The Association of Parental Involvement and Student Achievement from 1988 to 2012

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Abstract

For decades researchers have studied the influence of parental involvement on student achievement and the consensus is that parents are a positive influence on their children's education. In response, policymakers have followed up with educational reforms designed to increase parents' roles in the education of their children. However, not much research has investigated whether the relationship between parental involvement and student achievement is changing over time, especially for high school students. Based on data from the National Center for Education Statistics, this study examined the trend and extent to which parental involvement on high school students has changed from 1988 to 2012. Regression models revealed three trends. First, parental involvement of high school students has increased since 1988. Second, the extent to which parental involvement is associated with student achievement is conditional on the type of involvement, with some forms being positively associated and others being negatively associated. Finally, the increases in parental involvement appear to vary across socioeconomic levels.

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Chapter 1 – Purpose of the Study

Introduction

One of the common mantras of academic achievement has been parental involvement improves student performance. The consensus among researchers has been that students whose parents are involved are more likely to succeed academically, regardless of race, gender, or socioeconomic status (See Hoover-Dempsey et al., 2001; Shumow & Miller, 2001; Horvat et al., 2003; Jeynes, 2007). This belief has led to decades of educational reform with parental involvement as a key aspect if not the singular focus. For decades, the national government and states have enacted educational reforms designed to increase parental involvement. Here in Washington state, there are several laws that are designed to involve families in their children's education from the basic education act to comprehensive guidance and planning programs for students. National reforms have also been implemented from Title I, Part A, Section 1118 of the ESEA to reauthorizations under NCLB and ESSA. However, many questions still remain, namely, how impactful is parental involvement on a child's academic success, are certain types of parental involvement better than others, how does socioeconomic status affect parental involvement on student achievement, and how effective have the decades of reforms been on improving the effects of parental involvement on student achievement (See Hong & Ho, 2005; Bakker et al., 2007; Zarate, 2007; Hayes, 2012; Marcucci, 2020).

The purpose of this study is to look at data compiled from the past three decades to see the extent to which parental involvement is associated with student achievement over time, the extent to which this association differs across socio-economic levels, and if there has been a change in the overall frequency of parental involvement over time. These were important

questions already as we headed into another presidential election where education is sure to be a key issue, but these questions have recently become amplified by the impact that the virus SARS-CoV-2 and the disease COVID-19 have had on education (Abrahamson, 2020). Parents have had to take on the mantle of classroom teacher in the wake of national distance learning trends that appears to be the common practice going forward, in at least the short-term future (Kohli, 2020). Many parents have been forced to become involved in their child's education in ways they never imagined a year ago, and the added pressures on homelife have been well reported in the news (Reaume, 2020). As such, policy makers, from Congress to local school boards, have been frantically trying to develop policies to address these growing concerns, while still trying to ensure the most reasonable safety for students, teachers, school staff, and families at home.

Defining parental engagement or involvement has been difficult as perceptions of what constitutes engagement has changed over time and varies from one community to the next, be that racially, culturally, ethnically, or based on socio-economic status. For this analysis parental engagement will be broken up into two broadly defined categories; academic involvement and life engagement (Zarate, 2007). Academic involvement are activities, discussions, or actions focused on direct connections to their child's school life. These can be seen in conversation centered around college applications, taking entrance examinations, choosing courses throughout high school, or directly helping their children with homework. Life participation are any activities, discussions, or actions focused on non-academic topics. These are seen in conversation centered around the current state of the economy and job market, national and

global events, issues that are troubling their children, and other interests and hobbies their children have.

Hypothesis

The traditional focus of parental involvement has been in the form of direct interaction with schools and school communities. More recent research has begun to define new perspectives of parental involvement as either academic involvement or life participation. While research showing that parental involvement is a positive contributing factor to student achievement, defining what aspects of parental involvement have been most effective and how those have changed over time, has been limited to nonexistent. My hypothesis is that parental involvement has been an increasing factor in student achievement over the past three decades. Furthermore, that parental involvement of those from lower socio-economic levels has been primarily in the form of life participation over direct academic involvement. To this end, the following research questions will be examined:

1. How has the frequency of parental involvement in their children's academic life and home lives changed over time?
2. To what extent does parental involvement associate with student achievement over time?
3. To what extent does the association of parental involvement and student achievement differ across the socio-economic distribution?

