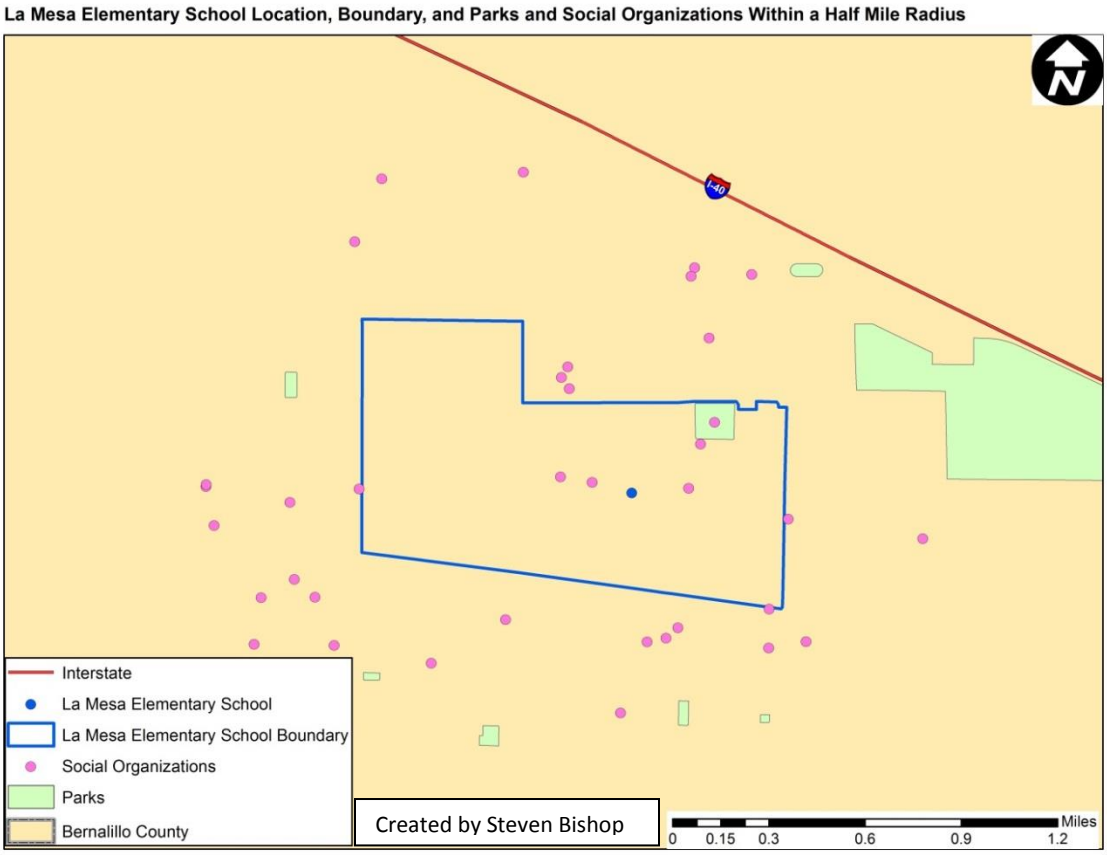
The idea that residential mobility affects student performance is discussed above, and is purported by Coleman (1988), Hagan, MacMillan, and Wheaton (1996), and Meier (1999). The logic behind this indicator is that neighborhoods with higher percentages of older households are more stable environments for school-age children. Once again, more qualitative measurements of residential stability would be useful. Surveying parents of students in APS about how often they've moved in X amount of years since a child has been in school would answer the question of residential mobility much more directly. But, also once again, the resources at my disposal are limited and this quantitative indicator of social capital will be informative in determining how it might affect student performance.

Social Organizations: My third indicator of social capital is the number of social organizations that exist within .5 miles of each school's boundary. I chose a .5 mile radius for this indicator and my park indicator because the .5 mile radius has become a planning-industry standard for determining how far residents in a community will walk to parks and transit locations (Guerra & Cervero, 2013)(Donahue, 2011). It's reasonable to use this radius as a measurement of how far residents will walk to take advantage of social services as well as park use. This indicator of social capital consists of places of worship (churches, synagogues, mosques, temples, and meditation centers), community centers, community healthcare locations, government centers offering social services, child and family development centers, free or reduced price clothing and food banks,

intervention clinics, YMCA locations, advocacy centers, and charity locations. These locations were identified via Google Earth and were digitized so they could be imported into ArcMap. This indicator list broadly defines what a social capital organization is, which is my goal. Porfeli et al. use social organizations as an indicator of social capital as well, but I feel their definition was a little limited and thus didn't encompass all organizations that are providing services to a community and thus adding to a community's social capital. The robustness of this list is limited to what organizations have been identified via Google Earth, but I identified 603 organization locations for Bernalillo and southern Sandoval counties and I was as thorough as possible in checking credentials and whether the organization truly existed. For example, if organization locations were identified in the middle of vacant lots, I would check the internet to see if addresses matched to existing organizations. Organizations often would be listed multiple times at the same address so these redundancies were removed from the final list.

Park Access: There is evidence in existing literature that student performance is tied to physical exertion among primary age children (Keays & Allison, 1995)(Tomporowski, Davis, Miller, & Naglieri, 2008). For this reason I felt park access should be considered a social capital indicator of a community. It would certainly be an indicator of a community's health capital, but there is overlap because parks can exist as areas where social connections are created and reinforced within a community alongside being areas that increase community health. Parks become meeting places for children and parents, nearby animal owners bring their dogs for walks, joggers run the perimeter, they are start- and end-points for bike rides; all the while these community members are

building connections and social ties with each other, increasing the community's social capital. Parks have a dual effect of being centers of physical activity for school age children, increasing learning ability, and being places of social activity, increasing neighborhood quality and stability via the strengthening of the community's social capital (which also has an effect on student success). For the purposes of this study, I located and counted all parks within the same .5 miles of each school's boundary I used for social organizations, via the City of Albuquerque's shapefile entitled "Parks," available on the city's GIS website.



Map 3

I have only park data for the City of Albuquerque. Most of the elementary schools lie within the city's jurisdictional boundary, so I feel the park data I have is still a valid indicator, but it is limited in scope. Map 3 illustrates an example of using this .5 mile radius to locate social organizations and parks near La Mesa Elementary School in Bernalillo County.

