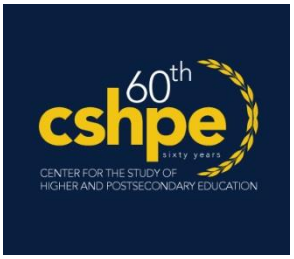

Community Resources and Educational Opportunities in Detroit:

Baseline Assessment of Academic Progress

Using the 2005-2009 Cohort of High School Students

Final Report, March 2019

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Abstract

With many companies accepting only job applicants with some college education, the past two decades have shown that k-12 school systems need to prepare students to not only complete a high school education, but also to be academically prepared to enroll in college credit courses. Urban areas often have higher drop-out rates and low rates of academic readiness for college. Education social justice issues, poverty and inequality in educational opportunity across school systems can contribute to lower levels of academic achievement and success in high school and college in urban areas. It is evident that there is a need for new approaches that will help urban students with academic achievement. This research report contributes to this need with a community resource theory of change applied to a Detroit Public Schools (DPS) case study of high school students.

In southeast Michigan, there is much concern about improving the educational achievement of students in the Detroit Schools to both graduate on time and be college-ready. In support of this goal, the Detroit Schools Higher Education Consortium (DSHEC) was created; its members included the Detroit Public Schools and seven Michigan colleges and universities. The Consortium shared research and best practices to improve the quality of education for the City of Detroit students. The research discussed in this report was one of their projects.

This baseline assessment research study examines changes in Detroit education from 2000 to 2010, including policy and demographic changes which caused some schools to close. We also examined the impact of community resources on educational opportunities using a 2005-09 student cohort database, Census data, and information on community resources. We examined three student outcomes: on-time graduation rate, grade point average (GPA) and school transfer during high school. The study proposes and tests a community resources theory of educational opportunity supporting Detroit students. The resulting analyses suggest strategies for further continuous improvement efforts for academic student success. In addition, qualitative school-based assessments and evaluations complemented the quantitative analyses in support of community-school partnerships.

To develop a baseline assessment of the factors that contributed to high school student success, the University of Michigan's School of Education worked with the DPS to collaborate on a 2005-2009 student cohort database. The student database included schools attended, academic performance, achievement tests results, and courses taken merged with Census and community resources data. This research approach provided an extensive analysis supporting a community resources theory of change.

Regression analyses showed statistical significance for community-based organizations providing support of student educational outcomes. The presence of community organizations was positively associated with both on time high school graduation rate and GPA. However, for the outcome of student transfer to another high school, there was a negative association with the number of community organizations. More results are discussed in the executive summary. The appendix includes the regression analyses. Of additional interest, graphs showing the variation between and within schools for the state-level achievement tests are also included in the appendix.

The results support the community resource theory of change that leads to recommendations that include more community-school partnerships in neighborhoods. The baseline assessment provided by the 2005-2009 student cohort database yielded compelling evidence that community resources contribute to student success including on-time graduation and higher GPA. It is recommended that this research is followed up with additional studies in Detroit.

Special Note for this 2019 Final Report

The analyses associated with the baseline assessment of the 2005-2009 student cohort database were conducted in 2013, with a draft report written and reviewed in 2013 and 2014. The analyses in this report were shared with and used by the DSHEC Consortium. However, this report was not formally released as a final report. With the solicitation of a book for the Palgrave book series on *Neighborhoods, Communities, and Urban Marginality* by its editors, and some analyses in this report providing a basis for the forthcoming book, *Detroit School Reform in Comparative Contexts: Community Action Overcoming Policy Barriers* (Palgrave, expected 2019) by Edward P. St. John and Feven Girmay, the decision was made to release this research report as a final report. Minor editing of the draft 2013 report includes relabeling the draft report as a final report with a publication date of 2019, and revision of tables to ensure that statistics related to small sample size groups were not reported. In addition, the title page and acknowledgements were revised, and a suggested citation, an abstract and this note were added.

Edward P. St. John was principal investigator for the research reported. For this research, as well as for good practice, we note that this report does not represent official policies of partner organizations.

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Executive Summary

This baseline assessment study examines change in Detroit education from 2000 to 2010. We also examine the impact of community resources on educational opportunities using a 2005-09 student cohort database, census data, and information on community resource. The study proposes and tests a community resources theory of educational opportunity.

The Detroit Context

From 2000-2010, there were three distinct periods of reform: a mayoral takeover of schools coupled with state control for financial reasons; a brief period of local control through governance by a newly-elected school board; and a more recent period of state control due to worsening financial conditions throughout the decade. Like most other urban districts, Detroit had extensive development of new charter schools, along with school closures attributable to population decline, budget deficits, and low test scores. Using publically available data on schools, population, and student trends, we reached the following conclusions:

- *Population Change:* Analyses of changes in the population during the decade showed decline in population, increased poverty, increased unemployment and other population shifts associated with decline in educational attainment in national studies.
- *School Change:* Analyses using national data sources found that newly opened charter and public schools did not differ in achievement test scores from older schools.
- *An Emergent Challenge:* We hypothesized that the *urban education swirl* of students and schools may have been detrimental to educational achievement and student success in Detroit high schools during the decade.

Community Resources Theory of Change

Extant theories of change were not sufficient for building an understanding of the roles community organizations currently play, along with the potential role of community-school partnerships in promoting educational outcomes. Economic theories and econometric methods have been used to examine links between pockets of poverty and educational outcomes in cities, while social and educational attainment theories have guided studies of high school and college outcomes used to inform educational policy. We constructed a theory of community resources and community outcomes that carried forward and further tested assumptions in the widely used frameworks while also building a foundation for examining the role of community organizations in educational improvement. Our logical model considered:

- *Student Background* using indicators related to socio-economic status and race/ ethnicity consistent with both social attainment and economic research tradition.
- *Community Resources,* combining community-based indicators using zip codes for *base communities*, an approach consonant with economic analyses, and

community organizations generated from an automated version of the yellow pages, including numbers of hospitals, colleges, churches, recreation centers, and social service centers within base communities (our initial test of a community resources model). We also considered concentration of poverty within high schools (as a way of examining school differences) and whether or not students transferred from their first high school (as means of testing the effects of urban education swirl) in analyses of attainment and achievement. We proposed two intermediate hypotheses related to the role of community organizations:

  - *Cultural Type*, presence of organization with missions aligned with social support of families creates social cohesion promoting educational attainment in base communities.
  - *Cultural Strength*, the total number of community organizations regardless of type provides social cohesion in support of educational attainment in base communities.
- *Student Achievement*, as measured by both achievement tests (in middle and high school) and math courses taken during the first year of high school.

We used this logic as a basis for examining how community organizations influence outcomes in both quantitative and qualitative studies. The quantitative models examined three outcomes:

- *On-time graduation* (whether or not students graduated in four years, a dichotomous outcome appropriate for logistic regression), as an indicator of educational attainment;
- *Grade point average (GPA)* (a continuous ordinal variable appropriate for ordinary least squares [OLS] regression), as an indicator of achievement associated with college success;
- *Transfer during high school* (whether or not students transferred at least once after entering high school, a dichotomous variable appropriate for logistic regression), as a further analyses of the consequences of urban swirl.

Educational Opportunity for the 2005-09 Cohort

The report provides descriptive statistics for student background, community resources, and student achievement as well as simple versions of regression analyses focusing on direction (positive or negative) of significant associations. The appendices provide more details related to statistical analyses and regression models. The descriptive analyses in the body of the report focus on change in key indicators related to SES, community resources, and achievement in both middle and high school. The analyses of educational opportunities were broken into two parts, one focusing on community resources, the second on the role of achievement indicators.

Community Resources: Our findings from the regression analyses included:

- Women were more likely than men to complete high school and to have higher grades.
- Being from a low-income family was negatively associated with on-time graduation and GPA.

- As predicted by prior studies, increased poverty and unemployment within base communities was negatively associated with both attainment and achievement.
- Attending high poverty high schools was negatively associated with both on-time graduation and GPA.
- Transfer was negatively associated with both on-time completion and GPA, a further indicator of the negative consequences of urban education swirl.
- Poverty indicators at the individual, school, and community levels were positively associated with transfer, indicating that the poorest students in Detroit were the most heavily subjected to the negative consequences of urban education swirl.
- Presence of community organizations made a difference in all three educational outcomes:
    - The numbers of churches and community service center centers were positively associated with on-time high school completion and GPA, providing evidence to support the cultural type hypothesis about mission alignment of community organizations.
    - The total number of community organizations was negatively associated with transfer, indicating communities with strong social cohesions improved educational achievement, probably as an artifact of mitigating school closures and urban education swirl.

Achievement: Consonant with many other studies of urban schools, we examined the influence of middle and high school achievement on high school outcomes. Some of the key findings:

- Proficiency on tests in middle school was positively associated with on-time completion of high school and high school GPA, although the significance of this association was weaker when high school achievement was also included in the analysis (final step in sequential regressions of attainment and GPA). Because a high percent of students were not proficient on the MEAP (middle school) tests and because of the success of the individual MEAP test scores predicting both the MME (high school) test scores and the high school GPA, the MEAP test scores need to be more aggressively used to mentor low-performing students in academic studies by providing scheduling time in both middle school and the freshman year to support these students in a successful transition to high school and graduation.
- Proficiency on high school tests had a more substantial impact on on-time completion and GPA than did high school math courses taken or completed during the first term of the freshman year.
- Among the MME scores that measure high school achievement, only proficiency in math was significant in predicting transfers. However both the grade in the first math course in high school and the overall high school GPA were indicative of transfers. . This suggests that the urban education swirl (as measured by transfer) was an artifact of both factors related to poverty and grades, especially in the freshman year.
- Associated with failing grades, were unexcused absences, indicating that an educational process related to reducing the average number of absences is needed.

The community resources and schools can help develop a learning culture that encourages students to attend school and take responsibility for their own learning.

Pilot Test of Actionable Research Supporting Community-School Partnerships

The findings on the quantitative analyses of the 2005-09 cohort indicated that community organizations could have a substantial positive influence on educational outcomes in Detroit. At the present time, numerous community organizations, businesses, and other organizations are engaged directly in school reforms in Detroit, further demonstrating the potential of community-school organizations.

Our model of actionable research includes assessment studies supporting efforts to understand challenges in schools, technical assistance for community and school groups on using inquiry-based approaches to social problems, and evaluations of interventions crafted to address emergent challenges in schools. We argue this approach has substantial potential in educational improvement by bringing university researchers into support roles for community-school partnerships that seek to improve the quality and extent of student learning during an extended school day achieved through restructuring with and after the formal school day.

As a pilot test of this method for providing research support for community-schools partnerships pursuing goals related to more and better learning time in schools and their support organizations, we responded to a request from a partnership organization for research support. In City Engineering Academy we conducted observations and interviews, focusing on changes they identified related to test scores in math and language arts. In addition to reviewing scores and proposals for reform, we interviewed teachers in the school to build an understanding of the underlying causes of current difficulties and to provide further analysis of the feasibility or alternative approaches to improvement. The analyses provided important insights for the case study school:

- *Math Proficiency*: The challenge in math related to students' difficulties with Arithmetic undermine students' ability to learn in Algebra and other newly required courses. We provided technical assistance with a pilot test of a math intervention provided by a community educator and have subsequently been providing research support informing professional development for teachers, designing new pedagogical opportunities and instructional methods, organizing research on these new methods, and informing ongoing improvement.
- *Literacy Proficiency*: The challenge in language arts was also related to basic difficulties teachers facing in meeting the new standards while working with students with basic literacy needs related to decoding and comprehension. There was conflict within the school and on a community advisory council regarding the value of critical literacy and basic phonics methods. After presenting preliminary findings on this topic, we were invited back into the school to support inquiry related to identifying better approaches to teaching language arts.
- *Social Support*: Based on interviews, we discovered an underlying problem related to social processes in the school. The school had chosen a disciplinary method that was heavily dependent on teachers working with students assigned to them across the school day. Frequently disciplinary challenges disrupted

instruction because students were referred to their mentor teachers during one of his/her regularly scheduled classes. While there are potential ways of restructuring teachers' responsibilities in discipline, a topic that moved forward within the school governance process, we emphasized the need for social support for students in their communities, given the many local challenges facing them. As a follow up, we are working with the schools' local area access network to help identify possible strategies for engaging community organizations in providing social support for students, as an alternative means of expanding learning time.

This experience with assessment in one school not only led to a continuation of collaboration within the school, even as it steered through other organizational conflict, but it has also opened up conversations with other LCANS community organizations about supporting and informing community-based interventions. Reflecting on this case and subsequent development, it is apparent that:

- *Trust* is a crucial element in the process of building strong relationships between university-based researchers and practitioners in both schools and community organizations engaged in reform. Research provides *trustworthy information* when it focuses on critical issues raised by the school rather than merely promoting reform agendas advocated by university educators, as is the case when reform focus is on bringing innovations to scale.
- It is appropriate to organize research to *support community-school partnerships* as they identify and test alternative strategies for improving the quality and amount of student time engaged in learning content and providing social support for students and families.
- The *actionable research approach*—assessment studies, technical association and evaluation supporting learning within schools and community organizations—provide means of building a partnership.

Recommendations

Recommendation 1: Community-School Partnerships. The baseline assessment study provides compelling evidence that community-based organizations, especially community centers and churches, provide support of student educational attainment as a consequence of their missions, which are aligned with community development and well being. In recent years, community organizations in Detroit have built partnerships with schools, which provides potential to support more and better learning time related to improvement of student achievement and support services promoting college preparation and access, new enterprises within the mission of supporting educational improvement. We recommend the universities in the Detroit area work with emerging community-school partnerships to support and inform development of new strategies to promote educational uplift.

Recommendation 2: University Research Support for Emerging Partnerships. University researchers can support development of community-school partnerships as means of promoting more and better learning time through assessment studies focusing on the causes of barriers to learning that emerge in schools in the community context and technical assistance with the use of

action inquiry to solve these emergent problems through new strategies that promote more and better learning time for students within their communities and schools. We recommend that university researchers develop partnership agreements with school-community partnerships in efforts to improve student learning time, using assessment, technical assistance, and evaluation as means of promoting evidence-based learning, with both educators and activists engaged in the partnerships. We further recommend that a culture of a continuous improvement classroom be considered for Detroit Schools, one that encourages a student-focused culture, where both the teacher and the students have the same common goals of learning, leading to more independent learning by students.

Recommendation 3: Follow-Up Studies of the Impact of Community Resources on Educational Opportunity. While this baseline assessment provides substantial evidence confirming a community-resources theory of educational reform, the methods can be improved. Specifically, the study methodology, supplemented with information on interventions by community-school partnerships and tracking information following students into college, can provide useful evaluative information on the impact of community-school partnerships now in development. We recommend that improved studies of student cohorts be conducted in 5 and 10 years to evaluate the impact of current reform efforts in Detroit.

Recommendation 4: Collaboration on Future Grants and Projects. The framework developed in this report provides a foundation for moving forward for future projects with research supporting educational improvement in Detroit, especially projects involving research partnerships between research universities and schools engaged in reform. We encourage collaboration on future project initiatives.

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1. Introduction

Starting in 2009-10, the Detroit education community entered a new era of cooperation with Skillman, Ford and other foundations supporting reform initiatives by the United Way and local access networks (LANs) for public, private and charter schools serving low-income students. These efforts are coordinated by Excellent Schools Detroit in collaboration with Detroit Public Schools (DPS), charter schools, Education Achievement Authority (EAA), and Catholic schools. Improving high school achievement and graduation rates and preparing more students for college success are the central goals of this initiative.

The idea of improving the college readiness of high school graduates has become a major theme in educational policy during the past decades, as states have raised requirements for high school graduation and introduced market systems. Studies of these reform initiatives document serious problems, however, especially in urban communities: charter schools have not out-performed public schools; school funding has declined in many urban areas, including Detroit; and there were declines in high school completions rates for a period of time following implementation of new requirements (Ravitch, 2010; St. John, Daun-Barnett, & Moronski-Chapman, 2013). There are some good signs, including a rise in both the participation rates and math scores on the SAT in the 2000s and improved graduation rates this decade. But the most serious challenges continue to be in urban communities, given the difficult economic conditions for low- and moderate-income families in America's cities. This report provides a baseline assessment of education in Detroit, with a focus on the role of community resources. The baseline assessment project was initiated as part of the planning project for the Detroit Schools Higher Education Consortium (Text Box 1.1).

Text Box 1.1: Statement of the Detroit Schools-Higher Education Consortium

Our History

In Spring of 2009, facing financial challenge and reconstitution, educational leaders of Detroit Public Schools and institutions of higher education began to discuss how a collaborative partnership could support any effective reform initiatives in Detroit. The following year, through a planning grant from the Ford Foundation, the DPS-Higher Education Consortium was established. Subsequently, the Consortium has worked on shaping a sustainable organizational structure that will impact the policy and the educational system in Detroit.

About Us

The Consortium is a partnership between Detroit Public Schools and seven institutions of higher education (*Eastern Michigan University, Michigan State University, Oakland University, University of Detroit Mercy, University of Michigan-Ann Arbor, University of Michigan-Dearborn, and Wayne State University*). In addition, the newly formed Education Achievement Authority, Excellent Schools Detroit, Data-Driven Detroit, Wayne RESA, and United Way are members.

We share a firm belief that every child in Detroit should receive a quality education. The situation is urgent. The city's future depends on the education provided for its children.

Our Mission

Through leveraging the DPSHEC's collective resources, we will contribute to the renewal and revitalization of Detroit's stature as a world-class city. We are committed to quality education for Pre-K-20 students in the city of Detroit, by expanding opportunities for college- and career-readiness.

The Consortium will:

1) Contribute to and disseminate research that informs effective teaching/learning practices and policies for student college-readiness.

2) Assist in transforming local school cultures to ensure college readiness and global competitiveness through system implementation of effective practices.

3) Advocate for effective, high-quality professional preparation and learning of teachers, administrators, and all staff.

The Consortium's mission is shaped by the idea that a substantive partnership between DPS and institutions of higher education can be mutually beneficial. By sharing data, communities and organizations can become better informed, and then can make better decisions. Collectively, we can become strong advocates, contributing research that informs the agenda for reform, assisting in the transformation of local school cultures to 21st century, college ready environments, and pressing for high-quality teacher education and training.

When writing this report, we recognize that educational problems are multiplied in urban areas with high concentrations of poverty. In a recent report from Brookings Institution, Kneebone, Nadeau, and Berube (2011) provided an analysis of statewide neighborhood poverty using the 2005-09 American Community Surveys (ACS) and the 2000 Census. Their findings included:

- The number of extreme poverty neighborhoods increased by one-third between 2005-09
- Poverty nearly doubled in Midwestern cities between 2000 and 2005-09 (and Detroit was ranked as one of the major cities experiencing the largest increases).
- These shifts altered the concentration of extreme-poverty neighborhoods to include some neighborhoods with high percentages of whites and high school graduates.

These conditions are especially evident in Detroit, the largest American city to file for bankruptcy. This report develops a baseline assessment of change in Detroit's population, educational systems, and community resources during the first decade of the 21st century to provide a basis for understanding the ways community resources might be better used to support school reform. We used analyses of Census data, common core data (CCD) on schools provided by the National Center for Education Statistics, student-tracking provided by Detroit Public Schools (DPS), and information on community resources for a quantitative assessment. These data resources are used to document patterns of change (i.e. Detroit Context) and to test our community-sources theory of change, focusing on the impact of community resources on high school outcomes. We also developed a qualitative case study of a school engaged in reform to illustrate how a community-resources approach to reform might be used to support reform in

Detroit high schools. The assessment is presented in six parts, including this introduction. Subsequent sections are:

- In Section 2 we examine the Detroit context, including changes in governance and policy between 2000 and 2010, demographic changes, the opening and closing of schools as the market model was introduced in the city during the decade, and evidence about school achievement in new and old schools. These analyses rely on 2010 Census, 2005-09 American Community Survey, and Common Core Data on Detroit Schools.
- Section 3 presents a community-resources model of educational improvements, a framework we examine using both quantitative and qualitative data. We develop a theory-based framework for examining the impact of community sources—the demographic conditions and community organizations in communities—on student achievement. Analyses using this framework provide insight into the ways partners in the nonprofit and educational research communities can support educational improvement. Specifically, this framework provides a logical and research-based approach for building an understanding of the ways the goals of more and better education might be achieved in urban high schools in collaboration with community and university partners.
- Section 4 present quantitative analyses of the role of community resources. Using multiple data sources, we construct a 2005-09 student cohort database and use it to examine how student background, student transfer (partly a consequence of schools opening and closing in urban communities), and student achievement on standardized tests influence high school completion. Our findings shed further

insight into the reasons why the shift of market systems has fallen short of its espoused intent, at least in Detroit.

- Section 5 presents a qualitative case: an assessment of educational challenges facing a Detroit high school, including possible remedies and opportunities for change. The case provides an illustration of the ways nonprofit organizations and universities can partner with high schools to provide more and better educational opportunities.
- Finally, Section 6 provides conclusions and recommendations for using a community-resources approach to educational improvement in Detroit.

2. Detroit Context

Education reform occurs in situated contexts—urban, suburban, and rural. For generations it has been evident there are differences in educational outcomes across locales. In the early twentieth century, cities generally provided the best education because they had greater resources (Ravitch, 2010; Reese, 2005). However in the late 20th century the momentum shifted, with suburban schools rising to the top with comprehensive high schools that provided diverse pathways for students. Most urban school districts were left behind with a mixture of school types—vocational, regular, and college prep—that were not flexible enough to respond to the increasing high school graduation standards during the past three decades. During the past decade some cities, especially New York and Chicago, have used community resources as part of comprehensive market-based reforms. But other cities, including Detroit, have been left behind as the concentration of poverty overwhelmed efforts for reform in public and charter schools in their newly emerging markets. We examine an alternative theory of urban education reform: that community resources—the local community's economic and social resources, supplemented by community organizations like churches and community centers—provide contexts for school improvement that have not been sufficiently utilized in efforts to improve schools.

As context for introducing a community-resources model of urban school improvement we examine the ways public policies have changed in Detroit and the State of Michigan, changes in demographics, the opening and closing of schools. We argue that the educational-standards and market rationales for reform are too simplistic because they do not adequately consider the context, including the roles of concentrated poverty and community-based organizations in the

reform process. The reforms promoted by the state of Michigan and the city of Detroit have emphasized financially-constrained methods of increasing standards in Detroit, a city with declining resources. But changes in educational policy, demographics within the city, and the opening and closing of schools present a context for a community resources approach to school reform that seeks to provide more and better learning for urban high school students.

2.1 Policy Changes Affecting Detroit Schools in the 2000s

Prior to 2005, the year in which our cohort entered their freshman year of high school, there were several key educational policy changes in Detroit that may have influenced the achievement and learning outcomes of the 2005-2009 cohort. Certainly the successive waves of reform in the 2000s were predicated on the assumption they would improve achievement, but other contextual factors were not appropriately addressed. After noting policy changes that could have influenced this cohort, we briefly describe the changes made during and after the period in which our cohort was in high school.

It is useful to understand the policy context surrounding the 2005-2009 cohort. Specific reform measures have resulted in a dramatically different educational landscape unimaginable just a decade ago. The policy changes during this period primarily dealt with governance, but were an artifact to financial issues in disputes with the State of Michigan. We start with an overview of the relationship between the achievement and learning outcomes of the 2005-2009 cohort and changes in governance during that period and follow with an overview of related financial issues.

Educational Policies: In the years preceding our cohort's freshman year, we identify two educational policies that influenced changes in school governance: mayoral control and lifting of

the charter school cap. In 1999, under Michigan Public Act 10, Governor John Engler (R) replaced the local school board with a mayor-appointed school board in Detroit. The city of Chicago had been the first to implement mayoral control as a measure to reform education; reformers in Michigan looked to Chicago as an example. However, mayoral control in Detroit did not play out in ways reformers had expected. In Chicago, mayoral control resulted in an increased number of charter schools and the involvement of foundations that put significant investments in these charters (Reckhow, 2010).[1] Detroit did not experience charter growth and lost most of its major foundation grants from 2000-2005 (Reckhow, 2010). In Detroit the mayoral takeover was politically based and did not have the same theory of community-based control as the Chicago reform (Franklin, 2003). In Chicago, parent advocacy groups had been a catalyst for reform. The model could not easily be transported from one city to another (Mirón & St. John, 2003).

Reformers in Detroit who looked at Chicago as a model for breaking apart the centralized bureaucracy of public schooling may have relied on a weak policy action theory. The mayoral control meant more state power and less local control. However, the year the state appointed Superintendent Kenneth Burnley, marking the beginning of the mayoral control era, Michigan had reached its charter cap. Thus, Burnley did not envision building charters but rather used a $1.5 billion bond for constructing new schools and renovation projects. Meanwhile, charters that had quickly been formed outside of the district drew thousands of pupils from Detroit and effectively dried out DPS funds.[2] As student enrollment declined, Burnley was forced to close down schools and cut jobs, and the schools he did create or try to improve were not enough to compete with the rising appeal of charters outside of the district. The decline in student

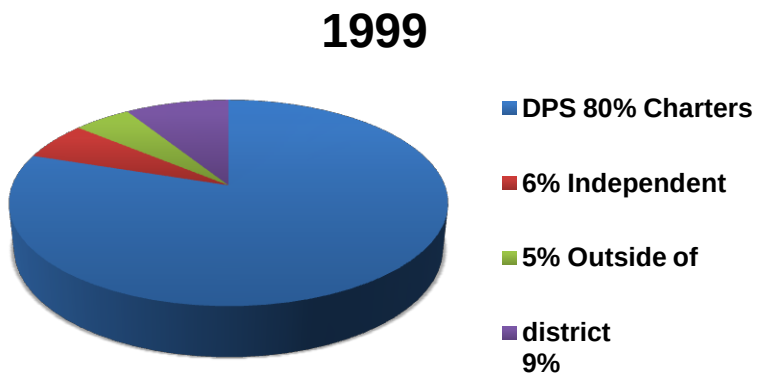
[1] New York City, Oakland, and Boston as well.
[2] In Michigan, funding per pupil follows where the student goes.

enrollment challenged Burnley and his team's control of the budget and its predictability. Burnley left in 2005 with a $189 million deficit. Mayoral control ended with Detroiters voting for the return of the local school board during the November elections in 2004.

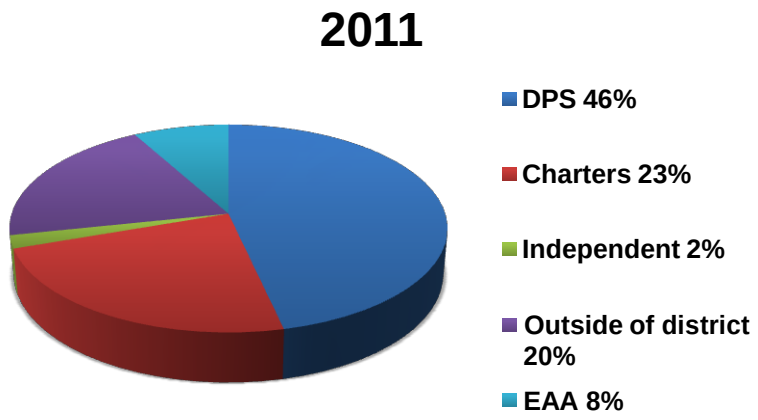
In 2003, however, reformers and policymakers acknowledged the charter problem in Detroit and, after much political infighting, Detroit lifted the charter cap. With this change in policy, we see a tremendous increase in charter schools in Detroit. In 1999, among Detroit's school-going children, 80% attended DPS and 6% attended charters; in 2011, only 46% attended the DPS while 23% attended charters (Figure 2.1). At the end of 2012, Detroit reportedly ranked number two nationwide in percentage of students attending charter schools (New Orleans is number one).[3] A critical question to ask is: How did the charter school movement in Detroit impact student outcomes? To address this question we first examine achievement in new and old schools and the role of transfer in student outcomes (Section 4). Disruption of students' education pathways can indeed be a predictable consequence of rapid movement to market systems of education if there are not adequate resources for new or old schools.

[3] The seventh annual report by the National Alliance for Public Charter Schools looked at the percentage of students enrolled in charter schools in large to medium sized cities using enrollment data from the 2011-2012 school year. Detroit enrolled 41% and New Orleans enrolled 76%. See Jennifer Chambers, "Detroit No. 2 in Percentage of Charter School Students, National Report Finds," *Detroit News*, Nov. 15, 2012.

Figure 2.1: The percentage of school-going children in Detroit enrolled in schools available to the district 1999 and 2011



Total school-going children in 1999: **194,255**



Total school-going children in 2011: **126,157**

Source: Data Driven Detroit, "Detroit System of Schools, Then and Now," (presentation, Detroit Schools-Higher Education Consortium Meeting, Detroit, MI, October 15, 2012).

The proliferation of charters was one issue, but it also appears that mayoral control (while it failed) began a trend of ever more state intervention. Structurally and politically, the 2005-2009 cohort contended with a changing educational landscape, including opening and closing of schools, financial crises, and poor achievement on mandatory tests.[4]

Financial Issues Influenced Change in Governance: After the DPS returned to a local school board, almost immediately debates about mayoral control reemerged. The rationale was that if Detroit had any hope of attracting federal money, mayoral control would signal that the city was positioning its school system for sweeping change. In the meantime, the school board elected a new superintendent, Connie Calloway. Calloway, however, appeared to work more closely with Governor Jennifer Granholm (D) than the school board by establishing the governor's "small schools initiative" in five schools. However, not much was done with this before the school board fired Calloway at the end of 2008. At this point, the *deficit had reached $400 million*, and State Superintendent of Public Instruction, Mike Flanagan, declared a state of financial emergency and recommended that Granholm appoint an emergency financial manager. Sadly, most of the debt had accrued during the period of Mayoral take over, so the newly created DPS School Board had limited opportunity to influence change in schools given the state's response to the deficit.

The appointment of an emergency financial manager (EFM) changed school governance once again in the DPS. In some ways, it was an extension of mayoral control in the sense that the EFM significantly decreased the power of the local school board and intentionally welcomed

[4] While this report provides information on student achievement and DPS-sponsored charters, some charter schools were not included in the common core data. Further, our student record data for the cohort includes only students enrolled in DPS, a shrinking percentage of Detroit students.

sweeping change. In essence, the advent of the EFM era not only marks the fragmentation of school control (who controls what) but also the radical fragmentation of the school system. As Table 2.1 shows, by 2011 there were two new types of schools: self-governing schools and Education Achievement Authority (EAA) schools. In particular, the EAA, a newly formed statewide school district designed to turn around the lowest performing 5% schools, exemplified the kind of sweeping changes to dismantle traditional public schooling that were envisioned by reformers in the mid 1990s. More and more, both during and after our 2005-2009 cohort began school, there was evidence of more state intervention and less local control.

Table 2.1 Detroit Schools by Types, 1999 and 2011 Comparison

1999		2011	
School types	Number of schools	School types	Number of schools
Detroit Public School District		**Detroit Public School District**	
Traditional	260	Traditional	109
DPS Authorized	7	DPS Authorized	13
Charters		Charters	
		Self-Governing	9
Charter Authorizers	36	**Charter Authorizers**	74
Independent	83	**Independent**	24
		Education Achievement Authority	15
Total	386	Total	244

Source: Data Driven Detroit, "Detroit System of Schools, Then and Now," (presentation, Detroit Schools-Higher Education Consortium meeting, Detroit, MI, October 15, 2012).