Chapter 2 – Review of Literature

Overview

The purpose of this study is to examine the extent to which different forms of parental involvement associate with student outcomes and how the frequency of parental involvement has changed in the past three decades. Parents are crucial to a child's life and everyday interactions with their children help to shape and inform the world around the child. Furthermore, student academic achievement is not just the concern of teachers, but it also a focus of many policymakers. To that end, policymakers struggle to identify ways to improve student achievement. Research has shown that the influence of parents on children is a strong indicator of student academic achievement (See Slaughter-Defoe et al., 1990; Bryant et al., 2000).

Nevertheless, educators continue to struggle with how to improve parental engagement, principally when accounting for different racial/ethnic backgrounds and varying socio-economic backgrounds. Since 2002, schools have been mandated to increase and improve parent/family involvement through the No Child Left Behind Act. However, schools have struggled with engaging culturally diverse communities who find it difficult to engage with schools that many times have differing cultures (Gonzales & Gabel, 2017).

Foundations of Parental Involvement

For almost as long as there has been compulsory education in the United States, there has also been direct parental involvement. From its beginnings in 1897 as the National Congress of Mothers, the National Parent Teachers Association (PTA) has advocated for increased

parental involvement to improve schools and communities (Annenberg Public Policy Center, n.d.). By the mid-1910s, PTAs had established themselves in districts across the nation and would work with districts and schools to improve access to resources and promote the school activities in the community. Superintendents even sought out the help of local PTAs for the collection of information in their districts. In 1914, Superintendent Horn of Dallas, Texas envisioned PTAs as working organizations that would collect qualitative data on local schools and then at monthly meetings, they would compile the local information together ("EFFECTIVE PARENT-TEACHER ASSOCIATIONS," 1914). Parents and parent education organizations were typically viewed as partners in a child's education.

By the 1920, the PTA was viewed as a vital extension to a child's education and the PTA had moved schools to include various courses that were extension of home life from health education and sewing, to agriculture ("Parent-Teacher Associations," 1923). PTAs also helped to secure funding needed for new buildings and materials. Nevertheless, there were still clear lines between the parent's involvement with their child's academics. Decades later, following the boom years that came after World War II, a wave of educational funding increases and reform movements took form, from Eisenhower's National Defense Education Act (NDEA) of 1958 that was influenced by the escalating Cold War, to the Elementary and Secondary Education Act of 1965 of the Johnson Administration. However, research out of the 1970s would show that many of these policies goals were not met, adding to a growing national interest in the quality of education (Ravitch, 1990).

A Nation at Risk

In the early 1980s, Ronald Reagan ran on a ticket of educational reform and downsizing the role of the federal government in education (National Archives and Records Administration, n.d.). Upon taking office, President Reagan appointed a National Commission on Excellence in Education (NCEE). The culmination of this work was the report, *A Nation at Risk* (Tomlinson, 1987). This report shook the nation with claims that standards and expectations of American students were not high enough and we were not competitive internationally. One major change *A Nation at Risk* did cause, was a national interest in school accountability. Before the release of the report, the idea of comparing states educational outcomes was politically toxic.

However, through the use of fiscal federalism, the Department of Education was able to wield important legislation over the states, namely federal funding attached to Title I of the Elementary and Secondary Education Act of 1965. Combined with the conclusions laid out in *A Nation at Risk*, the Reagan Administration, which had sought to shrink the role of the federal government in education, inadvertently laid the groundwork for decades of federal government intervention. A key part of Title I is Section 1118 in Part A. This provision gives school districts increased funding if they create programs and policies that address increasing parental involvement.

A Nation at Risk was not free from criticism. For decades it has been analyzed and evaluated. One concern was the simplicity in which it was written (Tomlinson, 1987). This was not a dense research report, filled with complex ideas and attention given to little details, and layered with discipline specific terminology that can confuse those outside the field. Instead,

the NCEE intentionally removed references and footnotes, trimming down the report to make it more approachable for the general public. It was far from the only report on education, with hundreds of state and local task forces commissioning reports on the status of education (Tomlinson, 1987) but it was easy to read in comparison and became popular, gaining articles and discussions in all the major news sources. Education reform had become a household issue.

A Nation at Risk has also been criticized for the educational movements that were born following it, from public school choice and vouchers, to charter schools, and the influence of federal and state funds on local districts (Mehta, 2013). While the report would mention the importance of parents, students, and communities, it's focus was on teachers as the primary indicator of a successful student and that the solution to saving education lay in improving the teacher or giving options to parents to send their children to other educational opportunities (Mehta, 2013). Accountability would be removed from parents and shifted fully to teachers, ignoring the influence that parents and communities have on children. Parental influence, a keystone in the success of a child, was no longer a primary concern for educational reform policymakers.