Analysis

With these indicators quantified, I created a spreadsheet in Excel with all the data I'm analyzing. The social capital indicators are my independent/explanatory variables, along with average income, educational attainment, and poverty levels, for each neighborhood I created in ArcMap, as additional explanatory variables. My dependent variables are the three year (academic years 2009-2010, 2010-2011, and 2011-2012) averages for students at each school in the math and reading proficiency exams that determine AYP.

With these dependent and independent variables compiled and entered into Excel, I imported them into Stata 13. I ran a Pearson's correlation coefficient test for all the independent variables to check for redundancy. The only strong correlation was a negative one between the variables percentage of population 25 and up with a high school degree or a bachelor degree, which is logical; the percentage of a population with a bachelor degree goes up or down depending on the percentage of the population with only a high school degree. For the regressions analysis I removed the variable percentage of population 25 and up with a high school degree. I ran separate multiple regression analyses for the Math AYP 3-year averages and for the Reading AYP 3-year averages.

4. Results

The return rates for the Quality of Education (QofEd) surveys, the rate of strong agreement to question 14 on the QofEd surveys, and average income for each neighborhood, are statistically significant in relation to the Math AYP averages. The percentage of population 25 and up with a bachelor degree is right on the cusp of being significant, but not enough to reject a null hypothesis that it has no impact on math proficiency exams. All the other variables are considered insignificant, with a p-value too high to reject a null hypothesis. The adjusted R-squared value is .67, making it a good fit for the analysis, and meaning that the parental social capital indicator is significant in determining student success in terms of math proficiency.

For the Reading AYP 3-year averages dependent variable, the results were similar. The rate of strong agreement to question 14 of the QofEd survey is significant, as is average income and percentage of population 25 and up with a bachelor degree. Unlike the math proficiency averages, the percentage of population 16 and up in the labor force that is unemployed has significance. The return rate of the QofEd survey is not significant. All other variables are not significant. The adjusted R-squared value is .72, again making it a good fit for the analysis and making one of the parental social capital indicators significant in determining student success in terms of reading proficiency.

Table 1 on the next page displays the coefficients, *t*-values, and the statistically significant variables, denoted with asterisks, for my regression analysis.

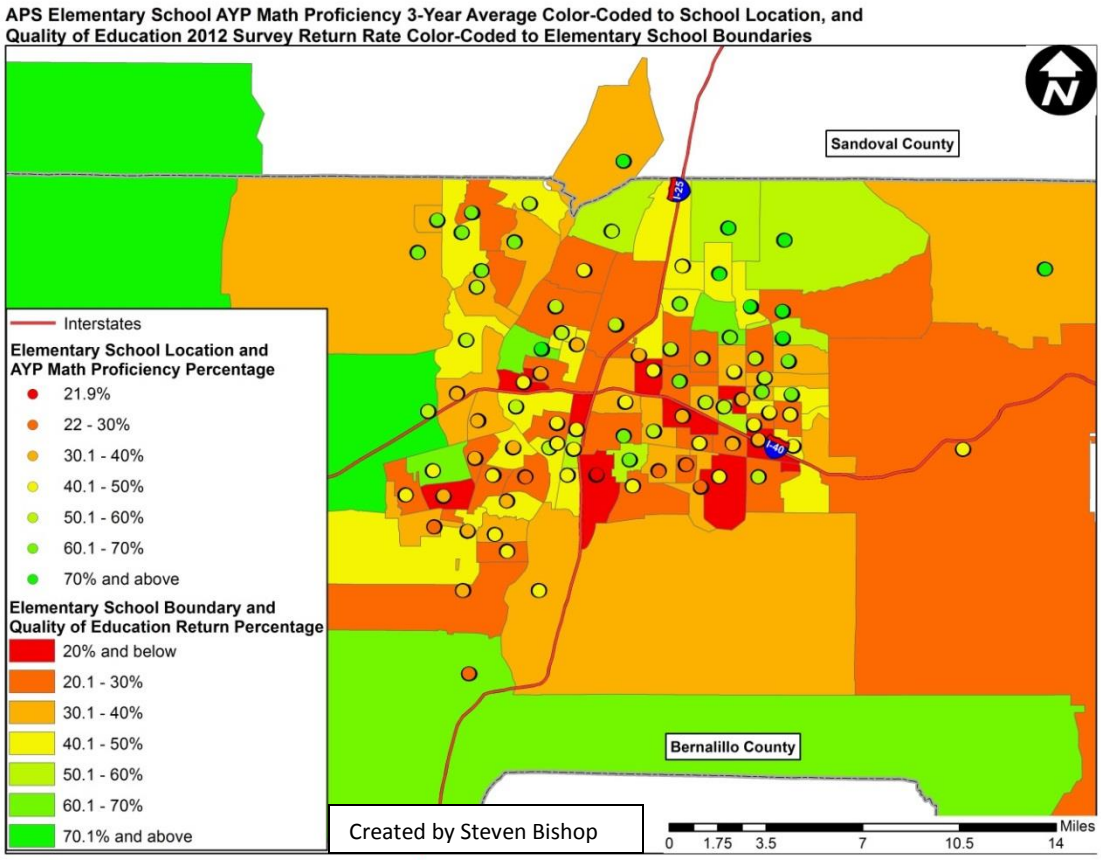
Table 1. Regression Results

	Math AYP 3 Year Average	Reading AYP 3 Year Average
Quality of Education 2012 Return Rate	0.195	0.125
	(2.65)**	(1.83)
Quality of Education Question 14 Strongly Agree Return Rate	0.307	.254
	(2.68)**	(2.39)*
Percent Moved in Pre-2000 (per Census Tract)	-0.207	-.116
	(-1.58)	(-0.96)
Social Organizations	.000	-.001
	(-0.10)	(-0.80)
Parks	-.001	.001
	(-0.65)	(0.66)
Mean Income (per Census Tract)	4.34e-06	3.493-06
	(2.98)**	(2.58)*
Population 25 and Up w/ Bachelor Degree (per Census Tract)	0.309	.388
	(-1.93)	(2.62)*
Population 16 and up--UnEmployed in Labor Force (per CensusTract)	-1.376	-2.01
	(-1.53)	(-2.42)*
Population Below Poverty (per Census Tract)	-.027	-.071
	(-0.30)	(-0.83)
Constant	0.157	-.310
	(1.01)	(2.16)
R-squared	.71	.75
Adjusted R-Squared	.67	.72
N	88	88