This change in governance—from a local school board to a mayoral-appointed school board—marks the beginning of the vast transformation of the overall structure of the public

school system. For example, Menefee-Libey (2010) argues that mayoral control in 1995 in Chicago led to the dismantling of the traditional public school system and the gradual development of what Bulkley, Henig, and Levin (2010) call the *portfolio management model* (PMM). That is, after mayoral control, Chicago Public Schools shifted from a centralized bureaucracy towards a central office that oversees a portfolio of schools. In effect, we see a similar trend in Detroit but with certain key differences. One question to ask is: How did the gradual dismantling of centralized and traditional public schools affect student outcomes?

Waves of Reform: There were three successive waves of reform in governance of Detroit schools influenced in part by the growing deficit (Figure 2.2): the Mayoral takeover of schools (1999-2005), the lifting of constraints on charters (2003-09), and the appointment of the first emergency financial manager in 2009. It is evident from trends in school enrollment (Figure 2.1), that the percentage of students attending DPS schools decreased during the first decade of the 21st century. There was also a precipitous drop in the overall Detroit population during the decade, along with a corresponding concentration of poverty in most parts of the city (discussed below). In addition, the movement of 15 schools to the EAA in 2011 further reduced the base of DPS schools (from 260 in 1999 to 109 in 2011) and of the number of students they served.

The policy changes surrounding the 2005-2009 cohort caused a proliferation of charters. The educational landscape profoundly changed after the apparent failure of mayoral control with successive changes in district leadership during the period (See Figure 2.3). These changes added to the instability of the district and within the schools during the period in which the 2005-09 cohort was enrolled in high school.

Figure 2.2 The Three Waves of Reform in Detroit, 1999-2014

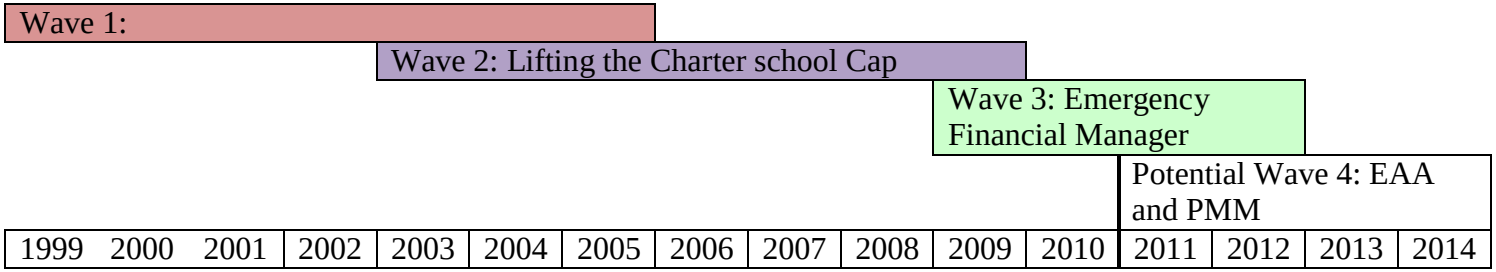
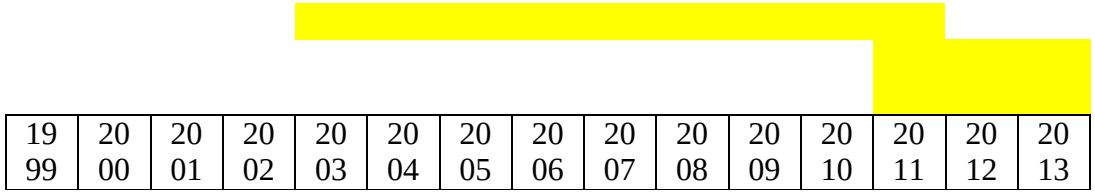


Figure 2.3 Changes in Detroit School Leadership, 1999-2013

Granholm (D)
Gov Rick Snyder (R)



1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013

The changes in philosophies of governance were also influenced by political changes in the State. The decade started with Governor John Engler, a staunchly conservative governor who created a merit grant program that excluded most Detroit students because they could not take the courses needed to complete the state tests used for the award (St. John & Chung, 2004). Engler also moved the financial management of education to the Department of Treasury, nearly dismantling the Department of Education. In contrast, during the administration of Governor Jennifer Granholm, the state followed an unfettered neoliberal course, increasing requirements without funding for implementation (St. John, Daun-Barnett, & Moronski-Chapman, 2013). The Governor's Cherry Commission, charged with identifying ways to double the number of college graduates in Michigan, had successfully raised graduate requirements for the 2011 cohort to include Geometry and Algebra II, but student funding per student declined during the period of implementation. Governor Rick Snyder, elected in 2010, made additional cuts in funding. Charters and public schools alike were struggling to introduce advanced math courses and other new graduation requirements.

2.2 Demographic Change and School Instability in Detroit 2000-2010

While the policy discourse on Detroit and other major American cities has been framed in terms of educational achievement and reform strategies that seek to improve test scores, most urban districts did not fund these reforms. Both patterns were evident in Detroit and Michigan (St. John, et al., 2013), which creates a highly troubling context for authentic educational improvement, but the increasing concentration of poverty and declining population further constrained opportunities for change. Below we examine trends in demographic, social and economic changes in Detroit using census data from the 2000 and 2010 census, recent population surveys, and common core data on school achievement (See Appendix A for Methods). Our

discussion of demographic change is followed by a descriptive analysis of the changes in schools (e.g., openings and closings as reported in the common core), and achievement outcomes.

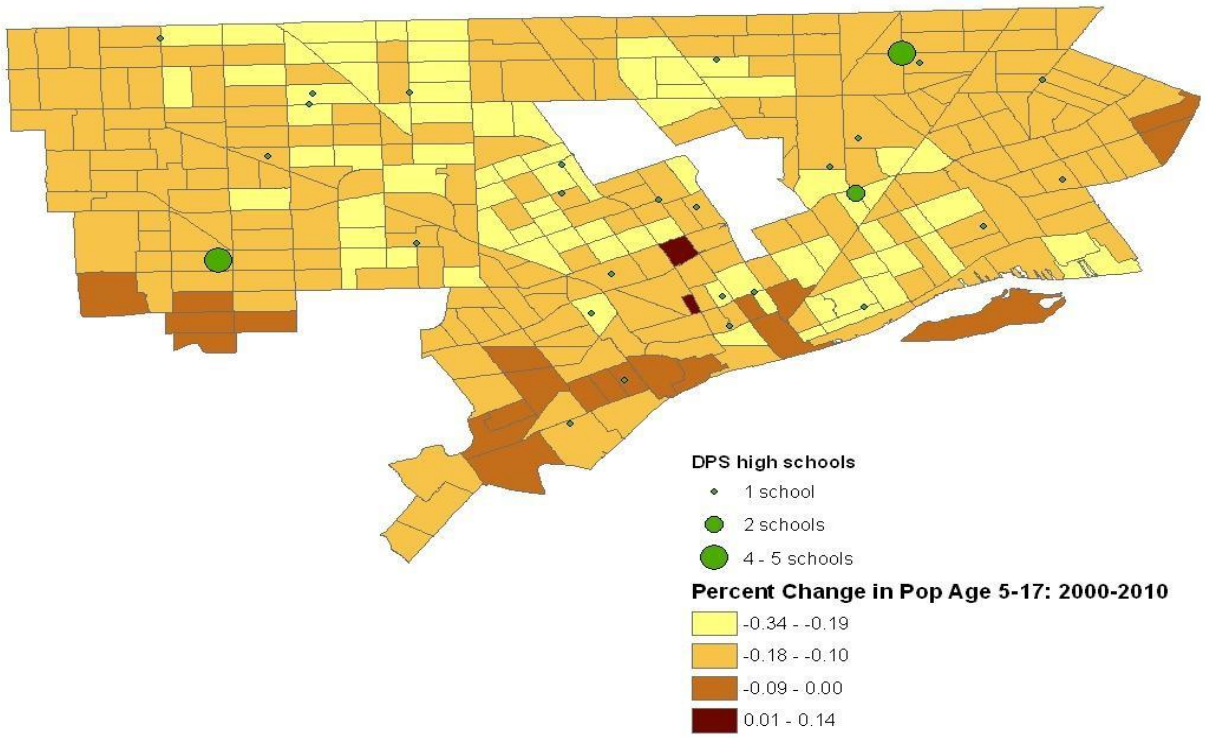
Population Decline and School Locale: Detroit's population dropped from 951,270 in 2000 to 713,777 in 2010, a drop of one-quarter of the city's population (Table 2.1). The comparison of population composition in 2000 and 2010 demonstrates the groups that declined faster than the general population. The percentage of children up to age 19 dropped at a faster rate than the general population. In addition, the percentage of Whites in the city declined, from 12.3% of the 2000 census to 10.6% in 2010, as the concentration of minorities in Detroit increased. Along with the concentration of minorities and the increases in unemployment, the poverty rate also increased (see Table 2.2).

Table 2.2. Changes in Basic Demographics in Detroit: Census 2000 and Census 2010

	Census 2000		Census 2010	
Variables	N	%	N	%
Total population	951,270	100	713,777	100.0
Population Age Under 5 years	76,232	8.0	50,146	7.0
Population Age 5-19 years	245,950	25.9	167,887	23.5
White	116,599	12.3	75,758	10.6
Black or African American	775,772	81.6	590,226	82.7
Asian/Indian/Alaskan/Pacific Islander	12,659	1.3	10,324	1.5
Some Other Race	24,199	2.5	21,569	3.0
Two or More Races	22,041	2.3	15,900	2.2

Population decline was not uniform across the city. We provide an overview of the relationship between the population decline of urban youth and school locales in Figure 2.4. This geographic analysis reveals that most areas within Detroit's city limits declined in population of school age youth between 2000 and 2010. A few census blocks in the southern part of the city had only modest population decline (less than 10%), but only two census blocks, both located in the central business corridor, had an increase in student age populations.

Figure 2.4 Geographic Analysis of Population Change for Youth Aged 5-17 Growth (2000-2010) in Relation to School Locales (in 2010)



Note: The blank spot in the middle represents the city of Hamtramck.

It is evident that most Detroit Schools still open in 2010 were located in parts of the city with declining population: a few schools were located in areas with population declines of 19% or more, most were located in areas with declines of between 10% and 18%, and only one school was located in an area with a decline of less than 10% in school age children. No schools were located in the two census blocks with slight population increase.

The first decade of the 21st century was a period of school openings and closings in response to federal and state policies advocating new standards and markets (Ravitch, 2010). There have been two major forces in policy on schools in the past decade: *No Child Left Behind*

(NCLB) enforced a policy of closing schools with low test scores, an outgrowth of the school standards movement started by the publication of *A National At Risk* (U. S. Department of Education, 1983); and the expansion of charter schools influenced by arguments for market systems that could improve education through innovation (e.g. Chubb & Moe, 1990). The two reform movements have different constraints and opportunities for innovation: the new public schools have constrained curriculum that has district-mandated courses, and, although charter schools must respond to higher levels of graduation requirements, they don't have to use curricula chosen and monitored by school districts (St. John, Masse, Lijana, & Bigelow, in press). Yet research consistently finds that charters and public schools do not differ significantly in achievement outcomes (Bettinger, 2005; Curto, Fryer, & Howard, 2011; Ravitch, 2010).

While both types of schools offer opportunities to school children in Detroit, there are additional financial factors influencing the closure of schools in Detroit. The population decline in Detroit, coupled with the decreased value of residences, including many abandoned homes, has decimated the tax base for schools and public services within the city. Along with academic challenges, the shrinking tax base has influenced closure of schools; more schools in Detroit have closed than opened. The revenue challenges are also a major factor in the appointment of emergency financial managers for the urban schools. Although the financial managers focused on educational challenges facing the schools, the underlying financial problem of the low tax base has been difficult to solve.

The concentration of poverty in Detroit, coupled with the closure of many of the traditional DPS schools with limited replacement by new public and charter schools, creates challenges for Detroit Public Schools, foundations, and community-based organizations engaging in reforms focused on expanding access to a quality education. The city has suffered

economically from the loss of jobs and population, partly the result of a restructuring of the auto industry. The Detroit educational system has also faced serious academic challenges over the decade, as discussed above. But it is crucial to recognize that the severity of the educational problems in Detroit has been influenced by financial challenges, including the need to pay off debt accrued while the schools were managed by external agencies. Not only has state per student funding decreased as schools have had to increase academic courses, but there has been a declining tax base for the city because of the concentration of poverty.

Community Resources: In the midst of population decline, many community organizations continue to function, including community centers, hospitals, and churches. During the past decade, the Skillman Foundation and other nonprofit organizations have supported some community-based organizations. For example, on its webpage the Skillman Foundation describes these community initiatives:

- Working with the EAA to transform failing neighborhood schools
- Moving promising public, private and charter schools to high performing through technical assistance through the Good Schools Resource Center-Detroit
- Building the Skillman Champion Schools Network
- Addressing academic under-preparation
- Building a strong network of education reform organizations
- Driving public policy
- Encouraging enrollment in quality schools
- Attracting high-quality schools to Detroit neighborhoods
- Investing in the capacity of highly effective school models to replicate and bring to scale

For example, through its community-based initiatives, Skillman has supported the start-up of local access networks that focus community resources on supporting students and families in learning about college as part of the college preparation process. This community-based approach to change has been supported within a select group of neighborhoods in Detroit. We

observed several examples of community involvement in schools as part of our qualitative research conducted in support of school reform (Section 4).

While the concentration of poverty is a predictor of school failure, we predicted that access to community resources in Detroit would have a positive association with student outcomes. While we did not have data of the specific projects and programs funded by Skillman and other foundations, we organized this study to test our hypothesis that community-based organizations can make a difference in student success.

2.3 Markets and School Achievement in Detroit, 2000-2010

Between 2000 and 2009 the City of Detroit, led by politicians (governors and mayors), introduced a new market model with charter schools into a declining market with increasing poverty. According to common core data, there was a decline in the total number of schools in between 2000 and 2010 in Detroit (Table 2.3): a total of 127 public schools closed during this time period while only 90 new public schools (47 of which were charter) opened, for a net loss of 37 schools in the city. During the decade charter schools closed as well as opened, but there was a net increase of 27 new charter schools.

Table 2.3. Number of Schools by Detroit Public School District and Opening/Closing Status

School Type	DPS	Charter	Total
Newly Open between 2000-2010	43	47	90
Closed between 2000-2010	107	20	127
Stayed Open between 2000-2010	170	34	204
Total	320	101	421

Source: Common Core of Data, National Center for Education Statistics (2000; 2010)

.

Charter schools are essentially choice schools, and they usually don't have the same district boundaries as public elementary schools. Parents must know about school choice schemes operative in cities and take the initiative to get into the choice stream, whether or not they have a local elementary school. Further, since charters are choice schools and don't have neighborhoods per se, the decline in the number of traditional public schools decreases access because there are often no traditional public schools nearby. Thus, distance from elementary schools, especially neighborhood public schools, is an important issue in large cities making the transition to a market system with increased numbers of charter schools. These conditions raise questions about student achievement in charter schools compared to public schools. Did the new schools give Detroit students access to higher quality education?

Achievement in New and Old Elementary Schools: The comparisons of 3rd grade MEAP test scores in math and reading for different types of open schools in 2007 and 2010 indicate only minor differences (Table 2.4). The newly-opened DPS schools had slightly higher scores than existing elementary schools in both math and reading in 2007, but slightly lower scores than these same schools in 2010. Further, in 2007 charter schools that opened after 2000 had lower math and reading scores than charters that had opened before 2000, but new charters had slightly higher scores than the older charters in 2010. All of these differences were minor, below the threshold usually used for statistical significance: all school types were within a standard deviation of other types of schools on each test in each period.

So the problem with test scores in elementary education is shared across all types of DPS schools. The opening and closing of public schools and the opening of charter schools did not result in a set of schools with higher-performing children. While charter schools have more freedom to define curriculum and have the opportunity to draw students from across the city,

these schools do not have significantly different test scores. This finding is consistent with national research that compares charter and public schools in urban areas.

Table 2.4. Average MEAP Score for the 3rd Grade by School Type: 2007 and 2010

	2007			2010		
School Type	N	Math	Reading	N	Math	Reading
DPS Newly Open between 2000-2010	6	315.70	321.57	13	310.25	312.55
		(14.96)	(14.23)		(4.19)	(7.04)
DPS Closed between	-	-	-	-	-	-
DPS Stayed Open between 2000-2010	122	310.39	314.39	78	314.96	314.58
		(9.46)	(11.91)		(8.55)	(11.04)
Charter Newly Open between 2000-2010	11	311.85	312.88	15	319.46	316.77
		(6.05)	(7.76)		(6.83)	(4.75)
Charter Stayed Open between 2000-2010	25	317.15	317.08	22	318.12	316.09
		(8.51)	(10.07)		(8.87)	(10.40)

Source: Michigan Department of Education
Note: Standard Deviations in parentheses

Achievement in New and Old Middle Schools: The difference in 7th grade MEAP scores in math and reading across different types of schools were also modest (Table. 2.5). There was modest improvement in 7th grade math scores and reading across all types of schools. Only one average score comparison indicates a difference approaching statistical significance: the average reading score in new charters was more than a standard deviation higher than public schools. Thus, while there were slight differences in test scores between charter schools and DPS schools for 7th graders, the differences were minor. Both sets of schools face challenges with respect to improvement of test scores.

Table 2.5. Average MEAP Score for the 7th Grade by School Type: 2007 and 2010

	2007			2010		
School Type	N	Math	Reading	N	Math	Reading
DPS Newly Open between 2000-2010	6	694.93 (8.27)	689.03 (7.82)	11	704.76 (10.27)	698.05 (11.34)
DPS Closed between	-	-	-	-	-	-
DPS Stayed Open between 2000-2010	64	698.53 (11.01)	695.71 (11.48)	53	708.77 (11.90)	701.25 (10.93)
Charter Newly Open between 2000-2010	10	703.17 (7.86)	701.16 (7.41)	15	710.50 (11.41)	710.63 (7.62)
Charter Stayed Open between 2000-2010	22	703.10 (9.73)	699.65 (8.03)	22	719.57 (11.08)	707.67 (10.09)

Source: Michigan Department of Education
Note: Standard Deviations in parentheses

Achievement in New and Old High Schools: The ACT college admissions exam was used for 11th graders in Michigan in 2007 and 2010. The comparison of scores by school type reveals mostly minor differences in scores. Four DPS high schools were closed between 2007 and 2010, so we could compare their scholars with those in newly opened schools after 2000. The average ACT scores in 2007 for the four closed high schools was slightly higher than the newly opened schools, but lower than the high schools that stayed opened. Further, the new and old charter high schools had slightly lower ACT scores than the continuing public schools in 2007.

There was slight improvement in the ACT scores for charter high schools between 2007 and 2010 (Table 2.6). Yet in 2010 the average ACT score in continuing public high schools was modestly higher than in the newly opened charters and modestly lower than in the older charter schools. The 2010 ACT scores differed more than a standard deviation in only one cross-group comparison: the average ACT score in newly opened public high schools (14.08) was more than a standard deviation lower than the average score in the older charter high schools (15.56). All

groups of high schools had ACT scores below the national average, but comparisons to the national average on the ACT are somewhat problematic because only a few states use the ACT as a statewide exam for 11th graders. Given the range of average ACT scores across high school types in 2010—14.08 to 15.56—all types of Detroit high schools faced challenges with respect to improvement in academic preparation for college.

Table 2.6. Average ACT Composite Score for the 11th Grade by School Type: 2007 and 2010

	2007		2010	
School Type	N	Mean	N	Mean
DPS Newly Open between 2000-2010	2	14.40	5	14.08
		(1.13)		(1.30)
DPS Closed between 2000-2010	4*	14.43	-	-
		(0.22)		-
DPS Stayed Open between 2000-2010	26	15.12	25	15.00
		(1.96)		(1.98)
Charter Newly Open between 2000-2010	12	14.43	12	14.89
		(1.06)		(1.32)
Charter Stayed Open between 2000-2010	7	14.59	7	15.56
		(0.72)		(1.08)

Source: Michigan Department of Education
Note: Standard Deviations in parentheses
* Four DPS high schools closed between 2007 and 2010. These high schools are: Mackenzie, Northern, Murray-Wright, and Redford. Other high schools closed during the decade include Cooley, Cooley North, Crosman, and Millennium.

The opening and closing of schools, a process that occurred in Detroit public and charter high schools during the period when the 2005-09 cohort was enrolled, may or may not be a positive event in the academic lives of students. The theory of school choice has long assumed that more choice is betters for students, but the research has not confirmed the benefits. Students who change schools during high school are potentially at greater risk than students who have stable learning environments. Students who face severe challenges because of declining social structures and increasing poverty are at higher risk in situations that require them to transfer

because their schools have closed. Therefore we consider the impact of transfer during high school on completion and achievement of students in the 2005-09 cohort.

2.4 The Challenge: Access to Quality Education

Policy-driven education reforms in Detroit, including the introduction of charters and the raising of graduation requirements between 2000 and 2010, have been initiated by state policymakers whose policies were in the neoliberal tradition of serving all students, a practice that departed from decades of improvement in equality in access to educational opportunity in the United States (Mirón & St. John, 2003; St. John, 2003). Neoliberal arguments for markets and higher standards, originating in New York in the late 20th century (Chubb & Moe, 1990; Ravitch, 2010), were not well aligned with urban challenges of declining population and increasing poverty. To make matters worse, Detroit suffered from deficits created during periods of mayoral control and state appointed financial managers. After decades of reform efforts, both public and charter schools in Detroit face an ongoing challenge of improving the quality of education. Like other cities, Detroit has a competitive market of public and charter schools with very little overall difference in achievement between them.

We conclude that the opening and closing of schools in Detroit between 2000 and 2010 created a pattern of *urban educational swirl*, with students being cast about from school to school as a result of policy initiatives and drastic cuts in funding for schools, created in part by the failure of state control of Detroit schools. The evidence of swirl emerges from the analyses of policy changes, opening and closing of schools, and student achievement in Detroit during the decade. Further, we argue that the central control of schools also undermined the prospective contributions of community organizations—churches, community centers, hospitals and so

forth—that can influence uplift in communities with extreme poverty if change advocates are not shackled by excessive, centralized control of education.

This baseline assessment study tests these propositions. We focus on the role of community organizations in support of educational improvement in Detroit high schools. We discuss our theory of change in Section 3 and provide quantitative and qualitative tests of this theory of change in Sections 4 and 5.

3. Community-Resources Theory of Change

Social theories of attainment and economic theories of efficiency have dominated educational policy in recent decades. Educational attainment theories have driving analyses by the U.S. Department of Education (e.g. Adelman, 2005, 2009; Berkner & Chavez, 1997; Choy,2002a, 2002b) used to argue for raising standards in math and other subjects. There has also been an unbridled belief in the efficacy of markets that has not been discouraged by studies and reviews that demonstrate minimal differences between charters and public schools (see Section 2). In this baseline assessment we introduce a community-resource theory of change that reconstructs understanding of the situated contexts for education reform. Our reconstruction adapts appropriate tenets from social and economic theory as they are typically applied to educational policy research. In this section we discuss the basic assumptions of our theory, as informed by theoretical and research literatures, as well how these assumptions have been informed by extant theory and research. These assumptions are:

1. Education occurs within communities, consonant with the historical American ethos of local control of schools. While centralization of educational policy had undermined these community connections, especially in urban communities, the engagement of community organizations in partnerships with schools provides an alternative to the now dominant theory of centrally controlled change (Section 3.1)
2. As posited in social and economic theory, individual background (e.g., gender, race and income) has a strong influence on individual attainment, but these forces are mediated through social contexts, the neighborhoods in which students live (Section 3.2)

3. Research on the role of extreme poverty in urban neighborhoods suggests a reframing of the role of communities, both with respect to poverty and community resources (Section 3.3)
4. Students' prior education and achievement in school influence their outcomes in high school, controlling for impact of background and neighborhood resources (Section 3.4)

These assumptions build on what we already know from the last half century of educational research but accommodate the roles of human, social and cultural capital consistent with the emerging theory of academic capital formation (ACF) as a framework for intervening to promote educational uplift (St. John, Hu & Fisher, 2011; Winkle-Wagner, Bowman, & St. John, 2012). We discuss the research base along with the logic we used to select variables for baseline assessment using regression analyses (for coding see Appendix D)

3.1Base Communities as Situated Contexts for Promoting Educational Opportunity

Historically, American education has been locally controlled, with communities forming schools and colleges using a combination of local taxes and tuition as citizens moved westward, from the colonial period (French and English) through to the development of public education systems in the late 19th century (Marsden, 1994; Reese, 2005, Thelin, 2004). In Catholic education, which was not secularized, along with the more loosely linked Protestant network of schools and college, there were stronger links between curriculum in colleges and high school, along with strong ties related to faith and values (Gleason, 1995; Heft, 2011).

While educational researchers have focused on curriculum alignment as the basis for educational reform in public high schools (e.g. Bryk, Lee, & Holland, 1995), prominent social theorists have used the comparison of Catholic and Protestant ritual and social connectivity to

explain differences in social and educational outcomes (Coleman, 1988; Durkheim, 1951), theories that are the basis of contemporary thought on social capital and social cohesion. Stepping back from debates about the supremacy of one faith tradition over another, the comparison of educational connectivity and social linkages in the analysis of faith-based education provides a broader framework for analysis of school reform than the pipeline theories that emphasize educational linkages over social cohesion and connectivity. While this baseline assessment focuses on success within the educational pipeline resulting in college preparation and graduation, we do so within an understanding of the role of social connectivity and cohesion and that base communities are organizing frames with which education reform occurs.

Social Connectivity and Cohesion within Educational Pathways: In recent books (St. John, 2003, 2006, 2013; St. John, et al., in press; St. John, Hu, & Fisher, 2011; St. John & Musoba, 2010), St. John has developed a theory of educational pathways that are formed and reformed though *academic capital formation*, which includes cross generational uplift related to human, social and cultural resources along with educational achievement and mastering of content. Considering empirical evidence of outcomes for privileged students with respect to race, education, and social class, students from families historically underrepresented among college graduates, qualitative research on students, and case studies of interventions, this body of work has focused on the social uplift processes of:

- *Human capital formation*, including the development of careers connected with content knowledge and of the financial resources to pay for college;
- *Social capital formation* through support from social networks (e.g. mentor-mentee relationships), trustworthy information, and development of the knowledge and skills for navigation of social systems; and

- *Cultural capital formation* as a process of building shared understanding of educational and career pathways within families and communities that support educational uplift.

While analysis of survey data on social and educational engagement in college and the use of pre-college services while in high school illuminates these capital formation processes (St. John, Hu, & Fisher, 2011), conceptual understanding, experiential insights, and qualitative assessment are important sources of information for constructing new understandings of academic capital formation. In this study, we lacked data on the social processes that relation to ACF, but we use a reframing of the challenge, a conceptualization of the role of *base communities* as local networks of people and services that support these forms of capital formation as students navigate educational systems

Base Communities: A conception of base communities offered a powerful analytic frame for research on liberation pedagogies and theologies in the 1970s and 1980s (Freire, 1970; Gutierrez, 1988). Liberation theology was a powerful force for social change in Latin America (Cleary, 1985), but was silenced by the Catholic Church by the end of the 20th century. Pedagogies of liberation were a force for educational change in the U.S. during the 1980s, but were lost as a framework in the pipeline logic after publication of *A Nation at Risk.*

It is important to refocus education reform on social cohesion within communities as frames of connectivity central to social theory (Coleman, 1988; Durkheim, 1951; Habermas, 1987, 1990; Taylor, 2007). In this report we use the concept of base communities as a way of thinking about the roles of churches, community centers, and other non-profit organizations in building a sense of common interest in educational uplift within communities. Due to the nature

of data collection, we used the bounded locales created by zip codes as a basis for building understanding the roles of community organizations within their situated geographical life contexts within cities, in this case in Detroit as a city withering economically. The Motor City has many strong cultural traditions from music (the Blues and Motown), from strong Catholic roots in education and social institutions harking back to French colonization, from the origination of assembly lines, to the formation of racially constructed communities around auto plants. These deep structural roots of social connectivity are still part of Detroit culture.

In this baseline assessment, due to data constraints we can only provide a superficial analysis of these deep social roots of connectivity and the ways they evolve within base communities. We code data in ways that provide visibility into the empirical nature of social linking structures in base communities and use qualitative assessment to build understanding of the ways these forces link within a school in relation to its community. Specifically, within the analyses of schools and their connection to community organizations we consider two alternative hypotheses related to the role of cultural strength: cultural type versus cultural strength (e.g. Smart & St. John, 1996). We examine both the types of community organizations and their total number. This approach provides new visibility into and new insights about the uplift of communities as community organizations provide supportive social structures, building social cohesion to support educational opportunity and uplift.

3.2 Student Background as a Basis for Analyzing Students' Educational Attainment

Social attainment theory starts with the base assumption that student socioeconomic background is a primary determinant of educational attainment (Blau & Duncan, 1967). In research leading to the development of academic capital as a framework for examining the role

of interventions in promoting education uplift, we found that two factors in particular, the engagement of parents in academic preparation and mentoring support by community members, made a substantial difference in students' and parents' decisions about education. Too often educational organizations reproduce inequality because they unintentionally discourage families from taking advantage of educational opportunities. After describing the research base, we discuss our approach to inclusion of background variables in our statistical analyses.

The Research Base: The definition of socioeconomic status (SES) can vary but usually includes the education level of parents. In research conducted by ACT in 2001, the researchers surveyed graduating seniors at 23 high schools in the five largest urban school districts, Chicago, Los Angeles, Miami-Dade County, Milwaukee, and New Orleans, and found that the highest education level was a high school diploma for 37% of the fathers and 33% of the mothers (Noeth & Wimberly, 2002). In the survey sample, 65% of the students were African-American, 30% Hispanic, and 5% other race/ethnicity. Ninety percent of the students viewed a college degree as important for a good job and 96% planned to attend college. Nearly all mothers or female guardians were considered by the students as influencers to attend college, and 84% of the students indicated that their mother or female guardian was helpful in their college planning (Noeth & Wimberly, 2002).

In 2009, the same year that our Detroit Public Schools cohort graduated, almost one in every five children lived with families in poverty across the United States (Aud et al., 2011). A high-poverty school is defined as one with more than 75% of the students eligible for free or reduced lunch (FRL). With respect to urban environments, *The Condition of Education 2011* estimates that "the percentage of students in high-poverty schools who attended city schools was nearly twice as large as the percentage of all students who attended city schools (58 vs. 29

percent)" for the 2008-2009 school year (Aud et al., 2011, p. 86). High poverty levels are associated with lower completion of advanced math courses in high school and lower rates of graduation from high school and college (e.g., St. John, 2006). Thus SES variables should be included in educational attainment studies.

Yet we need a better understanding of the ways resources in urban neighborhoods influence educational attainment. For example, for all school districts in city environments across the United States, the average freshman graduation rate in 2009 was 67.7% (Aud et al., 2013), which was substantially lower than the average of 80.7% for suburban and 79.9% for rural school districts. More female than male students graduated in four years; for Black students, 69.3% for females compared to 57.3% for males (Ross, 2012). With the call for 100% on-time graduation rates, all school districts need to improve, but especially urban school districts.

