

# Measuring Cultural Fluency in Berkeley Unified School District: Steps Toward an Effective Parent Involvement Strategy

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**Abstract:**

This paper examines the relationship between parent involvement and the academic achievement of children in Berkeley. I seek to address whether or not higher parent participation rates increase the likelihood of a student performing well in school and on state standardized tests, while controlling for other factors that also impact a child's academic achievement. Such factors include: free and reduced price meal eligibility (an indicator of family income), parents' educational attainment, ethnicity, involvement in special education, and language spoken at home. Upon controlling for these factors, the literature suggests that there should be a positive relationship between parent involvement and child's academic achievement.

This study also explores the extent to which parents are comfortable in their child's school. I utilized multivariate OLS regressions to measure if the school's cultural fluency has any effect on whether or not parents volunteer there, utilize teacher guidance, attend parent education workshops, or communicate with the teacher regularly.

I find that, within my sample, parent engagement is not a significant predictor of student achievement. Nor is it the case that parents who perceive ethnic inclusion issues are less involved in the schools. I explore possible explanations for these results and offer recommendations based on both the quantitative and qualitative data findings.

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## **I. Introduction**

The main purpose of this paper is to quantify the effect that parental involvement has on the academic achievement and engagement of children in Berkeley. Previous studies have illustrated a positive correlation between parent involvement and student success. As such, this study will also examine ways that Berkeley's schools can increase minority parent involvement. Specifically, it will explore the extent to which the cultural fluency of a school affects parent involvement in the school. Cultural fluency refers to the ability of staff and community members to interact with one another, acknowledging, embracing, and utilizing ethnic differences. In this paper, I hope to quantify the effect that a parent's comfort level in interacting with the school has on parental involvement.

My initial hypothesis is that the most unengaged parents are those from low-income, minority, and low-education backgrounds. I imagine that these types of parents derive less utility from involvement in the school because they have pressing family and income issues and also because they place relatively less value on their child's education than would a more educated parent. Yet it is my hope that the recommendations put forth here will pave the way for changes in district policy and staff and parent mindsets.

This project grew out of my internship with the 2020 Vision initiative, the City of Berkeley's initiative to close the achievement gap by the year 2020. I was initially interested in the position because the City focuses not just on what teachers can do to help students, but what the city can do (with such services as afterschool programs,

mental health, public health, etc.). This study grew out of my interest in ways that schools can create grassroots change without extra money, additional programs, or orders from the state/ district. It aims to generate a dialogue as well as quantitative results about what school practices will improve outcomes for the neediest students.

In line with the goals of 2020 Vision, I explore the extent to which parents of disadvantaged minority students are able and/ or willing to become active players in their children's schooling. 2020 Vision focuses specifically on the achievement gap that exists between White students and students of Hispanic and African American descent. This is in part because these two groups constitute the largest populations aside from Whites, but also because the gap is often largest for Hispanics and African Americans. As such, this project aims to get a better idea of how African American and Latino parent involvement affects the performance of children from these backgrounds. Furthermore, a more complete understanding of the factors that go into parental engagement will provide insight into the most effective ways of including and working with these groups of parents.

The City of Berkeley and Berkeley Unified School District (BUSD) officials are major stakeholders in the process, and as such, have major input into the goals and methodology of the project. All stakeholders agree on the main focus: examining the correlation between school cultural fluency and parent involvement and also between parent involvement and student achievement.

This project draws three main conclusions. First, parent involvement is not a significant predictor of student achievement. There are other aspects of students' lives

that have greater effect on their performance. Second, parents widely agree that the schools have adequate levels of cultural fluency. They feel welcomed and valued by staff and administration. Third, perception of school cultural fluency is not a significant predictor of whether or not parents are involved in the school. Even those parents who brought up perceived ethnic inclusion issues maintain working relationships with staff and gave back to the school in various ways.

This paper is structured as follows. Section II describes the demographic characteristics of BUSD and what form the achievement gap takes. It also gives background on the two schools surveyed and what makes them interesting test subjects. Section III reviews the relevant literature on the topic of parental engagement. Section IV delves into the methodology behind the project, more specifically the formulation and dissemination of the survey. Section V describes the quantitative methodology: the variables, structure, and purpose of my regression models. Section VI provides an analysis of those models, with Section VII laying out limitations and some directions for future research. Section VIII concludes and offers recommendations for enhanced student achievement and school-family communication

## **II. Background of Berkeley Unified School District and the Schools Chosen**

### **Berkeley Unified School District**

BUSD serves about 9,000 K-12 students with eleven elementary schools, three middle schools, and one high school.<sup>i</sup> Of these 9,000 (circa 2008/09 school year), about 7% are Asian, 17% Hispanic, 26% African American, 31% White, and 29% multiracial or

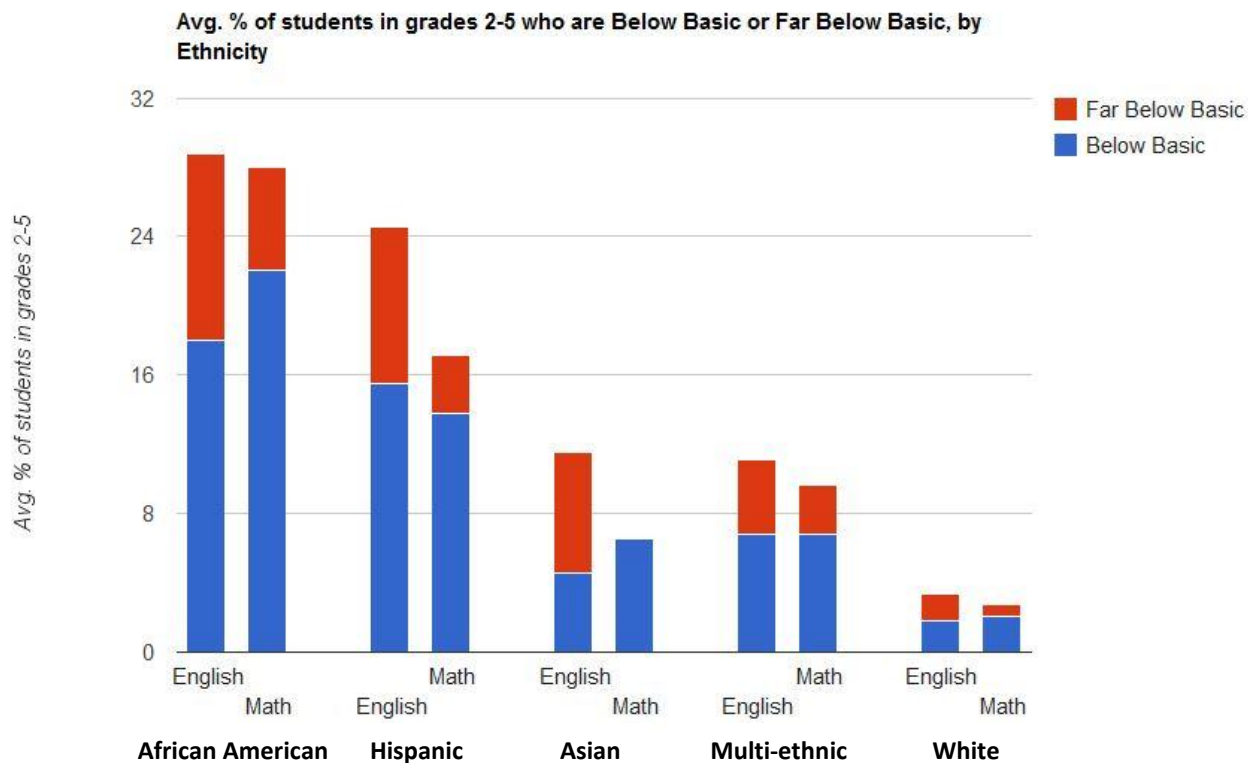
other.<sup>ii</sup> Almost 40% of BUSD's students are on free or reduced price meals and 13% are English Language Learners.<sup>iii</sup> On average, 36% of Berkeley students in grades 2- 11 score Advanced on their California Standardized Tests (CSTs) in English/ Language Arts, as compared to 24.7% statewide.<sup>iv</sup> In math, 42.8% of Berkeley students in grades 2- 7 score Advanced, compared to 31% statewide.<sup>v</sup> Similarly, 2.67% of Berkeley students in grades 2- 7 score Far Below Basic on their California Standardized Tests (CSTs) in math, as compared to 4% statewide.<sup>vi</sup> While BUSD may be able to boast higher overall performance, this does not mean that the state's persistent achievement gap is not present in Berkeley as well.

The graph below<sup>1</sup> illustrates the average percentage of BUSD students grades 2- 5 who scored Below Basic or Far Below Basic on CSTs in 2010. African Americans and Hispanics far outstrip all other ethnicities in both the Below Basic and the Far Below Basic categories. Whites are the most absent in terms of scoring Below Basic and Far Below Basic. This graph is also helpful in seeing the diversity of competencies and hypothesizing underlying causes. For example, although all ethnicities struggle more with English than with math, Hispanics and Asians have the most trouble with English. This pattern may point to language fluency as a predominant issue.