***t* statistics in parenthesis**
***p<0.05; **p<0.01**

5. Discussion

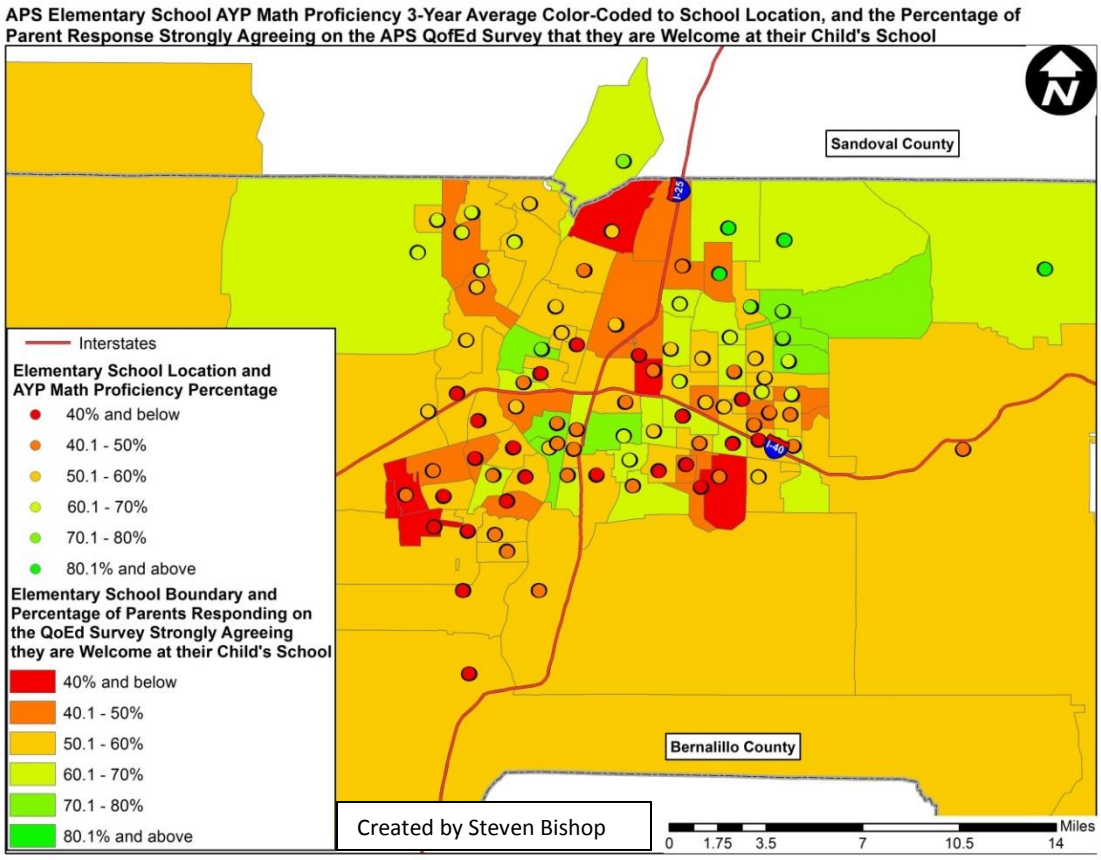
Parental involvement in a student's academic life is an integral aspect of social capital. Coleman (1988), Putnam (1993), Portes (2000), Lee & Bowen (2006), and Ream & Palardy (2008) all include it in their analysis of social capital and student performance. My analysis also finds significance between parental involvement and student performance. My social capital indicator measuring the return rate for the QofEd and its significance in determining math proficiency supports the idea that the more involved parents are in their children's learning, the better their children will do in school.



Map 3

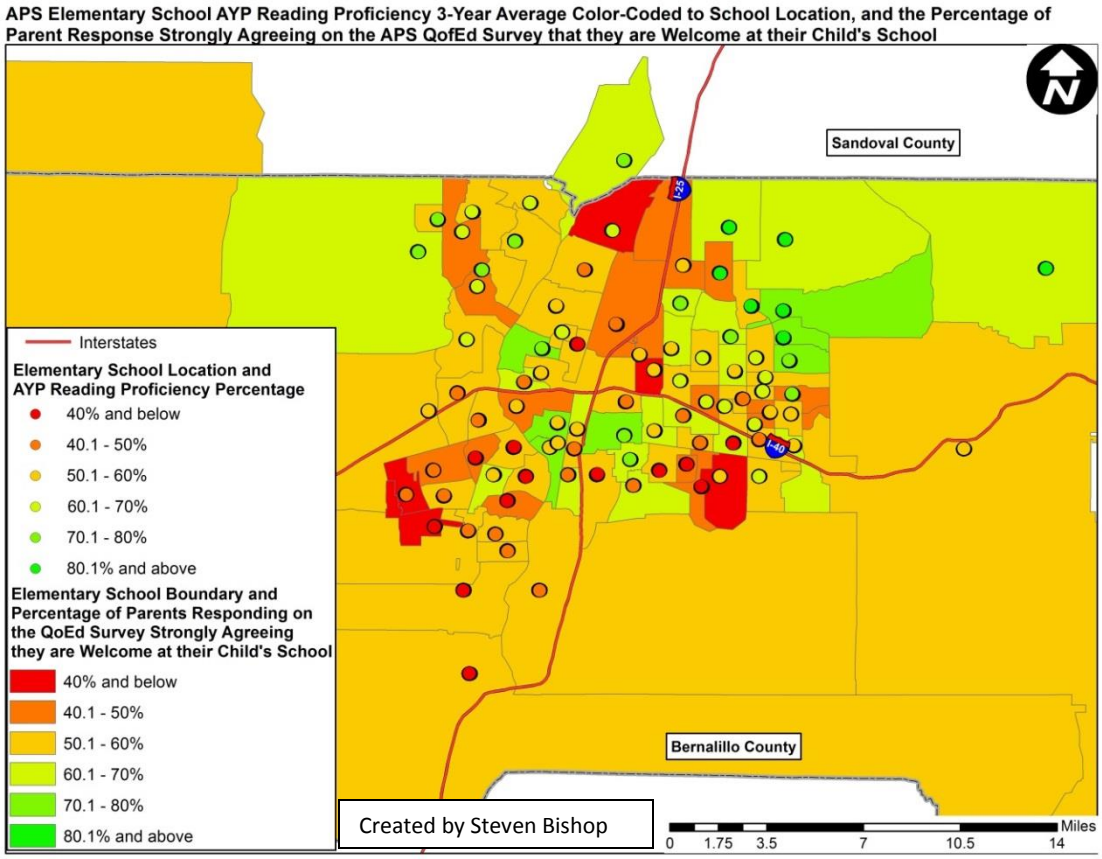
This indicator does not directly measure the strength of relationships between parents and their children, or between parents of different students, but it does add to the body of evidence that parental social capital, specifically their involvement with their children's academic life, is integral in lifting student performance.