Standards-Based Movement

The end of the 1980s saw the election of President George H.W. Bush and the move towards a standards-based education (SBE) as outlined in *A Nation at Risk*. At an educational summit of governors and President Bush, there was an adoption of goals for education by the year 2000 with SBE as a component of that. Signed into law in 1994 under the Clinton Administration, the National Education Goals, or Goals 2000, set the stage for SBE. This led to

the outcomes-based educational theory (OBE) adoption where all goals are the outcomes derived from the education. Schools would set target goals for students and then the delivery of instruction to meet those goals fell on the teachers and staff. Goals 2000 set eight goals to be met by the year 2000. One of those goals is of interest to this study, “(8) Parental participation” ([USC02] 20 USC 5812: National Education Goals, 1994).

In regard of parental participation, Goals 2000 declared, “every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.” Outlined in the objectives of this goal were directives for schools to “respond to the varying needs of parents and the home” and “actively engage parents and families”. The collective effects of teacher quality and parental involvement have been part of the focus of educational reform movements for the past four decades. While the definitions of each aspect have changed over the decades, the spotlight on these two pillars has been clear.

The same year as Goals 2000 also saw the Improving America's Schools Act of 1994 (IASA) (H.R.6 - 103rd Congress (1993-1994), 1994). This reauthorization to ESEA made major changes to the original law, namely that math and ELA standards would be the measuring stick with which we assess the quality of education. The National Center for Education Statistics at the Institute of Education Sciences, a division of the U.S. Department of Education, had already been running longitudinal studies tracking assessment data in reading, social studies, mathematics, and science, future studies would focus on primarily math scores and many times add in ELA assessments as well.

In the early 2000s, Goals 2000 was replaced by the No Child Left Behind Act, popularly known as NCLB or “Nickel B” (H.R.1 - 107th Congress (2001-2002), 2002). This reauthorization to the Johnson Administration’s Elementary and Secondary Education Act of 1965 was the first major rehauling of the ESEA. NCLB added increased accountability to schools and teachers. It also required states to develop standards for teachers being labeled “highly qualified”. NCLB did address parental involvement, primarily in promoting increased parent notification of rights and funding. The theory was to improve parental involvement, but critics argued this mandate was typically pushed to the side as schools were for focused on the testing outcomes that came with NCLB.

Furthermore, while NCLB did address achievement gaps between low-income students and more affluent students, it focused those gaps on the schools and teachers while ignoring the involvement of parents and communities that were also affected by this gap. This has led to some researchers addressing the impact of social and cultural capital on student achievement (See Horvat et al., 2003; Cheung et al., 2008; Turney & Kao, 2009; Marcucci, 2020). Obama’s Race to the Top program also came with similar criticism as it pushed the same narrative of test scores tied to teachers instead of addressing parental involvement and communities. While mentioning increased “stakeholders” input in decision making, it didn’t tie any outcome directly to it.

Following the Race to the Top program was Every Student Succeeds Act of 2015 (ESSA). This overhaul and reauthorization of the ESEA was more robust in addressing increased parental involvement. To that end, states have developed reporting systems and information

dissemination efforts to provide parents with easily accessible data and reports on school information and outcomes. In Washington state, this led to the Washington State Report Card and improvements to the Parent and Family Engagement (PFE) through OSPI. This study is designed to add to those efforts by analyzing the decades of available data to see trends in parent and family engagement that may inform future improvements.

Key Studies

Research studies from the 1980s until the early 2000s focused primarily on parental involvement within schools (See Lightfoot, 1981; Haynes et al., 1989; Shumow & Miller, 2001; Arguea & Conroy, 2003). This would evolve into interests of the communities that schools serve (Henderson & Mapp, 2002; Horvat et al., 2003; Mulligan, 2003), finally culminating in the past couple decades on the definition and perception of what parental involvement is for all stakeholders (See Zarate, 2007; Braley et al., 2009; Gonzales & Gabel, 2017; Chun & Devall, 2019; Delale-O'Connor et al., 2019; Marcucci, 2020).