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<sup>1</sup> Source: 2010 STAR Test Results, California Department of Education, Assessment, Accountability, & Awards Division  
<http://star.cde.ca.gov/star2010/ViewReport.asp?ps=true&lstTestYear=2010&lstTestType=C&lstCounty=01&lstDistrict=61143-000&lstSchool=&lstGroup=1&lstSubGroup=1>

**Graph 1**



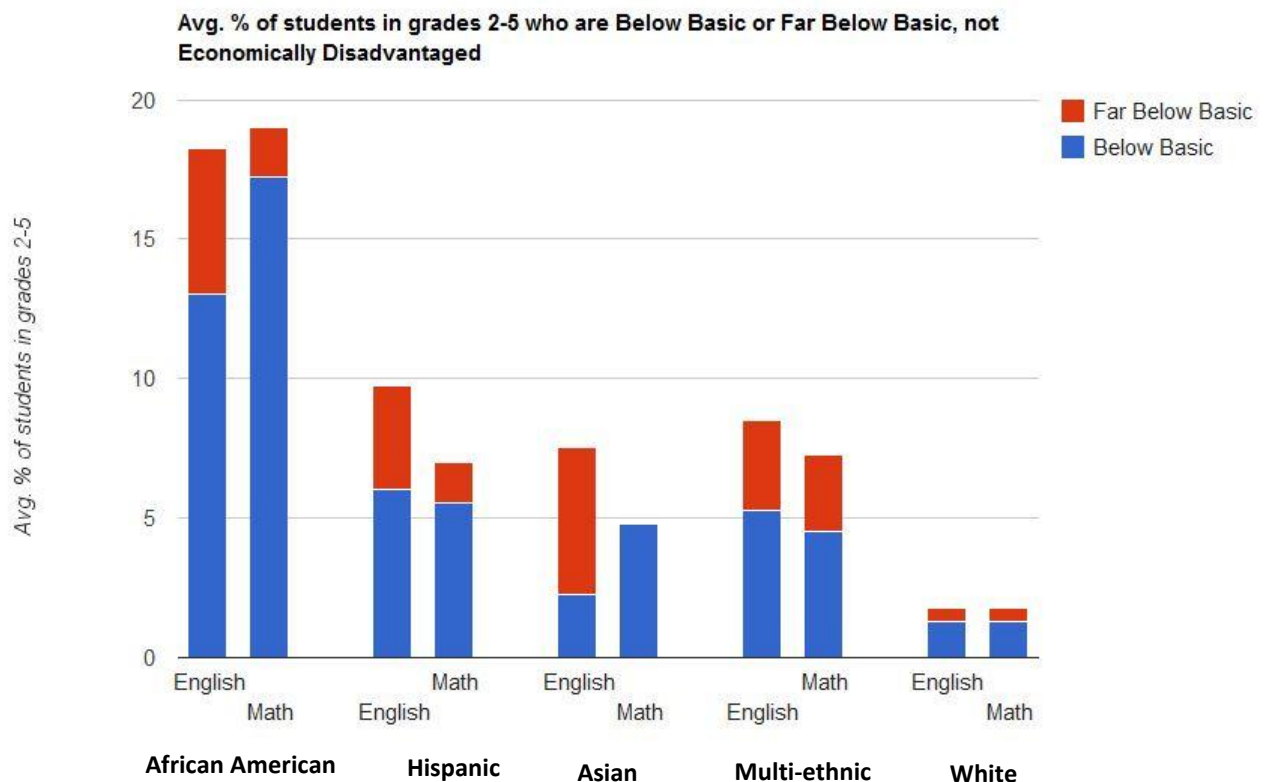
While some may argue that the achievement gap is caused only by income and wealth inequalities, the following graph argues differently. Graph 2<sup>2</sup> shows only students who come from families that are not economically disadvantaged. According to the aforementioned theory, these students should have scores that are closer to being equal because they have the same economic advantages. In fact, there is a level playing field. Yet it is still very obvious that the bar representing African American students,

<sup>2</sup> Source: 2010 STAR Test Results, California Department of Education, Assessment, Accountability, & Awards Division  
<http://star.cde.ca.gov/star2010/ViewReport.asp?ps=true&lstTestYear=2010&lstTestType=C&lstCounty=01&lstDistrict=61143-000&lstSchool=&lstGroup=1&lstSubGroup=1>



those who are not economically disadvantaged, is taller in both Below Basic and Far Below Basic than any other ethnicity. Here also, the English gap persists in Hispanic and Asian households, though to a lesser extent. Still too, the bars representing Whites are almost nonexistent compared to those of other ethnicities.

**Graph 2**



Yet BUSD has been taking steps since the 1960s in order to promote equality of opportunity for its students. It's most recent program, the "controlled choice" plan to assign students to elementary schools, was adopted in 2004. In this plan, the city is divided into more than 440 micro-neighborhoods, called "planning areas," each assigned a diversity category (from 1-4, 4 being the most historically underprivileged).<sup>vii</sup> This category is formed based on three criteria: the planning area's average household

income level, adult education level, and the percentage of students of color enrolled in grades kindergarten through 5 in public school.<sup>viii</sup> All students in the planning area are assigned the same code, regardless of race or income.<sup>ix</sup> For example, if a planning area has many families of color that are also low-income and low-education, the category assigned would be a 3 or 4. But were a White child from a wealthy, educated family to also live in this area, that student would still receive a category assignment of 3 or 4, the same as the rest of the area.

The district allocates children to schools based on the family's indicated school choice, but attempts to allocate equal proportions of students to each school. As such, the average elementary school will have approximately one-fourth Category 1 students, one-fourth Category 2 students, and so on. This process side-steps California's 1996 Prop 209, which states that no public institution may take race or ethnicity into account in admissions processes, because it uses students' home locations as opposed to their individual ethnic affiliations to determine which schools they will attend.

Although the goal of this policy is to promote equity in Berkeley's schools, it has potential negative effects on the level of parent comfort within schools. For example, perhaps a low-income parent dropping his/her child off at school in a part of town that boasts large houses and high home prices would feel intimidated or looked down upon. Income is just one factor that can make a parent feel out of place. English language proficiency, ethnicity, and level of education may also be different between groups of parents, and therefore make individuals self-conscious. This comfort and accessibility may also affect parent involvement. Parents may have difficulty getting across town to

their child's school, or may feel too uncomfortable to attempt to volunteer or communicate often with the teacher.

### **Berkeley Arts Magnet (BAM) Elementary and John Muir Elementary**

These two elementary schools were chosen for survey implementation for the commonalities they share with other BUSD schools. For example, BAM and John Muir have similar racial proportions as the overall district. See Graph 3 below.<sup>3</sup> The largest discrepancy being that John Muir has slightly more African American students.

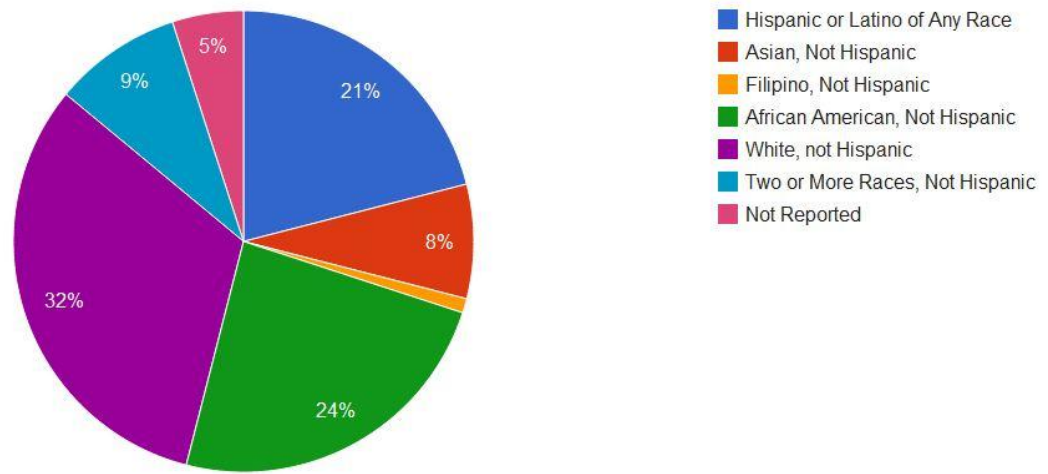
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<sup>3</sup> Source: Enrollment by Ethnicity for 2009-10, California Department of Education Educational Demographics Unit

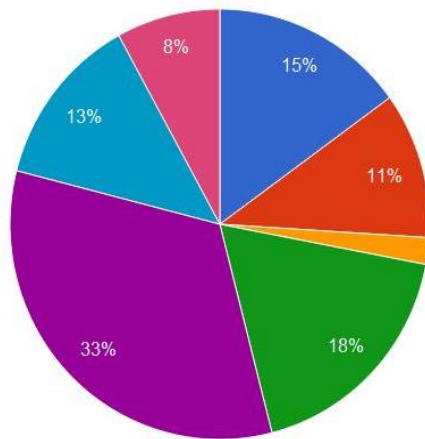
<http://dq.cde.ca.gov/dataquest/Enrollment/EthnicEnr.aspx?cType=ALL&cGender=B&cYear=2009-10&Level=School&cSelect=JOHN^MUIR^ELEMENTARY--BERKELEY^UNIFIE--0161143-6105316&cChoice=SchEnrEth>

### Graph 3

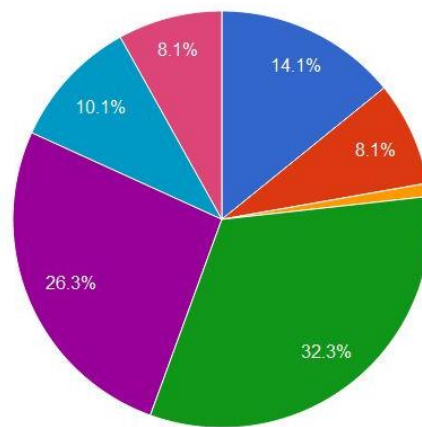
**Berkeley Unified: Population 2009/10**



**BAM Population 2009/10**



**John Muir Population 2009/10**



Both schools also have similar proportions of English Learners and economically disadvantaged students. The California Department of Education defines English Learner (EL) status as “lacking the clearly defined English language skills of listening comprehension, speaking, reading, and writing necessary to succeed in the school's regular instructional programs.”<sup>x</sup> 19.5% of John Muir students are EL, and 15.5% of

BAM's, compared to the district K-5 average, 21%.<sup>xi</sup> The standard deviation for EL enrollment is 7.15%, with both schools falling inside one standard deviation of the mean. Out of John Muir's 45 EL children, 18 (40%) are Spanish speakers, and the next highest group, Arabic speakers, contains 6 students (13%).<sup>xii</sup> At BAM, 57 students are EL, 20 (35%) of whom speak Spanish, and 8 (14%) of whom speak Arabic.<sup>xiii</sup> Total, grades K-5 in BUSD include 833 EL students, with 513 (62%) Spanish, and 41 (5%) Arabic.<sup>xiv</sup> Similarly, both BAM and John Muir are representative of the rest of the district in terms of proportion of low-income students (47.3% and 51.9% respectively, compared to 47.3% district-wide).<sup>xv</sup> With a standard deviation of 6.2%, both schools fall inside one standard deviation of the mean.

For the survey, it was crucial to use schools that have representative numbers of families that embody these two characteristics (EL status and family income level.) I hypothesize that these characteristics will be negatively correlated with parental comfort/ engagement, and as such, the data and findings will be most helpful if they are based on populations of EL and low-income students that are representative of other schools in the district. John Muir and BAM both fall within one standard deviation of the mean percentages of EL and low-income students in the district.