My second parental social capital indicator, the strongly agree response rate for question 14 in the QofEd survey, supports not only the idea that higher amounts of parental involvement increase student performance (at least in math proficiency), but it also supports the idea that the more welcoming a school's atmosphere, the more likely parents are to be involved with their children's learning.



Map 4

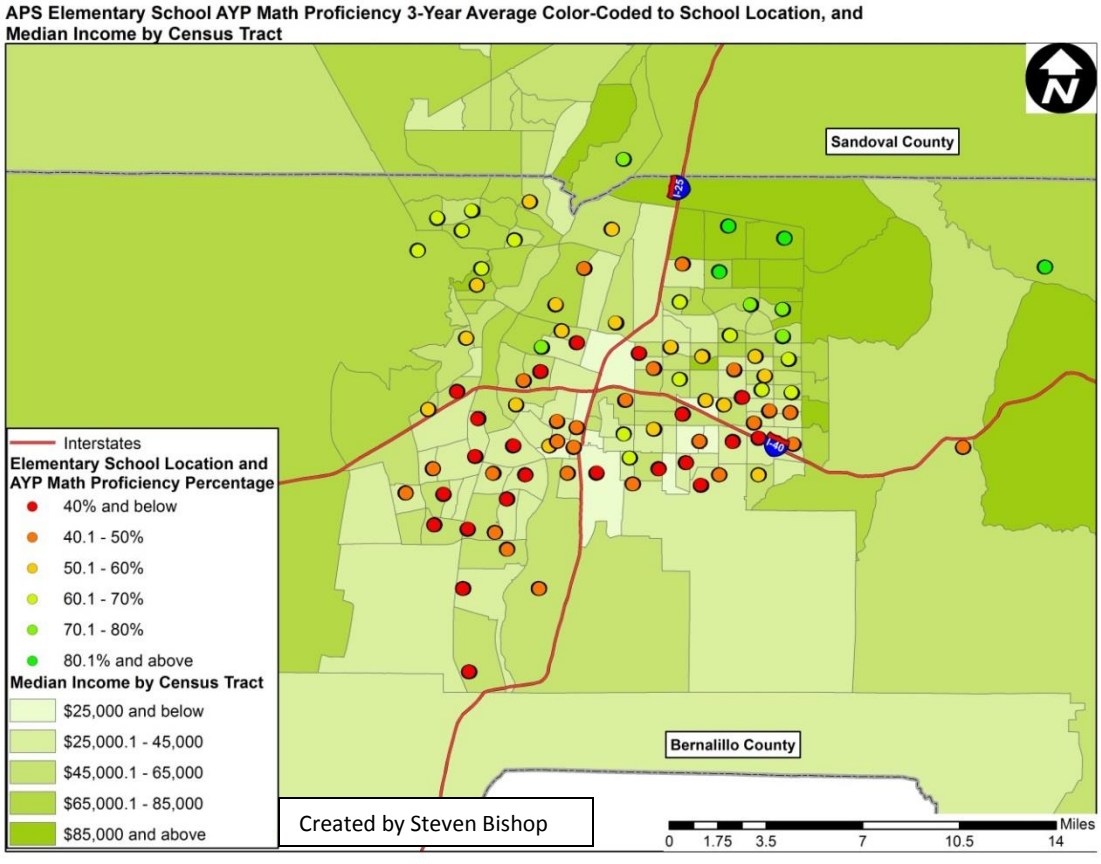
While the QofEd return rate indicator was not significant for reading proficiency averages, the strongly agree response rate for question 14 indicator does extend its significance to reading. So it's reasonable to say that school atmosphere, or a parent's interpretation of a school's atmosphere, plays a significant role in determining parental involvement in their children's lives.



Map 5

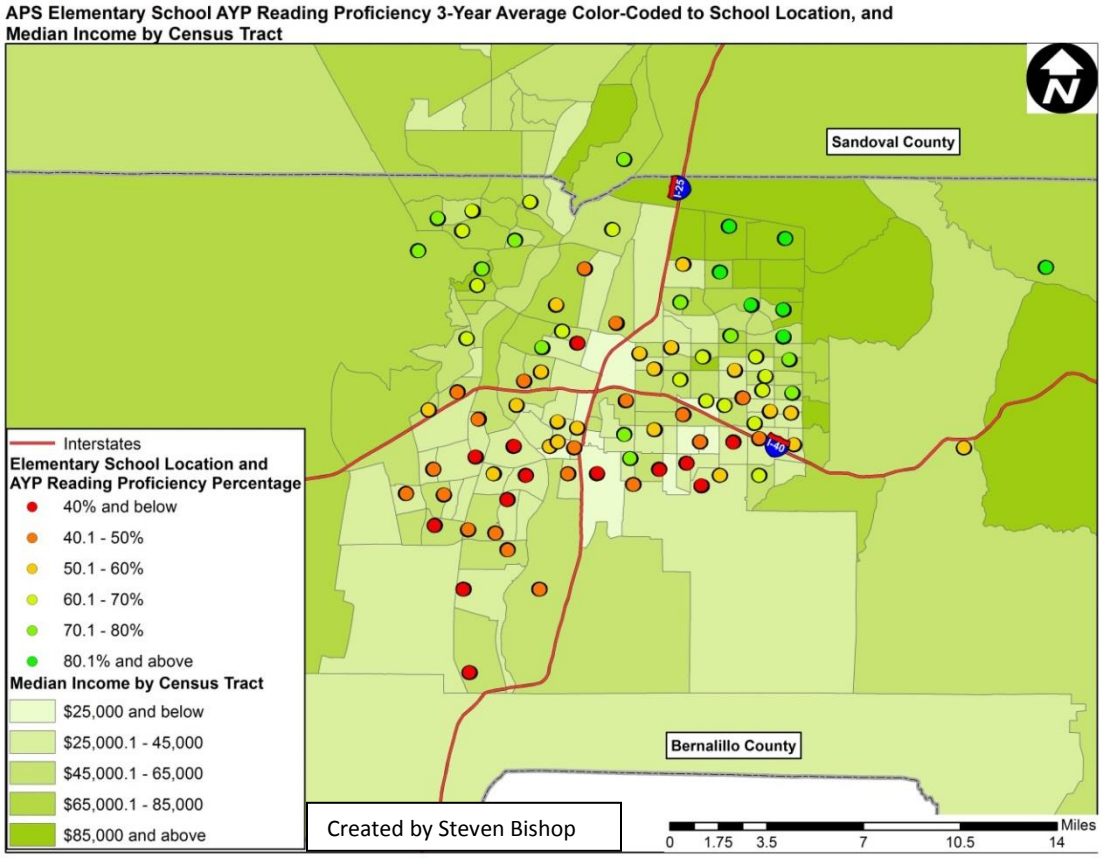
Maps 5 and 6 visually identify how schools with higher percentages of parents strongly agreeing they are welcome at their children's schools have higher proficiency rates in math and reading.