While the roots of parental involvement go back over one-hundred years to the founding of the National Congress of Mothers (which would become the National Parent Teachers Association), serious research into the effects of parental involvement on student achievement only go back a few decades. More recent work by Zarate (2007) has pulled away from the more traditional approach towards parental involvement (attending parent teacher conferences and school sporting events, volunteering at the school, and becoming active in a PTA), and have instead begun to look at the varying perspectives of parental involvement from different cultures and from people from various socio-economic backgrounds.

The Conditions of Education 2019 by the U.S. Department of Education highlighted the socioeconomic disparities in the outcomes of student participants in their final surveys but did not go far enough to explain what effect parental involvement played in their success among socioeconomic groups (McFarland et al., 2019). Recent qualitative research was also conducted looking at how Black families from various socioeconomic backgrounds interact with their children, both in a more traditional academic way and others (Delale-O'Connor et al., 2019). What they discovered was that socioeconomic status did not indicate any clear changes but racial identity did, in that school curricula fell short of providing content identifiable with their race/ethnicity and felt the need to involve themselves in the school to improve those opportunities and associate themselves with outside organizations and activities to fulfill those needs.

Among racial differences, a study by Marucci revealed that parental involvement in the form of parental academic expectations and parental school involvement led to decreases in student discipline among Black students (2020). Conversely, Marucci found that parental home involvement was correlated to increases in rates of student discipline among Black students but states this may be linked to the work of Wentzel (1993) that showed classroom behaviors correlated to academic performance. Students who had increased student behavioral issues needed increased home involvement. Furthermore, the effects of parental academic expectations were not significantly different between ethnicities but home and school-based involvement were detrimental factors for Black/African American students but there could be other mitigating factors.

Among Latino students, defining parental involvement has been challenging and complex. Many views exist. In a 2008 study, Dr. Zarate attempted to understand Latino parental involvement. She concluded that one major drawback between schools and Latino families were different definitions of parental involvement (Zarate 2008). Latino parents grouped parental involvement into two aspects of their children's lives: academic involvement and life participation[1]. Dr. Zarate observed that Latino parents saw a child's home life as an extension of the formal education they received at school. Zarate also pointed out that school definitions of parental involvement (joining a PTA, attending back-to-school-nights, open houses, parent-teacher conferences) didn't match the definitions of the parents they served. Of note, the parents that Zarate interviewed found challenges with assisting homework as many of them lacked the background to aid their children. They also struggled with communicating with school as the school's communication was limited and impersonal. Adding to the frustrations were work demands that put their availability outside of school operating hours and school policies that became barriers to involvement.

Other research in the Latino community found strong evidence of parental involvement improving a student's academic success when parents of a school community communicated with other parents, creating a larger social capital network (Durand, 2011). While this research was tied to parents of Kindergarteners, it highlighted the fact that as participants SES increased, so did their success with their social capital being the most powerful predictor of school involvement and a significant predictor of involvement at home. Parents with higher levels of

[1] See Key Findings on page 8 for a detailed list at https://eric.ed.gov/?id=ED502065

social capital were more involved in their children's lives, both academically and at home, and their children benefited from this involvement with higher literacy rate.

Another study looked at the effects of Latino parents' perceptions of education and their life participation (home-based involvement) on their children's academic success and found a positive correlation (Mena, 2011). Of note, they found that there are many aspects of parental involvement that are hidden from the view of schools that have a positive impact on the success of students. They found that the parent's beliefs in the success of their children was also an influencing factor. Students are influenced by the expectations that are placed on them and these expectations increased with higher levels of SES and academic attainment of the parents.

Chapter 3 – Methodology

Participants and Data Sources

The following analysis utilizes three longitudinal studies from the National Center for Education Statistics at the Institute of Education Sciences, a division of the U.S. Department of Education. The three studies are the National Education Longitudinal Study of 1988 (NELS), the Education Longitudinal Study of 2002 (ELS), and the High School Longitudinal Study of 2009 (HSLS). All three studies contain basic demographic variables on gender, race/ethnicity, and socio-economic status (SES) of participant's families as they attended school as well as future socio-economic status of the participants.