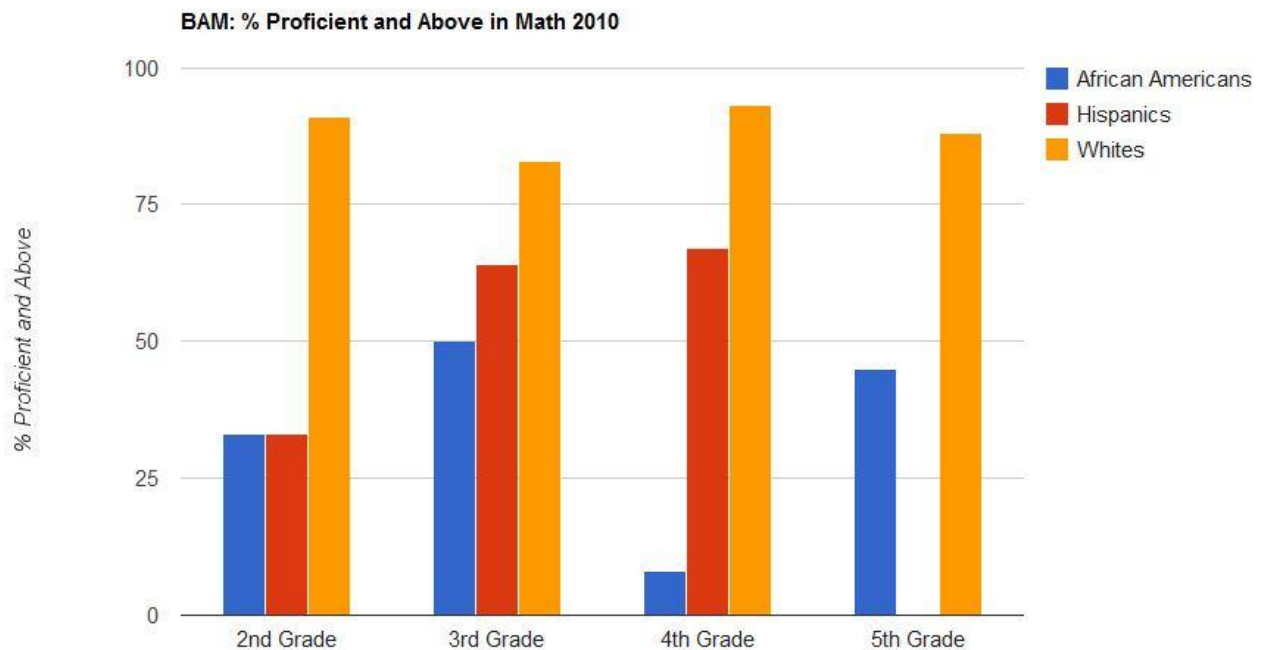
The achievement gap that exists at the district level is also present in BAM and, perhaps to a lesser extent, John Muir. Graph 4 and Graph 5<sup>4</sup> show cross-sectional views

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<sup>4</sup> Source: 2010 STAR Test Results. California Department of Education Assessment, Accountability, & Awards Division.  
<http://star.cde.ca.gov/star2010/SearchPanel.asp?lstTestYear=2010&lstTestType=C&lstCounty=01&lstDistrict=61143-000&lstSchool=6097729&lstGroup=5&lstSubGroup=1>

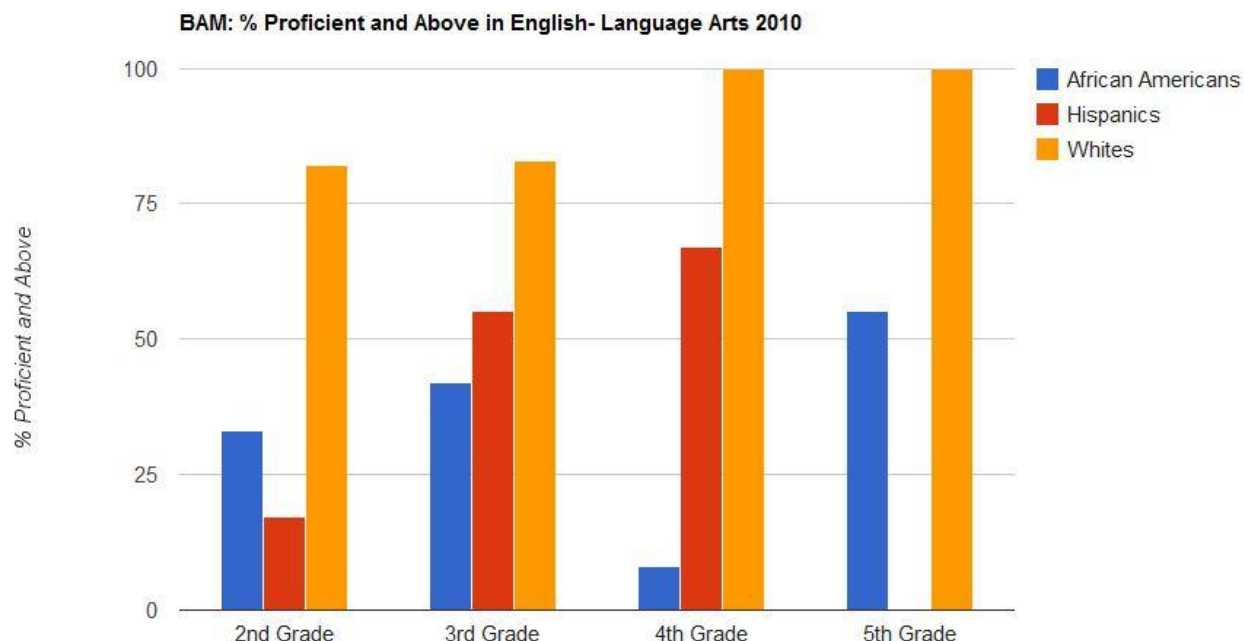
of STAR test achievement for BAM students. These scores<sup>5</sup> from the 2010 school year provide a snapshot in time of the gap between White students' performance and that of Hispanics and African Americans at BAM. White students are nearly all scoring Proficient and Above, while, in all cases but one, less than half of all African Americans are even Proficient. Although the gap for Hispanic students is smaller, there is a consistent 20%+ gap between the percentage of Whites and the percentage of Hispanics scoring Proficient and Above.

**Graph 4**



<sup>5</sup> Note: In 2010, there were fewer than ten Hispanic students tested in 5<sup>th</sup> grade math and English. Their scores were omitted for privacy reasons.

**Graph 5**



While there is little public data available on John Muir’s test scores because of the school’s size, we can infer some information from the African American scores and from the school’s Program Improvement (PI) status<sup>6</sup>. In order to protect student privacy, the California Department of Education Assessment does not provide data on student achievement when only ten or fewer students in a category had valid test scores.

African Americans constitute the only racial group with 10+ valid test scores (per grade level) at John Muir. Graph 6<sup>7</sup> shows that African American students at John Muir are scoring a bit higher on average than are those at BAM. Yet BAM is in its fourth year of PI

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<sup>6</sup>PI schools are Title I schools that have failed to meet Adequate Yearly Progress (AYP) standards for at least two consecutive years.

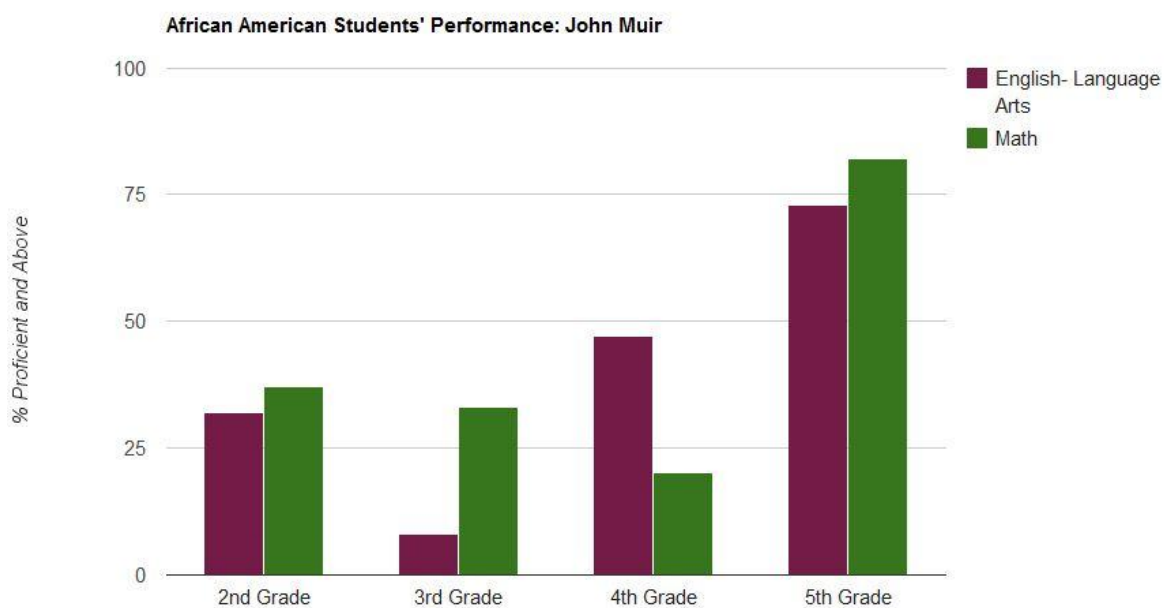
<sup>7</sup> 2010 STAR Test Results. California Department of Education Assessment, Accountability, & Awards Division.

<http://star.cde.ca.gov/star2010/SearchPanel.asp?lstTestYear=2010&lstTestType=C&lstCounty=01&lstDistrict=61143-000&lstSchool=6097729&lstGroup=5&lstSubGroup=1>

Note: This graph shows cross-sectional, not longitudinal data.

while John Muir is not a PI school. It would be surprising if a non-PI school did not have slightly higher scores within each subgroup than a PI school. It may be as well that John Muir's White students perform better than BAM's White students. As such, although there is little information on John Muir's test statistics by ethnicity, it is reasonable to assume that John Muir's achievement gap is similar to BAM's and BUSD's.

**Graph 6**



In summary, BAM and John Muir are ideal implementation schools because they are similar to one another and to the rest of the district concerning composition of ethnic backgrounds and EL and low-income students. Furthermore, the achievement gap that persists district-wide is also present in BAM, and possibly John Muir. These characteristics make these two schools suitable for deriving results that are applicable to other schools in the district.



### III. Review of Relevant Literature

Although countless researchers have conducted studies on the effects of parent involvement, my research is a bit different because it uses quantitative methodology. It is also important to note that until this project, there was no way for BUSD to measure parent involvement or parent/teacher/administrator perception of cultural fluency in schools. This research is meant to guide BUSD in its efforts toward more effective parent outreach and involvement. Because each district is different, with unique populations and issues, one cannot rely solely only on findings from other studies. That being said, current literature on the topic of parental involvement was indispensable in shaping the types of questions asked on the survey and the structure of the project in general.