Rethinking the Role of SES: There is a need to build support networks to reconstruct the relationship between families and schools. For example, Indiana's Twenty-first Century Scholars program encouraged academic preparation by providing support for parents and students, while the Gates Foundation's Washington State Achievers Program provided mentoring as support along with financial guarantees to support preparation (St. John, et al., 2013). Econometric research on these programs reveals significant differences for participants compared to non-participants (DesJardins, & McCall, 2009; Lumina Foundation, 2008; Melguizo, 2012; St. John, Hu, & Fisher, 2011). The social engagement in support systems allows student to overcome barriers created by socioeconomic circumstances. For high schools, it is important to consider the role of community resources that provide social support along with indicators of poverty.

The DPS data had limited information on families: We had data on race, gender, and poverty (i.e. free and reduced cost lunch), but not parent education. As we discuss in the next section, there was not substantial variation in race: most DPS students were African Americans. The recent study by Brookings Institution (Kneebone, et al., 2011) uses census data to situate SES in locales. In addition to controlling for appropriate background variables related SES, it was necessary to build a community resources theory of change situated in neighborhoods.

3.3 Community Resources in Base Communities

While it helps build an understanding of the role of poverty, the problem with the Brookings study (Kneebone, et al., 2011) and most other economic research on educational attainment in urban communities is that it implicitly focuses on problems (or deficits) and overlooks opportunities for community-based change. We recognize that while urban neighborhoods have the preconditions for replicating poverty, they also have resources that can promote uplift. We took the following steps to build a situated approach to examining the role of community resources.

- First, the Census data provided a wealth of information on SES variables. We developed indicators of the poverty by base community in Detroit, including variables related to education levels, single family households, language other than English, unemployment, and children in poverty. We refer to these zip code bounded areas as *base communities* to convey the sense of the lived experiences of individuals in relation to education and poverty.
- Second, we included information on resources in the neighborhoods: the number of resources in the home zip code (churches, colleges, hospitals, recreation centers, social service centers and total); the count for a base community a student

lived in was included. Inclusion of these variables provided a means of understanding the effect of social support, controlling for poverty.

- Third, we included variables related to the SES of the schools the students attended, including percent of students on a free or reduced lunch (categorized as high poverty schools) and the students, including eligibility for free or reduced lunch. We also included whether students had transferred from their original high school as an indicator of the ways the introduction of market forces influenced student change.

While there are a few studies tracking cohorts of students through high school in urban areas, we don't know of prior studies that have focused explicitly on a multidimensional concept of community resources.

Our analyses of educational achievement are consistent with prior research and policy development. Since publication of *A Nation at Risk: The Imperative for Educational Reform* in 1983 (U. S. Department of Education), states have moved toward implementation of the report's recommendations for minimum standards for graduation: 4 years of English, 3 years of mathematics, 3 years of science, 3 years of social studies, and one-half year of computer science (Aud et al., 2012). Research consistently finds that completion of these advanced courses is associated with degree attainment in college, an approach consonant with basic concepts in educational attainment theory (e.g., Adelman, 1999, 2005, 2009). While many states have followed this path, access to quality education remains a challenge in many states (St. John, Daun-Barnett, & Moronski-Chapman, 2013).

Research using student longitudinal data on urban students has followed this research tradition, focusing on courses completed. A study of the 2004-2005 graduating class from the urban Los Angeles Unified School District (LAUSD) showed a negative relationship between the number of failed courses and graduation (Silvers, Saunders, & Zarate, 2008). What was significant was that they had on record students failing as many as 15 courses. While students who had not failed any courses had a graduation rate of over 70%, with four failed courses the rate was 50%, and with six failed courses only 40% of the students graduated. Sixty-five percent of the students in Algebra I failed, 51% failed Geometry, 49% failed Biology, and 43% failed tenth grade English. Algebra I was a gateway course in that 70% of the students who passed it by the 9th grade graduated, compared to 35% of those who did not pass in it in their freshman year (Silvers, Saunders, & Zarate, 2008). In the Chicago Public Schools (CPS) study, 53% of the 2004-2005 freshmen failed at least one course, with the average GPA below 2.0 (Allensworth & Easton, 2007). Students with a C average tended to graduate on time (72%). With three or more failed courses as a freshman, the average graduation rate was less than 42%. In fact, Allensworth and Easton (2007) found that the freshman GPA and the number of F's in freshman classes explained 39% of the variation in the graduation rate compared to only 12% predictive variation for race, gender, economic status and test scores from middle school.

Our analyses include both achievement during middle schools as an indicator of high school preparedness and high school achievement using indicators similar to those in other studies. The analyses provide a baseline for comparing the impact of current policies and those of future interventions emphasizing *more and better time* (see below).

3.4 Framework for More and Better Time

The community-resource model provides a basis for understanding how the concept of more and better time applies to actions in schools and in community organization. The Ford Foundation's concept of more and better time emphasizes:

1. The whole school and every child
2. Significantly more student time for learning
3. Redesign of school days that braid together school, after school, and "any time/anywhere" technology
4. Overhaul of teacher time (staggered schedules, collaborative work time, using data to guide instruction, etc.)
5. Engagement with partners

Our analyses of the baseline cohort (next section and appendices) provide an empirical base for understanding the roles of community resources and educational practices in educational improvement. The qualitative analysis of schools, collected as part of an assessment study for a partner school, helps build an understanding of how to go about designing and evaluating interventions that address critical challenges within schools. This approach is highly aligned with these goals as we focus on challenge areas that have emerged frequently in our work in urban high schools:

1. The social context, including the college going environment, parent involvement, and college-school partnerships.
2. Math education, focusing on integrating basic math (Arithmetic) with the advanced math reasoning (Algebra, Geometry, and Algebra II) needed for graduation.

3. Advanced literacy, accelerating learning through engaged approaches that meet state standards.
4. Niche strategies with connected content that allows schools to integrate content with competitive themes (e.g. technology, medical education, social justice, etc.)
5. School wide process to support educational improvement

Focusing on these processes while developing partnerships between schools, community organizations, and university-based researchers, it is possible to build an approach to supporting more and better student learning time that: 1) is aligned with the new state graduation requirements; and 2) provides opportunities for integrating community-based organizations with the educational system to provide cohesive and comprehensive support of educational and social uplift. We examine the empirical foundations for this argument in Section 4 and provide a qualitative exploration of how to develop these insights into strategies for partnerships between schools and communities (Section 5).

4. Education Outcomes for the 2005-09 High School Cohort

The shift to the market of school operation and governance occurred as a first stage of reform in Detroit in the early part of the first decade of the 21st century, followed by increased graduation requirements and more substantial investment by nonprofit organizations. These reforms have used an implicit theory of central control, reinforced by the social and economic theories used to inform strategies and evaluate outcomes. Our approach to the analysis of student cohort data is a radical departure from econometric studies focusing primarily on the role of poverty and attainment studies that have focused almost exclusively on courses completed during high school. We use core concepts from economic analyses and the social theory of attainment, but alter the underlying assumptions about the role of communities, testing the core assumptions of a new, community-resources theory of educational improvement.

If the introduction of new markets, a policy evident since 1990, and the raising of education standards, a policy since 1983, have had limited impact on students situated in urban neighborhoods, then we need a new approach to the problem. Our analyses provide insight into the ways community organizations, situated within neighborhoods in the city of Detroit, can influence outcomes and construct student trajectories through high school, providing a new starting point for community-based educational reform.

The idea of community-based education reform is not new. It was the locus of the public takeover of Chicago school in the 1990s (Mirón & St. John, 2003), the development of the full service school movement in the 1980s, and the idea of a community council appeared in the original Title I program in the Elementary and Secondary Education Act of 1965 (Wong, 2003). An underlying problem has been that researchers have lacked a sound theory examining how

community resources link to education reform and student outcomes; instead, economic and social attainment theories have systematically left out the effects of community resources, due only in part to their failure to use appropriate data. Using appropriate data, theory and methods, this assessment using the 2005-09 high-school cohort data provides a baseline analysis of:

- Students' social-cultural contexts and how they influence completion of and success in high school, providing a research-based understanding of the ways community organizations and college partners can support academic success and career pathways for students in Detroit (Section 4.1).
- Students' achievement before and during high school, nested within local cultural contexts, and how these factors relate to high school completion, cumulative grades, and transfer during high school, providing a foundation for understanding how the new graduation requirements might influence Detroit schools (Section 4.2).

4.1 Community Resources and Student Educational Opportunity

The most basic question facing community activists and educators is: How can culturally situated resources influence educational improvement within communities with well established patterns of poverty? This question is vitally important in U.S. education policy because successive waves of educational reform since the 1950s have failed America's great cities (Mirón & St. John, 2003), a pattern that continued through the recent periods of reform (St. John, et. al., 2013; St. John, Masse, Lijana, & Bigelow, in press). The analyses of the Detroit context (Section 2) illustrated how the policy changes in the 2000s failed, as a pattern of student educational swirl was created by the opening and closing of schools.

The idea that community support can promote uplift—along with faith and perseverance in the face of discrimination—is central to the African American tradition of education, a culture in many high schools in the South that was eliminated by the dominant culture in white schools (Siddle Walker, 1996; Siddle Walker & Snarey, 2004; St. John & Cadray, 2004). Academic capital formation as a theory of uplift identifies community based organizations that can support student and family engagement in education as a first step in educational uplift (St. John, Hu, & Fisher, 2011). The social mechanisms of ACF are rooted in human capital (the desire for career uplift and to overcome financial barriers to college), social capital (networks, trustworthy information, and mentoring), and cultural capital as knowledge about educational pathways to career uplift. Addressing this challenge in socially and economically depressed communities is an essential motivational aspect of uplift.

We will examine descriptive statistics related to student background and community resources before discussing the multivariate analyses on the relative effects of community characteristics, and school contexts (including educational swirl) on educational outcomes.

Baseline Statistics on Community Resources

We provide three sets of descriptive statistics as means of framing our community resources approach. First, we present statistics related to conventional analyses of educational social uplift which illustrate the self-sealing logic of the primacy of social context. Second, we show that the social-demographic conditions of neighborhoods (with data generated from the census) also relate to achievement with basic linkage structures similar to the social uplift theory. Third, we present information of community organizations and the relationships between numbers of these organizations and educational outcomes.

The Conventional Logic of Social and Educational Uplift: In this section we will summarize student learning outcomes by demographics; included will be the 4-year graduation rate, the high school GPA , MEAP and MME scores, and the transfer rate summarized by gender, race/ethnicity, eligibility for a free or reduced lunch, and school poverty level. After selecting first time freshmen in 2005-2006 for the 2009 graduating class cohort, our database consisted of 7,445 unique student records. Table 4.1 summarizes the demographics for the 4-year and 5-year graduation rate. Students were considered to have graduated on time in 4 years if they graduated by July 31, 2009. In addition, we received data on students who were enrolled in the 2009-2010 academic year, thus enabling the calculation of a 5-year graduation rate

Note that female students have a substantially higher graduation rate than male students, and that students with parents who have an income above the poverty level (i.e. not eligible for free or reduced lunch) have a 17 percentage point higher graduation rate than disadvantaged students from families in poverty. However, many students who experienced difficulties in school, continued to the fifth year and graduated in 2010. Students who transferred during their high school years to another high school have a 23 percentage point lower graduation rate (50.5%) than students who attend the same high school (73.4%). One needs to use caution in interpreting this statistic, as there are many factors at work for students who transfer high schools. It can, however, be concluded that the stability of the same high school encourages successful graduation.

Table 4.1 Summary of Graduation Rates Broken Down by Traditional Background Variables

Demographic	Number of Students	4-Year Graduation Rate	5-Year Graduation Rate
Overall	7445	64.5	69.5
Gender			
Males	3466 (46.6%)	54.5	60.4
Females	3979	73.2	77.4
Race/Ethnicity			
Black	6902 (92.7%)	65.1	70.2
Latino/a	314	58.9	61.8
White	138	55.1	56.5
Asian/Pac. Is	64	59.4	60.9
Native Am *	*	--	--
Free/Reduced Lunch Eligibility			
Free lunch eligible	4558 (61.2%)	58.1	64.4
Reduced lunch eligible	567 (7.6%)	69.8	72.5
Not eligible	2320	75.6	78.6
School Poverty Level			
High Poverty – 75% or more of students with FRL	2254	55.4	61.2
Medium Poverty- 67 % to 75% of students with FRL	3043	59.0	65.5
Low Poverty- less than 67% of students with FRL	2148	81.9	83.8
Mobility			
Attend same high school	4544 (61%)	73.4	75.1
Transfer	2901	50.5	60.7

* Due to a small sample size for the Native American student group, statistics are not shown.

Another often used indicator of academic success is the high school GPA. Table 4.2 summarizes the high school GPA for the 2009 graduating class cohort by the demographic variables. The insights from these breakdowns include:

a. Males who attended DPS high schools actually had higher GPAs than females who graduated. There was less variation of grades by race, but there was more substantial variation by poverty (whether or not students were in federal lunch programs).
b. S*chools with lower poverty rates had higher average grade point averages.*
c. Students who graduated from their original schools had higher grades than students who transferred, providing prima facie insight into the consequence of urban school swirl in a city moving toward market models with declining funding for schools.

We conclude that gender along with poverty, measured by involvement in the federal free and reduced lunch program, provide reasonable and logically appropriate statistical controls of individual background for Detroit. Race does not vary sufficiently for inclusion in multivariate statistical models that break down cells by neighborhood, an essential element of our community-resource analysis. It is also important to consider school characteristics, including the poverty rates of students enrolled. Further, the role of student transfer stands out as a critical issue. Our development of multivariate models took these relationships into account.

Table 4.2 Summary of the High School GPA Broken Down by Student Characteristics

Demographic	Number of Students	High School GPA Graduate in 4-Years
Overall	7445	2.119
Gender		
Males	3466	1.865
Females	3979	2.340
Race/Ethnicity		
Black	6902	2.107
Latino/a	314	2.277
White	138	2.225
Asian/Pac. Is	64	2.520
Native Am *	*	--
Free/Reduced Lunch Eligibility		
Free lunch eligible	4558	1.984
Reduced lunch eligible	567	2.222
Not eligible	2320	2.359
Graduating School Poverty Level		
High Poverty – 75% or more of students with FRL	2254	1.98
Medium Poverty- 67 % to 75% of students with FRL	3043	1.94
Low Poverty- less than 67% of students with FRL	2148	2.516
Mobility		
Attend same high school	4544	2.322
Transfer	2901	1.801

* Due to a small sample size for the Native American student group, statistics are not shown.

Community-Based Poverty: The Brookings report uses change in Census tract data to examine educational attainment in cities (Kneebone, et al., 2011). As noted earlier (Section 3),

these findings helped us conceptualize the centrality of neighborhoods. In Detroit, there is substantial variation in poverty indicators by census tract. We used six variables from the census as measures related to our concept of community resources. Table 4.3 displays the summary statistics for the database (N=7445) (the methodology is described in the Appendices).

During the first decade of the 21st century there was an increase in the percentage of high school graduates, the percent in poverty, and children in poverty. These trends illustrate a breakdown of the conventional notion that education and economic well-being co-vary, because the education level in neighborhoods improved as poverty increased in Detroit. There was a decline in the percentage of households headed by females and families that did not speak English at home. Detroit had a concentration of Black urban poverty in spite of substantial education gains and declines in traditional indicators of poverty (e.g. limited English and single parent households). The travesty was the 15.4 percentage point increase in poverty. There was also substantial variation across all of these indicators, illustrating their utility in multivariate models that seek to provide a deeper understanding of the role of poverty.

Community Organizations: Community organizations are the backbone of urban communities, even when they are in decline. Between 2000 and 2010, Skillman Foundation worked with community advocates situated in churches and other community organizations to build strong, community-based strategies for improving educational opportunity as a means of educational uplift. Our analyses did not specifically designate locales that had this commitment from Skillman, but our methodology could be altered to include that type of quantitative assessment upon request, assuming we were provided the appropriate data on locales and projects.

Table 4.3 Percent Change in Census Demographic Indicators for Detroit Public School Cohort

Variable : Difference (2000 – 2011 Census Data)	Average/ (Standard Deviation)	Minimum/ Maximum	1st Quartile	Median	3rd Quartile
Percent High School Graduate or Higher	6.788 (3.228)	-0.5/ 15.1	4.5	6.0	8.6
Percent English not spoken at home	-0.131 (3.827)	-8.6/ 10.9	-1.7	-1.1	-0.5
Percent Female Householder with children	-1.636 (2.456)	-10.4/ 8.4	-3.5	-2.5	-0.6
Percent Unemployed	6.652 (2.287)	-2.8/ 12.0	5.3	6.0	7.6
Percent Poverty	10.711 (4.020)	-0.2/ 20.8	7.6	10.5	13.2
Percent Poverty-Children	15.417 (6.339)	-2.2/ 31.2	13.0	15.0	19.9

As noted earlier (Section 3), our data source for community organizations was from an automated version of the Yellow Pages. We examine prima facie statistical relationships between numbers of organizations of each type and educational outcomes, providing background for the multivariate analysis. We examine the associations between GPA and graduation rates.

Community Organizations and High School GPA: First, there was not a relationship between the number of churches in the base community (from zip) and GPA of high school students in those neighborhoods (Figure 4.1). There are a number of direct and indirect reasons why the number of churches could strengthen students' grades. The direct reason is that in some instances churches are locales for homework. Indirectly the theory of social cohesion of communities and its role in community wellbeing emanates from Durkheim's (1951) research comparing the rites and rituals of nations with Catholic populations to those with mostly Protestants in his work on suicide rates, still a persuasive argument in secular and faith-centered theories of social change (Haidt, 2012; Taylor, 2007). Our approach involves exploring whether

the presence of faith communities rather than their type influences educational outcomes. The prima facie evidence suggests a weak association. The relationship between the number of churches and graduate rates is similar (Figure 4.2)

Figure 4.1 Relationship Between Number of Churches within Base Community and High School GPA

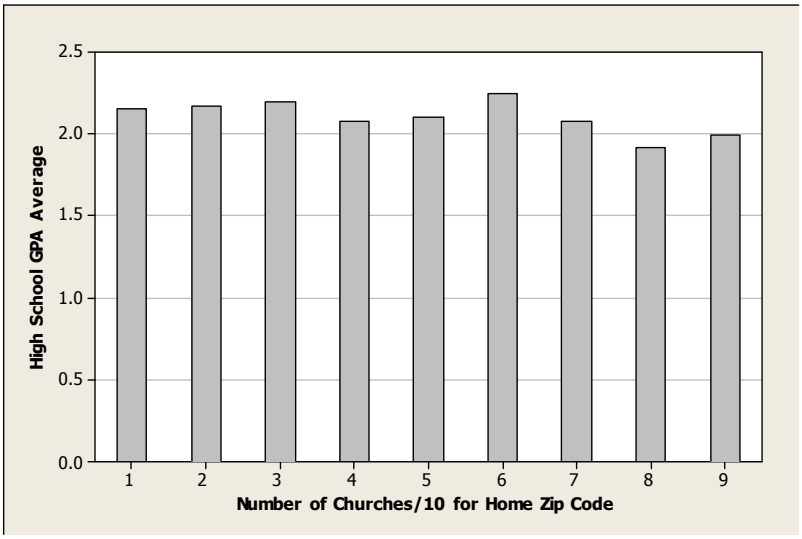
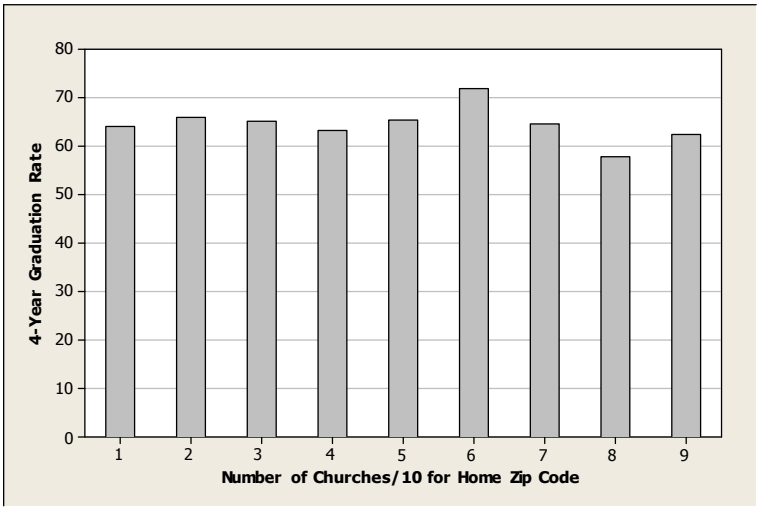


Figure 4.2 Relationship Between Number of Churches within Base Community and High School Graduation Rates



Conceptually, the presence of colleges can influence motivation as an indirect relationship. There is also potential for collaboration between high schools and colleges in efforts to improve curriculum and college access. Frequently community colleges provide college credits for high school students, a direct link that could influence attainment (Hoffman, Vargas, Venezia, & Miller, 2007). The relationship between the number of colleges in a base community and high school GPA for local students is presented in Figure 4.3. It illustrates there could be an important relationship: students from base communities with two colleges had higher GPAs than students in base communities with one college, but the GPA average for locales with three colleges did not significantly differ from those with one. There was a very similar pattern of relationship for graduation rates (Figure 4.4). In sum, there is at least prima facie evidence that colleges in the community can help expand education opportunity.

Figure 4.3 Relationship Between Number of Colleges within Base Communities and High School GPA

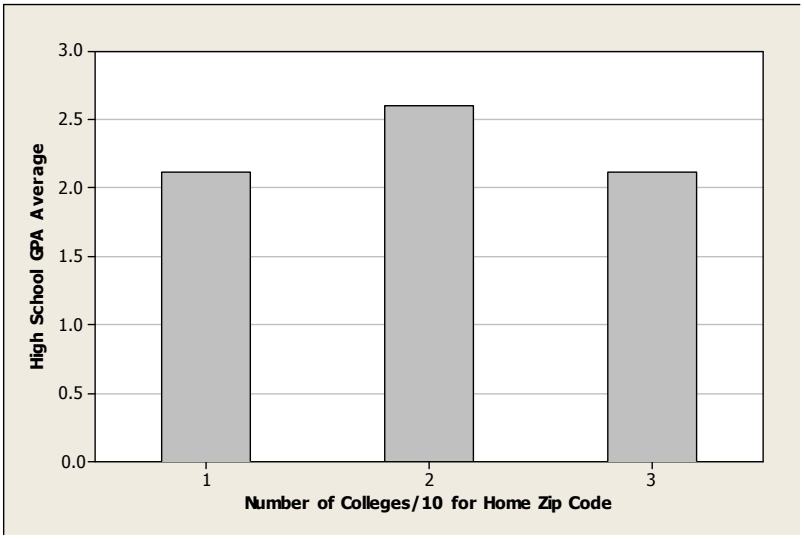
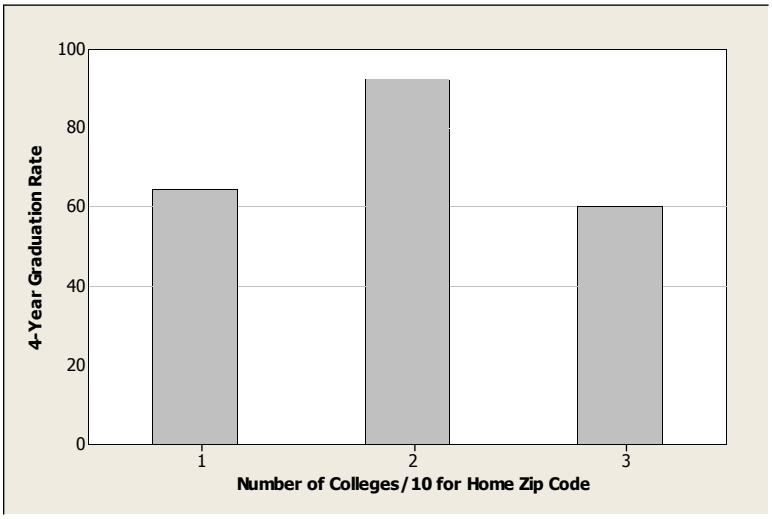


Figure 4.4 Relationship Between Number of Colleges within Base Communities and High School Graduation Rate



Proximity to hospitals can also have an influence on achievement through mechanisms that support student and family health. At the very least, proximity makes it easier to get to a hospital. It is also likely that community-based health centers will focus on access to quality health care. Figure 4.5 illustrates that the more hospitals in a base community, the higher the GPA of high school students. Further, having two or three hospitals in close proximately was also associated with higher high school graduation rates (Figure 4.6). Thus, there appear to be positive links between community health opportunities and educational opportunity in Detroit.

Figure 4.5 Relationship Between Number of Hospital within Base Communities and High School GPA

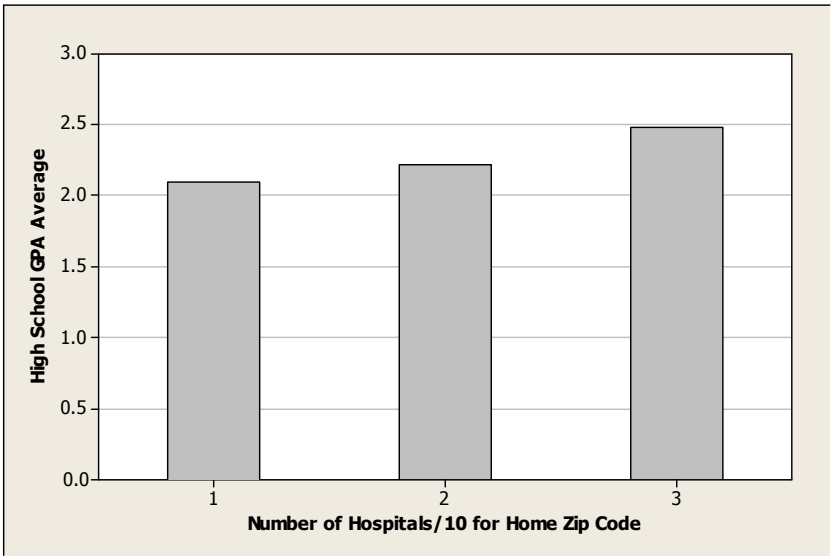
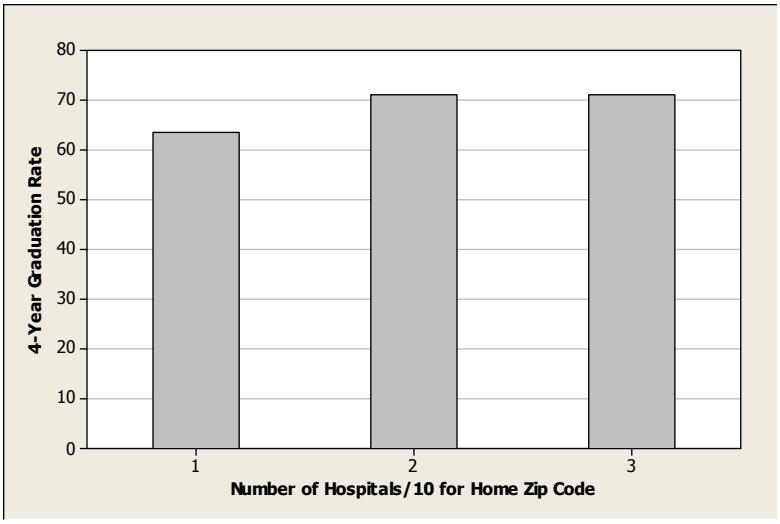


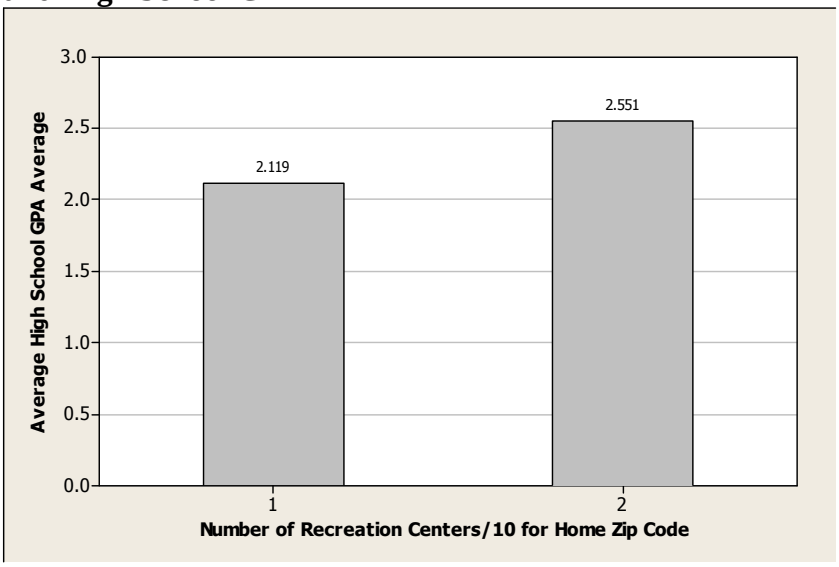
Figure 4.6 Relationship Between Number of Hospital within Base Communities and High School Graduation Rate



Community recreation centers provide a place for students to engage socially and recreationally. These centers can also be used for social programs, access networks, and other community-based initiatives that directly support educational uplift. There is an apparent relationship between the number of these centers in a base community and the GPA of students

in those locales (Figure 4.7). There is an even stronger relationship between the number of recreation centers and high school graduation rates (Figure 4.8). It appears recreation centers contribute to social cohesion in neighborhoods.

Figure 4.7 Relationship Between Number of Recreation Centers within Base Communities and High School GPA



While community recreation centers provide a safe place for youth to get together, social support centers provide places and people to support the social cohesion in the community. Easy access to community support centers provides services for older adults and the parents of young children. There was a slight positive relationship between social service centers and both GPA (Figure 4.9) and graduate rates (Figure 4.10). This provides evidence that community resources support social cohesion in neighborhoods and impact educational outcomes.