The NELS was a national cohort study of 27,394 students starting with participants in 8th grade and tracked them until the year 2000 (*National Education Longitudinal Study of 1988 (NELS*, n.d.). Surveys were completed by participants, parents, teachers, and high school principals. Cognitive tests were administered in math, science, reading and history. The ELS was a national sample of 16,197 high school sophomores through their transition into postsecondary college and career paths (*Education Longitudinal Study of 2002 (ELS*, n.d.). Surveys were completed by students, parents, teachers, librarians, and administrators. Cognitive tests were administered in math and English. Finally, the HSLS was a cohort study of 23,503 high school freshmen through their postsecondary college and career paths with a focus on math and science assessments and college decision-making (*HSLS*, n.d.). Surveys were completed by students, parents, math and science teachers, school counselors, and administrators. Cognitive tests were administered in algebraic skills, reasoning, and problem

solving. All three studies have public-release versions that were utilized in this analysis and are freely available from the NCES website.[2]

All three studies sent questionnaires to the participants (students), their parents, as well as their schools. This report measures data collected on the level of parental involvement as reported by parents, the students' academic achievements on math standardized testing, and the student's gender, race/ethnicity, and socio-economic status (SES). Parents were asked about how often they had helped their child with homework/projects, discussed courses to take, how to apply to college and the college application process, college entrance exams, community, state, national, and global issues, hobbies and interests to their children, and what issues trouble their children.

Design

Quantitative data was pulled from all three longitudinal studies relating to three main areas of concentration. As the sources of the data come from three existing longitudinal surveys, this is a non-experimental design that is focused on exploring the association of parental influence on student achievement as it already occurs. First, demographic information on a student's gender, race/ethnicity, and SES was compiled. Students gender was separated into male and female dummy variables for each of the three studies. Additionally, race/ethnicity was separated out into Black/African American, Native American/American Indian/Alaskan, Asian, and Hispanic respectively for each study. Finally, SES was compiled for each of the three studies. All three datasets were cleaned by identifying additional missing

[2] https://nces.ed.gov/surveys/SurveyGroups.asp?Group=1

values for all study variables. As each dataset was part of a longitudinal study, some variables were coded with values that identified participants as missing from pervious wave data. These were all marked as missing for the purpose of this study. As with gender, race/ethnicity was recoded into multiple dummy variables. Controlling for different racial and ethnic backgrounds allows for an analysis of parental involvement that takes into account structural inequities in student achievement.

Comparative variables on parental involvement were identified among all three datasets. For academic involvement, questions addressing discussions around what courses to take, plans for taking college entrance exams, applying to colleges, and helping with homework and projects were isolated and then combined into a new “Academic” variable. Additionally, life engagement variables where parents discussed jobs their teens could apply for, discussions of community, national, and global issues, topics that were troubling their teens, and other interests and hobbies were combined into a new “Life” variable. These variables were also multiplied with SES to create new “Academic*SES” and “Life*SES” interaction variables respectively for the purposes of regression analysis.

Finally, math standardized test scores were used from all three studies to identify student achievement. All datasets included a base year score as well as a score from participants junior/senior years. Math scores were used alone as they were the only constant across all three datasets. However, English/ELA standardized test scores may produce different results as familiarity with the English language has shown to be a positive association with

student achievement and parental involvement, especially among first generation immigrant families (Turney & Kao, 2009). All data was analyzed using SPSS Version 26 from the IBM Corp.

Plan of the Analysis

Survey data was analyzed using ordinary least squares (OLS) regression in hierarchical blocks. This was done to observe changes in the predictive relationship between parental engagement and student achievement when accounting for gender, race/ethnicity, and SES. After all variables had been coded for missing values and new variables created for gender and race/ethnicity to include dummy variables, frequencies and descriptive statistics were run. Next, linear regression models were operationalized for all three datasets using math standardized scores from the participants junior/senior year as dependent variables (DV) with Academic and Life variables as the primary independent variables of interest for block 1. Block 2 added SES, gender, and all race/ethnicity variables. Finally, in Block 3, the Academic and Life - by-SES interaction terms were added. The basic form of the OLS model used is as follows:

$$Y = \alpha + \beta_1(life) + \beta_2(academic) + \beta_3(SES) + \beta_4(gender) + \beta_5(race) + \mathcal{E},$$

where a student's high school math achievement (Y) was regressed on life and academic parental involvement along with a range of covariates.

This regression model was repeated two more times, filtering only the low and high SES variables respectively and removing the final Block with Academic*SES and Life*SES. This was done to see if there was any observable change between the different SES levels.