Many researchers have shown that parent involvement and teacher inclusion of parents translates into increased student success.<sup>xvi xvii</sup> One study by Westat and Policy Associates examining student achievement in Title I elementary schools found that teacher outreach to parents of low-performing students was related to improved student achievement in both reading and math.<sup>xviii</sup> Outreach to parents consisted of meeting face to face, sending home materials to help children with homework, and telephoning both routinely and when the children were having problems.<sup>xix</sup> In schools where teachers reported high levels of outreach to parents, test scores grew at a rate 40 percent higher than in schools where teachers reported low levels of outreach.<sup>xx</sup>

Work by Shaver and Walls confirms the correlation between parent education workshops and student success. Parent education workshops consist of 1. teacher updates on their children's progress, 2. training on topics responding to parents'

interests, such as how to support children going through crisis and discipline strategies, and 3. learning packets in reading and math, as well as training in how to use them.<sup>xxi</sup>

However, many researchers have found that as students get older, the effect of parent involvement and outreach decreases. Specifically, Catsambis's study of students in secondary school found that parent communication with the school, attendance at school events, and contacts with other parents had little effect on student outcomes.<sup>xxii</sup>

These findings shaped my decision to use elementary schools for my study and to include specific questions about teacher outreach and parent involvement in my survey.

Other studies provide more detailed analysis on the reasons parents choose not to interact with the school, and what schools can do to increase involvement. Epstein and Lee used the National Educational Longitudinal Study (1988) and the Hopkins Enhancement Survey to collect longitudinal data from principals, students (8th graders), teachers, and parents. They found various indicators for parent involvement in school workshops and activities.<sup>xxiii</sup> The correlates of parents' volunteering at the school include: small schools with self-contained classes, suburban schools, schools with more professional families, and schools where students enter with higher grade level knowledge. These patterns suggest that there is greater outreach to these families or more initiation by these families. Epstein and Lee's findings suggest that parent comfort may be a factor in parent involvement and also that parent volunteerism may be an indicator of income and a high value on education. I factor these results into the survey by attempting to measure parent comfort and its effect on involvement. I will also be

using parents' education level and whether or not the child qualifies for free/ reduced price meals as proxies for income, so I can control for this characteristic.

Research by the National Center for Education Statistics found that parent attendance at school activities and involvement in general does not directly lead to increased student achievement. It is more likely that involvement indirectly affects achievement by making the parents more familiar with the school and teachers. This familiarity may lead to better parent-teacher relations and more personal attention for their children.<sup>xxiv</sup> Or perhaps increased familiarity with the programs available at the school allows parents to take early intervention or preventative measures against behavioral and academic problems.<sup>xxv</sup> These findings facilitated my addition of survey questions that target awareness of school programs and resources.

#### **IV. Methodology I: The Structure and Purpose of the Survey**

The survey questions were chosen by Maya Hernandez from BUSD's Office of Family and Community Partnerships, Tanya Moore from the City of Berkeley's 2020 Vision initiative, and Pamela Harrison-Small, supervisor of BUSD's Culturally, Linguistically Responsive Systems division and myself. The survey questions were inspired by or directly taken from two sources: our own understanding of the current status of communication between parents of color and schools and San Francisco Unified School District's parent engagement survey.

Questions in the Communication section of the survey came largely from Hernandez's observations of minority parent complaints and comments from her Parent

Advisory Committee. This committee consists of parents of diverse backgrounds whose children attend schools throughout the district. For example, a common comment that Hernandez would deal with was, “I did not know how to access a certain service.” To which, oftentimes, she would respond, “There was a parent education workshop on that topic a few weeks ago. Why didn’t you attend the workshop?” only to receive confused looks, and the parents’ realization that they had dismissed the workshop notice thinking that it did not apply to their children. Exchanges such as this one prompted the creation of a survey section that allows parents to voice their grievances with the communication methods of the school/ teacher as well as give constructive advice on which methods work best for them. This section of the survey aims to answer the questions: What are the disconnects in communication between parents and teachers? And are certain groups more likely to experience failures in communication?

The San Francisco Unified School District (SFUSD) parent and staff survey inspired questions in our Access and Equity survey section.<sup>8</sup> The goal of the Access and Equity section is to better understand how minority parents feel about their interactions with staff and administrations and how they view those staff and administration interactions with their children. The end goal is to quantify to what extent parents feel included by the school. This way, I will be able to see whether parent comfort is correlated with parent involvement.

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<sup>8</sup> The 2010 SFUSD parent survey can be found here:  
[http://web.sfusd.edu/Services/research\\_public/sfusd\\_satisfaction\\_surveys/SFUSD%20Satisfaction%20Survey%202010-%20Family%20Survey.pdf](http://web.sfusd.edu/Services/research_public/sfusd_satisfaction_surveys/SFUSD%20Satisfaction%20Survey%202010-%20Family%20Survey.pdf)

Upon analysis of the results of the SFUSD survey, it became apparent that we did not want to replicate their work directly. Although SFUSD received a total of 14,354 responses (27.2% of district enrollment), the mean response for every question bordered between a 3 and 4, where 3 corresponds to Agree and 4 to Strongly Agree. This result can be interpreted in different ways. Perhaps the questions asked were ambiguous, not specific enough for parents to be able to disagree with their meanings. Perhaps the questions were confusing, causing parents to feel as though they understood and agreed, when in reality they missed the true goal of the question. It is also possible that the survey was only returned by engaged and active parents, those most likely to give positive responses. Or perhaps SFUSD is a perfectly inclusive and accepting district.

Although the SFUSD survey was far from perfect, many of its questions had valuable underlying concepts. One question that we took from the SFUSD survey was “My child’s school respects, values and builds on its students’ languages, cultures, and lived experiences.” This question attempts to measure parent comfort as it relates to curricula and teaching strategies. A parent who disagrees with this statement is likely to feel as though the dominant culture of the school is not accessible or welcoming to people who are different. Yet the nature of this statement is complex and may be attempting to hit too many points at once. Although I had doubts about the usefulness of these questions, I was only one stakeholder in the creation of the survey. My partners within the district decided that these questions were the best measures of school

cultural fluency. As such, it is possible that many of the questions taken from the SFUSD survey will not have statistically significant correlations with other variables.

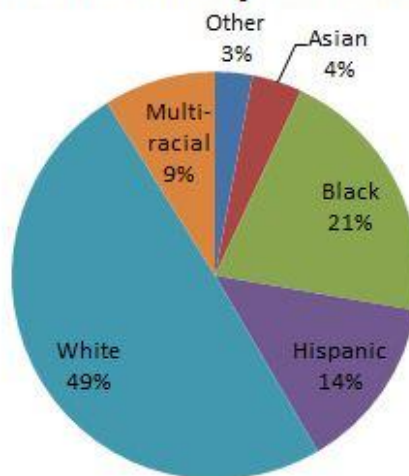
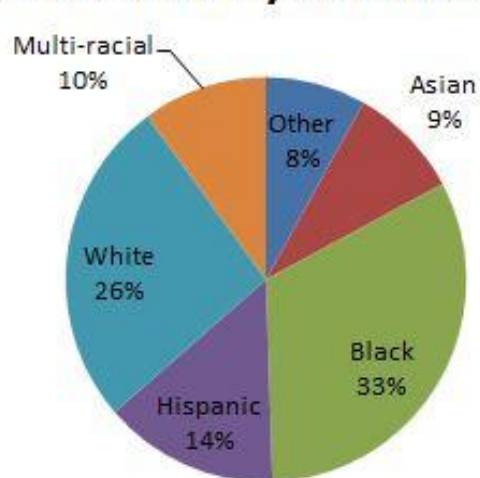
Distribution to the two schools followed a multi-pronged approach, including paper surveys sent home in students' folders, email, and through contacts in ethnic parent organizations. At each school, a prize was awarded to the class that returned the most surveys. In total, 264 surveys were completed. 211 from BAM and 63 from John Muir. However, many families have more than one child at the school. Accounting for this phenomenon, the total number of observations grows to 266 for BAM, 78 for John Muir, and 344 total.<sup>9</sup> The 2010/2011 enrollment numbers for BAM and John Muir are 413 and 243, respectively. Therefore, (with multi-child households taken into account) the observations represent 64% of BAM's students and 32% of John Muir's. The following charts show the ethnic composition of those families who responded, compared to the 2009/2010 enrollment statistics:

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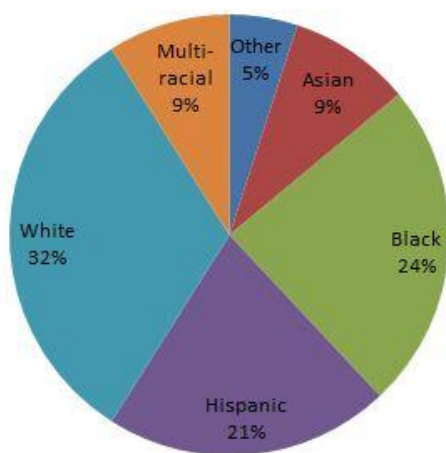
<sup>9</sup>Note: in the regression analysis, only 264 observations are used. The addition of the students whose parents have more than one child at the school is only to find out if the sample was representative.

Graph 7

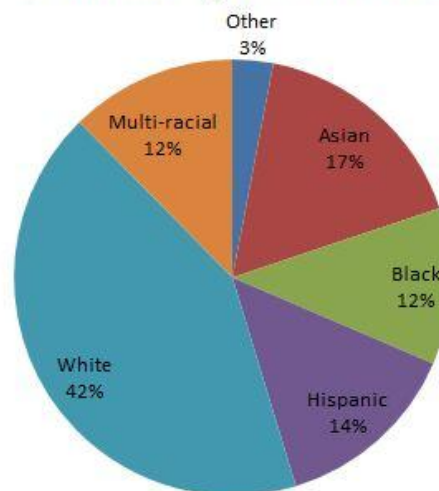
## John Muir 2009/10 Enrollment John Muir Survey Results 2011



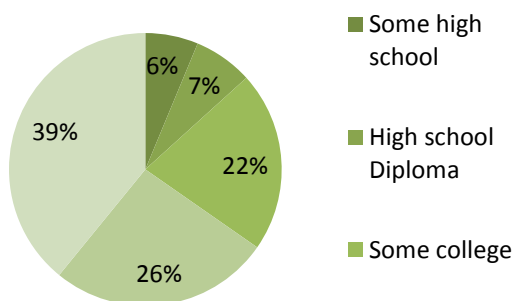
## BAM 2009/10 Enrollment



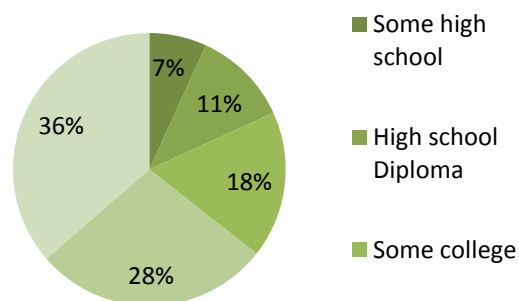
## BAM Survey Results 2011



## Highest Level of Education Attained by Parent 1



## Highest Level of Education Attained by Parent 2



Both samples included a greater percentage of White families and a smaller percentage of Black and Hispanic families than exist at the schools in reality. Furthermore, both samples also included fewer Free and Reduced Price Meal-eligible families: 35% (my sample) vs. 47% (the reality) at BAM and 31% vs. 52% at John Muir. Moreover, the majority of the families who responded reported one or more college graduate parents, many from Masters/PhD programs. Although this is the response sample that would be expected, it adds a bias to my results that is impossible to estimate. It may be the case that those parents who are least involved and least content with the school are those who failed to respond. Or perhaps those parents who did not respond would have similar answers as those who did. As such, it is impossible to know whether the feelings of my sample group are representative of the feelings of those who did not answer.