Figure 4.8 Relationship Between Number of Recreation Centers within Base Communities and High School Graduation Rate

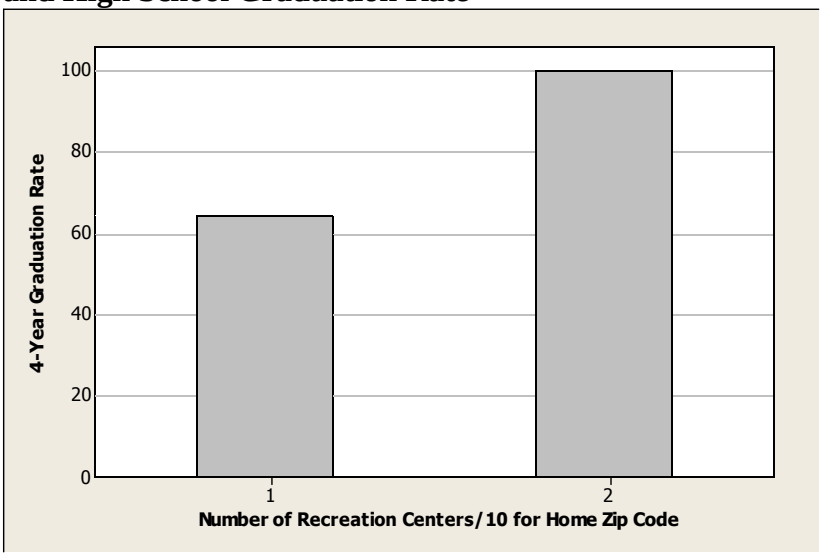


Figure 4.9 Relationship Between Number of Social Service Centers within Base Communities and High School GPA

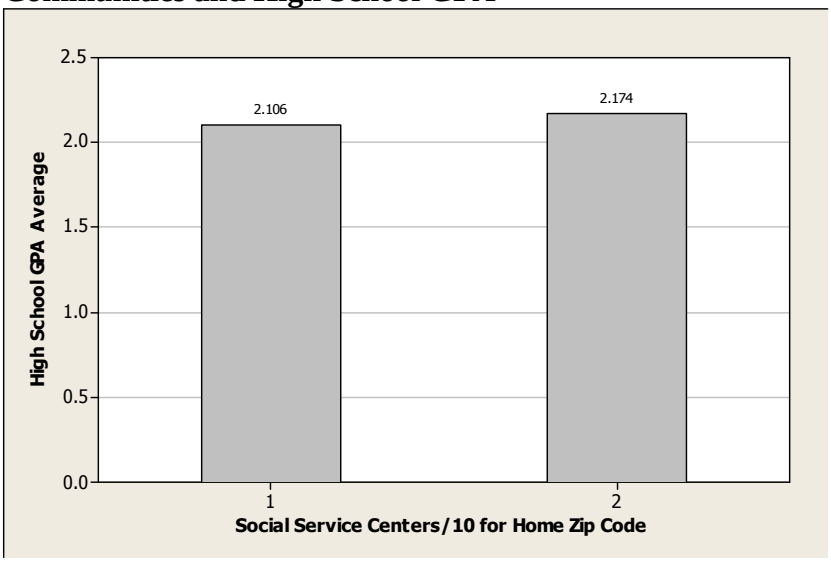
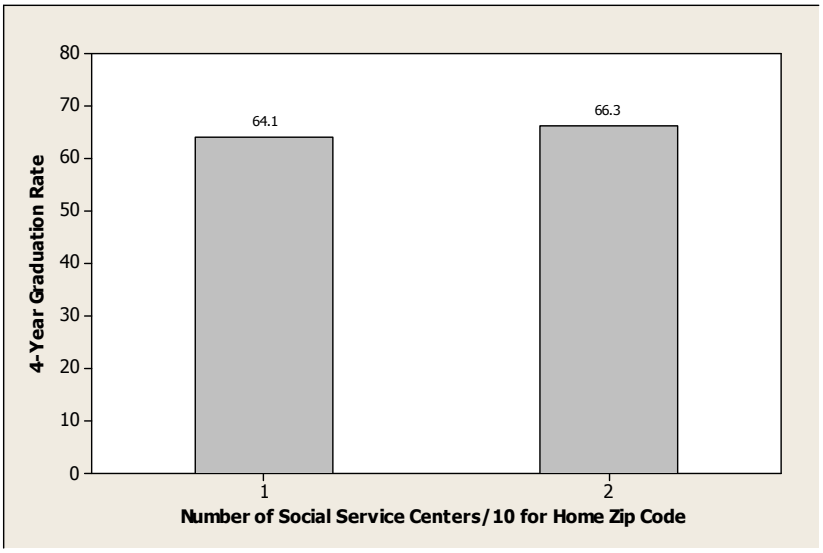


Figure 4.10 Relationship Between Number of Social Service Centers within Base Community and High School Graduation Rate



Finally, we consider the relationship between the total number of community resources and educational outcomes. If community resources matter as mechanisms supporting advancement of educational opportunities through social cohesion, do some types of community organizations have more influence than others? Or is the total number of resources a better indicator of social cohesion and supportive environment for leaning? If we look only at numbers, without considering how various factors in communities interrelate with individual background, it appears that the total number of services is not related to educational outcomes. The total number of community resources did not appear correlated with either GPA (Figure 4.11) or graduation rates (Figure 4.12).

Figure 4.11 Relationship Between Number of Community Resources within Base Communities and High School GPA

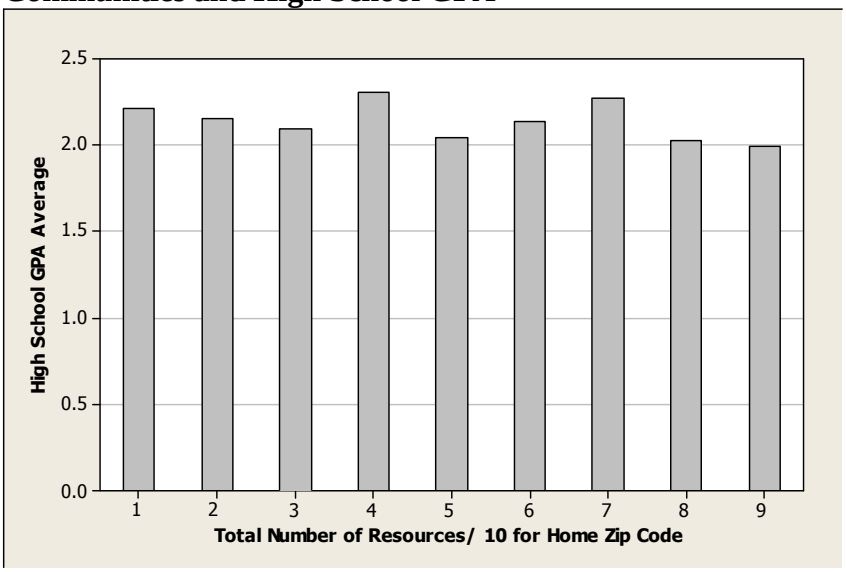
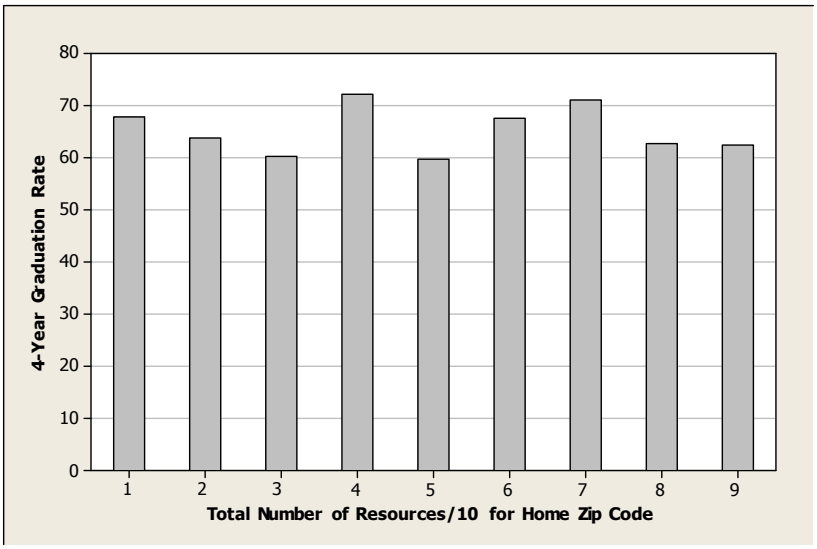


Figure 4.12 Relationship Between Number of Community Resources within Base Communities and High School Graduation Rate



The Impact of Background and Community Resources on Educational Outcome

Our multivariate statistical methods used a sequence of regressions. All or our regression models had only variables related to individual background in step one; community sources were

added in the second step; prior achievement in middle school was added for step three; and high school achievement in step 4. We provide three sets of regression (Appendix D): 1) logistic regressions examining whether or not students graduate, 2) OLS regressions to examine GPA for graduating students; and 3) logistic regressions for whether or not students transferred from the base high school. While the appendix presents statistical details, we highlight only significant relationships in our discussion of the three analyses below, a more reader-friendly approach. We present the analyses of the relationship between achievement (courses completed and educational outcomes) in section 4.2.

Community Resources and High School Graduation: One of the crucial educational outcomes is whether or not students graduate from high school. As we noted above, between 2000 and 2010 the percentage of the population with high school diplomas increased along with poverty; it is possible improved schools influenced this unexpected relationship. The percentage college graduates in Detroit remains very low, however; the emphasis on pathways to college and college preparation for all students in high school could break through the cycle of poverty, as educational reformers have argued in recent decades (Section 2). Regardless of the positions people take on the transition to college preparatory high schools in market systems of education, it is important to build a base understanding of the effects of community resources on high school graduation rates.

The analysis of high school graduation demonstrates the value of a community-resources approach to the analysis of educational opportunity (Table 4.4). Across all of the models, background had a sustained effect on graduation: women were more likely to graduate than men and being from a low-income family (i.e. free or reduced lunch) decreased the odds of graduation. Community resources, prior achievement and high school achievement did not

diminish the impact of these factors for Detroit public school students in the 2005-09 cohort. But the background variables explain a small portion of total variance while the variables relating to community resources explain substantially more variance. They too have mostly consistent effects across the models.

Two of the variables related to changes in demographic conditions. First, increases in the percentage of female-headed households had a positive association with graduation rates in the first model only. Readers are reminded there was an actual decrease in the percentage of female-headed households over the decade, so there was some loss of this form of family stability. In addition, this association disappeared when middle school achievement was added to the model. It is possible that families are better prepared to help their children with homework in middle school than high school. Indeed, as education requirements in high schools rise, it is harder for parents to help students with their studies. In Indiana, for example, the parent encouragement and homework support provided by the Twenty-first Century Scholars program were significantly associated with college going. Therefore, there are good reasons to focus support for students on preparation and college access in Detroit.

The second variable related to changes in the neighborhood was the negative association between the percentage of limited English families in a community and the graduation rates of children from those communities. This indicates that children from language-minority communities have more problems in Detroit than do children from English speaking families. The percentage of language minority families decreased in Detroit during the decade, so the overall impact of the presence of linguistic minority families is not a strong explanation for variations in high school completion.

Table 4.4 Logistic Regression Analysis of the Influence of Background, Community Resources and Educational Achievement on Four-Year Graduation: Background and Community Resources Only (Simple Version)

Characteristic	Background		Community and School		Middle School Achievement		High School Achievement	
	Assoc.	Sig.	Assoc.	Sig.	Assoc.	Sig.	Assoc.	Sig.
Female	Positive	***	Positive	***	Positive	***	Positive	***
F &R Lunch	Negative	***	Negative	***	Negative	***	Negative	***
Change (2011-2000)								
Diff in % High School Diploma or above				NS		NS		NS
Diff in % Female Householder with children			Positive	**		NS		MS
Diff in % Language Not English			Negative	***	Negative	***	Negative	***
Diff in % Unemployment				NS		NS		NS
Diff in % Individual in Poverty				NS		NS		NS
Diff in % Children in Poverty				NS		NS		NS
Community Resources								
# Churches			Positive	***	Positive	***	Positive	***
# Colleges				NS		NS		NS
# Hospital				NS		NS		NS
# Rec. Centers				NS		NS		NS
# Social Centers			Positive	***	Positive	***		NS
Total # Orgs.			Negative	**	Negative	***	Negative	**
Attend High Poverty School			Negative	***	Negative	***	Negative	***
Transferred school			Negative	***	Negative	***	Negative	***

Note: ** significant at .05; *** significant at .01; NS not statistically significant

Three of the variables related to community resources were significant. First, the number of churches had a consistent positive association with high school graduation rates for students

from a base community within the city. This is an interesting finding because there was not prima face evidence of a correlation between the number of churches and high school graduation rates. This finding serves as evidence validating the social cohesion argument about the role of faith-based groups in community cohesion, a argument widely advocated by social scientists and philosophers familiar with Durkheim's hypothesis (e.g. Haidt, 2012; Heft, 2011; Taylor, 2007).

This finding raises further questions about the constrained curriculum hypothesis. Several scholars have noted the differences in outcomes between Catholic schools and public schools (Bryk, Lee, & Holland, 1995; Coleman, 1988; Heft, 2012). Coleman (1988) originally argued that differences in rituals and social cohesion mattered with respect to school success. In contrast Bryk, Lee and Holland (1995) argued the differences in success were related to the constrained curriculum, a hypothesis that had a substantial influence on arguments to raise high school graduation requirements. The other possibility is that the shared values and social cohesion in Catholic schools explained differences in student success (Heft, 2012). Regardless of the reason, the finding that the presence of faith communities matters in educational attainment is an important one and is consonant with the core argument of the community-resources theory of educational opportunity.

It is possible that niche-based schools in urban communities have opportunities to create strong social cohesion, a pattern already observed in some exceptional charter schools (St. John, et al., in press). Both charter and public schools in urban areas are using market niches to compete for students in urban markets (St. John, et al., in press), including Detroit, where both types of schools are using themes with integrated curriculum (see Section 5). It is possible that these niche-based approaches can provide a basis for improving social cohesion, especially if connectivity to community-based organizations becomes a reality.

The second type of community organization that had a significant association with graduation was the number of social service centers. Again, presence of social service centers relates to social cohesion within communities in urban areas. They provide places to congregate, much like churches, as well as locales to receive social services. This finding strengthens the community-resources arguments about educational opportunity, consonant with the strategies used by the Skillman Foundation in Detroit.[5] It may be that community centers provide parent education that helps create a family value of education attainment; they may increase family cohesion by supporting family stability which, in turn, effects student achievement; and/or the presence of these centers and the professionals who work in them may lead residents to value educational achievement. This topic merits further study.

The number of community organizations was not significant independent of type. While other types of community organizations may potentially be important partners in school improvement, this indicates they are not at the present time. It appears that community organizations with a mission that supports community cohesion are important although the total number of community organizations does not.

Two other community-related variables were significant: starting high school in a high poverty school and transferring from one high school to another had negative associations with completion. The finding about high poverty schools is consonant with a substantial body of research literature that finds links between poverty and lack of educational achievement (Section 3). The finding about the impact of transfer is troubling, especially given the number of ongoing

[5] The positive association between community service centers and high school graduation lost significance when high school achievement was considered in the final model (findings about achievement are discuss in Section 4.2). This change in significance is explained by a direct correlation between the number of community service centers and high school achievement.

school openings and closings (as discussed in Section 2). Because of the importance of this finding and its implications with respect to the negative consequences of urban education swirl, we consider transfer as an outcome using our community-resource model.

High School Grades: The analyses of the impact of community resources on high school grades have many similarities to the graduation models discussed above. This means that the community-based resources that influenced degree completion also influenced grades, which is expected because grades are always positively associated with high school completion rates (i.e. if grades are too low, students can't get sufficient course credits and graduate). Our discussion mentions similarities, but focuses on reasons for differences.

First, the two SES background variables had a similar effect: women had higher grades than men, controlling for other factors; and students from low-income families had lower grades than their peers. There was one notable difference between the two models: poverty, as measured by participation in the federal lunch program, ceased to be significant in the analysis of grades but not in the analysis of graduation. This means that once students arrive at their high school, extreme poverty is a factor in grades controlling for high school test scores and courses.

Second, changes in population characteristics of neighborhoods had similar effects for grades in and completion of high school: the increase in female heads of household had a positive association with high school grades; and increases in the number of language minority families had a negative association. The implications of these findings are similar to those discussed above. There was also a new finding: increases in local unemployment rates had a negative association with high school grades before high school achievement was considered. Growing unemployment puts stress of families and frequently makes it necessary for children to

work to support their family. High school achievement (level of courses completed and test scores) could be affected by a student's increased work load and/or increased stress within the family due to unemployment. Unemployment increased substantially in Detroit during the decade, so unemployment had a substantial indirect effect on students' through its association with high school achievement.

Third, community resource centers—the types and total number—had the same impact on grades as on graduation. These findings reinforce the interpretation above about the role of mission-oriented organizations (i.e. churches and community centers) in supporting social cohesion within urban neighborhoods.

Fourth, the variables related to schools—poverty and transfer—have similar effects across the two models. The main difference was that attending a high poverty school ceased to be significant once high school achievement was added to the model. This further reinforces the argument about links between high school achievement and grades.

Table 4.5 OLS Regression Analysis of the Influence of Background, Community Resources and Educational Achievement on High School GPA: Background and Community Resources Only (Simple Version)

Characteristic	Background		Community and School		Middle School Achievement		High School Achievement	
	Assoc.	Sig.	Assoc.	Sig.	Assoc.	Sig.	Assoc.	Sig.
Female	Positive	***	Positive	***	Positive	***	Positive	***
F& R Lunch	Negative	***	Negative	***	Negative	***		NS
Percent Change (2011-2000)								
% HS Diploma				NS		NS		NS
% Female House with children			Positive	***	Positive	**		NS
% Not English Speakers			Negative	***	Negative	***	Negative	***
% Unemployment			Negative	**	Negative	**		NS
% Individuals in Poverty				NS		NS		NS
% Children in Poverty				NS		NS		NS
Community Resources								
# Churches			Positive	***	Positive	***	Positive	**
# Colleges				NS		NS		NS
# Hospitals				NS		NS		NS
# Rec. Centers				NS		NS		NS
# Social Centers			Positive	***	Positive	***		NS
Total Resources			Negative	***	Negative	***	Negative	***
Attend High Poverty School			Negative	***	Negative	**		NS
Transferred school			Negative	***	Negative	***	Negative	***

Note: ** significant at .05; *** significant at .01; NS not statistically significant

Transfer and Urban Education Swirl: While entry into high school is the decision point with and urban schools choice system, transfer after initial enrollment usually occurs because the initial school choice was not a good fit, students were not successful in their original school, and/or their schools closed. In Detroit during the first decade of the 21st century, school closure was a factor influencing the ways students navigated educational systems. Some students transfer from academic high schools (e.g. Cass Tech) when they do not achieve up to standards. Other

students may be advised to transfer to a different type of high school. We've already seen that transfer contributes to drop out or slowed graduation and lower grades (Tables 4.5, 4.6). Transfer is a problematic intermediate outcome (i.e. occurs before graduation) that is an artifact of urban educational swirl.

Our sample is from DPS data, so if students chose to attend out of district high schools they would not be included. Students' background, home community, community resources in home communities, and characteristics of initial high school of choice had an influence on transfer.

First, women were less likely to transfer than men and students from high poverty homes were more likely to transfer. This indicates women had more mobility than me, but given the problematic nature of transfer in the context of urban school swirl, the implications of the mobility can be question (i.e. was there an implicit false promise?).

Second, four of the six variables related to change in students' base communities were significantly associated with transfer:

- An increase in the percentage of the population with high school diplomas was positively associated with transfer. The reasons are not readily evident, but it is possible that parents with high school diplomas were unhappy with the learning environments their children experienced and had enough academic capital to know where their children would be better off.
- The percentage of families with females as head of households, an indicator that decreased as a percentage but had a positive association with academic success, had a negative association with transfer. In Detroit, the percentage of female-

headed households consistently indicated stability supporting educational opportunity.

- The increase in unemployment was positively associated with transfer, further illustrating how unemployment undermines social stability and how it relates to educational progress.
- The increase in the number of children in poverty was positively associated with transfer during high school, further illustrating that the decline of social stability in Detroit undermined educational opportunities for Detroit's youth.

Third, five of the six indicators related to community organizations were significantly associated with transfer:

- The number of churches was negatively associated with transfer, indicating the social cohesion provided by faith communities provided stabilizing forces enabling children to persist in their initial high school of choice.
- The number of hospitals in students' home communities was positively associated with transfer, indicating the presence of these facilities was destabilizing, possibly due to noise from emergency vehicles and other disruptive forces.
- The number of recreation centers in a student's base community was negatively associated with transfer, indicating they were stabilizing forces, giving students a place for positive social interaction. Interestingly, the variable was not significant when middle school achievement was included, but was significant before and after this step. The interaction between recreation centers and middle school achievement merits attention in future studies of Detroit students.

- The number of social service centers was also negatively associated with transfer in two of the three models in which it was included, further illustrating the ways these centers influence social stability and educational opportunity in Detroit's neighborhoods.
- Finally, the total resources in base communities was positively associated with transfer, indicating the missions of community organizations were more important in social stability and educational opportunity than the total number of organizations.

It is noteworthy that universities were the only type of organization not significantly associated with any of the outcomes. This means universities were benign in spite of their extensive potential as partners in educational improvement in Detroit.

The Dual Roles of Community Resources: These analyses illustrate the dual role of base community resources in community stability in relation to educational opportunity in Detroit. These analyses confirm the economic argument by Brookings (Kneebone, et al., 2011): the concentration of poverty and unemployment in urban base communities undermines educational opportunity for urban youth. On the other hand, community organizations that help stabilize and create community cohesiveness within base communities have substantial positive associations with improving educational opportunity during high school. Churches, social service centers, and recreation centers all played important roles in improving stability and opportunity. Hospitals were not a positive force, while universities had not risen to the point of making a difference in their communities, either positively or negative. These analyses support the claim that the missions of community-based organizations are more important than their total number. Further, they illustrate that hospitals and universities could do more to support the social stability of the base communities in which they are located.

Table 4.6 Logistic Regression Analysis of the Influence of Background, Community and School Resources, and Achievement on Transfer Rate (students who were freshmen at open schools): Background and Community Resources Only (Simple Version)

Characteristic	Background	Community and School	Middle School Achievement (MEAP)	High School Achievement
N=6123	Assoc. Sig.	Assoc. Sig.	Assoc. Sig.	Assoc. Sig.
Female	Negative ***	Negative ***	Negative ***	Negative **
F & R Lunch	Positive ***	Positive ***	Positive ***	Positive ***
Census Data (2011-2000) Percent Chang				
Diff in % High School Diploma or above		Positive ***	Positive ***	Positive ***
Diff in % Female Householder with children		Negative ***	Negative ***	Negative ***
Diff in % Language Not English		NS	NS	NS
Diff in % Unemployment		Positive ***	Positive ***	Positive **
Diff in % Individual in Poverty		NS	NS	NS
Diff in % Children in Poverty		Positive ***	Positive ***	Positive **
Community Organizations				
# Churches		Negative ***	Negative ***	Negative ***
# Colleges		NS	NS	NS
# Hospitals		Positive ***	Positive ***	Positive ***
# Rec. Centers		Negative **	NS	Negative **
# Social Centers		Negative ***	Negative **	NS
Total Resources		Positive ***	Positive ***	Positive ***
Attend High Poverty School		Positive ***	Positive ***	NS

Note: ** significant at .05; *** significant at .01; NS not statistically significant

4.2 Achievement Situated in Base Communities

For the past few decades, the research on educational attainment developed for educational policy has emphasized the effects of courses completed in high school and test scores on outcomes like high school graduation, college enrollment, and college completion. This paradigm still dominates the literature on college access and success, with integration of an emphasis on student aid along with the alignment of high school courses with attainment (e.g. Perna & Jones, 2013). We recognize the importance of this pervasive framing of educational research and policy, so we focus on these now traditional variable linkages in the quantitative analyses below, especially the descriptive statistics summarized first. However, our discussion of statistically significant relationships below is constructed using analyses that also considered community resources.

Descriptive Analyses of Achievement

While our analyses of student achievement included high school courses—and as in many studies we considered math courses completed—we found the achievement scores on standardized tests were better predictors of high school outcomes. We present analyses of middles school achievement on standardized tests, high school achievement, and math courses completed as further descriptive background.

Prior Achievement in Middle School: In recent years administrators in Detroit schools have focused on test scores because they determine whether schools move from DPS control to EAA. Therefore, we consider middle school achievement test scores as part of the baseline. The specific components of the test are examined.

First, in reading, writing, and social studies scores, middle schools varied in relation to background and community resources (see Table 4.7 and Figure 4.13). Females had slightly higher scores on both reading and writing tests by completion of middle school. While the number of Whites was low, they had higher scores on reading and social studies than other groups; there were also only a few Native Americans, but they had the highest writing scores. Most of the students were Black. Students who were not part of federal free and reduced (F&R) lunch programs had higher scores on all three tests than students who were eligible for these programs. Students who attended the same school all the way through high school had higher average scores on all three tests than did students who transferred. In addition, students who were enrolled in schools with lower poverty rates had higher scores than students in schools with larger percentages of students in poverty. These findings illustrate that low-income students entered high school at a competitive disadvantage with respect to prior achievement.

Figure 4.13: Box plots by MEAP subject ordered from highest to lowest median score for the freshman class 2005-2006. The MEAP scores are from 2003 to 2005. The MEAP Math scores were not available.

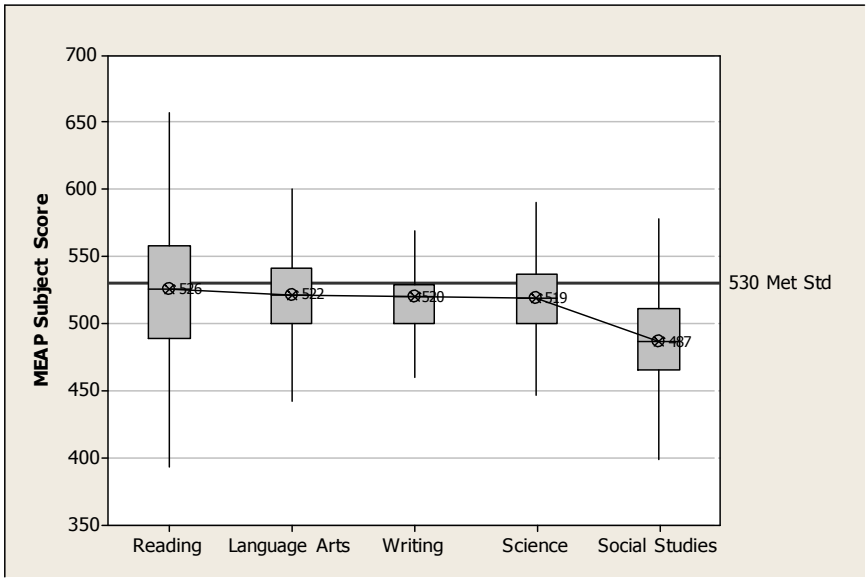


Table 4.7 Summary of MEAP Scores for 2009 Graduating Cohort for Reading, Writing, and Social Studies

Demographic	N	MEAP Reading Average	N	MEAP Writing Average	N	MEAP Social Studies Average
Overall	5066	523.7	5058	516.4	5155	488.0
Gender						
Males	2291	515.7	2277	512.6	2313	485.7
Females	2775	530.3	2781	519.5	2842	489.9
Race/Ethnicity						
Black	4720	523.8	4713	516.5	4786	487.9
Latino/a	203	524.1	202	515.1	214	492.3
White	85	526.5	85	515.2	90	489.8
Asian/Pac. Is	43	509.6	43	514.9	47	482.6
Native Am *	*	--	*	--	*	--
FRL Eligibility						
Free lunch	3668	518.1	3665	515.0	3701	483.8
Reduced lunch	446	529.4	446	518.0	470	493.5
Not eligible	952	542.7	947	521.1	948	501.2
High School Poverty Level						
75% plus FRL	1493	514.4	1492	514.3	1505	480.5
67 -75% FRL	2125	513.7	2122	514.5	2155	479.9
Below 67% FRL	1448	548.0	1444	521.4	1495	507.2
HS Mobility						
Same school	3021	528.8	3025	517.5	3102	491.8
Transfer	2045	516.2	2033	514.7	2053	482.3

* Due to a small sample size for the Native American student group, statistics are not shown.

Second, the exact same patterns of disparity were evident in English Language Arts (ELA) and science (Table 4.8). Females scored higher than males, low-income students scored lower than students with higher incomes, and attending high poverty schools was a disadvantage. The story was similar in both language-based and science-based tests. These findings echo prior research (Section 3) and demonstrate that poverty and gender create disparities before students enter high school in Detroit.

Table 4.8 Summary of MEAP Scores for 2005-2009 Cohort for ELA and Science

Demographic	N	MEAP ELA Average	N	MEAP Science Average
Overall	5018	520.4	5174	519.6
Gender				
Males	2256	514.5	2316	518.8
Females	2762	525.1	2858	520.2
Race/Ethnicity				
Black	4674	520.4	4805	519.5
Latino/a	202	520.0	215	521.3
White	84	520.6	89	522.3
Asian/Pac. Is	43	512.3	47	514.8
Native Am *	*	--	*	--
FRL Eligibility				
Free lunch	3630	516.8	3719	516.3
Reduced lunch	443	524.2	472	525.1
Not eligible	945	532.5	983	529.4
High School				
75% plus FRL	1479	514.6	1525	513.6
67 -75% FRL	2100	514.4.	2151	513.1
Below 67% FRL	1439	535.0	1498	535.0
Mobility				
Same school	3002	523.4	3108	522.5
Transfer	2016	515.8	2066	515.2

* Due to a small sample size for the Native American student group, statistics are not shown.

Unfortunately, DPS did not provide the actual MEAP scores for Math, so Math is not reported in Table 4.7. In the appendix, the box plots reflect the subject scores. In the regressions summarized below, we used the PL (proficiency level) data for MEAP Math, which Detroit did provide.

High School Achievement: First, the high school scores on the Michigan Merit Exam (MME) in reading, writing, and social studies show similar patterns (see Table 4.9) , but with some slight variations between the two grade levels for students in the cohort. Females continued

to have higher scores than males in reading and writing, but males had slightly higher scores in social studies. This shift could have resulted from differences in dropout rates for males, with more departure by male students. Students with higher poverty (F & R Lunch) had lower scores than students from better family circumstances. Thus, socioeconomic background continued to be a force, as would be expected based on extant scholarship.

Significantly, the average MME scores for Social Studies are the highest of all the subjects (1100 is proficient for all subjects), even though the average MEAP score for social studies was one of the lowest. This suggests a major effort was undertaken by DPS to improve students' knowledge of social studies.

Second, a similar pattern was evident in math and science scores in high school (Table 4.10). The deviation from the general pattern of SES and school disparity was related to gender differences on math scores: males had slightly higher scores than females, a reversal in the pattern evident in middle schools for the same cohort. This reversal could be related to the culture in schools which often implicitly supports male achievement in math. It is also possible that patterns of departure (males drop out at a higher rate) and educational practices play a role.

Table 4.9 Summary of the Michigan Merit Exam (MME) for 2009 Graduating Cohort: Reading, Writing, and Social Studies

Demographic	N	MME Reading Average	N	MME Writing Average	N	MME Social Studies Average
Overall	3931	1089.4	3860	1076.4	4014	1106.0
Gender						
Males	1539	1085.7	1509	1070.8	1582	1106.7
Females	2392	1091.7	2351	1080.1	2432	1105.5
Race/Ethnicity						
Black	3663	1089.2	3593	1076.3	3739	1105.7
Latino/a	160	1089.5	159	1076.5	164	1110.6
White	62	1097.5	62	1084.0	64	1113.6
Asian/Pac. Is	36	1087.2	36	1079.5	37	1105.5
Native Am *	*	--	*	--	*	--
FRL Eligibility						
Free lunch	2113	1082.9	2065	1070.1	2162	1102.1
Reduced lunch	323	1091.4	318	1077.1	335	1107.0
Not eligible	1495	1098.0	1477	1085.1	1517	1111.4
High School						
Above 75% FRL	958	1078.2	919	1066.5	985	1099.5
67 -75% FRL	1368	1080.8	1343	1067.1	1385	1099.2
Below 67% FRL	1605	1103.3	1598	1090.0	1644	1115.6
HS Mobility						
Same school	2808	1091.9	2796	1079.2	2887	1107.8
Transfer	1093	1082.7	1064	1069.2	1127	1101.4

* Due to a small sample size for the Native American student group, statistics are not shown.