Income is a strong determinant in student success for both math and reading proficiency averages. My study does not dig into why this could be and the possible reasons behind this correlation are outside my scope of discussion. Ream & Palardy (2008) do discuss connections between the financial status of families and the amount of social capital they possess, ultimately saying that this increase in social capital due to higher socio-economic status does not necessarily mean higher utilization of their social capital. My findings might indicate that in the Albuquerque area, parents with more financial capital might be utilizing their stock of social capital more readily when it comes to involvement in student learning.



Map 7

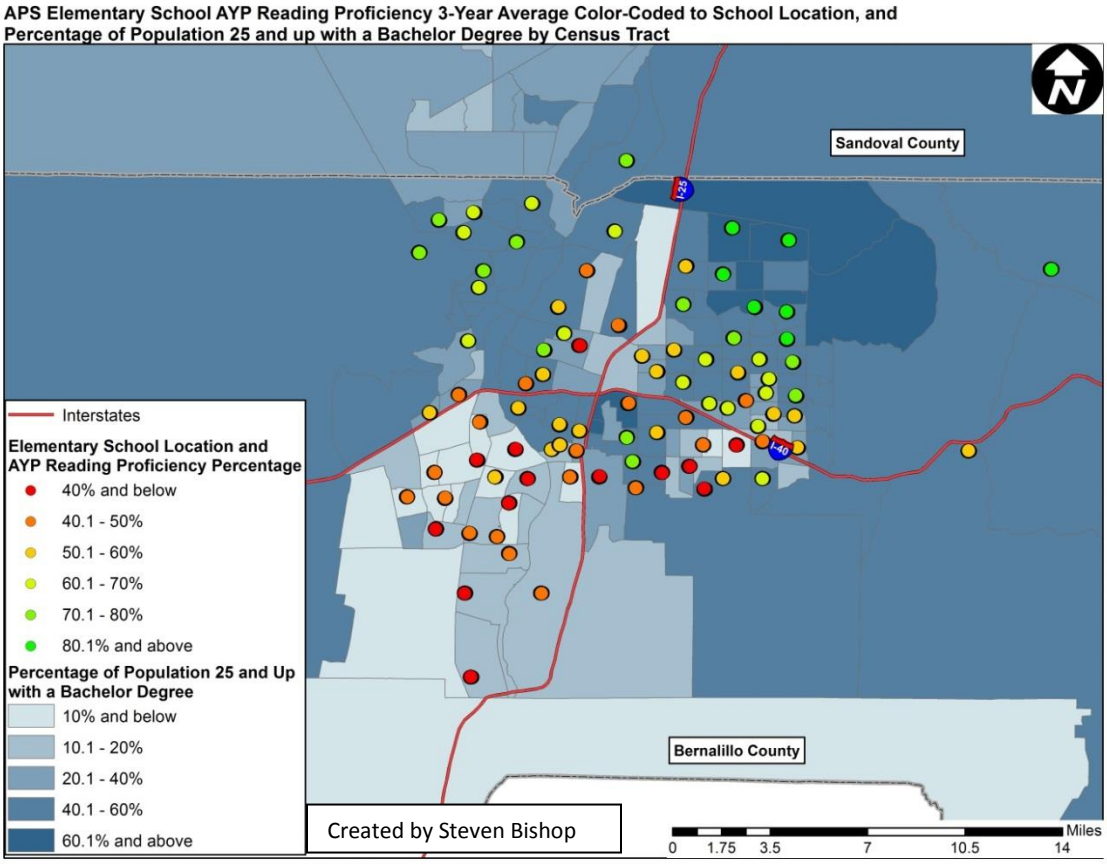
Maps 7 and 8 illustrate the statistical correlation between proficiency scores and income levels in Albuquerque.



Map 6

My analysis also points to educational attainment and employment status affecting student performance, as measured by the percentage of population 25 and up with a bachelor degree and the percentage of population 16 and up in the labor force unemployed, and affecting only the reading proficiency averages. I could take the logical leap that the more folks with bachelors in a community might mean less unemployment, as these folks are more employable, even in a slow economy. Either way, the fact that

educational attainment is affecting student performance is significant.



Map 7

If we take a little step back and look at these maps as a whole, I think we start seeing some larger issues at play. All the maps illustrate some major geographical differences in proficiency levels at elementary schools in APS. Schools south of Interstate 40 are, for the most part, performing at lower levels than schools north of the freeway. This is especially true for schools in the southwest quadrant of the city. There seems to be some structural factors existing across the city, based on location, affecting student performance. Why are students in these areas of the city performing at lower

levels on the tests determining math and reading proficiency? Why are students in schools in the northeast heights performing at higher levels than students at schools in the south valley?

One answer might be cultural. The tests measuring proficiency are universal in terms that they are not tailored to different communities throughout New Mexico, let alone the city of Albuquerque. Simple language differences might be barriers to higher proficiency levels. Questions translated from English to Spanish might have awkward turns of phrase that don't make sense once translated. Beyond foreign language translations, students in a community with significant cultural differences from test-creators might not even recognize certain phrases, sentence structures, and even word usage. Teachers might be looked upon to explain these concepts in terms culturally diverse students will recognize, but if they are constrained to teaching to the test, then the language they are forced to use from the beginning will not resonate with their students, since they cannot change the language used on these tests.