## **V. Methodology II: Quantitative Approach**

The survey was designed to answer the following research questions:

1. Does parental engagement predict student achievement?
2. Does family perception of the school's cultural fluency affect the extent to which families of color engage?

In attempting to answer these questions, I use a quantitative approach, testing the variables that I hypothesize pertain to student achievement and parent engagement.



## **Variables**

### **Student Achievement**

The STUDACHIEVEPCF variable is an index of component scores from two variables: the student's report card grades and his/her average performance on past standardized tests. This information was reported by the parents in the surveys. To estimate this general achievement, I use principal components analysis (PCA) to create an index of component scores from the first principal component taken from the two measures. PCA is a "statistical method for transforming correlated variables into new variables that are uncorrelated with each other and best represent the variance shared by original variables."<sup>xxvi</sup> This approach is premised on the assumption that an individual's grades and test scores share the influence of that individual's general scholastic achievement.

### **Income**

Eligibility for Free or Reduced Price Meals (FRPM) is used here as an indicator for Income. Parents responded in the survey as to whether or not their child qualifies for this federal program. Eligibility for the FRPM program is determined by each family's income, more specifically, what percent of the poverty level that family's income constitutes. For the 2009/2010 school year, families making 185% of the poverty level qualified for Reduced Price Meals and those making 130% of the poverty level qualified for Free Meals.<sup>xxvii</sup> For a family of four, this correlates to \$40,793/year and \$28,665/year respectively.<sup>xxviii</sup>

## **Volunteering**

The variable VOLTIME is a composite of three variables: how often the parent volunteered in the classroom, how often he/she volunteered at school events, and whether or not he/she served on a parent committee.

## **Contact with the Teacher**

The variable CONTACTTEACHER is a composite score of how often the parent contacted the teacher for 1) Concerns about a child's academic performance, 2) Concerns about a child's discipline, 3) Advice on how to help a child with homework, and 4) Questions about curriculum/standards. Based on the content of the questions, it is possible that many parents whose students are doing poorly will have high CONTACTTEACHER scores as well as those whose children perform well and have highly engaged parents.

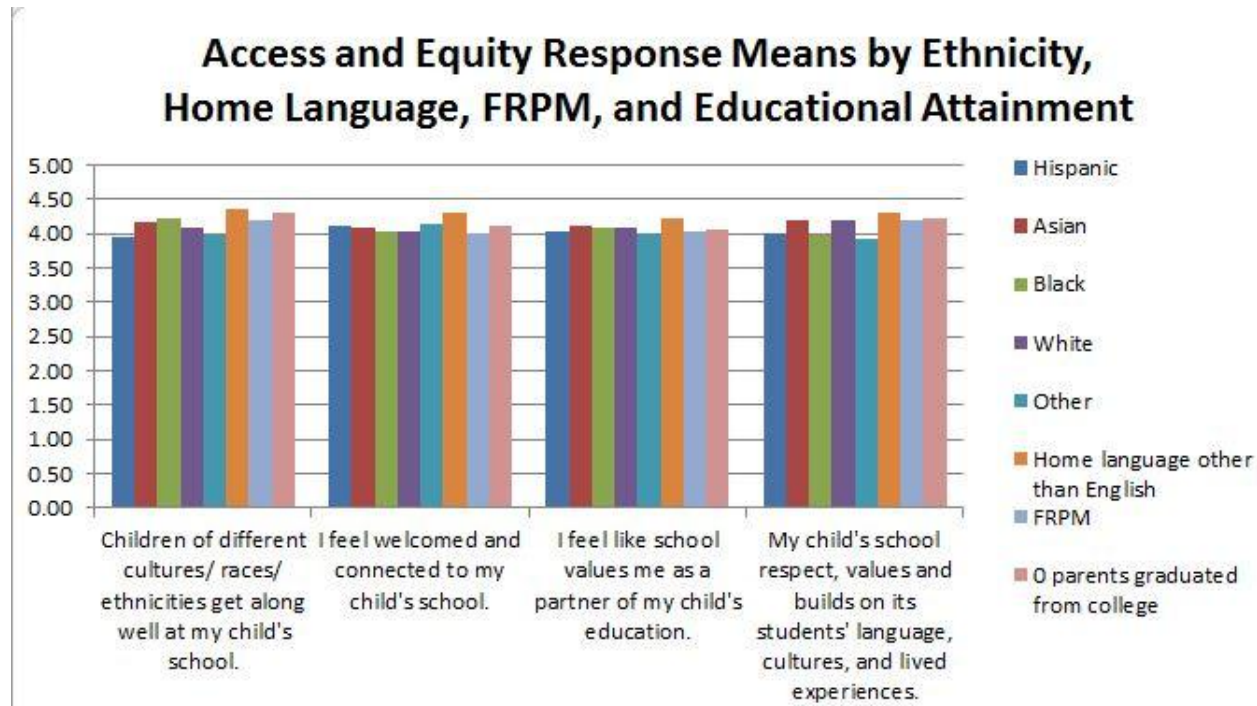
See Appendix B for a list of all Variables Abbreviated

## **VI. Analysis**

### **Descriptive Statistics**

Graph 8 below shows that, on average, parents of all groups agreed with the statements concerning Access and Equity. With Likert scale responses corresponding to numbers (Strongly Disagree – Strongly Agree corresponding to 1-5, respectively), the average was around the sentiment “Agree.” No one question has significantly different responses than any other, and the standard deviations are very similar as well.

Graph 8



The homogeneity of the responses gives the same interpretation as the homogeneity in SFUSD's responses: Perhaps the questions asked were ambiguous or confusing, perhaps I did not receive responses from those least engaged parents, or maybe BUSD is a perfectly inclusive and accepting district. The discrepancy between my sample and the true ethnic and FRPM eligible populations points to the probability that sample bias does play a role, perhaps in combination with some confusion over questions. Nevertheless, the homogeneity of the means and the standard deviations (See Appendix C) illustrate that it is likely that none of these comfort variables will be significant in any regression, since most all parents answered with agreement.

## Results of Regression on Student Achievement

This section seeks to answer the question: Does parental engagement predict student achievement? Appendix D gives the results for a regression on student achievement that includes all parent involvement variables (CONTACTTEACHER, VOLTIME, USETEACHERGUIDANCE, and ATTENDWRKSHOP). I did not include additional parent involvement variables in the regression below because they severely decreased the fit of the model, as illustrated by the R-squared.

The following model regresses student achievement (STUDACHIEVEPCF) on independent variables representing race (BLACK, WHITE, HISPANIC, ASIAN, OTHER), parent education (1PARENTGRAD), family income (FRPM), home language (HOMELANG), how often the parent contacts the teacher (CONTACTTEACHER), how often Black parents contact the teacher (CONTACTTEACHER\_BLACK), how often the parent volunteers in the school (VOLTIME), and special education identification (SPED).

One surprising takeaway from the results is that, within this sample, neither parent involvement nor ethnicity plays as large a factor as would be expected. No variables for ethnicity retained significance, and there was no significant correlation with amount of time volunteered.

However, if the above charts depicting the achievement gap in Berkeley are true, then there should be a correlation between ethnicity and achievement. One explanation for the lack of significance of the black variable is that FRPM and 1parentgrad are picking up on the same trend, and that these are better predictors of student

achievement. But that does not mean that there is no correlation between black and student achievement.

One possible explanation for volunteer's lack of significance is sample bias. On average, my sample consists of educated, higher-income parents of every race. It may be that a student growing up in a household with successful, educated parents will do well, even without his/ her parents volunteering. This is consistent with the strong correlations between student achievement and income and parent education. On the other hand, perhaps volunteering at the school and serving on parent committees simply does not affect student achievement. It is possible that parent actions taken at home or in other parts of the community have a greater effect on student achievement than involvement in the school.

There is also an interesting relationship between student achievement and whether the parents contact the teacher on certain issues. It is understandable that contacting the teacher has a negative coefficient because the issues that parents responded to on the survey were largely negative, from discipline issues to concerns about performance. Yet, judging by the `contactteacher_black` variable, it is possible that different ethnic groups have different ways of approaching teachers, some more often than others, some more about certain issues than others. However, either way, the effect of contacting the teacher is very small.

**Effect of Parent Involvement on Student Achievement: OLS Estimates**  
**Dependent Variable: STUDACHIEVEPCF**

<i><b>Explanatory Variables</b></i>	<i><b>( 1 )</b></i>	<i><b>( 2 )</b></i>	<i><b>( 3 )</b></i>	<i><b>( 4 )</b></i>
contactteacher	-.1144655*** (.029)	-.0950734** (.030)	-.0626331** (.032)	-.10032 *** (.038)
voltime	.0778934* (.036)	.0670911* (.037)	.049436 (.040)	.0483715 (.040)
asian		-.1211835 (.187)	-.0263946 (.201)	-.0184524 (.200)
black		-.4517935** (.194)	-.0596917 (.215)	-.3791295 (.279)
hispanic		-.1614765 (.188)	-.0441738 (.194)	-.0294845 (.194)
other		-.2131056 (.168)	-.1292316 (.176)	-.1276022 (.175)
1parentgrad			.2939461 (.181)	.3187415* (.180)
homelang			.2663255 (.209)	.2921614 (.208)
frpm			-.5121777*** (.155)	-.4674534*** (.156)
sped			-.7708995* (.296)	-.7706713*** (.295)
contactteacher _black				.1181266* (.066)
constant	.052183 (.109)	.1876244 (.136)	-.0003413 (.221)	.0241585 (.221)
Observations	264	264	244	244
R-squared	0.0661	0.0870		0.1923

\*\*\*--- p<0.01, \*\*--- p<0.05, \*--- p<0.1

## Results of Regressions on Parent Involvement

Although it appears as though parental involvement does not greatly affect the student achievement of this sample, it is still valuable to ask which parents are engaged and whether they feel comfortable in the school. The following models seek to answer the second research question: 2. Does the school's cultural fluency affect the extent to which families of color engage? Cultural fluency is represented here by the inclusion of the variable RAISEINCLUSIONISSUES. See Appendix E for examples of comments that constitute "ethnic inclusion issues."