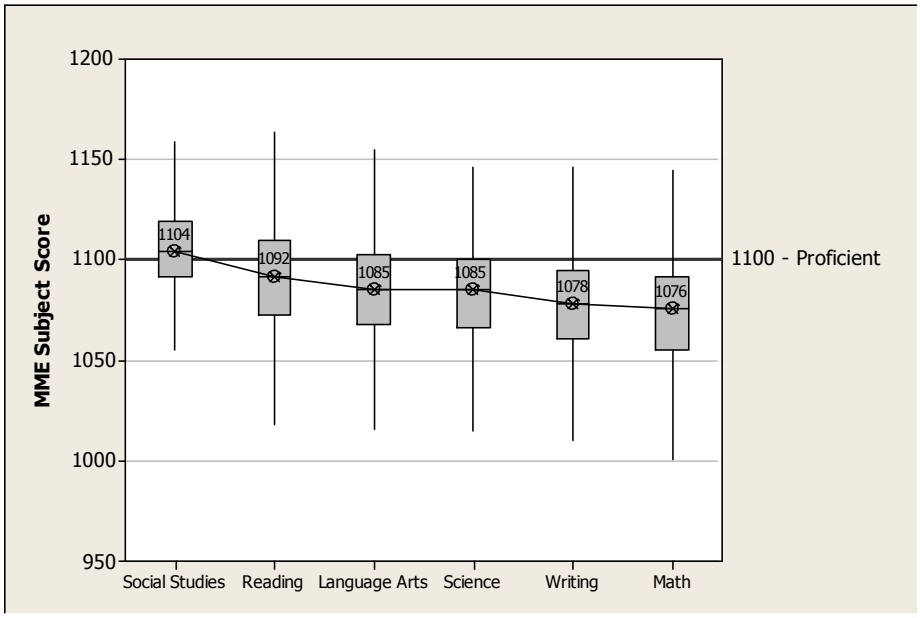
Table 4.10 Summary of the Michigan Merit Exam (MME) for 2009 Graduating Cohort: Math and Science

Demographic	N	MME Math Average	N	MME Science Average	N	MME ELA Average
Overall	3595	1071.3	3860	1077.0	3807	1083.5
Gender						
Males	1524	1072.6	1512	1077.0	1484	1079.0
Females	2371	1070.5	2348	1077.1	2323	1086.4
Race/Ethnicity						
Black	3627	1070.6	3592	1076.9	3544	1083.4
Latino/a	160	1081.1	160	1079.2	158	1083.4
White	62	1084.3	62	1082.7	60	1091.4
Asian/Pac. Is	36	1073.3	36	1073.4	35	1084.5
Native Am *	*	--	*	--	*	--
FRL Eligibility						
Free lunch	2088	1065.7	2066	1070.2	2030	1077.2
Reduced lunch	321	1074.0	318	1080.2	312	1085.2
Not eligible	1486	1078.6	1476	1085.8	1465	1092.0
High School						
75% plus FRL	948	1062.4	920	1066.0	909	1072.8
67-75% FRL	1348	1062.7	1342	1066.6	1323	1074.7
Below 67% FRL	1599	1083.9	1598	1092.1	1575	1097.1
HS Mobility						
Same school	2817	1073.7	2799	1080.1	2762	1086.2
Transfer	1078	1065.2	1061	1068.9	1045	1076.5

* Due to a small sample size for the Native American student group, statistics are not shown.

The overall relationship between the MME subjects is shown in Figure 4.14, which clearly shows the best achievement was with social studies and the least with math.

Figure 4.14: Box plots by MME subject ordered from highest to lowest median score for the freshman class 2005-2006.



High School Attendance

In a separate analysis of attendance as measured by unexcused absences in the student course file, we found that there was a relationship between unexcused absences and course grades, consistent with previous research. In this analysis, there were a total of 95,052 freshman courses taken by DPS students; Table 4.11 shows the summary statistics for the number of unexcused absences for each earned grade.

Table 4.11: Statistical Summary for Unexcused Absences for Freshmen Courses (Per Semester) for Each Grade

Grade	N	Average	Standard Deviation	20th Percentile Point	50th Percentile Point (Median)	90th Percentile Point	Maximum
A	18105	5.4	5.7	1	4	12	63
B	21554	6.7	7.0	1	5	15	71
C	22831	8.7	8.6	1	6	20	74
D	16040	12.3	11.1	2	10	26	90
F	15646	25.5	18.6	7	23	51	95

A similar analysis was conducted for courses taken by students who were seniors in the 2008-2009 and 2009-2010 school years; 66,215 graded courses were included. The average and median number of unexcused absences are larger for the senior year, indicating a "sliding" attitude towards more unexcused absences.

Table 4.12: Statistical Summary for Unexcused Absences for Senior Courses (Per Semester) for Each Course Grade

Grade	N	Average	Standard Deviation	20 Percentile Point	50 Percentile Point (Median)	90 Percentile Point	Maximum
A	20045	9.6	8.6	2	7	21	70
B	17273	11.7	9.9	3	10	25	90
C	15724	14.5	12.0	3	12	31	75
D	8993	20.4	14.4	7	19	40	89
F	4179	29.7	20.4	8	29	56	82

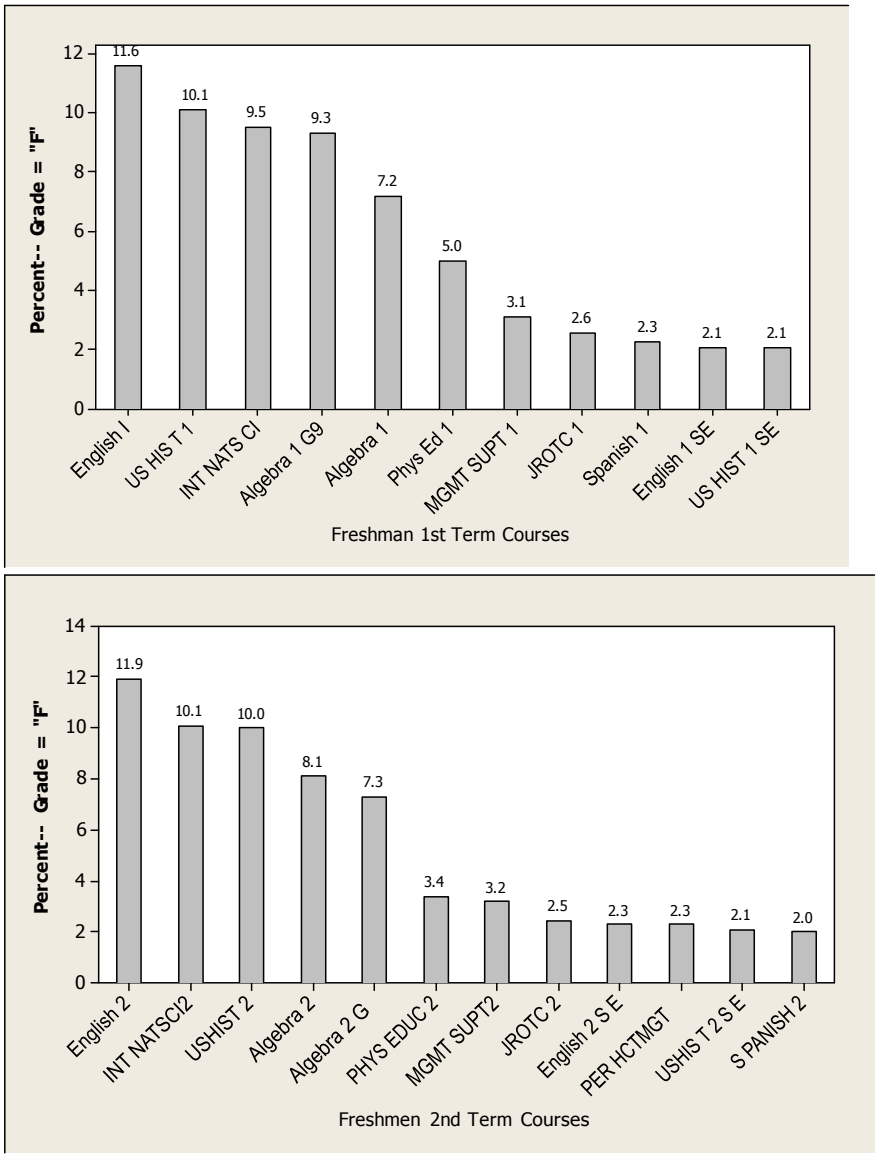
Both these tables are summarized by courses and not by student, but if one assumes that all students take about the same number of courses, the two tables show that the average number of unexcused absences tends to increase from the freshman year to the senior year. In preparing Detroit students for college, the number of unexcused absences is an important indicator to monitor student behavior for preparing students for college.

Comparison of Failing Courses and Courses for which Students Earned A's

At part of the baseline assessment, we felt it was important to document which course freshmen were failing the most. Figure 4.15 shows a Pareto Chart of whose courses with the highest percent of "F" grades for the first and second semesters. For example, 11.6 % of all "F" grades were recorded in English I. Only those courses with more than 2% of the failing grades are shown. No effort was made to combine course names, e.g. Algebra I is listed under several

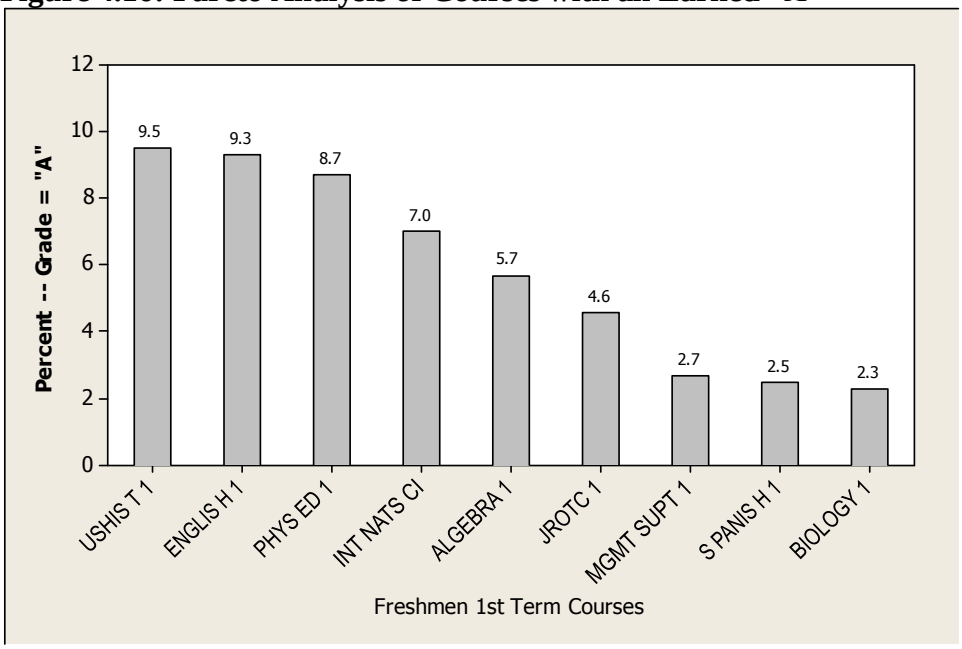
course names. *When Algebra 1and Algebra 2 in grade 9 are combined, over 16% of the failing grades are in an Algebra course***.**

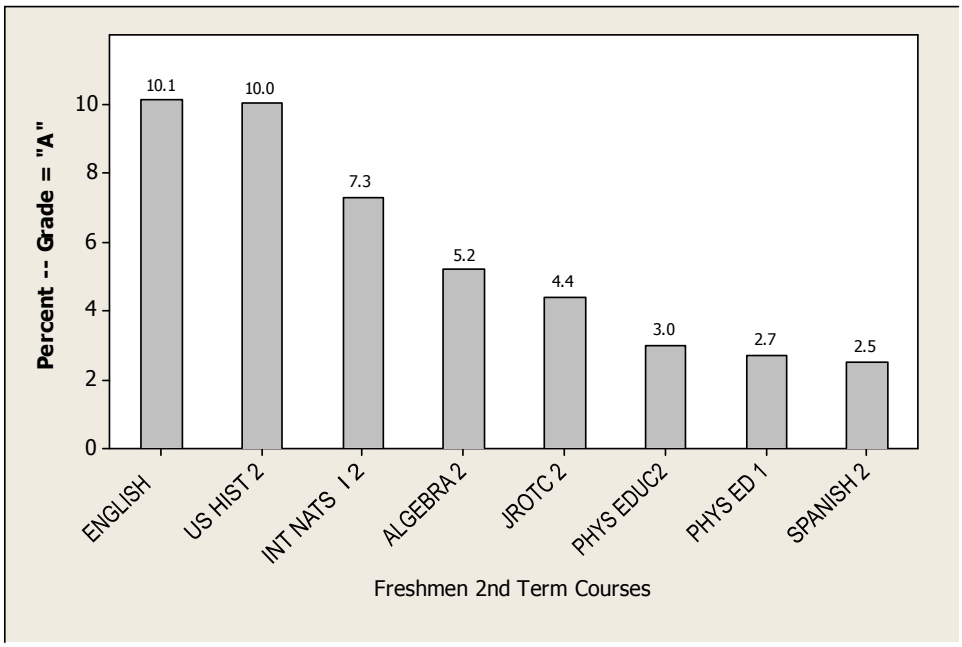
Figure 4.15: Pareto Analysis of Failing Grades by Course. Based on all students listed as freshmen in the Student Course File.



At the other end of the grading scale, an analysis was completed to order the courses by "A" grades. English and U.S. History are both high frequency courses for both grades of an "A" and an "F" (Figure 4.16).

Figure 4.16: Pareto Analysis of Courses with an Earned "A"





The Impact of Achievement on High School Outcomes

The regression analyses of high school outcomes consider community resources and achievement in sequential models adding blocks of variables. The first two variable blocks for all models (i.e. background and community sources) were presented above. As noted, there were a

few modest changes in the significance of some of the community variables when achievement was added. Below we present a summary of the second level analyses of graduation, GPA, and transfer.

Graduation: As noted above, both individual background and community resources had significant associations with graduation across the models. In Table 4.13, the achievement portion of the regression analyses are presented. Our analyses consider whether or not students were proficient on the MEAP rather than the actual score, as well as whether or not the data was available; students could not be proficient if there was no data. Using this approach it was possible to retain all cases. (The data on courses taken was not included for statistical reasons noted in Appendix D.)

First, proficiency in middle school in math, reading, science, and writing were significant and positively associated with high school graduation. When high school achievement test scores were added, proficiency in reading, science, writing, and science ceased to be significant. The change in significance is related to the correlation between subject matter scores at the two levels. However, middle school math proficiency continued to be positively associated with graduation when high school test scores were considered, indicating a weaker correlation. These findings are interrelated with changes in the statistical significance of the roles of community support organizations (discussed in Section 4.1) and changes in gender scores on math. These findings illustrate that community support and cultural understanding, as conveyed within base communities and schools, have an influence on math achievement in high schools.

In most instances, having missing data on middle school proficiency exams had a negative association with high school graduation, as would be expected. There were two exceptions to this pattern: missing data on reading and ELA proficiency had a positive

association with graduation. This finding merits further analysis. Too frequently missing data is used to exclude students in statistical models, which means there is limited prior information on the consequences of the missing test score data of middle school students when they enter high school.

Controlling for other factors, including middle school achievement, adding high school achievement in the last step of the model improves the model (i.e. concordance and other model indicators). Proficiency on the MME in ELA and social studies had positive associations with graduation, but math, reading, and science proficiency were not significantly related to graduation, controlling for middle school achievement. Having missing data on reading and social studies reduced the odds of completing high school. These findings, especially the statistical insignificance of high school math scores, runs counter to the dominant logic on educational attainment. Examining whether or not students are proficient on tests and whether or not they had test data provide an alternative way to think about educational achievement and attainment. This approach is more inclusive and more accurately reflects the role of tests; whether or not people show up for tests need to be taken into account.

Table 4.13 Logistic Regression Analysis of the Influence of Background, Community Resources and Prior Achievement on Four-Year Graduation: MEAP and MME Only (Simple version)

Characteristic	Background			Middle School Achievement (MEAP)		High School Achievement	
	Assoc.	Sig.	Assoc.	Sig.	Assoc.	Sig.	Assoc	Sig.
Middle School Achievement								
ELA Prof					NS			NS
ELA Missing					Negative	***	Negative	***
Math Prof					Positive	***	Positive	**
Math Missing					NS			NS
Reading Prof					Positive	**		NS
Reading Missing					NS		Positive	**
Science Prof					Positive	***		NS
Science Missing					NS			NS
Social Studies Prof					NS			NS
Social Studies Missing					NS			NS
Writing Prof					Positive	***		NS
Writing Missing					NS			NS
High School Achievement								
ELA Prof								
ELA Missing							Positive	***
Math Prof								NS
Math Missing								NS
Reading Prof								NS
Reading Missing							Negative	***
Science Prof								NS
Science Missing								NS
Social Studies Prof							Positive	***
SS Test Missing							Negative	***
Writing Prof								NS
Writing Missing								NS

Note: ** p<0.05 *** p< 0.01; NS not significant

High School GPA: For five of the six middle schools test score were significant and positively associated with high school grades before high school scores were added to the model

(Table 4.14). Only writing and math proficiency were still significantly associated with HS GPA in the final model, indicating middle school tests are predictive of high school test scores. Having missing data on middle school tests was not significantly related to high school GPA.

Interestingly, having a missing ELA score in high school was significant and positively associated with high school grades. Missing math, reading, and social studies scores were negatively associated with high school grades, the expected relationship. High school Math proficiency and social studies proficiency were positively associated with high school GPA.

Perhaps more surprisingly, the type of first high school math course taken (above or below Algebra compared to Algebra) was not significantly associated with graduation GPA. However, failure of first semester math in high school (a component of GPA), absence from math class, and having no reported grade, all indicators of low performance, were expectedly negatively associated with high school GPA. Researchers have found that students who fail a core course, particularly mathematics or English, are more apt to drop out of high school (Allensworth & Easton, 2007).

Table 4.14 OLS Regression Analysis of the Influence of Background, Community Resources, and Achievement on High School GPA: Middle School and High School Achievement Only (Simplified Version)

Characteristic	Background		Community and School		Middle School Achievement		High School Achievement	
	Assoc.	Sig.	Assoc.	Sig.	Assoc.	Sing.	Assoc.	Sig.
Middle School Achievement								
ELA Prof						NS		NS
ELA Missing						NS		NS
Math Prof					Positive	***	Positive	***
Math Missing Data								NS
Reading Prof					Positive	***		NS
Reading Missing						NS		NS
Science Prof					Positive	***		NS
Science Missing						NS		NS
SS Prof					Positive	***		NS
SS Missing						NS		NS
Writing Prof					Positive	***	Positive	**
Writing Missing						NS		NS
High School Achievement								
ELA Prof								NS
ELA Missing							Positive	***
Math Prof							Positive	***
Math Missing							Negative	**
Reading Prof								NS
Reading Missing							Negative	**
Science Prof								NS
Science Missing								
Social Studies Prof							Positive	***
Social S. Missing							Negative	***
Writing Prof								NS
Writing Missing								NS
1st Sem Math								
Below Alg								NS
Above Alg								NS
Math Failed							Negative	***
Miss. Grade							Negative	***
Absences> 10							Negative	***
Absence missing								NS

Note: ** p<0.05 *** p< 0.01; NS not significant

School Transfer (Urban Swirl): As noted above (Section 4.1), transferring during high school was negatively associated with graduation and GPA. Further, school closure is a serious problem in the urban schools transition to market, but the problem has been under studied (Section 4.2). Therefore, the analysis of the relationship between achievement and transfer is a core issue with respect to social cohesion and educational opportunity. The logistic regression analysis found that variables related to social cohesion (e.g. community organizations) mitigated other forces causing transfer.

The analysis of transfer (Table 4.13) reveals that students' achievement as measured by the MEAP and MME scores had only very modest significance with transfer: only math proficiency in middle school had a significant (and positive) association with transfer, and only after high school achievement was added to the model. No other variables related to achievement scores in either middle or high school had a significant association with transfer. However, we found that when we disaggregrated the data by freshman high school, the average GPA for students who transferred tended to be around 2.00 or lower, suggesting the freshman high school GPA may be related to the decision to transfer. In fact, having a low GPA was statistically related to transferring, while having a high GPA was related to not transferring. (See Appendix D) This evidence indicates that urban swirl among Detroit students, an unintended consequence of school openings and closings in the market transition, was almost entirely unrelated to student achievement.

Table 4.15Logistic Regression Analysis of the Influence of Background, Community and School Resources, and Achievement on Transfer Rate (students who were freshmen at open schools): Middle School and Math Achievement Only (Simplified Version)

Characteristic	Background		Community and School		Middle School Achievement (MEAP)	High School Achievement	
N=6123	Assoc.	Sig.	Assoc.	Sig.	Association Sig.	Assoc.	Sig.
Middle School MEAP							
ELA Prof					NS		NS
ELA Missing Data					NS		NS
Math Prof					NS	Positive	**
Math Missing Data					NS		NS
Reading Prof					NS		NS
Reading Missing					NS		NS
Science Prof					NS		NS
Science Missing					NS		NS
SS Prof					NS		NS
SS Missing					NS		NS
Writing Prof					NS		NS
Writing Missing					NS		NS
High School Achievement							
ELA Prof							NS
ELA Missing							NS
Math Prof							NS
Math Missing							NS
Reading Prof							NS
Reading Missing							NS
Science Prof							NS
Science Missing							NS
Social Studies Prof							NS
SS Missing							NS
Writing Prof							NS
Writing Missing							NS
HS GPA> 2.6						Negative	***
HS GPA < 1.6						Positive	***
1st Term Math							
Below Algebra							NS
Above Algebra							NS
Absences >10						Positive	***
Absences MD						Positive	**
Failing Grade						Positive	***
Absence Missing						Positive	***

Note: ** p<0.05; *** p<0.01; NS Not Significant

The lack of a significant association between any achievement score and transfer seems to undermine further the validity of rationales used to push markets and perhaps even penalize schools with low achievement scores as part of state and federal policy. The collective challenge continues to be finding better ways to improve achievement, given the constraints imposed on schools by market competition (i.e. opening and closing of schools) and raising graduation requirements (i.e. constraining curriculum to college preparatory courses).

Further, students with low GPAs were more likely to transfer and students with high grades were less likely to transfer. The level of math students took their first year in high school was unrelated statistically to transfer while factors the undermine achievement in math (absences, failing grades, etc.) were. This data further reinforces that transfer was not part of a strategy that promoted educational improvement but instead undermined attainment.

Summary Findings on Academic Reforms in Detroit

Beyond the correlation between achievement scores and grades, there is little evidence that reform strategies used in Detroit in the first decade of the 2000s were associated with educational improvement. The baseline assessment of academic outcomes by Detroit students in the 2005-09 cohort went to school during a time when marketization through opening and closing of schools and focusing on increasing the level of math students must take to graduate were dominant strategies; these strategies do not appear to be related to improvement in attainment outcomes.

4.3 Community Resource, Student Achievement, and Educational Opportunity

The community resource theory of educational opportunity provides a different vantage on patterns of educational attainment than traditional attainment studies. The study has two major findings.

First, the presences of community-based organizations, especially churches and community service centers, had a significant and positive association with improvement of student grades and degree completion and provided supports that mitigated forces influencing transfer, a consequence of school closings and openings (Section 2). While the decline of urban base communities, including rising unemployment and declining population, accelerate educational challenges, the apparent social cohesion provided by community organizations provided a mechanism for contending with the declines in Detroit schools.

While community centers and churches were apparently positive forces for change within Detroit base communities, proximity to colleges and universities campuses was benign: their presence in base communities neither improved nor detracted from educational attainment among Detroit high school students in the 2005-09 cohort. There is potential for university-school partnerships working with community organizations as networks supporting improved educational opportunity (e.g. Hudson, 2013), there was not enough empirical evidence to support this argument from this assessment study. The potential remains largely unrealized.

Second, the findings on student achievement indicate a mostly positive relationship between test scores and both high school grades and graduation. Students who are proficient on tests also have better grades than peers who did not meet proficiency standards and/or did not complete their tests. Taking a more advanced math course as the first one in high school was not

statistically related to high school GPA, although earning a failing grade in the first math course was. Therefore, support in the freshman year is very important for academic success in high school. The detailed curriculum records showed that while some students never recovered academically from a freshman year with low grades, some did and went on to achieve A's in their junior and senior years and graduate on time. We found a very high correlation between the MEAP score and the MME score, thus the MEAP test is a predictor of success in high school which means MEAP scores can be used as a basis for an intervention

The one anomaly emerging from looking across the two parts of these analyses is that there were changes in the patterns of math achievement. It was apparent that churches and community centers helped improve achievement, but there was a reversal in the pattern of achievement. In middle school, females modestly outperformed males on math proficiency, while the reverse pattern was evident in high school. It would appear there is a window of opportunity to improve educational outcomes through engaging schools and community organizations in efforts to improve the amount and quality of learning time, especially in math.

The analyses in this section illustrate an approach to quantitative assessment and evaluation that can be used to inform educational improvement in Detroit. With further adaptation it will be possible to build a data-based approach that tracks students through Detroit schools, including their involvement in community-based interventions. Such a data system can be used to evaluate the impact of both large scale and local interventions. We encourage collaboration on development of a quantitative assessment and evaluation center to support educational reform and improvement in Detroit schools.

Research partnerships between schools and community organizations can make substantial contributions. While this quantitative baseline assessment provides a foundation for thinking about strategies, it does not provide evidence regarding collaborative models that do or might work. In the next section we present a pilot test of an alternative approach to partnerships that treats research as a resource for improvement, rather than reducing it as an instrument to measure outcomes from failing patterns of public policy. There is a new convergence of nonprofit organizations and educational systems in Detroit. The following pilot test focuses on discerning ways universities might become more constructive members of partnerships with schools in Detroit.

5

Qualitative School-Based Assessment and Evaluation:

Pilot Test of an Alternative Partnership Model

When university researchers collaborate with schools in urban systems engaged in upgrading curriculum, they typically encounter clashes between their own paradigmatic assumptions and the realities of education reform in the market system. The traditional policy research and evaluation framework has helped set the current trajectory for reform, making it difficult for researchers to consider alternative framing of the challenges (Sections 2, 3 and 4). Teacher educators usually have their own theories of pedagogical and content linkages in the classroom, but teachers' classroom practices are constrained in districts with standardized and tightly aligned curriculum, timing of delivery, and tests. As a response, researchers set up experiments and other interventions and invite teachers to join in the process, but the research involved often doesn't fit the circumstances facing teachers.

The concept of more and better time provides two alternative ways to reconstruct these relationships. First, community organizations have direct links to students, families, and schools, so they provide prospective partners with schools in extending learning time. The problem of better learning time in schools is complicated by the constraints of the educational system. However, many schools in Detroit are entering a period of testing new approaches: EAA schools have invested in an individualized, automated approach to instruction; some DPS schools have taken steps to increase flexibility by developing partnerships with community-based organizations; and both traditional and new public schools are engaged in developing niche-content strategies that align with career and educational pathways.

Stepping back to view these forces, it is possible to envision a window of opportunity for university-based researchers to work with, and in support of, schools and community organizations as partners in reform. In this vision, university researchers must reconstruct their paradigmatic assumptions about policy levers and content delivery to acknowledge the constraints and opportunities within the existing market-based urban education systems. The community resources model of education reform (Sections 2 and 3) provides a reframing the assumptions about education reform to include community-based organizations as integral to school-based reform.

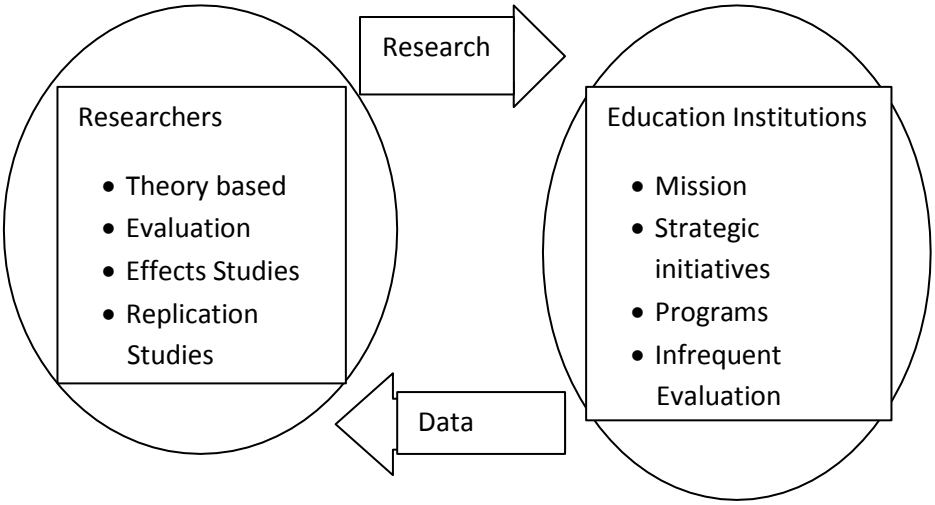
This section provides a reconstructed vision of partnerships between schools, community organizations, and university-based researchers as partners in reform. First, we present a reconstructed framework for developing research partnerships. Second, a case study illustrates the reconstructed partnership strategy, contributing further evidence about the Detroit school baseline for reform.

5.1 Research Partnerships Strategy

Schools and community organizations involved in rebuilding schools need to develop an approach to solve educational and social problems that emerge as they pursue new school-based models. Typically this requires building new, locally-situated understandings of why the problem exists, creating the potential of using research and information to support problem solving. In practice, creating an open environment the builds on the strengths of schools and community organizations depends on having an evidence-based attitude, along with a capacity to recognize both opportunities and constraints. Below we compare conventional and alternative models of research partnerships.

Conventional Research Partnership Model: The conventional relationship between educational institutions and researchers who perform evaluation studies is illustrated in Figure 5.1. Most educational systems provide data through routine data reporting and surveys and get information back in the form of accountability reports comparing their practices to those at similar institutions (as part of accountability) and research reports that evaluate programs (that may or may not be related to practice). Occasionally, research methods will rise to the level of casual inference, which is thought to mean that through replication other institutions might have the same results. However, since organizational circumstances vary across schools and colleges, innovative practices must usually be modified.