Some schools also seem to be performing well but exist in communities with low levels of parental involvement, while other schools are performing poorly but exist in communities with high levels of involvement. This again could be a result of cultural differences, and structural barriers holding students back. The basis of tests, the idea that they can accurately and equally measure student performance universally might be a fundamentally flawed idea. Using universal tests create bias against those that must take them that come from drastically different subject positions and hold drastically different worldviews. Expecting test-takers whose life experiences are significantly different from test-creators to fall in line, to learn unfamiliar language and ways of expression is short

periods of time, more often than not leads to these test-takers being pushed out of academic life at a young age, and often pulled onto an economically unstable and unhealthy track.

6. Further Research

It is imperative to delve deeper into what structural factors, internal and external to schools, might be affecting student performance. More fine-grained studies would be integral into understanding these barriers.

From this study it is clear a purely quantitative spatial approach to measuring social capital leaves too much out of the analysis. Simply counting social organizations and parks within walking distance of a school's boundary is not enough. Measuring the strength of relationship between social organizations in a neighborhood and community members and parents would be more useful in understanding any subsequent effect on student performance. Measuring who is using nearby parks, and the frequency of such use, might also shed more light on their effect on student performance. It would be useful to understand community members' attitudes and perspectives on safety and park use. It would also be interesting to delve into how student's feeling of safety at school and in their community might be linked to performance. Using surveys to record how often parents of school age children use social services within their community, and which specific services they use, would help to identify strengths of relationships between these organizations and parents in a community.

Formulating long term case studies identifying trends in communities with low parental involvement but high levels of proficiency compared to communities with high parental involvement but low levels of proficiency would be valuable. Again, using surveys and interviews of community members, parents, teachers, and even administrators would be an important method of data collection. Long term data would

be most useful, as trends over time can give researchers a better sense of what's really going on in these communities leading to higher of lower levels of proficiency.
I have found no significance between my neighborhood age indicator and student performance. As stated before, it might be more useful to conduct a qualitative analysis of this type of social capital indicator, specifically, questioning parents about how often they have moved over the course of their children's academic life, and analyzing possible statistical links between this mobility and proficiency scores.

It is also imperative to conduct research that will lead to a furthering of understanding of how exactly parental involvement is affecting student performance, and what barriers exist at schools that limit parental involvement. Again, surveys and interviews of parents and teachers and community members would be the best forms of data collection for this type of analysis. Simply asking parents what barriers are holding them back would be a simple step but I'm sure would be very enlightening. Asking teachers their attitude and approach towards parents, and vice versa with parents attitudes and approaches towards teachers, would be an important measuring device of the strength and health of parent/teacher relationships and trust levels. Understanding what barriers exist at schools that might turn away parents interested in involving themselves in their children's schooling would be integral in any attempt to boost involvement at a community school and should be further explored and identified.

In regards to further quantitative research, finding more fine-grained methods of data collection is necessary. As discussed in the beginning of my Methods chapter, MAUP is no doubt affecting my results. Using rigorous qualitative approaches is one

solution. Although there will be problems with any aggregation of data used in spatial analysis using block level census data would also help mitigate the MAUP issue.

7. Conclusion

My conclusions are limited to the validity of my data collection methods, and I hesitate to make any major policy recommendations. It is clear however, that parental involvement is a key aspect of student performance and creating welcoming school environments by utilizing community assets should be an immediate goal of not just community schools, but schools across the APS district.

For the purpose of my research I have used aspects of social capital theory as a guide in understanding how community factors influence student performance; with an eye on attempting to understand which services community schools might locate at schools in order to best serve the community, increase trust levels, and build stronger relationships between schools and parents, in order to lift student performance. I have called these aspects my 'social capital indicators.' The most significant in terms of my statistical analysis was the aspect indicating parental involvement. Certain other demographic factors had statistical significance as well, income, educational status, and unemployment.

The results of my analysis are a beginning step in determining what services and accesses to opportunities should be located at community schools. Income, education levels, and unemployment in a community are factors schools do not have the immediate power to change. But schools do have an ability to become welcoming places open to the communities they serve. From my research it is clear that parental involvement is a key aspect in student performance, and that the atmosphere of a school—how welcoming it is towards parents—plays a role in determining this parental involvement. Community schools should focus on creating an open environment for parents, encouraging them to

involve themselves in during-school and after-school activities. Schools could open playgrounds located at schools to all children in a neighborhood, locate events such as movie nights and community block parties on school campuses, encouraging teachers to attend, all in an attempt to build relationships and trust levels between schools and parents. Community schools, and schools across the district, should approach the communities they serve with an asset oriented attitude and use the resources and services at hand to build school/parent relationships and lift student performance.

Looking at the larger picture, I would hope that this research project can help open more dialogue between schools and the communities they serve. Affecting the structures that currently exist in communities across APS holding students back academically will take time. Changing performance measurements that figuratively and literally appear in languages that are completely different to students' native languages will take time. But in the here-and-now schools throughout APS can come to a better understanding of what the communities they serve have to offer; the skills community members and social organizations can bring to the table. These skills and services can be instrumental in reaching out to students who might otherwise be pushed out of academic life. These same skills and services could also be utilized to encourage further parental involvement in their children's academic lives. Ultimately this might mean more individual school autonomy, especially to pick curriculums that match the cultural environment of their surrounding communities. The most important thing to keep in mind, I believe, is that all of us interested in student performance and how schools operate, need to remember that schools do not operate in a vacuum and that communities must be a leader in any process deciding the fate of their young ones.