I ran three separate regressions: two multivariate OLS models, and one logit model. My goal was to see whether there were any traits that consistently stood out for parents who volunteer often, use teacher guidance often, or access school services.

The models regressed indicators of parent engagement and use of school services (VOLTIME, TEACHERGUIDANCE, and USE\_RESOURCES) on independent variables representing race (BLACK, WHITE, HISPANIC, ASIAN, OTHER), parent education (1PARENTGRAD), family income (FRPM), home language (HOMELANG), how often the parent receives contact from the school/teacher (CONTACTABOUTPTA, CONTACTABOUTVOLUNTEER, CONTACTABOUTSERVICES, CONTACTABOUTGUIDANCE), whether the parent specifically mentions the existence of ethnic inclusion issues (RAISEINCLUSIONISSUES), and the age of the student (STUDGRADE).

Only one pattern is apparent in all three of these regressions: the significance of the variables having to do with the communication the parent receives about the opportunity. This is to be expected, and may possibly have endogenous effects, as those who volunteer more are likely to hear about additional volunteer opportunities, and those who use school services have

many routes by which they may hear about additional services, etc. Yet the absence of other patterns is also noteworthy. No race is consistently more likely to participate in any of these opportunities, home language is not always a factor, and parents who mentioned inclusion issues were not significantly less likely to engage with the school.

In fact, parents who raise inclusion issues were more likely to volunteer or serve on a student committee. Of the 22 parents who brought up an issue about ethnic inclusion outside of the Access and Equity questions, 15 were BAM parents (7 John Muir), 3 were Black, 3 were Asian, 7 were Hispanic, 5 were White, and 4 were Other. 19 out of the 22 families contained at least one parent who had graduated from college. 5 were eligible for free/ reduced price meals. Contrary to what one might expect, those who perceive inclusion issues are not predominantly low-income, low-education, minority families. However, a surprising amount of John Muir parents (relative to BAM parents) and Hispanics wrote in these additional issues.

It is possible that those parents who are most likely to volunteer/ participate in a parent committee are also those who would be more likely to do the extra work of filling out the free-response questions in the survey. Or perhaps the extra time that these parents spend on campus make them more aware of the issues between students, parents, and staff there. Another possibility is that the reason these parents volunteer more time is to help ameliorate inclusion issues and affect change in the culture of the school. Yet, interestingly enough, these parents who perceive additional ethnic inclusion issues are not significantly more or less likely to use teacher guidance or to use additional school services.



### Effect of Cultural Fluency on Amount of Time Volunteered: OLS Estimates

<i>Explanatory Variables</i>	<i>Dependent Variable: voltime</i>
contactaboutvolunteer	.6442892*** (.121)
contactaboutpta	.2242677* (.126)
asian	-.0928036 (.315)
black	-.531826 (.339)
hispanic	-.7973418*** (.306)
other	.0824589 (.269)
raiseinclusionissues	.8158851** (.349)
1parentgrad	.3761639 (.289)
homelang	.1145841 (.351)
frpm	-.1404801 (.243)
studgrade	-.0889324 (.058)
constant	.8592027** (.420)
Observations	215
R-Squared	0.3428

\*\*\*--- p<0.01, \*\*--- p<0.05, \*--- p<0.1

**Effect of Cultural Fluency on How Often the Parent Uses Teacher Guidance: OLS  
Estimates**

<i><b>Explanatory Variables</b></i>	<i><b>Dependent Variable: teachguidance</b></i>
contactaboutguidance	.2831568*** (.051)
asian	.1239231 (.157)
black	.2441827 (.171)
hispanic	.0882336 (.161)
other	.1036608 (.134)
raiseinclusionissues	-.2005548 (.179)
1parentgrad	-.0566172 (.142)
homelang	.3154781** (.166)
frpm	.1362815 (.117)
studgrade	-.1158205*** (.030)
constant	.799166*** (.201)
Observations	214
R-Squared	0.2640

\*\*\*--- p<0.01, \*\*--- p<0.05, \*--- p<0.1

**Effect of Cultural Fluency on Whether or Not the Family Accesses Additional School  
Resources: OLS Estimates**

<i>Explanatory Variables</i>	<i>Dependent Variable: use_resources</i>
contactaboutserves	.4627512** (.212)
asian	-.205732 (.521)
black	1.304405* (.725)
hispanic	-.2988909 (.508)
other	.5001682 (.461)
raiseinclusionissues	-.3654806 (.611)
1parentgrad	-.0101631 (.552)
homelang	.7279917 (.637)
frpm	1.936193*** (.459)
studgrade	.04449 (.103)
constant	-.8227744 (.686)
Observations	220
R-Squared	0.2068

## VII. Limitations and Additional Research

It is probable that my results for all regressions suffer from sample bias. Those least engaged parents would be less likely to fill out a survey than those who are interested in and work actively toward school improvement. According to Harrison-Small, there are some families that even teachers cannot reach to bring up concerns about the child. Had all families filled out the survey, I believe the answers about Access and Equity, volunteering, and student

achievement would have been very different. A clearer relationship between ethnicity and student achievement should have emerged, based on the data we have about the achievement gaps in the schools surveyed. I believe that significance overall would have improved had I had more observations. Yet it is also possible that the parents surveyed were a representative group, but some lied about or exaggerated their child's achievement. Realistically though, based on the large numbers of White and Asian respondents compared to Hispanic and Black, it is likely that we missed the population we were intending to serve.

Fear of inciting privacy issues hindered my project from being able to measure some relationships that would have been helpful to better understand. For example, it would have been ideal to have access to the true scores of each student. This way, I would be able to rule out one aspect of sample bias, the tendency for parents to over-report their child's grades. However, parents would be unlikely to fill out a survey that identified their child/ them directly and schools would be unlikely to provide me with information on student grades.

Furthermore, I did not have a perfect variable for income because I was afraid that to ask directly about income on the survey would lead to under-reporting for that question. Income is a private issue, one that a parent would be less likely to report in case anyone should be able to link the survey to him/her. Over-reporting and under-reporting might be an issue if the parent feels uncomfortable giving this information to a stranger. Being able to place families into gradients of income would be preferable to the FRPM variable, which lumps families into "very poor" and "not very poor". Ideally though, each parent would report the exact amount of income they receive annually. This way, the regression would be able to

differentiate whether or not achievement/ involvement increase with income instead of whether or not being very poor affects achievement/ involvement.

Future quantitative research on the topic of parent involvement would be more helpful if the researchers have the time and ability to collect surveys from all parents. This way, total number of observations would be high, and any sample bias would disappear. Time constraints and constraints on human resources prevented my project from achieving this goal. Were my team able to translate the survey into other languages, especially Arabic, Vietnamese, and Laotian, more parents would have been able to fill it out. Were we able to reach out to parents through churches and other community groups, we may have gotten more parents who are not involved in the school, but in other aspects of the community. Administering the survey over the phone or at after-school programs would further increase access to those who simply throw out paper surveys.

The discrepancy between the signs of the coefficients on CONTACTTEACHER and CONTACTTEACHER\_BLACK may be worth additional research, especially were the researcher to have more observations. Is it true that parents contacting the teacher more helps Black children more than it would help a student of another ethnicity? If so, why would that be the case? And what would influence some Black parents to contact the teacher more than others?

## **VIII. Conclusion**

My findings answer the two research questions that I was interested in exploring:

1. Does parental engagement predict student achievement?

2. Does family perception of the school's cultural fluency affect the extent to which families of color engage?

First, parental engagement does not predict student achievement. Berkeley parents who volunteer, serve on parent teacher committees, attend teacher education workshops, or use teacher guidance are not more likely to have high performing students. This is a surprising result, given the previous literature on this topic. However, many of the cited studies were measuring improvement over time, whereas my data was cross-sectional. It is possible that increased teacher outreach on topics such as guidance, workshops, and opportunities to volunteer would lead to increased engagement and increased student success.

Yet it is also possible that the population of adults in Berkeley is different than that of other cities in ways that affect this relationship. For example, residents of the Bay Area in general, and Berkeley in particular, tend to be better educated and have higher incomes than in other parts of the nation. In 2006, 50% of San Francisco residents ages 25 and older had a Bachelor's degree or higher, ranking 2<sup>nd</sup> in the nation for cities over 250,000 people.<sup>xxix</sup> Data from 2004-2005 shows the median household income of San Francisco (\$60,031, ranked third richest city by Forbes) and the median home price for the San Francisco- Oakland- Fremont metropolitan area (\$726,900).<sup>xxx</sup> In comparison, in 2000, 64% of Berkeley residents had a Bachelor's (including 34% who held a graduate or professional degree), and median household income was \$44,485.<sup>xxxi</sup>

It is possible that the educated and urban culture of Berkeley promotes parent involvement in their students' lives in ways other than through the school. For example,

helping a child at home, participating in community organizations, and visiting museums. Also, the high cost of living and high average income indicate the high opportunity cost of taking time off from work to volunteer at a child's school or attend a field trip. It is likely that most Berkeley households include two working parents, further limiting parent availability during the day. As such, for this sample, it may not be correct to correlate lack of parent involvement in school with low value placed on education.

Second, cultural fluency does not affect the extent to which families of color engage with the school. The Access and Equity questions, which were supposed to measure parent comfort and school cultural fluency, were almost unanimously agreed with. Even those parents who specifically brought up ethnic inclusion issues were not consistently less likely to engage with the school. For officials at the school and district, this result was unexpected. Yet it is possible that other factors are more influential in whether parents engage or not, like their time constraints or the amount of communication they receive about opportunities to get involved.

## **Recommendations**

The open response questions on the survey help explain some of the quantitative results and provide a basis for improvement.

Because many parents commented on the overwhelming nature of communication from the school, one possible strategy to increase parent involvement would be to tailor contact more closely to each family's needs. Many parents complained that automated phone messages from the school were too long and too frequent. These parents admitted to tuning them out or deleting them without listening

to the entire message. Still more families stated that they often found that important information got lost in the “barrage” of useless communication from the school. Since receiving contact about opportunities is highly correlated with whether a parent takes advantage of those opportunities, it is worth looking into strategies that will incentivize parents to pay attention to notices from the school. One possibility would be to more effectively personalize communication per family, thereby limiting the amount of inapplicable contact received.