Figure 5.1 Conventional Relationships between Researchers and Educational Institutions



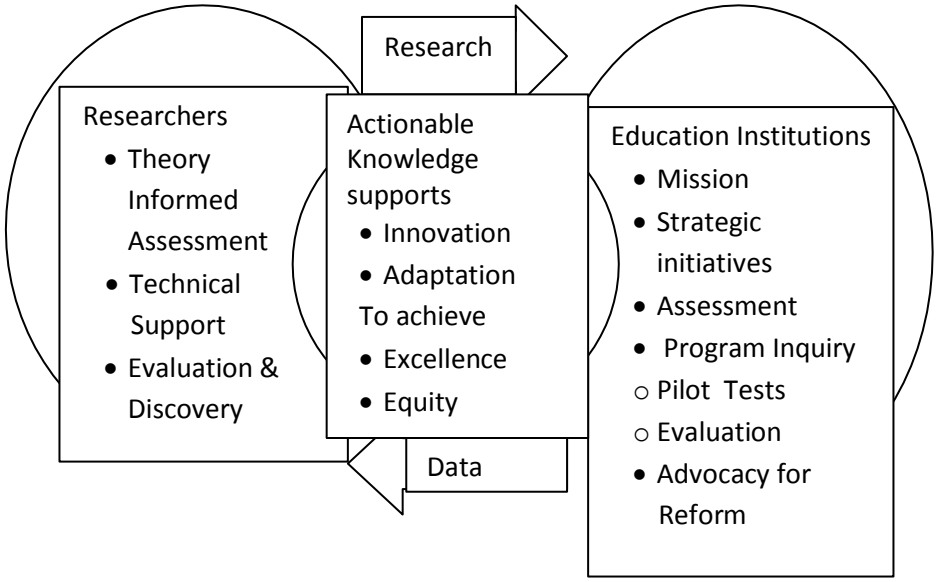
Alternative Partnership Model: Using the action inquiry process, researchers and educators collaborate on social problem solving with a focus on developing actionable

knowledge to inform innovation and organizational adaptation (Figure 5.2). We encourage using the tools of action inquiry in partnerships that focus on achieving greater emphasis on social justice as educational institutions strive for excellence. The inquiry process encourages practitioners to think critically as they consider adopting strategies from elsewhere as well as envisioning and testing entirely new change strategies. Both the researchers and the practitioners have dual, mutually-reinforcing roles with this type of deep partnership.

For educational practitioners and community activists, the focus can shift from rationalizing action in administrative systems to solving problems that impede organizational adaptation and innovation in pursuit of excellence and equity. Partnering in action research provides opportunities for openness about troubling aspects of program design and practice, as well as envisioning and testing alternative approaches. Many times innovations can be pilot tested by adapting the use of existing resources. The practitioners continue their roles in administration, teaching, and/or service, but also can use information to advocate for organizational and/or financial support of innovation. The duality for practitioners involves simultaneous engagement in innovative approaches to practice and collaboration on research informing others.

For researchers and graduate students, action inquiry provides opportunities to engage in real-life problem solving and gain insight into the practice of innovation and organizational change as part of the research process. The quantitative and qualitative methods used can and should be state-of-the-art, so the research can be used for publications and dissertations (see Addendum). The duality of research and advisory roles for researchers allows collaboration on the development of new ideas, testing ideas in practice, and integrating problem-solving into a research agenda.

Figure 5.2 Integration of Action Inquiry: Focus on Actionable Knowledge for Social Justice



Assessment and Evaluation Studies: Three forms of research action are integral to this reconstructed model:

- *Theory Informed Assessment*: Researchers must be willing to reconstruct their framing assumptions to use what they know from theory and research, but reconstruct it to actually address emerging problems. For example, Sections 3 and 4 illustrate reframing of education attainment theory to incorporate community resources.
- *Use of Evidence*: Teachers, administrators, and policymakers in schools need to develop better ways of using evidence, including their own reflection on problems, to build shared understanding of challenges. Too often there are competing models of instruction and intervention that reduce the problem to

either-or choices that are unrealistic because they don't fit emergent problems. *Evaluation of practice should be built into the design* of interventions developed to solve locally-situated problems in schools. Evaluation is a vital component to successful reform, and schools should develop methods of generating new evidence about reform outcomes when they try out a new approach in a classroom, a grade level, or on a school-wide basis.

The *alternative partnership* model provides a learning-oriented, experimental environment that values pilot testing and knowledge building over simple program success or failure. An unsuccessful intervention is seen as a learning experience rather than a failure that must be covered up. Even interventions that have prior evidence of success can benefit from adjustments to fit local circumstance. The attitude of inquiry values a legitimate attempt to try out a new service model. Evaluation is experienced as an opportunity to learn how to improve services to students rather than a professional threat. Because the critical success indicators are important, even when programs are not as effective as hoped high schools are still concerned about this aspect of student success and will continue to address the challenge.

The evaluation of innovations undertaken in individual action inquiry projects should contribute to the general literature if the research is completed using generally accepted standards. In most instances, publications from action projects can be co-written by practitioners and researchers because of their collaboration on the design of the action experiments.

5.2 Case Study: Assessment Study in Partnership with City Engineering Academy[6]

Most of the high schools we've worked with in Detroit have served severely underrepresented students left behind after more than half of the population left the city. School

[6] Consistent with Human Subjects Protocol, we've changed the name of the school to minimize the possibility of identification of interviewees.

choice also allowed many district students to choose schools out of district, and successive waves of centralized reform (i.e. state control, mayoral control, and multiple financial managers) have left the schools with declining funding per student and debt to pay off. The district has had only two years of local school board control during this century; direct government control was well established before the turn of the century. Statewide funding for schools in Michigan has declined since that state has decreed that all students complete Algebra and Geometry and at least enroll in (if not pass) Algebra II before they can graduate (St. John, et al., 2013). The state now requires all 11th grade students to take the ACT as part of the state assessment process, and very few Detroit students achieve the national average score of 21 on the ACT.

During the past year, we have collaborated with public, private, and charter high schools in discussions of the challenges they face and how they can use data to inform their development. The general challenges we find in high schools with primarily low-income students include low-parent engagement, even in charter and private high schools, and students consistently achieving below average in math and language, the two areas that remain central in state tests. A few of the schools we've worked with remain general high schools, but most have themes in an attempt to create a market niche.

City Engineering Academy (CEA) is a DPS school pursuing a content niche. The principal was encouraged by a representative of a corporation providing mentoring support to ask us for an assessment study of literacy and math challenges. The school's community-based board was seeking quick remedies. CEA had built partnerships to support their engineering theme, including programs on robotics and applied engineering. They had many successes, as illustrated by the principal's comment: "*Under my leadership the (name) has improved student test scores, attendance, and has begun to link learning with career and college through our*

robotics and Career and Technical Education initiatives." Indeed, there were several examples of positive press about the school prior to, during, and after the assessment process.

Like all public schools in Detroit, the budget constraints created by low funding levels and money taken from the budget to pay off the debt (about $400,000 a year for CEA), has made it difficult to fund laboratories in technical courses and sciences, although students do have computer access in the science classrooms. While graduation rates hovered around the district average and test scores remained low, nearly 90% of graduates were accepted by either a two- or four-year college.

Our assessment process involved review of school reports on achievement, interviews with teachers, observations in the school, and discussions about other curriculum challenges facing educators in the school. In addition to summarizing developments on math and literacy, we consider underlying critical social issues before discussing the math and literacy challenges.

School Context: About two-thirds of the teachers were young, recent college graduates. Some had worked in industry, including engineering firms, and several were in Teach For America (TFA). TFA teachers were well educated and highly motivated young adults, but had little prior experience in education. Some of the new teachers taught in math, technology, and other newer subjects, sometimes with no content area background in those areas. The other third of the teachers were veterans from the district who taught special education, literacy and science. Both veteran and new teachers were involved in school governance, but there were some differences between the two groups with respect to expectations about discipline.

CEA had about 350 students drawn primarily from the local community. The shared perception of teachers was that their school was the last choice among the three schools in the

building for most of their students. The neighborhood had many abandoned houses and businesses. Many students were homeless in the sense that they stayed with different members of their extended families at different times.

In Michigan, special needs students are required to complete the new graduation requirements. About 40% of the students in CEA were special needs with individual education plans (IEPs). The IEPs were very general, providing very little guidance for teachers. The following comments illustrate the ways many of the young teachers responded to the large group of students with special needs:

- *The small school initiative sounded good…The school originally was supposed to have a 15% population of Special Ed but the district started dumping Special Ed kids here*
- *I didn't want to violate full-inclusion or anything like that; I just wanted one section of kids—and they really do have a wide range of ability levels but they are all kids who will work…But that class gets stepped on and the other two classes are full of behavior problems*

As these comments illustrate, many of the teachers were unprepared for the severity of the problems in the learning environment. In its second year as a newly reorganized school, CEA had some leeway in curriculum because it had a local board with modest authority over discretionary spending (i.e. money from nonprofit organizations), and teachers were involved in the internal school governance. But the hopes for engaging in an improved enterprise were undermined by the realities of the learning environment, pressures to raise scores immediately,

and use of the DPS curriculum. Teachers had the freedom to deviate from the curriculum, but it was difficult to do so given the other constraints they faced.

Underlying Social Issues. CEA educators were concerned that the school was not preparing students to be career and college-ready by graduation. The vision of the school was to educate all students using a rigorous, inquiry-based college preparatory curriculum combined with integrated technology. Their goal was to produce life-long, reflective learners prepared to compete and succeed in a global society. With the first class graduating in 2013, the educators were concerned they had come up short in meeting their goals. Several argued that problem students were interfering with student achievement, while others thought the school had a good behavior plan but it was not being implemented. A veteran teacher who had been involved in planning for the new school reflected:

> *In the initial plan we were told and trained that we will work in the high violent neighborhood…in the highest violence neighborhood in Detroit, high crime, high poverty…And so when we did the analysis of their needs, the first one was that almost 98% of them had at some point in their lives some type of trauma, and there were social and emotional and behavioral needs that interfere with their academic performance. At the beginning we got--the initial staff--we got a lot of training in behavior, in trauma, in all kinds of things and everything was about 'give them love, love and love'. That's how the advisory was born. This class of advisory…everything was about having a relationship with the students. Now it did kind of change; it's a lot of punishments and suspensions. It is no more about relationships, but we talk about that.*

An administrator indicated, "*Through the school governance process, a system of discipline had been agreed upon based on practices in successful schools that some of the teachers had visited.*" However, this system didn't seem to work at CEA: in the month of April, 2013, there were over 200 discipline referrals, a practice that was disruptive to classrooms. An administrator noted that: *"The problem is that the majority of the referrals happen not in the hallway* (but)*... in the classrooms, inside of the classroom."* A teacher who had responded to behavior problems through referral commented

> *You end up kicking a kid out of class again and again and again because they have a beef with the teacher and it's a recurring problem. I feel behavior really affects their graduation odds because if you get kicked out enough times or if you're late to school and you have to sit in the auditorium and miss first hour, we have kids who have not been to English for the entire semester because they're late every day and have to sit in the auditorium every day so of course you're going to fail English.*

Several teachers also argued that social promoting was a problem in the school. An educator observed: *"To be completely honest, I feel like even those who can't read and write would get passed if they just came to class and had good behavior. The kids that fail are probably kids that don't come to class enough.*" Another educator shared: *"if they don't feel like they're getting what's happening in class, they act out to try to disrupt the learning process because they're embarrassed and they want to divert attention away from the lesson."* Elaborating on this challenge, she stated, *"So a lack of preparedness leads to this lack of self-confidence, fear of failure, not taking things seriously and just sort of behavior that disrupts the learning environment because they're not getting it one way or another."*

The new discipline system used a combination of rigid rules and caring support of children, but the implementation of the model wasn't working. An experienced teacher said, *"I was unable to do my job as a teacher given the climate of this school, or at least I was unable to do it in a manner that was satisfactory to myself or satisfying to myself. I was becoming unhappy with the general chaos."* Within the system, teachers were supposed to take responsibility for keeping track of an advisory group of 12 to 15 students, including their attendance and behavior problems. But the process of referring students complicated teaching:

> *Any time they get referred in a classroom, they get sent to you. So you can be teaching, right in the middle of your lesson and you get a knock at the door and you have two or three kids running at you at once telling you about how they're not wrong and what's happening. Your whole lesson is interrupted. I mean, I like the system but it's very distracting especially when you have a lot of behavior problems in your advisory.*

The teachers were aware of the need to revisit the discipline plan before other instruction challenges could be addressed: *"Also I think some type of behavior modification needs to be developed school-wide here because just to send a kid to an adviser…when the adviser is in the classroom helping students who need help and are actually trying, that breaks the focus of that student who is trying."* Not only was there reason to revisit the disciple procedures, but issues of race and poverty were also interlaced into the behavioral problems in the school. Many of the new teachers were unable to relate to the students, so they frequently referred students to their advisor and those teachers got distracted by the dual responsibilities; too frequently the solution was to suspend or expel children.

It was apparent that parents expected social promotions for their children and there was some resistance to the new, more rigorous expectations. A counselor observed,

> *Even though we've sent them certified letters that your kids are not graduating, they are behind five classes, we will not see them till the day they realize that that kid really isn't going to graduate. And then they want to know what we're going to do so that kid can walk the stage.*

As part of our report, we concluded more attention should be paid to the social context of the school and its engagement with the community, no small challenge. The social context issues emerged as part of the assessment process, but were not one of the focal points of our analysis, so we did not engage in discussing possible remedies. After the report, members of the research team began to work with the local access network, a nonprofit college success organization that supports college preparation, financial aid applications, and college applications.

Literacy Challenge: At our initial meeting with the school council, we were asked to consider the reading and math challenges in the school. At the same meeting, a vendor presented a proposal for a direct instruction reading intervention focused on basic reading skills that would cost the school about $100,000 a year. The proposal was controversial because about a dozen of the teachers had attended professional development workshops focused on critical literacy and connected approaches to integrating literacy across the curriculum. From this initial discussion forward, it was evident there was conflict over how best to address the basic literacy needs. A school partner focused on college preparation had taken a close look at academic achievement and was appalled: *"the reality of really seeing that the majority of the population is between second and sixth grade in reading."*

The literacy challenge was complicated by the fact that many students were involved in an individualized credit recovery program. One teacher noted,

> *They (students) sit and work on it and there's not really any collaboration or orchestration (with an instructor); people just sit and work at their own pace. And because our students struggle so badly with reading, so many students just don't get it.*

The strategy used to provide basic instruction was self-paced without much organized teacher support. An English teacher shared, *"I mean a lot of my students…most of them were like 'I've never read a book in my life… like a full book'."* An administrator shared, *"The teachers talk about 'if I could just get them to put forth the effort, if I could just get them to try'."*

The low level of basic literacy skills also complicated efforts to use the college applications as a tool in instruction. A teacher stated,

> *I'll give them a scholarship application and they look at a one-page application and say 'this is too much'. They don't want to do it. Their reading and writing levels are so low that to them, writing a one-page essay can be overwhelming. You get what I'm saying? Reading an application through can be overwhelming.*

One teacher indicated *"There is a fairly prescribed curriculum from DPS but I feel like we've just been given free rein to move away from that…"* The English teachers were excited about working together to figure this out and were beginning by focusing on the pacing guide because they thought it covered too much and was not based on the students' reading level. They were hopeful this would be part of the Summer Institute, giving the teachers time to plan

together. But they also recognized they had not done enough to evaluate what they were already doing: *"One of the things we talked a lot about this year is 'How do we evaluate what we're doing to determine if we need to keep doing it or do we need to change it?'."*

The school has already identified a critical gap in achievement. The educators appeared ready to take action as part of the summer institution. In our report on the assessment, we recommended they consider strategic steps during the next academic year:

- Continue to enhance the DPS-based curriculum, supplementing both with basic instruction in reading for students with severely limited reading skills and advanced critical-literacy methods for all students as a means of accelerating improvement. This process would involve more use of grouping strategies, which had been avoided in the school, but it was time to reflect on the viability of credit recovery as a method of dealing with deficiencies in reading achievement among entering students.
- Develop plans to pilot test the new advanced literacy techniques they had learned about in their professional development programs. While teachers had been trained, they had not yet tried out the new methods. A core concept of the new methods was that engaged, literacy-based methods could accelerate learning for students with basic reading skills.
- Evaluate the two possible basic literacy approaches proposed: the direct instruction method proposed by the vendor and the meaning-oriented approaches recommended by the state reading association. If there was still disagreement after reviewing both methods, they should set up ways of testing both approaches, possibly informing development of a locally constructed hybrid approach that would have the support of the schools council and the district.

The research team was not involved further in deliberations about literacy education, although professors from the university were involved in ongoing professional development. The decision process was complicated because the professor who provided the advanced literacy workshops was on the board, as were advocates of direct instruction. Our recommendations had been crafted to encourage using an open, evidence-based approach involving pilot tests as a way through disagreements.

Math Challenge: Math scores were the second topic raised in the initial meeting with the school council. While new faculty were hired to teach the newly required advanced math courses, professional development opportunities had not been provided, as had been the case with literacy.

In anticipation of this topic, a math professor and a community-based math educator were invited to the meeting at the recommendation of the team leader (St. John); the three had previously worked together in observing schools and testing new approaches to math instruction. The community-based math educator had developed techniques for teaching advanced math (pre-calculus) in one of the city's high schools. After discussion in the school council meeting, it was apparent that pilot-testing a training session for math and science teachers would be a useful component of the assessment.

Within a week and before interviews were scheduled, the community-based math educator provided a workshop, introducing engaging approaches to teaching advanced mathematical reasoning that were central to developing the knowledge and skills of urban school students. In conversations with math educators after the session, it was apparent that the methods were well received, but there was concern there was not time to integrate the new methods into the current curriculum. We explored possibilities in conversations with teachers, administrators,

and the community-based educator in follow-up meetings. One alternative discussed was to double up on the math period, using the engaging math methods in a study period involving diverse skill groups to encourage students to help each other. The possibility of integrating the engaging curriculum was also discussed, but it was apparent more professional development opportunities would be needed to achieve this aim.

The assessment focused on educators' perspectives on how changes in the curriculum would meet student needs. Regarding the base curriculum, one educator commented "*it tries to have an emphasis on abstract math the entire way through so even in the young grades where you're typically in the arithmetic stage, they're trying to teach thinking and reasoning skills*." Complicating matters, the teachers in the math program were new to the school: "*Originally when this program started four years ago, the program had different teachers. This year they have brand new teachers so they're not familiar with what the curriculum used to be*."

There was an emerging consensus about the challenge the school faced in math curriculum. Students coming into the school were not ready for the advanced math required for graduation:

> *When you have a student coming in—and I'm just being honest—that's at best case fifth grade math level and they're really struggling, then their grade becomes much more indicative of how willing they are to engage than it is about what they master. If they come in and they're willing to give it a go and put in the effort they're going to at least pass your class even if they have no mastery of the material*.

The incongruity between the entry achievement level of students and the levels of math required were causing the CEA educators to rethink the curriculum. A math educator commented, "*We're looking at completely changing the way we do things in terms of integrating*

geometry and algebra together and then using that to do what we call 'boot camp'. It is to look at remedial skills they need for arithmetic and spend time on what all students struggle with." This emerging shared understanding of the problem provided a foundation for moving forward.

Based on the assessment and pilot test of professional development on engaging math methods, we encouraged the school to work through the dual level challenge of addressing basic skills needed while experimenting with integration of engaging methods, either through doubling up the time for math and/or through integration of engaging methods in the core course sequence. Specifically, our recommendations were:

- *Teacher Reflection and Professional Learning:* Continue to build a shared understanding of the math challenges in the school, using insights from classroom experience to inform planning.
- *Program Redesign:* Based on insights gained from the summer programs, we suggested they discuss strategies for integrating engaging math methods into the summer "boot camp" programs and the Algebra and Geometry curriculum in ways that would help students with both abstract thinking and the development of basic math skills.
- *Integrate Evaluation into the Redesign Process:* CEA has been in a mode of responding to crises as they emerge. External evaluation of the math interventions was needed, both to promote professional learning among math educators and to document the effects of the intervention strategies.

We also encouraged the school council to integrate evaluation plans into the CEA and the two other schools in the facility with the help of the community-based math educator; all three schools agreed to do this.

Evidence-Based Capacity Building: This preliminary test of a new approach reveals the potential of involving educational researchers in the process of solving the most basic challenges in urban high schools undergoing transformation to college preparatory models. The basic social challenges within schools (e.g., student behavior) and their communities (e.g., poverty, crime), along with the necessity of responding to new standards while competing within market systems create a difficult situation for schools servicing severely challenged students.

It is seriously problematic that state policy continues to enforce aligned standards and public accountability, while market systems encourage local adaptations. It is difficult for local high schools to deal with these competing demands, especially those serving severely underserved students who routinely get left behind in school choice schemes. The CEA illustrates how the four challenges—market niches, advanced math, advanced literacy, and social context—actually converge in schools. Forced to make rapid changes and follow scripts, schools must adapt, change and innovate, with a focus on student and community needs and concerns, at the same time their options are constrained by the system, especially the district's curriculum.

The CEA case also illustrates some of the ways variability in openness to evidence can constrain or accelerate innovation. In the case of the literacy challenge, although there was a shared understanding that many entering students faced basic literacy challenges, there was disagreement within the school's local board about strategy: direct instruction versus advanced literacy. We recommended that educators pilot test and communicate about intervention strategies, whichever one was chosen, as a means of building a culture of evidence-based decision making. However, the university involved in the assessment study had faculty who were also engaged in promoting specific reform options. In one case, a member of the faculty who was

on the CEA advisory board had spearheaded some of the training received on literacy, and her advocacy added to the contested situation in the school.

In contrast, a consensus emerged about the basic math challenges in the school, and there was open discussion about possible strategies along with willingness to try out new approaches. We encouraged the evaluation of pilot tests as a means of building a professional, learning-oriented culture within the school. The assessment team suggested—and pilot tested—a professional development strategy.

Both instances illustrate that advocacy for change—coupled with research and content expertise—can play an important role in the intervention process. Implementing the entire process is probably necessary, because university faculty generally need to publish as an outcome of this type of service-oriented intervention.

5.3 Conclusions

The goal, to provide more and better learning opportunities through partnerships between schools and community organizations, is both appropriate and timely. As schools adapt to new constraints on course offerings and the pressure to develop viable content-linked themes, more and better time for learning can provide a framework for integrating strategies rather than an additional policy mandate the pulls schools apart. University researchers can provide support for educational reform in Detroit through alternative methods that provide:

- Assessment studies that help educators build a better informed understanding of the challenges they face as they adapt to address mandates, compete for students and resources, and work in partnerships to improve the extent and quality of learning opportunities;

- Technical assistance in the design of interventions, include technical assistance that supports educators and community-based advocates as they (a) adapt curriculum and pedagogies in innovative ways and (b) redesign pedagogies and extracurricular learning opportunities; and
- Evaluation research, both quantitative and qualitative, that provides evaluative research evidence that promotes learning within school partnerships about strategies for extending students' school days with better opportunities for learning.

The CEA case studies illustrates the way qualitative studies can be used to help build an evidence base the helps schools adapt to the challenges they face. As a conclusion, we consider possible steps in moving forward.

6. Conclusions

While Detroit students, schools, and neighborhoods as base communities face extreme economic and social challenges, there is potential for building collaborative partnerships that support improved educational opportunity and social cohesion. This baseline assessment provides a framework for understanding how community-based partnerships might collaborate to provide more and better learning time for students in Detroit schools. This conclusion summarizes student findings, discusses the role of family engagement in academic preparation informed by this study and related research, reexamines how community-school partnerships can engage to support more and better learning time within base communities and schools, strategies for improving more and better time within partnerships, and recommendations.

6.1 Summary Findings

The baseline assessment of education and community resources in Detroit provides a new, evidence-based, logical foundation for aligning community resources with schools to pursue the common mission of improving educational outcomes. The following summary focuses on new insights supporting this proposition.

Detroit Context (Section 2)

The successive changes in educational policy, along with the opening and closing of schools due to the implementation of charters, marked disjointed, state-directed reform in Detroit from 2000 to 2010, In particular, successive failed state takeovers of Detroit schools, a period of mayoral control, and a brief interlude of control by a locally-elected board created an uncertain and unstable policy and education environment. A pattern of urban educational swirl resulted in poor academic achievement in both new and old schools at the elementary, middle and secondary levels.

Analyses of trends in policy changes between 2000 and 2010 illustrate that Detroit schools were subject to fiscal and structural control by the state for most of the decade. Further, the mayoral control model, based on successful implementation in Chicago, was never fully enacted due to the state's taker over of the school in the early part of the decade.

The analyses of demographic changes during this period illustrate the trajectory toward population decline and poverty across the city. There did not appear to be a rational relationship between school closures and shifts in populations, indicating a political model of school closures. While the rest of this baseline study focused on high schools because of the centrality of academic preparation in high school for college attainment, a necessity for social uplift and urban renewal, the problems with periods of state control, a declining population, concentrated poverty, and disjointed implementation of the market model plagued the entire system.

Community Resources Theory of Change (Section 3)

While most research on educational attainment has focused on course completion (especially math courses) as a predictor of long term success, we reframed the challenge by examining community organizations along with changes in demographics in base communities (as zip-code bounded tracts) along with the presence of community organizations as context for student achievement in high school, including graduation and GPA as critical outcomes, along with transfer during high school, and an intermediate outcome related to urban swirl.

The Community Resources Theory of Change is based on social theory focusing on cohesion within communities as well as social, human, and cultural capital formation as part of an uplift process referred to as academic capital formation (ACF). This reframed theory helps build a better understanding of the ways schools and community organizations can work as partners in improving the quality of education.

The Impact of Community Resources on High School Outcomes (Section 4.1)

Not only did our findings support the overall hypothesis that community resources were linked to education outcomes, it provided further insights into the two specific sub-hypothesizes: the strength of community organization v. the mission (or type) of community organizations.

Findings: We found that, controlling for changes in demographic indicators in base communities, the presence of churches and community centers was a positive force associated with higher odds of graduation and higher GPAs. In addition, as an indicator of urban education swirl, we found that transfer after entering high school was negatively associated with both on-time completion of high school and GPA. Given the problematic nature of transfer, we also examined factors associated with transfer. Presence of community organizations of all types (i.e. the total number of community service centers, recreation centers, churches, colleges, and hospitals) was associated with lower odds of transfer, further indicating social stability improves students' changes of educational success.

Not only are these findings consistent with the community resources theory of change, they illustrate the critical roles of community organizations in creating stable settings for social and educational uplift within base communities in Detroit.

Sub-Hypotheses: Our analyses also considered two alternative explanations about the impact of the collective strength of community organizations as a total community approach and the hypothesis that the type of community organizations and, more specifically, their missions, matter in educational outcomes.

First, the finding that the total number of community organizations was associated with reduced student transfer supports the community strength hypothesis. The total number of community resources provides an indicator of how strong a base community is with respect to

social and economic stability. It could be that the social stability provided by hospitals, college campuses, and other community organizations minimized school closures in the base community reducing forced transfer, an explanation that can be examined with extant data. If this relationship proves to be the case, we have confirmatory evidence of an indirect relationship between community stability and educational stability. The community strength hypothesis could then be redefined: a high number of community organizations creates stability that reduces school closure and urban swirl.

Second, the organization type hypothesis—that community organizations with community service missions help expand educational opportunities by strengthening social cohesion within base communities—was also supported. Community organizations with missions related to community cohesion, as is the case with community centers and the faith-based community of care provided by churches, were the ones that were directly associated with on-time graduation and higher grades. Thus, the alignment of the missions of community-based organizations with the goals of improving educational attainment provide prospective organizational rearrangement that supports more and better time for student learning, including development of knowledge and skills for navigating social and educational systems.

Achievement on Tests (Section 4.2)

Controlling for students' backgrounds, changing demographic indicators in base communities, and community resources as measured by presence of community organizations, proficiency on tests in middle schools was associated with success in high schools (on-time completion and grades). In addition, proficiency on high school tests was positively associated with both grades and on-time graduation. Controlling for achievement and other factors, the math course students took when they started high school (i.e., higher than Algebra or lower than

Algebra compared to Algebra only) was not significantly associated with high school outcomes. These findings illustrate that test scores are indicative of student success in Detroit schools. At the same time, the findings raise further questions about the theory of educational change that argues raising graduation requirements is the solution to problems with college access.

Pilot Test of the Alternative Model (Section 5)

We pilot tested an alternative approach to providing university-based research support for community-school partnerships. The core strategies in the proposed approach to actionable research in support of school-community partnerships are: 1) assessment studies should focus on building understanding of causes of *critical issues raised by schools*; 2) technical assistance can support educators and community advocates with designing and pilot testing new strategies for addressing these problems; and 3) evaluation studies can provide information informing educators and community advocates about the efficacy of educational strategies developed to address critical challenges.

The case study school, City Engineering Academy (CEA), made contact with us through community partnerships. CEA had a well defined focus with extensive community support, but concerns emerged in the school about low scores in math and literacy. Our assessment examined reasons for these problems related to the social and educational context, helped identify possible solutions involving educators and community advocates, and helped identify evaluation issues. This illustrative example confirms that an actionable approach has potential for improving educational opportunities through school-community partnerships in Detroit.

6.2 Community and Family Engagement in Academic Preparation (New Hypotheses)

The baseline study identified two core principles that can guide efforts to build strong school-community partnerships supporting more and better time for student learning in Detroit

schools. First, community organizations within base communities can provide a foundation for student and family engagement in schools. Second, *partnerships between community organizations and schools* can strengthen family and student engagement in learning.

This section reexamines findings from the baseline study in relation to recent research-informed theory development research that focuses on student and family engagement in academic preparation, college transitions, and college success (St. John, et al., in press; St. John, et al, 2011; Winkle-Wagner, et al., 2012). We focus on the ways community-school partnerships can support improvement of more and better learning time as part of the formation of human, social and cultural capital in support of educational uplift through more and better learning time.

Base Communities and Human Capital Formation

From the perspective of human capital formation in support of uplift, there are two critical issues in base communities in relation to parents' and students' knowledge and skills: 1) building new understandings of career and education pathways; and 2) building realistic strategies for paying for college. Fortunately, community-based organizations are engaged in addressing these challenges in Detroit.

Education and Career Pathways: Between 2000 and 2010, Detroit's neighborhoods experienced population decline, increased poverty, and increased unemployment, along with, surprisingly, an increased percentage of adults with high school diplomas. These conditions create a perfect storm with respect to declining models of career pathways and the prospects that high school diplomas will help graduates find employment. Successful outreach programs in Indiana and some other states have focused on career pathways as a central theme in building local knowledge of education pathways.

The recent development of local college access networks in Detroit neighborhoods, along with deep commitments by businesses such as EY's (formerly Ernst Young) mentoring partnerships, provide organizational partners for addressing these core issues. In addition, the thematic approach being taken in Detroit high schools seems to be well aligned with a strategy of focusing on links between education and career pathways, as illustrated by the CEA case (Section 5).

Realistic Knowledge of College Costs and Finance: The literature on college access has been overly optimistic when it claims knowledge about student aid will solve the access problem; increasingly, federal policy makers are recognizing the affordability problem. Student debt is especially troubling in states with limited investment in need-based grants, including Michigan. When students learn about financial aid and do the simple math, subtracting costs form available grants, they find how extreme their debt may need to be to pay for college.

Applying for student aid is a necessity, but an insufficient step for low-income students in Michigan. There are some local merit-based grants, but the analyses of students' test data (Section 4) illustrates that most students do not qualify for these grants. Further, while the University of Michigan and a few other universities have a commitment to meet need for admitted, low-income state residents (with a combination of need-based grants and subsidized loans), few Detroit students qualify for admission to UM; most other campuses in the state can't afford to make this commitment. There's also the issue of students entering college with remedial skills, thus having to take developmental math and English courses. This lengthens the time to degree. Given the reduction in Pell grant eligibility, students are at risk of running out of money before completing a degree.

College affordability is a serious problem for most Detroit students graduating from high school. Unless new partnerships can be built to ensure affordability through guaranteed aid meeting need, many students will have substantial work and debt burdens. Realistic information is needed for students and families to develop a realistic understanding of the financial challenges related to attainment of four-year degrees in the state.

Community Organizations Support Development of Navigational Skills

Social capital formation has been the domain in which the greatest gains have been made with respect to supporting academic preparation and college going. College-school networks have developed an array of mentoring strategies that support preparation for and transition to college by promoting better use of student time during and after school. Three specific mechanisms merit attention when strengthening community-school partnerships.