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9. Appendix

Table 2. School Profiles

School	Math AYP 3YrAvg	Reading AYP 3YrAvg	QoED 2012 Return Rate	QofED Question 14 Strongly Agree Return Rate	Percent Moved In Pre2k	Social Organizations	Parks	Mean Income	Population 25 and Up w/High School Diploma	Population 25 and Up w/Bachelor Degree	Un-Employed	Population Below Poverty	Full Academic Year 3YrAvg
A. Montoya	0.489	0.593	0.219	0.571	0.390	11.000	2.000	72563.000	0.191	0.424	0.071	0.114	143.00
Acoma	0.436	0.556	0.436	0.479	0.411	24.000	13.000	54043.000	0.234	0.330	0.080	0.162	92.00
Adobe Acres	0.494	0.447	0.296	0.593	0.349	10.000	4.000	42240.000	0.323	0.104	0.092	0.249	237.00
Alameda	0.518	0.609	0.559	0.358	0.343	7.000	2.000	60050.000	0.239	0.380	0.078	0.125	123.00
Alamosa	0.382	0.395	0.222	0.453	0.372	14.000	8.000	34573.000	0.326	0.083	0.118	0.258	273.00
Alvarado	0.518	0.575	0.234	0.544	0.430	16.000	5.000	54919.000	0.279	0.336	0.082	0.141	179.00
Apache	0.438	0.565	0.483	0.603	0.277	13.000	13.000	46545.000	0.234	0.287	0.107	0.217	148.00
Armijo	0.285	0.340	0.256	0.520	0.452	16.000	9.000	35367.000	0.337	0.113	0.089	0.277	195.00
Arroyo Del Oso	0.674	0.779	0.477	0.656	0.295	12.000	6.000	43288.000	0.284	0.284	0.073	0.179	173.00
Atrisco	0.468	0.524	0.269	0.630	0.404	13.000	4.000	36526.000	0.319	0.101	0.094	0.270	119.00
Bandelier	0.688	0.753	0.547	0.686	0.213	29.000	23.000	35363.000	0.133	0.438	0.077	0.283	246.00
Barcelona	0.423	0.442	0.364	0.525	0.482	9.000	0.000	39875.000	0.345	0.104	0.099	0.251	238.00
Bel-Air	0.429	0.539	0.133	0.346	0.406	31.000	20.000	45237.000	0.273	0.355	0.073	0.192	146.00
Bellehaven	0.549	0.653	0.546	0.584	0.381	22.000	14.000	40254.000	0.300	0.216	0.071	0.186	137.00
Carlos Rey	0.469	0.442	0.250	0.397	0.185	3.000	14.000	50189.000	0.168	0.099	0.095	0.189	343.00
Chamiza	0.669	0.737	0.300	0.556	0.309	15.000	10.000	71852.000	0.214	0.389	0.059	0.073	269.00
Chaparral	0.532	0.645	0.404	0.507	0.335	14.000	21.000	66359.000	0.219	0.353	0.076	0.103	319.00
Chelwood	0.424	0.514	0.213	0.578	0.379	22.000	10.000	40099.000	0.285	0.249	0.102	0.199	189.00

Cochiti	0.366	0.534	0.270	0.506	0.339	28.000	16.000	41458.000	0.248	0.332	0.073	0.242	128.00
Collet Park	0.608	0.661	0.358	0.514	0.407	24.000	15.000	55476.000	0.233	0.347	0.078	0.137	150.00
Comanche	0.582	0.665	0.277	0.525	0.413	21.000	12.000	56531.000	0.213	0.387	0.066	0.103	174.00
Coronado (2yr)	0.417	0.507	0.486	0.774	0.332	51.000	21.000	33639.000	0.226	0.265	0.072	0.276	62.00
Corrales	0.713	0.709	0.304	0.644	0.331	12.000	2.000	64321.000	0.230	0.386	0.091	0.092	222.00
Dennis Chavez	0.810	0.839	0.449	0.403	0.360	16.000	12.000	81865.000	0.174	0.499	0.064	0.054	324.00
Dolores Gonzales	0.586	0.513	0.470	0.614	0.332	51.000	21.000	33639.000	0.226	0.265	0.072	0.276	161.00
Double Eagle	0.847	0.877	0.519	0.680	0.393	11.000	6.000	90124.500	0.139	0.561	0.059	0.084	226.00
Duranes	0.469	0.426	0.178	0.632	0.372	9.000	11.000	44663.000	0.231	0.346	0.078	0.198	121.00
Edmund G. Ross	0.406	0.531	0.418	0.487	0.388	19.000	10.000	68608.000	0.179	0.443	0.067	0.116	241.00
East San Jose	0.411	0.442	0.433	0.644	0.425	19.000	8.000	33338.000	0.258	0.168	0.114	0.282	257.00
Edward Gonzales	0.428	0.424	0.614	0.469	0.250	14.000	16.000	40950.000	0.325	0.080	0.105	0.232	506.00
Emerson	0.276	0.233	0.228	0.458	0.172	19.000	8.000	27799.000	0.236	0.194	0.129	0.358	141.00
Eubank	0.344	0.437	0.192	0.559	0.353	23.000	16.000	39679.000	0.279	0.224	0.097	0.189	168.00
Eugene Field	0.474	0.468	0.559	0.555	0.261	50.000	15.000	26561.000	0.219	0.293	0.090	0.350	142.00
Georgia OKeeffe	0.780	0.842	0.292	0.729	0.363	8.000	11.000	82052.000	0.163	0.535	0.062	0.063	240.00
Governor Bent	0.510	0.600	0.279	0.647	0.364	28.000	12.000	53725.000	0.215	0.369	0.059	0.130	215.00
Griegos	0.744	0.778	0.661	0.754	0.402	16.000	14.000	53035.000	0.255	0.357	0.077	0.167	165.00
Hubert H. Humphrey	0.798	0.824	0.491	0.597	0.334	11.000	14.000	80180.000	0.159	0.519	0.066	0.548	210.00
Hawthorne	0.325	0.372	0.241	0.608	0.300	23.000	14.000	35776.000	0.286	0.192	0.085	0.211	194.00
Helen Cordero (preK-2nd)			0.413	0.618	0.250	14.000	16.000	40950.000	0.325	0.080	0.105	0.232	
Hodgin	0.366	0.503	0.426	0.482	0.266	21.000	14.000	39602.000	0.288	0.279	0.073	0.217	192.00
Inez	0.558	0.609	0.388	0.491	0.376	28.000	12.000	43436.000	0.221	0.324	0.063	0.165	177.00
John Baker	0.662	0.724	0.367	0.739	0.398	13.000	11.000	67337.000	0.179	0.445	0.071	0.093	228.00
Kirtland	0.477	0.482	0.250	0.657	0.210	6.000	20.000	33387.000	0.193	0.317	0.119	0.317	119.00
Kit Carson	0.302	0.390	0.432	0.485	0.479	9.000	0.000	39400.000	0.338	0.113	0.088	0.257	248.00
La Luz	0.377	0.358	0.496	0.531	0.383	22.000	10.000	36173.000	0.314	0.213	0.096	0.250	113.00