Both parents and the majority of staff members reported that one of their largest worries is the presence of disruptive and sometimes “emotionally disturbed” students in the classroom. Parents are concerned about this issue because they would like the teacher to be able to devote energy to teaching instead of discipline. Both parents and teachers perceive fairness issues because so much energy is devoted to disruptive students that it takes time away from well-behaved ones.

Many staff members cited limited access to student services as a barrier to progress for students requiring emotional and behavioral aid. Staff complained that children often receive services months after they are referred. This lack of response or long wait time seems to be a larger problem than whether or not the student’s parents feel comfortable in the school. Increasing human and financial resources allocated to the Universal Learning Support System would increase aid to those students in need.

The answers to the Access and Equity questions show that Berkeley Unified School District does a commendable job engaging parents of all ethnicities, income brackets, and English language proficiencies. Although some parents perceive ethnic



inclusion issues, these parents continue to give back to the school and have working relationships with staff members. And although some parents do not volunteer, attend parent education workshops, and/or use teacher guidance to help their children learn at home, their students still perform relatively well. Yet there remains room for improvement in the arena of parent communication and access to student services.

Although cultural fluency remains a valid concern, and one that school staff and parents should keep in mind when working with people from different backgrounds, I do not believe it should be given priority over other interventions that have been shown to affect student achievement. My report to the district, BAM, and John Muir will be helpful in starting a dialogue about the issue of parent comfort and involvement. However, were it to come down to the choice of allocating resources to a staff seminar on cultural fluency or additional support for student services, my results suggest that additional dollars spent on cultural fluency may be misplaced and would definitely be difficult to evaluate in terms of effectiveness.

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## Appendix A

### BUSD Family Engagement Survey - Parent/Guardian

*If you have more than one child attending this school, please answer child-specific questions for the oldest child.*

#### Background Information

1. Which elementary school does your child attend?

☐ Berkeley Arts Magnet

☐ John Muir

2. My child's ethnicity (Check as many as apply):

☐ Alaskan Native or Native American

☐ Asian (e.g. Chinese, Japanese, Korean)

☐ Asian Indian (India, Pakistan)

☐ Black/African American

☐ Latino or Hispanic

☐ Middle Eastern

☐ Pacific Islander (Filipino, Samoan)

☐ Southeast Asian (Vietnamese, Cambodian, Thai)

☐ White

☐ Other (please list): \_\_\_\_\_

3. Highest level of education completed by child's mother:

☐ Some high school

☐ High school diploma

☐ Some college

☐ Undergraduate degree

☐ MA/MS/PhD/professional degree

4. Highest level of education completed by child's father:

☐ Some high school

☐ High school diploma

☐ Some college

☐ Undergraduate degree

☐ MA/MS/PhD/professional degree

5. Primary language spoken at home:

☐ English

☐ Spanish

☐ Other (please specify): \_\_\_\_\_

6. Does your child qualify for free/ reduced lunch?

- ☐ Yes
- ☐ No
- ☐ Don't know

7. Grade my child is currently enrolled in (If multiple children enrolled at school, please indicate grade level for both children):

- ☐ Kindergarten
- ☐ 1<sup>st</sup> grade
- ☐ 2<sup>nd</sup> grade
- ☐ 3<sup>rd</sup> grade
- ☐ 4<sup>th</sup> grade
- ☐ 5<sup>th</sup> grade

8. My child is involved in these programs offered by his/her school:

- ☐ GATE
- ☐ LEARNS After School Program
- ☐ Special Education
- ☐ Mental Health Services
- ☐ After school program at City recreation center
- ☐ Berkeley Youth Alternatives (BYA)
- ☐ South Berkeley YMCA Learning Academy
- ☐ Other: \_\_\_\_\_
- ☐ My child is not involved in any afterschool program

9. In report cards, my child usually receives the following marks:

- ☐ 1- Below
- ☐ 2- Approaching
- ☐ 3- Proficient
- ☐ 4 - Advanced
- ☐ Don't Know

10. My child enjoys school.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐ Don't know

11. On past standardized tests, my child generally scored:

- <sup>1</sup>☐ Advanced
- <sup>2</sup>☐ Proficient
- <sup>3</sup>☐ Basic
- <sup>4</sup>☐ Below basic
- <sup>5</sup>☐ Far below basic
- <sup>6</sup>☐ Not applicable
- <sup>7</sup>☐ Don't know

### Access and Equity

12. Children of different cultures/ races/ ethnicities at this school get along well.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

13. Teachers and staff at my child's school have high expectations of all students.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

14. My child's school is a safe place to be from early in the morning to late at night.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

15. I feel welcomed and connected to my child's school.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree

16. I am good friends with some parents at my child's school

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree

17. I feel like the school values me as a partner in my child's education.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

18. My child's school respects, values and builds on its students' languages, cultures, and lived experiences.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

19. My child has a meaningful and caring relationship with at least one adult at the school.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

20a. I would like to have more interaction with my child's teacher.

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree

20b. Please explain:

---

21. Please list or describe any other fairness or inclusion problems that exist in the school

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## Communication

22a. During the time period from August 2010 to December 2010, on average how many times per month did you communicate with your school/teacher using...

Email?	0	1-2	3-5	6 or more
Phone?	0	1-2	3-5	6 or more
In person meetings?	0	1-2	3-5	6 or more
Other: _____	0	1-2	3-5	6 or more

22b. During the time period from August 2010 to December 2010, on average, how many times per month did you contact your child's teacher for...

Concerns about your child's academic performance?	0	1-2	3-5	6 or more	Doesn't apply
Concerns about your child's discipline?	0	1-2	3-5	6 or more	Doesn't apply
Advice on how to help my child with homework?	0	1-2	3-5	6 or more	Doesn't apply
Questions about curriculum/ standards?	0	1-2	3-5	6 or more	Doesn't apply
Other: _____	0	1-2	3-5	6 or more	Doesn't apply

23. During the time period from August 2010 to December 2010, on average, how many times per month did you receive information about...

Opportunities to volunteer at the school?	0	1-2	3-5	6 or more	Don't know
Guidance for parents on how to help their children learn at home?	0	1-2	3-5	6 or more	Don't know
Parent education workshops?	0	1-2	3-5	6 or more	Don't know
Academic and other support services available at the school?	0	1-2	3-5	6 or more	Don't know
Opportunities to participate in leadership and decision making committees at the school?	0	1-2	3-5	6 or more	Don't know



Please circle all that apply

24. How do you receive information from the school?	Mail	Email	Sent home with the child	Personal phone calls	Automated phone calls	Report cards	Parent-teacher conferences	Physical space for parents, like a bulletin board	School events, like Back to School Night	In my language	Parent groups like PTA
25. Which of these methods do you prefer?	Mail	Email	Sent home with the child	Personal phone calls	Automated phone calls	Report cards	Parent-teacher conferences	Physical space for parents, like a bulletin board	School events, like Back to School Night	In their language	Parent groups, like PTA
26. Which methods could be improved (or used, if not currently in practice) by the school?	Mail	Email	Sent home with the child	Personal phone calls	Automated phone calls	Report cards	Parent-teacher conferences	Physical space for parents, like a bulletin board	School events, like Back to School Night	In their language	Parent groups, like PTA

27. During the time period from August 2010 to December 2010, on average, how many times per month did you ...

Volunteer at school events?	0	1-2	3 or more
Volunteer in your child's classroom or school?	0	1-2	3 or more
Use teacher guidance to help your child learn at home?	0	1-2	3 or more
Attend parent education workshops?	0	1-2	3 or more

28. I participate or have participated in the following school leadership and decision making committees:

- <sup>1</sup>☐ School Governance Council (SGC)
- <sup>2</sup>☐ English Learners Advisory Council (ELAC)
- <sup>3</sup>☐ Parent Teacher Association (PTA)
- <sup>4</sup>☐ Parent leadership trainings (PLAN)
- <sup>5</sup>☐ Other: \_\_\_\_\_
- <sup>6</sup>☐ I currently don't participate in any leadership or parent groups

29. Please check any words that explain how you generally feel about communication from your child's school:

- <sup>1</sup>☐ Overwhelming/ overload
- <sup>2</sup>☐ Unimportant
- <sup>3</sup>☐ Difficult to understand
- <sup>4</sup>☐ Does not apply to my child
- <sup>5</sup>☐ Helpful
- <sup>6</sup>☐ Friendly
- <sup>7</sup>☐ Other: \_\_\_\_\_

30. Teachers seem open to questions or feedback

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

31. Principals seem open to questions or feedback

- <sup>1</sup>☐ Strongly agree
- <sup>2</sup>☐ Agree
- <sup>3</sup>☐ Neither agree nor disagree
- <sup>4</sup>☐ Disagree
- <sup>5</sup>☐ Strongly disagree
- <sup>6</sup>☐ Don't know

32. Please list or describe any other communication issues that exist between the school and your family

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### School Programs

33. I know what is meant by the term “achievement gap.”

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree
- ☐ I have never heard of the term “achievement gap”

34. I am aware of and I know how to access the school’s resources to support my child’s academic and social and emotional developmental needs.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

35. Please mark all resources your school offers that you have used between August 2010 and December 2010:

- ☐ Student support team/ Universal Learning Support System (ULSS)
- ☐ After school program
- ☐ Free and reduced meal program
- ☐ Special education program
- ☐ Mentoring/ tutoring
- ☐ Social services like public health, mental health
- ☐ Family Support/ Counseling
- ☐ Other: \_\_\_\_\_
- ☐ I have not used any additional resources at the school

36. Please list or describe any barriers you have experienced when trying to access any of the above services:

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37. This school provides high quality instruction.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

☐ Don't know

38. This school provided me with the grade level standards and expectations for my child.

- ☐ Strongly agree  
☐ Agree  
☐ Neither agree nor disagree  
☐ Disagree  
☐ Strongly disagree  
☐ Don't know

39. I understand the grade level standards for my child.

- ☐ Strongly agree  
☐ Agree  
☐ Neither agree nor disagree  
☐ Disagree  
☐ Strongly disagree  
☐ Don't know

40. I am well-acquainted with the goals of 2020 Vision

- ☐ Strongly agree  
☐ Agree  
☐ Neither agree nor disagree  
☐ Disagree  
☐ Strongly disagree  
☐ I've never heard of 2020 Vision before

41. On average, I help my child with their homework

- ☐ Less than half an hour per night  
☐ Half an hour per night  
☐ 1 hour per night  
☐ 2 hours per night  
☐ More than 2 hours per night

42. One thing I wish teachers knew about my family:

---

## **Appendix B**

### **Variables Abbreviated**

The variables used to answer the research questions were the following:

STUDACHIEVEPCF- A variable measured in standard normal units that represents estimated general scholastic achievement.