Social Support in Communities: The missions of churches and community centers as sources of social support for families are well aligned with the educational programs. These organizations can be the locus of outreach to students and parents, providing places for homework support and supplemental work on critical subjects, especially math and language arts, and providing work, service, and other learning opportunities that connect with math and literacy content to strengthen learning. YouthVille in central Detroit, Focus Hope in North Central Detroit, and Brightmoor community, the sight for Detroit's first college access network, provide excellent examples of community-based organizations with the capability to support expansion and transformation of learning opportunities for Detroit youth in their base communities.

Mentoring: Having adults who care is vitally important for youth. Several comprehensive interventions at the state level in Indiana and Washington State and through national networks

like College For Every Student and GEAR UP have demonstrated that providing mentors (adult to student) and peer mentoring (student to student) provide viable means of building support structures. In Detroit the EY mentoring program at Detroit Institute of Technology mentioned above has received national attention. Organizations like this can be the locus for sustaining community involvement in educational improvement.

College Pathways and Student Educational Navigation: University outreach services, including the UM Center for Educational Outreach and similar partner organizations in other universities, have missions to support student learning about college. There was some evidence generated in qualitative studies as part of the baseline assessment that college-school partnerships can promote expansion of student aspirations, but the research evidence is stronger from national rather than local studies.

Cultural Capital as Contextualized College Knowledge

Detroit and other U.S. cities are in the midst of uplifting high school education to provide college preparatory education for all students. The schools serving inner city youth have faced the most serious challenges in making this transition. In Detroit this transition has been especially difficult because of the financial challenges, closure of schools, and decline in the population and its economic resources. The transition now underway in Detroit has involved schools, community-based organizations, and businesses in building new partnerships supporting reform.

Ultimately, it is crucial that people living in base communities build individual and collective understandings of college and career pathways that are viable and trustworthy. In the old Detroit, it was possible to graduate high school and get a job in manufacturing as the auto industry became the engine for the economic development of the city. The challenge of building

a new city culture requires both collective and locally situated images of new pathways that are supported by experience. This culture shift may be underway, but if it is, it is only in the early stages. The research evidence provided by the baseline assessment is a starting point for building an evidence-based approach that involves university researchers in the process.

6.3 University Researchers Supporting Community-School Partnerships

Universities also must undergo a culture shift in the logic they use to frame and conduct research. The old university paradigm was that education professors knew best practices and should share them with schools through professional development, teacher education, and interventions is schools; policy researchers and evaluators were part of the establishment holding schools accountable for making mandated changes. Researchers were deeply engaged in setting the new agenda, as econometric and social attainment studies have been used to rationale the new agenda since the early 1980s.

The alternative paradigm involves researchers using their research methods and their knowledge of educational content, pedagogies, and intervention processes as resources to support schools as they make the critical transitions. In this alternative vision, community organizations and schools are the locus of partnerships that focus on providing more and better learning opportunities for students, not only in the core subjects but also in development of social supports that help students and their parents develop skills for navigating educational pathways. This new view does not necessary alter the need for traditional university-based scholarship that focuses on innovation, efficacy and accountability, but it is important we engage in new, different, and better ways in support of learning for uplift.

In this alternative view, the role of university researchers is actionable, constructed to support reforms through:

- Assessment studies of underlying causes of and possible solutions to challenges schools face, using both databases and qualitative inquiry as sources of information to inform reform;
- Technical assistance to community organizations, local change advocates, and educators in schools as they think through strategies for providing more and better learning time for educational uplift; and
- Evaluation studies that help educators, community advocates, students and parents better engage through personal reflective learning that is evidence based.

Specifically, using this alternative paradigm in Detroit necessitates supporting community-school partnerships that focus on improving and expanding opportunities for students to learn necessary content, as required by the state and rationalized by neoliberal reform logics, along with the broader agenda of developing knowledge and skills for college and career navigation and supporting the cultural shift in the understanding of new educational and career pathways.

6.4 *Recommendations*

Recommendation 1: Community-School Partnerships. The baseline assessment study provides compelling evidence that community-based organizations, especially community centers and churches, provide support of student educational attainment as a consequence of their missions, which are aligned with community development and well being. In recent years, community organizations in Detroit have built partnerships with schools, which provides potential to support more and better learning time related to improvement of student achievement and support services promoting college preparation and access, new enterprises within the mission of supporting educational improvement. We recommend the universities in the Detroit

area work with emerging community-school partnerships to support and inform development of new strategies to promote more and better learning time before, during, and after school.

Recommendation 2: University Research Support for Emerging Partnerships. University researchers can support development of community-school partnerships as means of promoting more and better learning time through assessment studies focusing on the causes of barriers to learning that emerge in schools in the community context and technical assistance with the use of action inquiry to solve these emergent problems through new strategies that promote more and better learning time for students within their communities and schools. We recommend that university researchers develop partnership agreements with school-community partnerships in efforts to improve student learning time, using assessment, technical assistance, and evaluation as means of promoting evidence-based learning, with both educators and activists engaged in the partnerships.

Recommendation 3: Follow-Up Studies of the Impact of Community Resources on Educational Opportunity. While this baseline assessment provides substantial evidence confirming a community-resources theory of educational reform, the methods can be improved. Specifically, the study methodology, supplemented with information on interventions by community-school partnerships and tracking information following students into college, can provide useful evaluative information on the impact of community-school partnerships now in development. We recommend that improved studies of student cohorts be conducted in 5 and 10 years to evaluate the impact of current reform efforts in Detroit.

Recommendation 4: Collaboration on Future Grants and Projects. The framework developed in this report provides a foundation for moving forward for future projects with research supporting educational improvement in Detroit, especially projects involving research

partnerships between research universities and schools engaged in reform. We encourage collaboration on future project initiatives.

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Appendix A:

Trend Analysis of Detroit Context (Section 2)

Three groups of data were employed in the analyses in Section 2: Census and American Community Survey (ACS) data collected by U.S. Census Bureau, Common Core of Data (CCD) by National Center for Education Statistics (NCES), and secondary school test scores drawn from the Michigan Department of Education (MDE).

Sources of Data

For analysis of trends in Section 2, we used Census (2000, 2010) and ACS (2005-09) data to obtain demographic, social, and economic information for 2000 and 2010 in Detroit divided into Census tracts and block groups. This approach was consistent with the Brookings report that provides a national study of urban demographic change in relation to education outcomes (Kneebone, Nadeau, and Berube (2011). Census block group is the smallest geographic unit determined by the Census Bureau, while Census tract is a group composed by five to six block groups. As of 2010, there are 1071 Census block groups and 315 Census tracts in the city of Detroit.

Whereas the Census is conducted once every ten years, the ACS is conducted every year to provide reliable and timely information about demographic, social, and economic changes in the community. Unlike the Census survey conducted for the entire U.S. population, the ACS randomly samples about 3 million addresses each year. The ACS is replaced the decennial Census long-form surveys (asking detailed social and economic information) in 2010 and will collect the long-form type information throughout the decade. For this reason, we used the Census 2000 and the ACS 2005-09 as our main population data sources providing social, economic, and demographic information; Census 2010 data were also used to obtain the most

recent basic population characteristics. The ACS 2005-09 data include the average five-year estimates (from 2005 to 2009) of population characteristics for the Detroit area by Census block group.

The public school information (including the DPS schools and Charter schools) was obtained from the Common Core of Data (CCD) which annually collects descriptive information about all public elementary and secondary schools and school districts in Detroit. The zip-code information was available through the CCD databases, and they were used to visualize the locales of each school within the Census tracts through Geographic Information Software (GIS).

Although the CCD data do not specifically provide the closing/opening dates of each public school, we estimated the closing and opening status of each school between 2000 and 2010 by comparing the full list of schools for that period. For example, if a school is listed in the 2000 CCD data list and disappears from the 2010 CCD list, then we categorized that school to be school that closed school during the ten year period. Conversely, if a school does not show up in the 2000 CCD list, but appears in the 2010 CCD school list, then the school is categorized as newly opened. If a school is cross-listed in both 2000 and 2010 CCD lists, then the school is classified as staying open for the past ten years.

Finally, we collected school-level average test scores (e.g., MEAP, ACT) of the public elementary and secondary schools in Detroit from the Michigan Depart of Education's Assessment and Accountability website (see http://www.michigan.gov/mde/0,4615,7-140-22709_31168_31530---,00.html). However, we were unable to obtain test score information between 2000 and 2007, so the earliest test scores we could have access to were available starting in 2008.

Analytic Methods

Descriptive Statistics: In Section 2 we used descriptive summary statistics methods to compare the population (or percentage) changes in Detroit between 2000 and 2010. In addition, we reported the summary mean statistics to compare changes in the elementary and secondary test scores by the type of school.

The Census data are a good source of geographic information that can be visualized into maps. We exported the numeric population information in Detroit by Census tracts into the ArcGIS program that is specially designed to perform spatial analyses utilizing a geographic information system (GIS). For example, the ArcGIS program allows us to visualize how the percentage of population who obtained at least a high school education or who are below poverty is distributed across the city.

We were also interested in examining how each school is situated by different social, economic, and demographic conditions in the city. This was possible by spatially joining the Census tract-level information with the locale of each school (reported in the CCD data), so each school was assigned to the relevant Census tract. The forthcoming Maps in this report are a result of this spatial analysis using the Census/ACS data and the CCD public school list of data collectively.

Community Resources

Using the Yellow Pages Spider software, churches, colleges, hospitals, recreation centers, and social service centers were tabulated for each Detroit area zip code. These were then aligned with the zip codes in the student cohort database. Our analyses of high school GPA and graduation examine the effects of community resources by category and total number of resources (churches+ colleges + hospitals+ recreation centers+ social service centers) by student home zip code.

Appendix B:

Development of 2005-2009 DPS Cohort Database

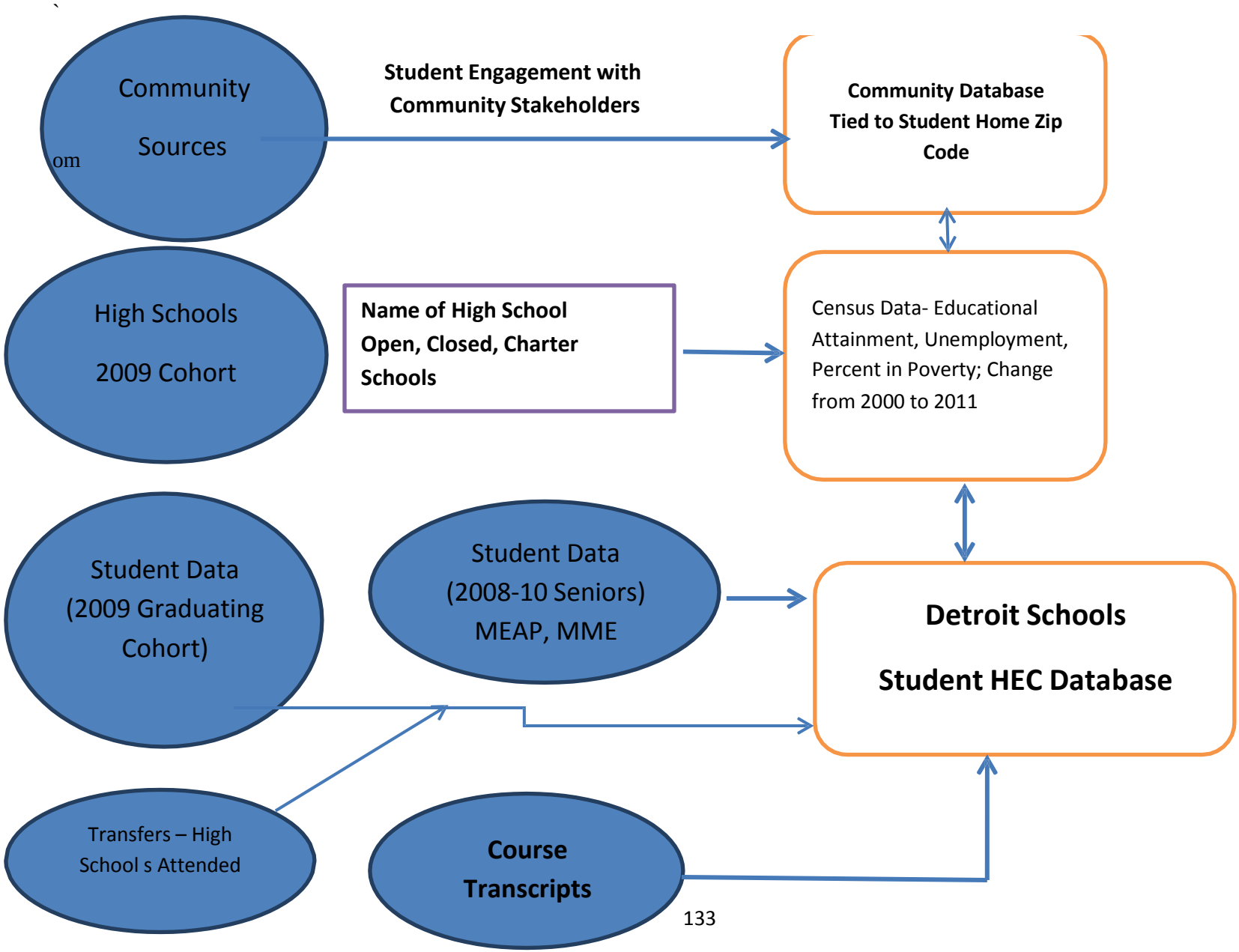
Description of Data Received from the Detroit Public Schools

The Office of Research, Evaluation, Assessment & Accountability of the Detroit Public Schools organized the data for the 2009 Graduating Class cohort into five datasets. A diagram of the sources of student data is shown in Figure B-1. The type of data included:

1) Student (freshman) dataset - includes demographics, FRL eligibility and high school GPA
2) Graduate dataset – graduation date, graduating high school
3) High Schools Attended – list of middle schools and high schools attended by year
4) Student Transcripts- courses taken by each student, course grade and excused and unexcused absences
5) Datasets of the 2003-2004 and 2004-2005 middle school MEAP scores and the 2008 MME score for all subjects.

Figure B-1 presents a diagram of the databases

Figure B-1: Detroit Schools 2009 Graduating Cohort Database



The Student Data (2009 Graduating Cohort) (known as file A) included demographics and home zip code, but did not include high schools attended, which was in file B. A check of file B and the Course Transcripts showed that some students who were included in the Student Data (2009 Graduating Cohort) matriculated into 9th grade in 2004-2005 instead of the 2005-2006 academic year; often they were repeating some courses in the 9th grade, so even though they were in the 9th grade in the 2005-2006 year, they were not first time freshmen in the 9th grade. We decided we wanted to track 2005-2006 first-time freshmen and identify them as part of the 2009 graduating class cohort. Our definition of graduation was if they graduated by July 2009, they had graduated within 4-years; we were also able to calculate the 5-year graduation rate with the data that was provided. We selected students who in the High School attended (file B) had a year of "6" representing the 2005-2006 academic year. Our sample size was 7445 students. We merged the initial first-time freshmen with the graduating information. In reviewing the database, we initially had about 400 students who transferred in their freshman year, either in the first or second semester. In order to establish the freshman high school they started at, we reviewed the transcripts and chose the first high school, unless it was during the summer and they attended a different high school in the fall. Some students took the MEAP or MME test more than once, in which case we took the last set of scores.

Community Resources

For each home zip code, the yellow pages spider software was used to tabulate the number of churches, colleges, high schools, hospitals, recreation centers, social centers, and the total number of resources. These were input into the 2009 graduating class cohort database. For three records, the zip code was missing, and 0 was used for the number of resources.

Change in Key U.S. Census Bureau Variables from 2000 to 2011

At the time the 2009 graduation class entered middle school in 2002 through high school, the Detroit Public Schools was experiencing significant changes as discussed in Section IV. With this in

mind, we accumulated data from the U.S. Census on key demographic changes from 2000 to 2011. Since only zip code was available, we used the Zip Code Tabulation Area (ZCTA) as the unit of measure. The ZCTA approximates the same area as a zip code, within the logical structure of the Census tract number (U.S. Census Bureau, 2013).

We used the American Fact Finder (*factfinder2.census.gov)* to collect the data. Table B-1 displays the variables and datasets used. We accessed Guided Search, then "I'm looking for information for a specific dataset", then entered the 83 zip codes in the DPS 2009 Graduation Class Cohort, and selected the final datasets identified in Table B.1.

The 83 Zip Code Tabulations Areas included in the analysis (and in the 2009 Graduating Class Cohort) are: 48021, 48030, 48033-48036, 48038, 48043, 48066, 48072, 48075, 48076, 48080, 48083, 48084, 48089, 48091-48093, 48101, 48111, 48122, 48124-48127, 48141, 48146, 48152, 48154, 48160, 48180, 48183, 48186-48188, 48193, 48195, 48197, 48201-48230, 48234-48240, 48309, 48312, 48316, 48331, 48342, 48375, 48377.

In the 2000 Census, there was no 48033 ZCTA; U. S. Census Bureau documentation suggests that 48033 and 48034 were combined as ZCTA 48034 and then split for the 2010 Census (U.S. Census Bureau, 2013). For ZCTA 48033 for the 2000 Census, the ZCTA 48034 data was used.

Three records did not include the home zip code; one record showed a zip code of 48222 for which there is no ZCTA data; and zip code 48193 did not have a ZCTA in 2000; for these 5 records with missing data, the average difference between the 2000 and 2011 Census for each variable for all students was imputed.

Table B.1 U.S. Census Variables and Datasets Used

Variable	2000 Decennial Census Dataset	2011 5-Year Average American Community Survey (ACS)	Comments
Percent High School Graduate and Above, 25 Years and Older (Educational Attainment)	2000 Decennial Survey SF3 DP02 (Variable HC02_ VC17)	2011 ACS SF3 DP02 (Variable HC03_VC93)	
Percent of Population over age of 5 with Language other than English Spoken at Home	2000 Decennial Survey SF3 DP02 (Variable HC02_VC75)	2011 ACS SF3 DP02 (Variable HC03_VC168)	
Percent of Female Householders with no husband present with own children under 18 years	2000 Decennial Survey SF1 DP1 (Variable HC02_VC84)	2011 ACS SF3 DP02 (Variable HC03_VC12)	2000 data not available in the SF3 DP2 dataset
Percent of Population 16 years and older, Civilian, Unemployed	2000 Decennial Survey SF3 DP03 (Variable HC02_VC06)	2011 ACS SF3 DP03 (Variable HC03_VC08)	
Percent of Individuals Below Poverty Level in 1999	2000 Decennial Survey SF3 DP3 (Variable HC02_VC105	2011 ACS SF3 DP03 (Variable HC03_VC166)	
Percent of Individuals Below Poverty Level in 1999- Related Children 5-17 Years	2000 Decennial Survey SF3 DP3 (Variable HC02_VC113	2011 ACS SF3 DP03 (Variable HC03_VC170)	

Methods for Calculating Graduation Rates

In our research, we were interested in the pattern of student success; our graduation rates by school and district do not match the graduation rates published by the state of Michigan's Department of Education. The procedure for calculating the graduation rate is complex. We do not have all the data to duplicate the complex process that the state of Michigan uses. For example, if a student starts at High School A, he/she would be in the initial count and base of the graduation rate of School A; yet if the same student transfers to High School B, is there for two semesters and is included in School B's count days, then that student's count in the base of the graduation rate for 2009 is transferred to School B. Over the four year period, the number of first-time freshmen included in the count for graduation moves from school to school and district to district (i.e. the freshman count is variable over the four years).

Table B.2 presents a comparison of the CEPI (Michigan) and database graduation rates.

Table B.2: Comparison of the State of Michigan Graduation Rates to the Database Graduation Rates

An * indicates a small sample size; the corresponding graduation rate is not shown.

Detroit Public High School	Freshmen (N)	Number of Graduates		Freshmen (N)	Graduates (N)	Grad Rate
	CEPI	CEPI	Grad Rate	Database	Database	DB
*Cooley High School (w/Business Adm Pgm)	305	184	60.3	274	115	42.0
*CROSMAN HIGH SCHOOL	70	20	28.6	*	--	--
*DETROIT TECHNOLOGY HIGH SCHOOL	57	53	93.0	48	43	89.6
*NANCY BOYKIN CEC	20	<10		*	--	--
Cass Technical High School	464	438	94.4	561	417	74.3
CATHERINE FERGUSON ACADEMY	65	<10		*	--	--
Central Collegiate High School	246	157	63.8	272	113	41.5
Chadsey High School	177	88	49.7	191	67	35.1
Cleveland	64	46	71.9	*	--	--
Cody College Preparatory Upper School of Communication & Media Arts High School	361	170	47.1	319	115	36.1
	120	116	96.7	115	81	70.4
Crockett High School	189	170	89.9	165	126	76.4
Davis Aerospace High School	44	42	95.5	53	33	62.3
Denby High School	290	195	67.2	339	141	41.6
DETROIT ASSOCIATION OF BLACK ORGS	43	<10		*	--	--
Detroit City High School	169	109	64.5	*	--	--
Detroit International Academy for Young	73	57	78.1	67	38	56.7
Detroit School of Arts	257	243	94.6	325	226	69.5
Douglass Academy for Young Men	45	30	66.7	*	--	--

Table B.2 continued

Finney High School	252	154	61.1	261	107	41.0
Ford High School	385	241	62.6	313	161	51.4
Kettering High School	241	162	67.2	229	104	45.4
King, Martin Luther Jr. Senior High Scho	380	328	86.3	330	236	71.5
Mumford High School	550	424	77.1	323	214	66.3
Northwestern High School	283	177	62.5	208	87	41.8
Osborn Upper School of Global Communicat	338	187	55.3	284	124	43.7
Pershing High School	363	240	66.1	317	174	54.9
Randolph Career and Technical Center	<10	<10				
Renaissance High School	245	236	96.3	281	228	81.1
RONALD MCNAIR TECH MIDDLE SCHOOL						
Southeastern High School	535	377	70.5	457	285	62.4
Southwestern High School	169	91	53.8	114	56	49.1
Special Education School	<10	<10				
TROMBLY HIGH SCHOOL	46	12	26.1	32	7	21.9
West Side Academy	155	66	42.6	39	7	17.9
Western International High School	385	294	76.4	357	240	67.2
Y. GLADYS BARSAMIAN PREPARATORY CENTER	<10	<10		*	--	--
Jerry White Center High School	63	<10		60	0	0.0
All Detroit Schools	8709	5195	59.7	7445	4801	64.5
	7449	5107		6436		

Appendix C:

Graphs of the MEAP and MME scores by High School

This Appendix includes box plots by high school for MEAP and MME subject scores. The school number is the number designation given by the Detroit Public Schools. Only those schools with more than 100 freshmen are included.

MEAP subject scores

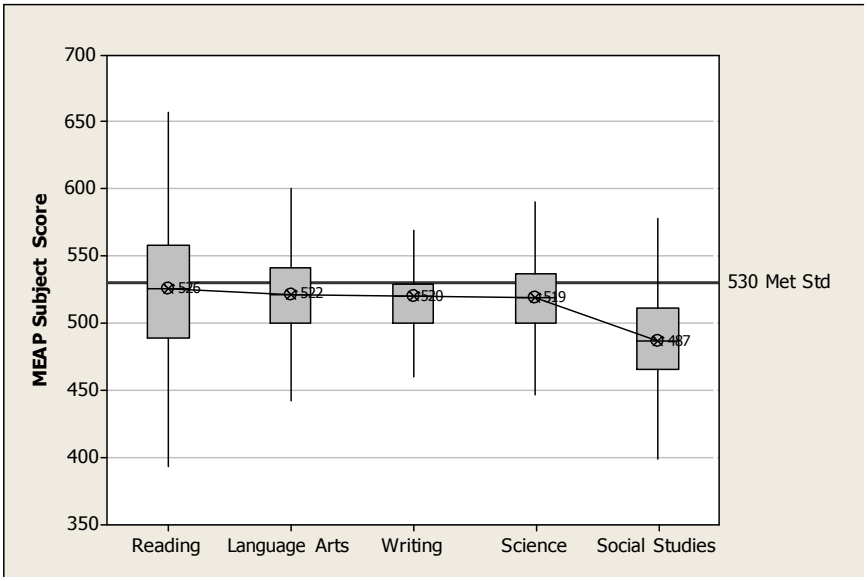


Figure C-1: Box plots by MEAP subject ordered from highest to lowest median score for the freshman class 2005-2006.

The MEAP scores are from 2003 to 2005. The sample size varied from 5018 to 5174 students. The MEAP Math scores were not available.

The MEAP subject scores are first presented by high school in the Pareto subject order from highest to lowest for median MEAP performance by subject: Reading, English Language Arts, Science, Writing and Social Studies

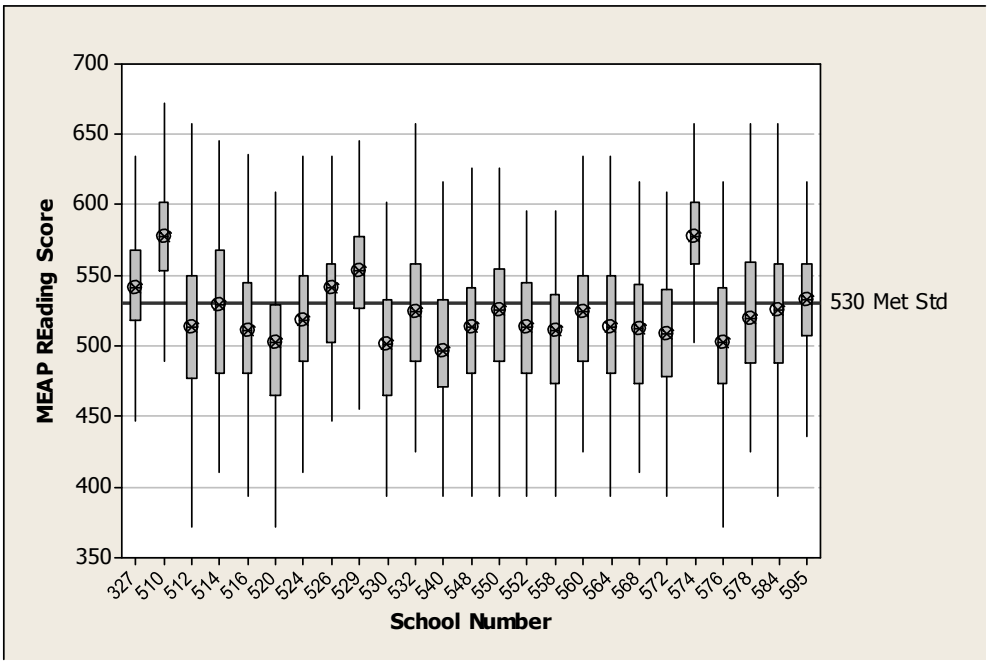


Figure C.2: Box plots of the MEAP Reading score by high school.

High schools 510 and 574 have higher achievement levels; High Schools 317, 510, 514, 526, 529, 574 and 595 have a median greater than or equal to 530, which indicates proficiency in reading. The variability tends to be consistent across schools with some schools having higher medians.

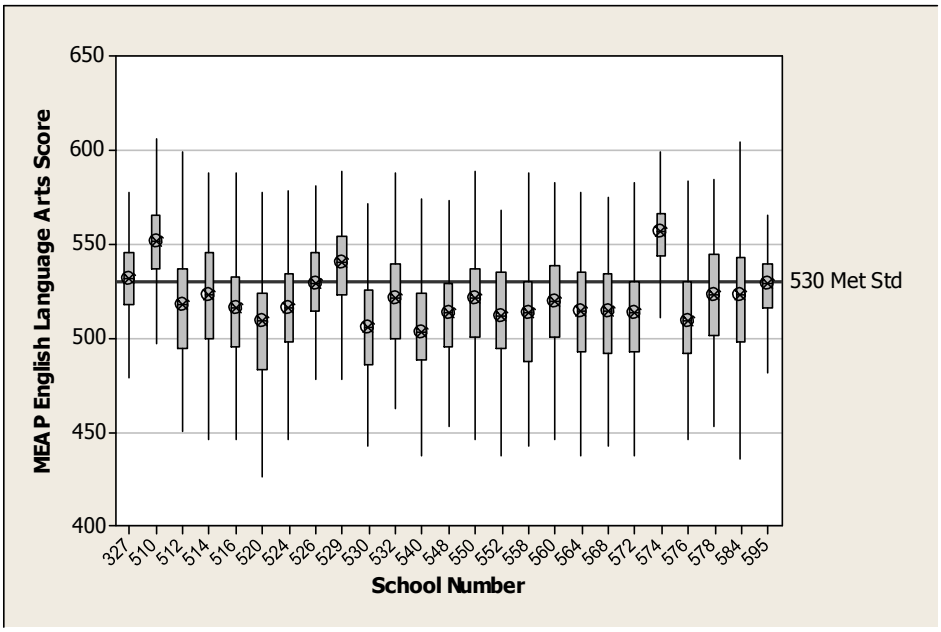


Figure C.3: Box plots of the MEAP English Language Arts (ELA) score by high school.

Good consistency in variation with High Schools 327, 510, 529, 574 and 595 having medians at or above the proficiency level of 530.

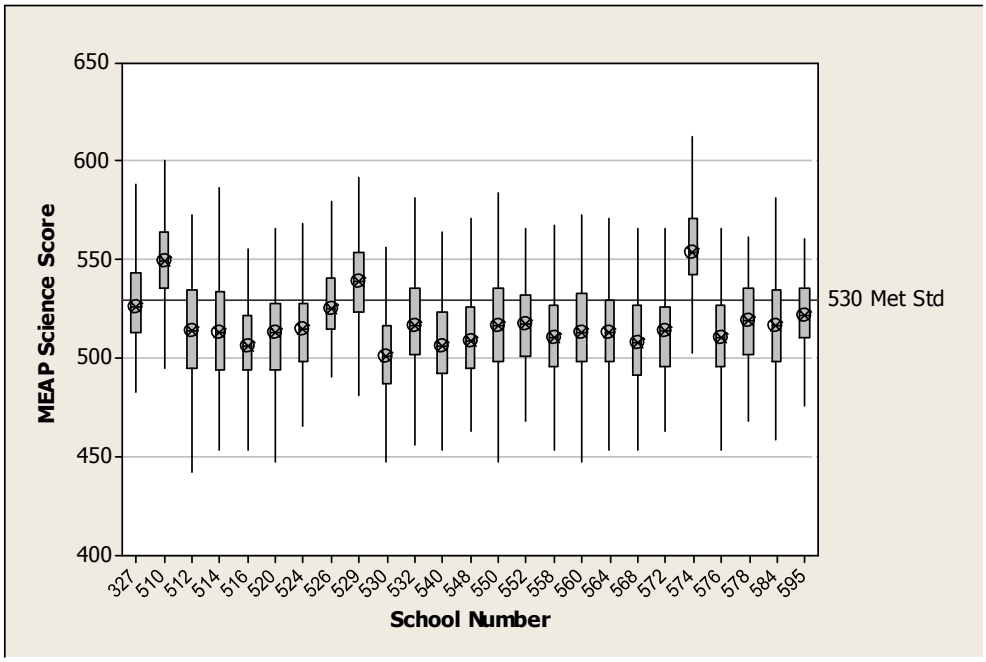


Figure C.4: Box plots of the MEAP Science score

Analysis shows consistency in variation, with only three high schools with a median greater than the proficiency level of 530: High Schools 510, 529 and 574.