La Mesa	0.481	0.479	0.239	0.544	0.224	36.000	8.000	30266.000	0.249	0.215	0.076	0.299	240.00
Lavaland	0.310	0.425	0.366	0.541	0.338	17.000	15.000	43874.000	0.279	0.256	0.089	0.189	221.00
Lew Wallace	0.436	0.546	0.290	0.733	0.279	54.000	24.000	33929.000	0.202	0.363	0.059	0.283	134.00
Longfellow	0.465	0.541	0.194	0.667	0.242	45.000	11.000	33793.000	0.174	0.442	0.069	0.278	136.00
Los Padillas	0.284	0.325	0.630	0.540	0.434	6.000	0.000	48372.000	0.328	0.192	0.108	0.205	104.00
Los Ranchos	0.476	0.458	0.276	0.590	0.374	6.000	1.000	58988.000	0.239	0.358	0.089	0.125	146.00
Lowell	0.220	0.326	0.139	0.508	0.304	35.000	17.000	30318.000	0.214	0.305	0.098	0.309	131.00
Mary Ann Binford	0.387	0.444	0.186	0.532	0.294	11.000	13.000	41895.000	0.317	0.085	0.106	0.253	364.00
MacArthur	0.587	0.625	0.465	0.529	0.479	18.000	7.000	55747.000	0.284	0.323	0.086	0.145	98.00
Manzano Mesa	0.582	0.639	0.297	0.592	0.215	6.000	7.000	45930.000	0.206	0.281	0.085	0.213	234.00
Marie Hughes	0.573	0.685	0.316	0.482	0.371	10.000	9.000	69967.000	0.221	0.395	0.066	0.072	312.00
Mark Twain	0.327	0.438	0.182	0.683	0.339	36.000	13.000	38417.000	0.246	0.287	0.068	0.233	119.00
Matheson Park	0.557	0.604	0.353	0.536	0.408	17.000	11.000	57532.000	0.214	0.375	0.080	0.118	110.00
McCollum	0.475	0.617	0.224	0.494	0.423	19.000	10.000	43382.000	0.325	0.194	0.108	0.178	155.00
Mission Avenue	0.514	0.459	0.239	0.500	0.301	35.000	15.000	40268.000	0.316	0.248	0.079	0.214	133.00
Mitchell	0.547	0.612	0.245	0.544	0.388	20.000	13.000	58132.000	0.220	0.386	0.075	0.098	163.00
Monte Vista	0.665	0.751	0.268	0.724	0.250	54.000	24.000	36375.000	0.157	0.462	0.071	0.261	209.00
Montezuma	0.411	0.463	0.321	0.599	0.317	30.000	20.000	40323.000	0.253	0.349	0.072	0.216	199.00
Mountain View	0.475	0.463	0.364	0.523	0.364	5.000	0.000	48137.000	0.255	0.286	0.090	0.204	138.00
Navajo	0.377	0.427	0.450	0.574	0.281	6.000	9.000	46079.000	0.303	0.133	0.104	0.249	277.00
North Star	0.881	0.891	0.551	0.690	0.385	18.000	8.000	85238.500	0.154	0.523	0.063	0.087	269.00
Onate	0.668	0.715	0.404	0.425	0.387	19.000	9.000	55624.000	0.213	0.383	0.079	0.144	113.00
Osuna	0.687	0.740	0.664	0.632	0.363	19.000	11.000	59827.000	0.197	0.432	0.061	0.080	185.00
Painted Sky	0.513	0.558	0.738	0.519	0.318	4.000	14.000	48313.000	0.297	0.208	0.079	0.192	415.00
Pajarito	0.316	0.382	0.228	0.595	0.440	6.000	1.000	48863.000	0.334	0.159	0.103	0.197	246.00
Petroglyph	0.634	0.724	0.326	0.591	0.239	13.000	15.000	56480.500	0.247	0.347	0.093	0.103	296.00
Reginald Chavez	0.503	0.543	0.433	0.494	0.378	30.000	24.000	41631.000	0.252	0.314	0.075	0.214	152.00
Rudolfo Anaya (2yr)	0.284	0.347	0.308	0.370	0.202	6.000	15.000	45633.000	0.304	0.095	0.099	0.248	248.00

Suzie Rayos Marmon	0.379	0.445	0.322	0.514	0.294	28.000	26.000	52813.000	0.249	0.278	0.086	0.150	262.00
S Y Jackson	0.789	0.823	0.504	0.777	0.347	12.000	10.000	68309.000	0.169	0.489	0.062	0.086	245.00
San Antonito	0.821	0.875	0.366	0.684	0.466	1.000	0.000	82347.000	0.172	0.496	0.058	0.069	139.00
Sandia Base	0.433	0.573	0.167	0.400	0.168	15.000	9.000	34432.000	0.223	0.193	0.083	0.277	175.00
Seven Bar	0.550	0.659	0.425	0.513	0.244	5.000	14.000	61395.000	0.237	0.337	0.085	0.089	351.00
Sierra Vista	0.618	0.665	0.269	0.518	0.221	10.000	14.000	70907.000	0.206	0.332	0.075	0.106	323.00
Sombra Del Monte	0.443	0.580	0.367	0.610	0.411	28.000	16.000	51632.000	0.227	0.353	0.076	0.117	164.00
Sunset View	0.667	0.694	0.411	0.500	0.142	6.000	11.000	73197.000	0.214	0.334	0.062	0.066	183.00
Tierra Antigua	0.639	0.734	0.369	0.644	0.335	3.000	17.000	55931.000	0.266	0.286	0.064	0.166	187.00
Tomasita	0.330	0.447	0.157	0.561	0.317	20.000	17.000	35854.000	0.321	0.154	0.102	0.218	152.00
Valle Vista	0.367	0.392	0.451	0.583	0.409	14.000	11.000	38173.000	0.283	0.219	0.075	0.242	205.00
Ventana Ranch	0.606	0.728	0.306	0.556	0.146	2.000	12.000	70247.000	0.195	0.333	0.077	0.103	308.00
Wherry	0.277	0.320	0.396	0.488	0.190	22.000	14.000	27176.000	0.241	0.161	0.116	0.349	155.00
Whittier	0.290	0.375	0.310	0.596	0.199	37.000	22.000	31638.000	0.219	0.287	0.098	0.311	142.00
Zia	0.584	0.599	0.363	0.641	0.353	44.000	16.000	40640.000	0.231	0.374	0.060	0.222	157.00
Zuni	0.612	0.672	0.289	0.526	0.435	48.000	19.000	50855.000	0.228	0.367	0.070	0.149	187.00