SPED- A binary variable of 0 or 1 that represents whether the student receives special education services

FRPM- A binary variable of 0 or 1 that represents whether the student is eligible for Free or Reduced Price Meals

BLACK- A binary variable of 0 or 1 that represents whether the student is Black

HISPANIC- A binary variable of 0 or 1 that represents whether the student is Hispanic

ASIAN- A binary variable of 0 or 1 that represents whether the student is Asian

OTHER - A binary variable coded 1 when the student is either multi-racial (non-Hispanic) or a race other than Black, White, Asian, or Hispanic

WHITE - A binary variable of 0 or 1 that represents whether the student is White. This variable is not included in the regression, but rather is included in the constant. WHITE is omitted so as to avoid perfect multicollinearity.

HOMELANG- A binary variable coded 1 when the student's home language is not English

1PARENTGRAD- A binary variable coded 1 for students with one or more parents that graduated from college

STUDGRADE- Student grade level (0-5, 0 corresponding to Kindergarten)

VOLTIME- A composite variable measured in standard normal units that represents amount of time spent volunteering in the school

CONTACTTEACHER- A composite variable measured in standard normal units that represents how often the family contacts the teacher about certain issues

USETEACHERGUIDANCE- How often the family uses teacher guidance to help their student at home

ATTENDWRKSHOP- How often the family attends parent education workshops

USE\_RESOURCES- A binary variable coded 1 when the family takes advantage of at least one of the following: student support team/ Universal Learning Support System (ULSS), after school program, free and reduced price meal program, special education program, mentoring/ tutoring, social services like public health, mental health, or family support/ counseling

CONTACTABOUT PTA, VOLUNTEER, SERVICES, GUIDANCE- How often the family receives contact from the school/ teacher about opportunities to participate in a parent committee, opportunities to volunteer, academic and other support services available at the school, or guidance for parents on how to help their children learn at home.

RAISEINCLUSIONISSUES- A binary variable coded 1 when the respondent mentioned specific ethnic inclusion issues

## Appendix C

### Standard Deviations of Access and Equity Responses

	<i>Children of different cultures/races/ethnicities get along well at my child's school.</i>	<i>I feel welcomed and connected to my child's school.</i>	<i>I feel like school values me as a partner of my child's education.</i>	<i>My child's school respect, values and builds on its students' language, cultures, and lived experiences.</i>
Hispanic	0.80	0.95	1.12	1.11
Asian	0.91	0.88	1.52	0.73
Black	1.32	1.07	0.93	0.99
White	1.19	0.96	0.93	1.24
Other	1.13	0.80	1.03	1.28
Home language other than English	0.94	0.99	1.39	1.10
FRPM	0.81	1.10	1.05	0.85
0 parents graduated from college	1.10	1.10	1.23	1.12

## Appendix D

### Effect of Parent Involvement on Student Achievement: OLS Estimates

Dependent Variable: STUDACHIEVEPCF

<i>Explanatory Variables</i>	<i>( 5 )</i>
contactteacher	-.053657 (.035)
voltime	.0789511* (.046)
asian	-.0530564 (.217)
black	-.0020328 (.237)
hispanic	-.02255 (.213)
other	-.1547851 (.134)
1parentgrad	.235474 (.195)
homelang	.2350887 (.231)
frpm	-.4230459 *** (.167)
sped	-.8288306 *** (.331)
useteacherguidance	-.1070539 (.092)
attendwrkshop	-.0628434 (.158)
constant	.0333144 (.239)
Observations	221
R-squared	0.16

\*\*\*--- p<0.01, \*\*--- p<0.05, \*--- p<0.1



## **Appendix E**

### **Examples of Comments That Constitute Ethnic Inclusion Issues**

“I would like the school to know that are in a loving home with two parents who are married to each other. Teachers assume that I am a single parent when in fact I've been married for 18 years. I feel as though I'm always having to correct them. I also feel that some teachers and ADMINISTRATORS tend to talk down to me because I'm a person of color; they almost seem surprised that I can speak in complete sentences.”

“Not enough outreach or inclusion for Latino families.”

“The children need more multicultural activities and projects to do. Learn a lot academically, but definitely not what is expected art wise. There are plenty Mexican, Ethiopian, Indian, Asian, and black families here but no representation”

“My kid has a rainbow of friends. The diversity mix at our school is great, however racial equity awareness projects and programs(extra meetings, gatherings, celebrations, events, etc.) are overwhelmingly slanted toward African-Americans. Latino and Asian cultural focus is nearly absent, and if you're Arab forget it!”

“Teachers very slow to warm to parents of Black and Latin origin. It is a shame, we have much in common.”

“The staff are pretty much ignorant of other cultures. Although ostensibly they show interest and respect, I suspect that deep inside them they believe that this culture is superior to others. In any case, I see no serious effort in learning from education systems in other countries. In 8 it's because of the pressure the individuals receive which makes them view kids as a product that they must build to certain specifications (e.g., read by end of K). The same pressures explain why parents and their opinions are irrelevant, what's relevant is only what comes from above. This explains answer to 9.”

“Had a personal issue, discussed it so the teacher could gain a better understanding...the teacher put the comment on student's report card! NO PARENTS OF COLOR IN LEADERSHIP, SCG, PTA...privileged parents create a divide that is suffocating and negative. Outside of school teachers and some parents have a relationship that could be deemed inappropriate. The discussion of students and other disenfranchised families brings a reproach on what the mission of educating total child should be. Things need to change.”

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<sup>i</sup>District Profile: Berkeley Unified School District, Fiscal Year 2008-2009. Education Data Partnership. 2011, <<http://www.ed-data.k12.ca.us/>>

<sup>ii</sup>ibid

<sup>iii</sup>ibid

<sup>iv</sup>2010 STAR Test Results, California Department of Education, Assessment, Accountability, & Awards Division <<http://star.cde.ca.gov/>>

<sup>v</sup>ibid

<sup>vi</sup>ibid

<sup>vii</sup>Yang, Sarah. "Berkeley Unified's racial integration plan a model for other school districts nationwide, says new report." UC Berkeley Media Relations.

<[http://www.berkeley.edu/news/media/releases/2009/09/01\\_schoolintegration.shtml](http://www.berkeley.edu/news/media/releases/2009/09/01_schoolintegration.shtml)>

<sup>viii</sup>ibid

<sup>ix</sup>ibid

<sup>x</sup>DataQuest Glossary, California Department of Education.

<[http://dq.cde.ca.gov/dataquest/gls\\_learners.asp](http://dq.cde.ca.gov/dataquest/gls_learners.asp)>

<sup>xi</sup>Data for 2009-10 School Year, California Department of Education Educational Demographics Unit <<http://dq.cde.ca.gov/dataquest/>>

<sup>xii</sup>English Learners by Language and Grade, California Department of Education, Educational Demographics Office <<http://dq.cde.ca.gov/dataquest>>

<sup>xiii</sup>ibid

<sup>xiv</sup>ibid

<sup>xv</sup>Data for 2009-10 School Year, California Department of Education Educational Demographics Unit <<http://dq.cde.ca.gov/dataquest/>>

<sup>xvi</sup>Henderson, A.T. (1987). *The Evidence Continues to Grow: Parent Involvement Improves Student Achievement*. Columbia, MD: National Committee for Citizens in Education.

<sup>xvii</sup>Henderson, A.T., and Berla, N. (1994). *A New Generation of Evidence: The Family is Critical to Student Achievement*. Washington, DC: National Committee for Citizens in Education.

<sup>xviii</sup>Westat and Policy Studies Associates. (2001). The longitudinal evaluation of school change and performance in Title I schools. Washington, DC: U.S. Department of Education, Office of the Deputy Secretary, Planning and Evaluation Service.

<[http://www.ed.gov/offices/OUS/PES/esed/lescp\\_highlights.html](http://www.ed.gov/offices/OUS/PES/esed/lescp_highlights.html)>

<sup>xix</sup>ibid

<sup>xx</sup>ibid

<sup>xxi</sup>Shaver, A. V., & Walls, R. T. (1998). Effect of Title I parent involvement on student reading and mathematics achievement. *Journal of Research and Development in Education*, 31(2), 90–97. EJ561992.

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- <sup>xxii</sup> Catsambis, S. (1998). Expanding knowledge of parental involvement in secondary education—Effects on high school academic success (CRESPAR Report 27). Baltimore, MD: Johns Hopkins University. ED426174. < <http://www.csos.jhu.edu/crespar/Reports/report27entire.htm> >
- <sup>xxiii</sup> Epstein, Joyce & Lee, Seyong (1995) “National patterns of school and family connections in the middle grades” in *The Family-School Connection: Theory, Research, and Practice*, edited by Bruce Ryan, 1995: SAGE Publications, Inc.
- <sup>xxiv</sup> National Center for Education Statistics. (1997). Statistical Analysis Report: *Fathers' Involvement in Their Children's Schools*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. <<http://nces.ed.gov/pubs98/fathers/Find1.asp#familial> >
- <sup>xxv</sup> *ibid*
- <sup>xxvi</sup> Dillon W.R., Goldstein M. (1984). Multivariate analysis, methods and Applications. New York: Wiley; quoted in Burris CC, Wiley E, Welner KG, Murphy J. (2008) “Accountability, Rigor, and Detracking: Achievement Effects of Embracing a Challenging Curriculum As a Universal Good For All Students,” *Teachers College Record*, 110(3), pp. 571- 608.  
<[http://www.colorado.edu/education/faculty/kevinwelner/Docs/Burris,Wiley,Welner\\_Accountability\\_Rigor\\_and\\_Detracking.pdf](http://www.colorado.edu/education/faculty/kevinwelner/Docs/Burris,Wiley,Welner_Accountability_Rigor_and_Detracking.pdf)>
- <sup>xxvii</sup> Federal Register. Vol. 74, No. 58. (2009)  
<<http://www.fns.usda.gov/cnd/governance/notices/iegs/IEGs09-10.pdf>>
- <sup>xxviii</sup> *ibid*
- <sup>xxix</sup> Christie, L. “America’s Smartest Cities.” 2006. CNN Money.com.  
<[http://money.cnn.com/2006/08/29/real\\_estate/brainiest\\_cities/#list](http://money.cnn.com/2006/08/29/real_estate/brainiest_cities/#list)>
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- <sup>xxxi</sup> City of Berkeley website. “About Berkeley: Who We Are.” Accessed May 2, 2011.  
<[http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=7164#Table\\_DP-4](http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=7164#Table_DP-4) >