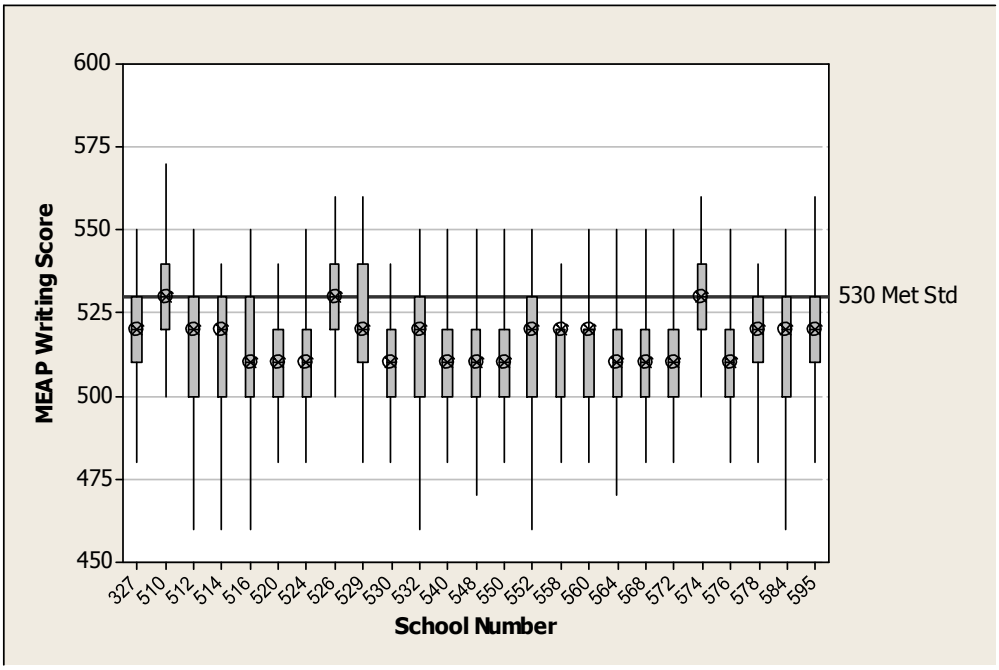


Figure C.5: Box plots of the MEAP Writing Score

The analysis shows some high schools have more variability in the writing scores than others (note the longer boxes and longer "whisker" below the box). High Schools 510, 526 and 574 have the highest medians and are equal to the standard of 530**.**

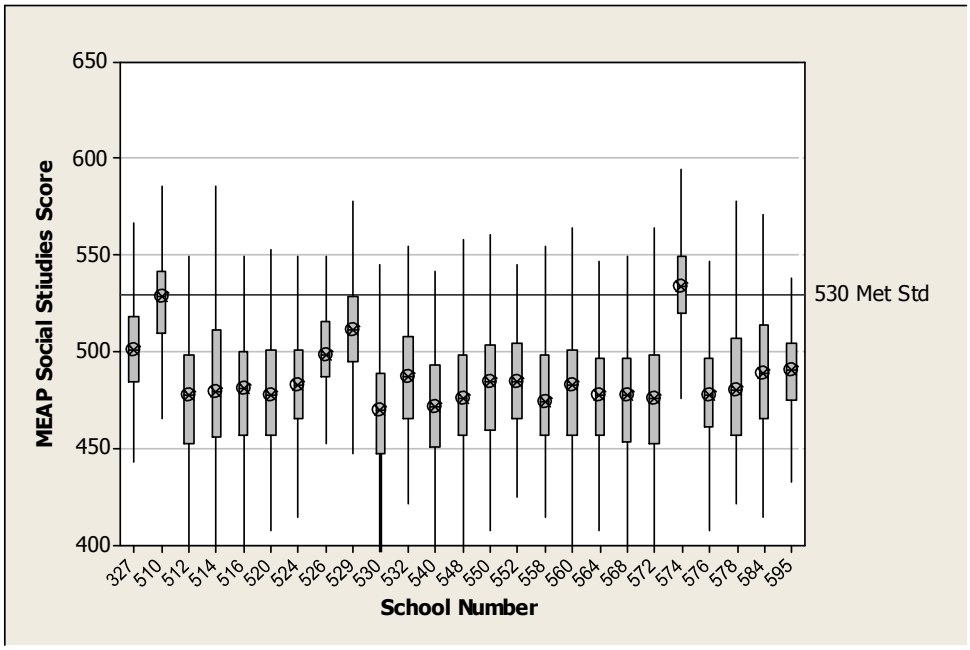


Figure C.6: Box plots of the MEAP Social Studies Score

This figure shows that most of the high schools are performing at much less than the standard. Again, High Schools 510 and 574 have the highest medians, at or above the standard for proficiency, with less variation than most of the other high schools.

Michigan Merit Exam (MME) subject scores

The MME subject scores are presented by high school in the Pareto subject order from highest to lowest for average MME performance by subject:

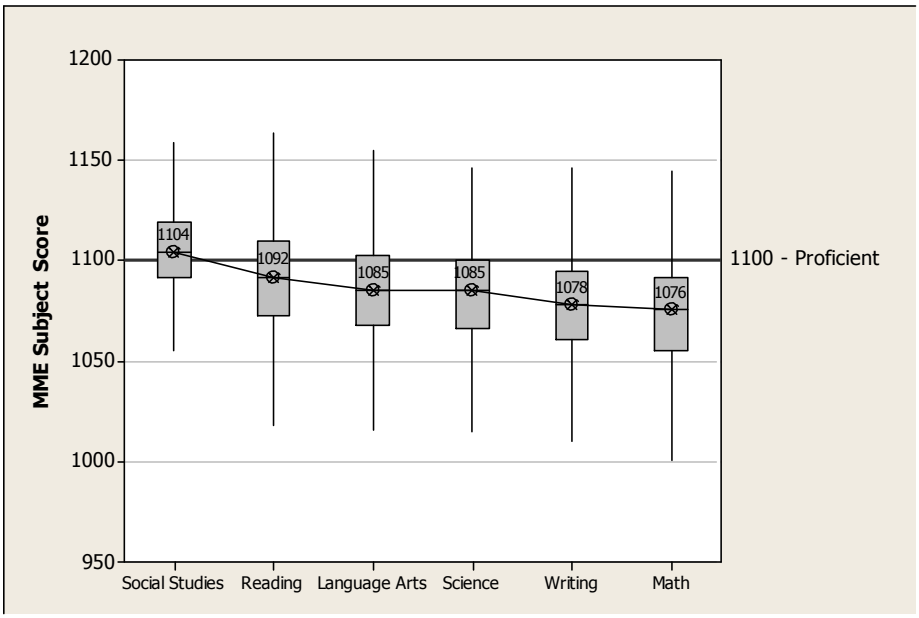


Figure C.7: Box plots by MME subject ordered from highest to lowest median score for the freshman class 2005-2006.

The MME subject figures are ordered by Social Studies, Reading, English Language Arts, Writing, Science and Math

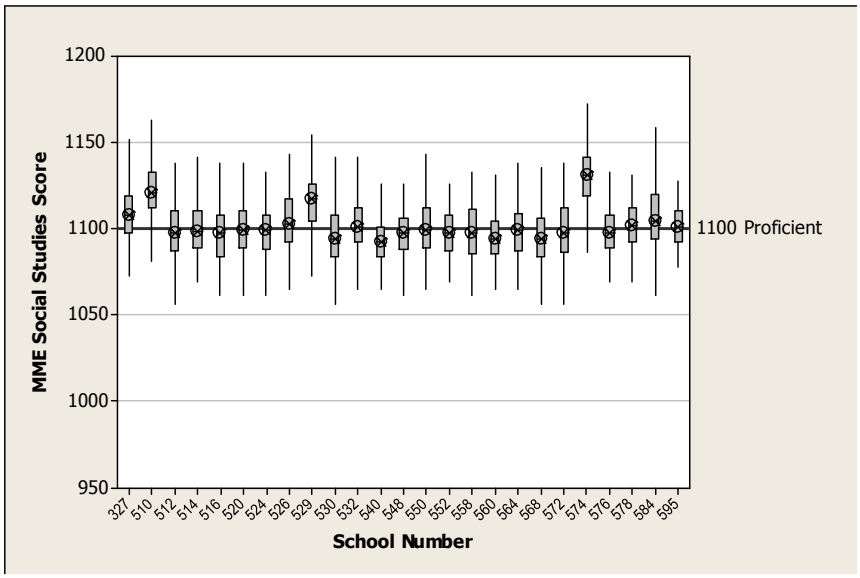


Figure C.8: Box plots of the MME Social Studies score

This analysis shows equal variation across schools with four schools having higher medians: High Schools 327, 510, 529 and 574.

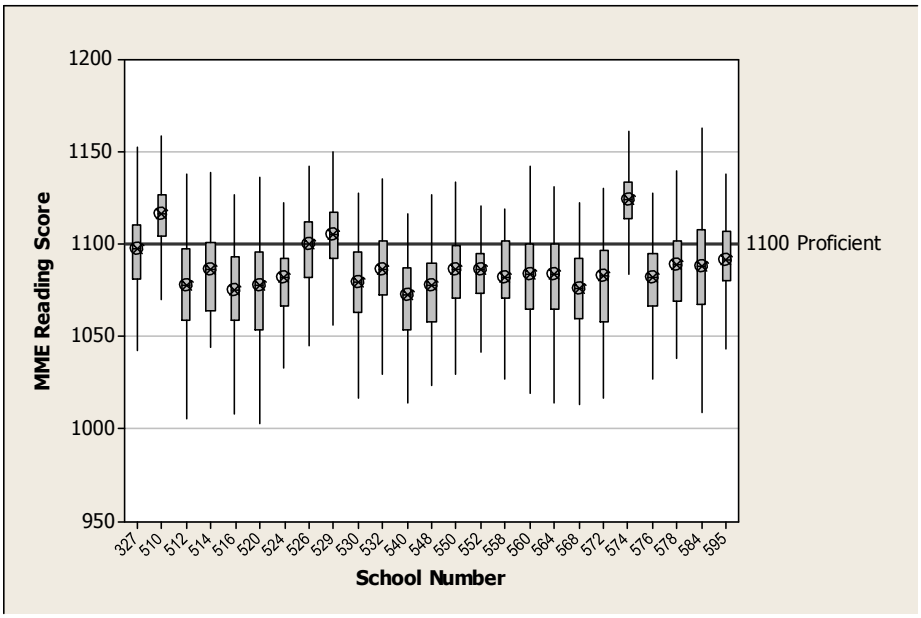


Figure C.9: Box plots of the MME Reading score

Analysis shows more distribution variability across schools with High Schools 510, 529 and 574 having medians above the proficiency level of 1100.

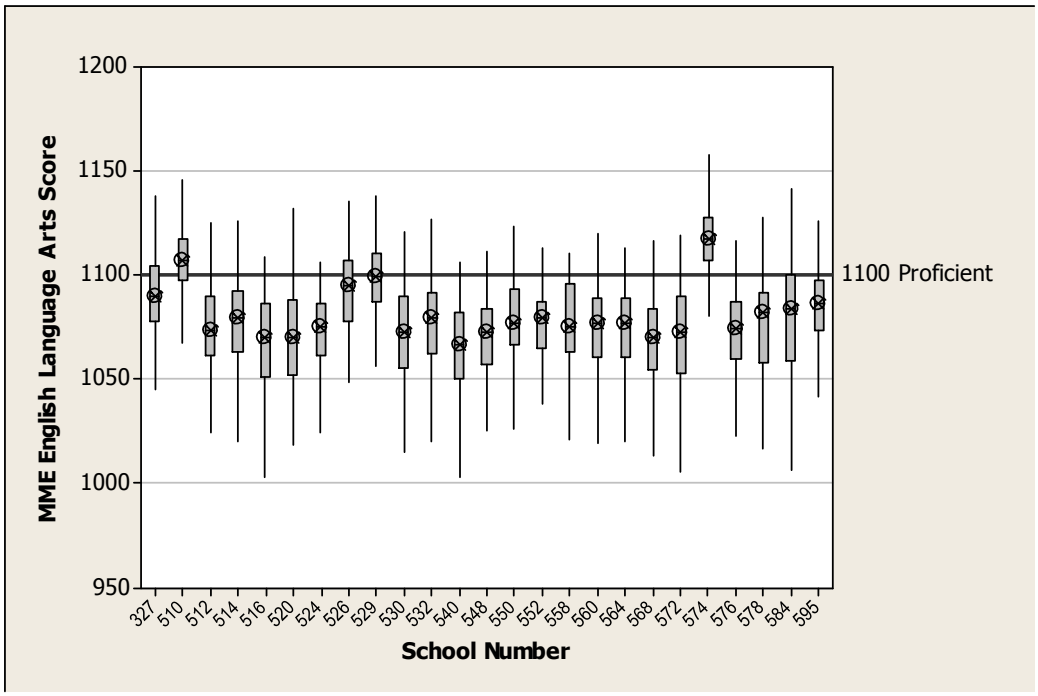


Figure C.10: Box plots of the MME English Language Arts (ELA) score

Analysis shows consistent variability with only High Schools 510 and 574 with significant percent of students showing proficiency.

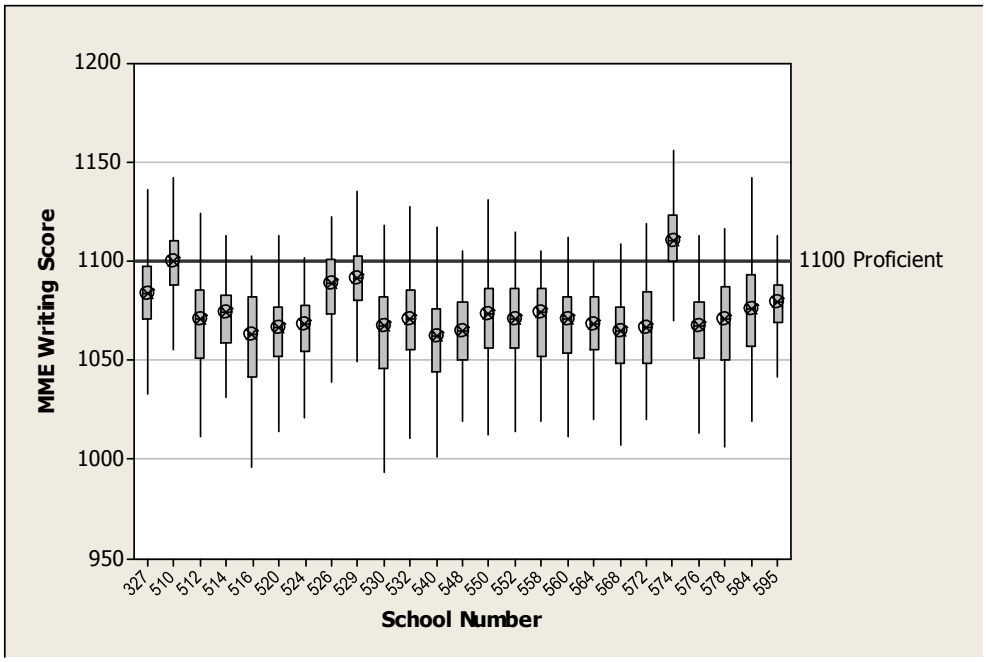


Figure C.11: Box plots of the MME Writing score

Analysis shows different levels of variation (see length of boxes and some of the whiskers (lines) are longer indicating a larger range in the writing score. Only High School 574 has a median above the proficiency level of 1100.

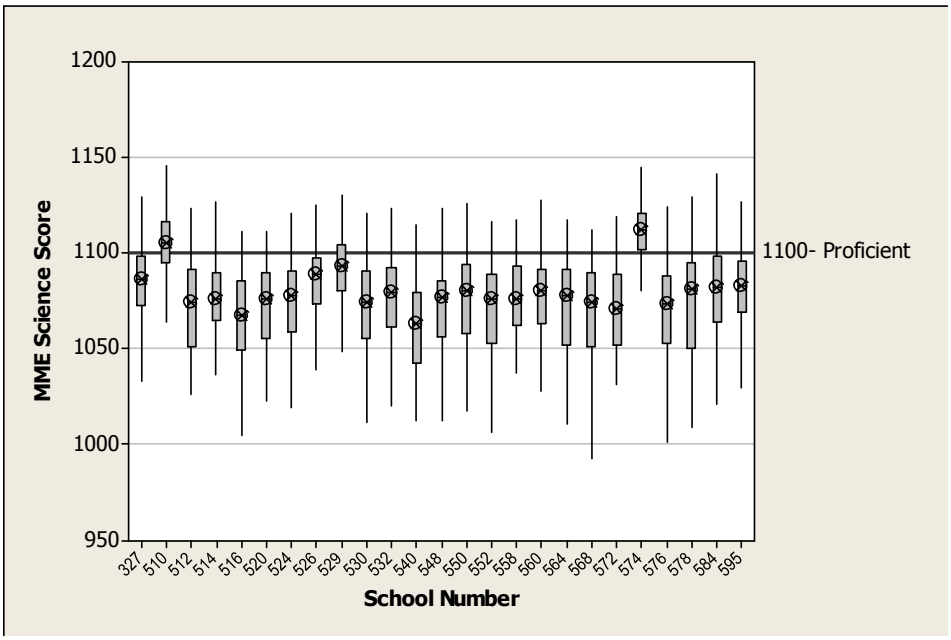


Figure C.12. Box plots of the MME Science score

Analysis shows variation in the distribution of the MME Science score by high school, with some high schools showing a much tighter distribution about the median and others showing twice the variation; however most scores do not indicate that students are proficient in Science.

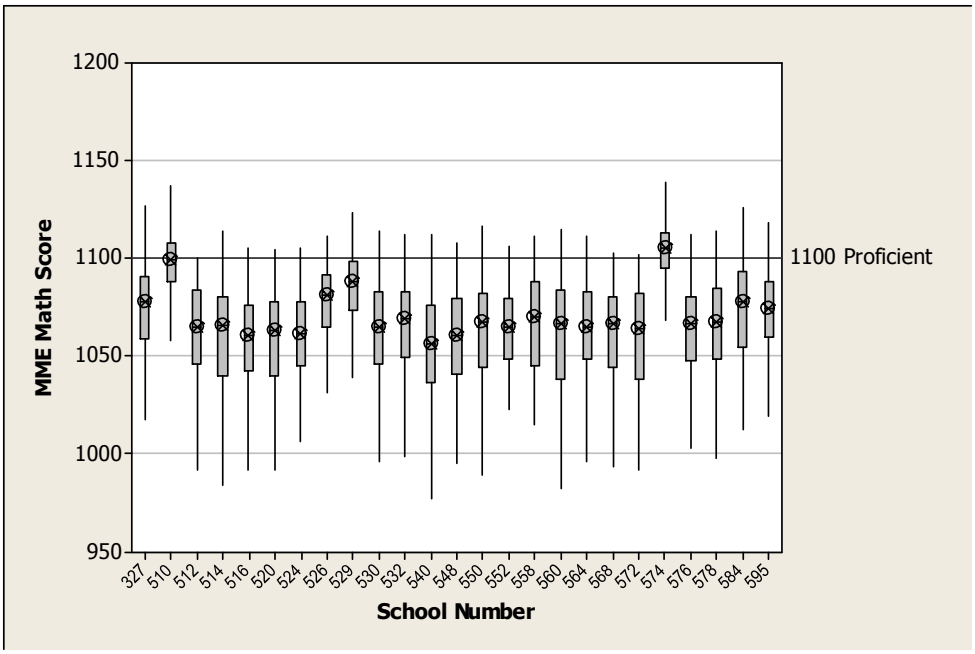


Figure C.13: Box plots of the MME Math score

Analysis reveals two levels of variation, with high schools with the higher medians having less variation (tighter range, shorter box) - this is ideal. Only High School 574 shows a median greater than the proficiency level of 1100.

Appendix D

Regression Models and Analyses

Variable Coding For Regression Analyses Using 20005-09 DPS Cohort

Dependent Variables in Regression Models:

- Graduation rate: Graduated students (1) compared to Students who have not graduated (0)
- Transfer Rate: Students who transferred (1) to students who did not transfer (0) (open schools only)
- High School GPA (continuous variable)

Independent Variables: Background

- Females (1) compared to Males (0)
- Free or reduced lunch eligibility (1) compared to no eligibility (0)
- Race/Ethnicity was not included in the model, since over 93% of the students in the cohort of 7445 students was Black.

Independent Variables: Community and School Resources

- For the U.S. Census Bureau data, the median of the difference between the 2007-2011 American Survey Community data and the 2000 Decennial data was calculated for each variable. A 1 was assigned to values greater or equal to the median and a 0 (expected) for those less than the median

- For the count of the number of resources in the home zip code (churches, colleges, hospitals, recreation centers, social service centers and total), the median count across the student cohort was calculated. For those values greater than or equal to the median, a 1 was assigned, otherwise a 0. For the number of hospitals and the number of social service centers, an adjustment was made in the cut point (1 was added to the median) so that the distribution would be closer to 50% above and below the median.
- For the school FRL, a school with 75% of students on a free or reduced lunch was categorized as a high poverty school (1) compared to not being a high poverty school (0).

Independent Variables: Prior Achievement

- For the MEAP and MME scores, the initial PL score of 1, 2, 3 or 4 identifying the proficiency level was the basis of the design set of dummy variables. One dummy variable identified a 1 for proficiency (1 or 2 for the MEAP PL subject), and 0 otherwise. The second dummy variable identified 1 for missing data and 0 otherwise. Both are compared to the assumed "0" of not proficient (PL = 3 or 4)
- High School GPA for the graduation rate regression: a design set with dummy variables set so that one identifies a high school GPA of 1.6 or less and the other identifies a high school GPA of 2.6 or more.
- First: design set with 3 levels--lower than algebra, at algebra, and higher than algebra. The standard will be at algebra level, with 2 dummy variables created for below and above algebra. For each student, the math

courses were reviewed and if the student was taking algebra, he/she was considered at algebra, geometry was considered above algebra, and car math was considered below algebra; in some cases a subjective decision was made by the researcher, based on the math courses presented.

- Grade in math course: A design set with dummy variables was used. One dummy variable identified D or failing= 1 and 0 otherwise. The second dummy variable identified 1 for missing data and 0 otherwise. Both are compared to the assumed "0" of earning an A, B,C.
- Unexcused absences in first semester of math: A design set with dummy variables was used. One dummy variable identified over 10 unexcused absences as a 1, 0 otherwise. The second dummy variable was for missing data (1), and otherwise 0. Both are compared to the assumed "0" of 10 or fewer excused absences.
- Open/Closed Schools- a filter that defines if a freshman high school remained open or closed. For the Transfer regression, only the subset of students initially at open schools are considered.

Regression Analyses

Table D.1 Logistic Regression Analysis of the Influence of Background, Community Resources and Prior Achievement on Four-Year Graduation

Characteristic	Background		Community and School		Middle School Achievement (MEAP)		High School Achievement	
	Odds Ratio	Signif	Odds Ratio	Signif	Odds Ratio	Signif	Odds Ratio	Signif
Female	2.25	***	2.26	***	2.16	***	1.94	***
Free or Reduced Lunch	0.48	***	0.57	***	0.36	***	0.62	***
Census Data (2011-2000) home Zip Code								
Diff in % High School Diploma or above			1.05		1.10		1.15	
Diff in % Female Householder with children			1.19	**	1.14		1.08	
Diff in % Language Not English			0.79	***	0.77	***	0.81	***
Diff in % Unemployment			0.89		0.90		0.87	
Diff in % Individual in Poverty			1.13		1.09		1.15	
Diff in % Children in Poverty			0.88		0.91		0.95	
Community Resources Home Zip Code								
Number of Churches			1.56	***	1.64	***	1.59	***
Number of Colleges			1.01		0.98		1.01	
Number of hospital			0.99		1.00		0.99	
Number of RC			0.98		0.93		1.01	
Number of Social Centers			1.25	***	1.27	***	1.18	
Number of Total Resources			0.74	**	0.68	***	0.66	**
Attend High Poverty School			0.63	***	0.72	***	0.81	***
Transferred school			0.40	***	0.41	***	0.62	***

Middle School MEAP Achievement				
ELA Prof			0.98	0.97
ELA Missing Data			0.51 ***	0.33 ***
Math Prof			1.69 ***	1.24 **
Math Missing Data			0.78	0.77
Reading Prof			1.30 **	1.11
Reading Missing Data			1.34	2.50 **
Science Prof			1.49 ***	1.10
Science Missing Data			0.84	0.92
Social Studies Prof			1.06	0.92
Social Studies Missing Data			1.08	1.26
Writing Prof			1.24 ***	1.11
Writing Missing Data			1.07	1.11
High School Achievement MME				
ELA Prof				0.82
ELA Missing Data				5.98 ***
Math Prof				1.60
Math Missing Data				1.04
Reading Prof				1.29
Reading Missing Data				0.09 ***
Science Prof				0.92
Science Missing Data				0.20
Social Studies Prof				1.52 ***
Social Studies Missing Data				0.10 ***
Writing Prof				1.63
Writing Missing Data				3.77
P- Pearson	0.98	0.081	0.004	0.479
P-H-L	1.000	0.135	0.675	0.173
Gamma	0.38	0.41	0.50	0.79
% Concordant	49.8	70.1	74.8	89.2

** $p<0.05$ *** $p<0.01$

Table D.2 OLS Regression Analysis of the Influence of Background, Community Resources, and Achievement on High School GPA

Characteristic	Background		Community and School		Middle School Achievement (MEAP)		High School Achievement	
	Coefficient	Signif	Coefficient	Signif	Coefficient	Signif	Coefficient	Signif
Female	0.460	***	0.440	***	0.402	***	0.254	***
Free or Reduced Lunch	-0.324	***	-0.232	***	-0.282	***	-0.014	
Census Data (2011-2000) home Zip Code								
Diff in % High School Diploma or above			-0.024		-0.004		-0.010	
Diff in % Female Householder with children			0.080	***	0.055	**	0.027	
Diff in % Language Not English			-0.090	***	-0.114	***	-0.074	***
Diff in % Unemployment			-0.064	**	-0.56	**	-0.036	
Diff in % Individual in Poverty			0.038		0.028		0.039	
Diff in % Children in Poverty			-0.071		-0.626		-0.037	
Community Resources Home Zip Code								
Number of Churches			0.139	***	0.162	***	0.085	**
Number of Colleges			0.010		0.005		0.020	
Number of hospital			-0.030		-0.017		-0.006	
Number of RC			0.020		-0.003		0.012	
Number of Social Centers			0.100	***	0.090	***	0.019	
Total Resources			-0.157	***	-0.193	***	-0.129	***
Attend High Poverty School			-0.125	***	-0.051	**	0.033	
Transferred school			-0.443	***	-0.388	***	-0.106	***

Middle School MEAP Achievement				
ELA Prof			0.043	0.031
ELA Missing Data			-0.002	-0.013
Math Prof			0.300 ***	0.100 ***
Math Missing Data			-0.044	-0.045
Reading Prof			0.134 ***	0.021
Reading Missing Data			0.095	0.152
Science Prof			0.198 ***	0.039
Science Missing Data			-0.025	-0.029
Social Studies Prof			0.145 ***	0.054
Social Studies Missing Data			0.071	0.081
Writing Prof			0.125 ***	0.046 **
Writing Missing Data			0.027	-0.056
High School Achievement				
ELA Prof				0.056
ELA Missing Data				0.354 ***
Math Prof				0.157 ***
Math Missing Data				-0.228 **
Reading Prof				0.041
Reading Missing Data				-0.251 **
Science Prof				0.045
Science Missing Data				0.328
Social Studies Prof				0.123 ***
Social Studies Missing Data				-0.611 ***
Writing Prof				0.032
Writing Missing Data				-0.279
1st Sem Below Algebra or no math				-0.019
1st Sem Above Algebra				0.073
1st sem Math Course Failing Grade				-0.428 ***
1st sem Math course grade missing (no math course or withdrew)				-0.556 ***
1st sem Math Absents> 10				-0.302 ***
1st Sem Math course absence missing				0.204
S	0.884	0.851	0.807	0.618
R2 (Adj)	9.12%	15.7%	24.2%	55.6%
P, Lack of fit	0.101	0.000	0.009	0.002

**** p<0.05 *** p< 0.01**

Table D.3 Logistic Regression Analysis of the Influence of Background, Community and School Resources, and Achievement on Transfer Rate (students who were freshmen at schools that remained open)

Characteristic	Background		Community and School		Middle School Achievement (MEAP)		High School Achievement	
N=6123	Odds Ratio	Sig.	Odds Ratio	Sig.	Odds Ratio	Sig.	Odds Ratio	Sig.
Female	0.84	***	0.84	***	0.86	***	1.13	**
Free or Reduced Lunch	1.92	***	1.86	***	1.94	***	1.40	***
Census Data (2011-2000) home Zip Code								
Diff in % High School Diploma or above			1.24	***	1.22	***	1.23	***
Diff in % Female Householder with children			0.63	***	0.63	***	0.65	***
Diff in % Language Not English			0.90		0.94		0.90	
Diff in % Unemployment			1.24	***	1.23	***	1.21	**
Diff in % Individual in Poverty			0.96		0.97		0.98	
Diff in % Children in Poverty			1.52	***	1.49	***	1.38	**
Community Resources Home Zip Code								
Number of Churches			0.58	***	0.56	***	0.63	***
Number of Colleges			1.15		1.14		1.10	
Number of hospital			1.41	***	1.40	***	1.38	***
Number of RC			0.84	**	0.86		0.83	**
Number of Social Centers			0.80	***	0.82	**	0.90	
Total Resources			2.00	***	2.09	***	1.92	***
Attend High Poverty School			1.29	***	1.21	***	1.08	

Middle School MEAP Achievement				
ELA Prof			1.05	1.08
ELA Missing Data			0.98	1.02
Math Prof			0.92	1.20 **
Math Missing Data			1.48	1.49
Reading Prof			0.84	0.96
Reading Missing Data			0.64	0.66
Science Prof			0.85	1.06
Science Missing Data			0.66	0.70
Social Studies Prof			0.92	1.05
Social Studies Missing Data			1.13	1.08
Writing Prof			0.89	1.01
Writing Missing Data			1.40	1.33
High School Achievement				
ELA Prof				0.74
ELA Missing Data				0.80
Math Prof				0.84
Math Missing Data				1.02
Reading Prof				1.26
Reading Missing Data				1.59
Science Prof				0.96
Science Missing Data				0.52
Social Studies Prof				0.91
Social Studies Missing Data				1.32
Writing Prof				1.20
Writing Missing Data				1.87
High School GPA> 2.6				0.40 ***
High School GPA < 1.6				1.27 ***
1st Sem Below Algebra				1.11
1st Sem Above Algebra				1.17
1st sem Math Absents >10				1.26 ***
1st sem Math				

Absences MD				0.38 **
1st sem Math Failing Grade				1.49 ***
1st sem Math Grade Missing (no math course)				2.91 **
P-Pearson	0.000	0.000	0.001	0.055
P – H-L	0.002	0.019	0.724	0.401
Gamma	0.22	0.24	0.26	0.46
% Concordant	43.6	61.0	62.8	73.0

** $p<0.05$ *** $p<0.01$