Limitations

There are a couple limitations to this study. First, as with many longitudinal studies, there was attrition of participants and some new participants were included later. The size of the samples helps to mitigate these issues. Furthermore, the three studies this analysis pulls from span three decades. The different studies tried to use much of the same type of questions for many parts of their surveys, but minor discrepancies still exist. This analysis is designed more as a broad overview to inform future research. Additionally, as this is a non-experimental study looking for correlations, there is the potential that parental engagement's association on student achievement could be from unobserved factors. Finally, the thirty-year timespan that this study covers also comes with changing economic trends. The income and wealth gaps have been increasing over these decades which could match some of the results when looking at SES by quartile and quintile, as will be discussed later (Pew Research Center, 2020).

Chapter 4 – Results and Discussion

Participant Data and Measure

The National Education Longitudinal Study of 1988 (NELS) surveyed 27,394 students, the Education Longitudinal Study of 2002 (ELS) surveyed 16,197 students, and the High School Longitudinal Study of 2009 (HSLS) surveyed 23,503 students. Race/Ethnic categorization became more nuanced from the NELS to the HSLS, separating Asian and Pacific Islander for the HSLS and adding "More than one race" for the ELS and HSLS. Furthermore, the NELS and ELS used quartiles for socioeconomic status while the HSLS moved to quartiles. Parental engagement variables were discussions and involvement parents had with students on the topics listed on Table A. Due to changing variable categories, listed below are parent responses for "Never".

There are a couple points of note. First, from the NELS to ELS, the proportion of students who identified as white dropped from 67.2% to 55.8%, while Asian, Black/African American, and Latinx all increase. The HSLS showed a slight increase to Latinx while Asian and Black/African American saw slight decreases. Socioeconomic status was changed from quartiles in the NELS and ELS to quintiles for the HSLS. Finally, the frequency of never being parentally engaged depends on individual variables with parents becoming more involved in their children's homework, course selections, college exams, career advice, and interests but less involved in college applications, and talking about world events.

Table A: Descriptive Statistics of Demographic Variables.

	NELS (n=27,394)	ELS (n=16,197)	HSLS (n=23,503)
Gender			
Male	50.6%	49.9%	51.0%
Female	49.4%	50.1%	49.0%
Race/Ethnicity			
Amer. Indian/Alaskan Native	1.3%	0.9%	0.8%
Asian	6.7%	10.2%	8.2%
Black/African American	8.2%	13.4%	10.4%
Latinx	10.7%	15.0%	16.4%
More than one Race	*	4.7%	5.6%
Pacific Islander	**	**	0.5%
White	67.2%	55.8%	55.1%
Socioeconomic Status			
1 = lowest	23.3%	23.9%	15.6%
2	23.9%	23.7%	17.8%
3	24.0%	24.7%	18.9%
4	28.8%	27.7%	21.8%
5 = highest	***	***	25.9%
Math Standardized Test Scores			
Mean	51.1334	50.6639	51.501
Standard Deviation	10.13884	10.11226	10.15416
Academic**			
Selecting Courses	6.1%	9.7%	4.3%
College Exams	12.5%	23.1%	11.0%
College Application	7.3%	25.1%	9.8%
Help with homework	13.6%	8.5%	5.3%
Life**			
Jobs/Career	10.6%	20.7%	6.8%
World Events	9.7%	15.7%	10.8%
Troubles	3.4%	6.4%	3.9%
Interests	3.0%	0.6%	2.1%

*Not categorized in NELS
**Added as Asian in NELS & ELS
***NELS and ELS used 4 levels of SES while HSLS expanded to 5.
****All descriptive statistics for Academic and Life are responses of “Never”. Additional outputs available upon request.

Descriptive Results of Parental Involvement Over Time

How has the frequency of parental involvement in their children's academic life and home lives changed over time?

Table A shows the frequencies from all three longitudinal studies for academic and life participation, while Table B shows the regression analysis for each dataset. The purpose of this study is to see if educational policies from the past thirty years that were designed to increase parental engagement have moved in the desired direction. Additionally, this study applied the different definitions of parental engagement, as outlined in the 2007 study by Zarate, to see if there are differences in the frequencies of each types of engagement. Those two definitions are academic involvement and life participation. A difficulty in doing this comparison is the changing category levels used between the three surveys.

To account for this, a common category of "Never" was used to see if the proportion of parents who weren't involved directly in their child's academic or non-academic lives had changed during the period of the study. The results are mixed. On average, 9.03% of parents weren't engaged in these activities in their child's life in 1992 and by 2012, that number had dropped to 7.41% of parents. Of note is the ELS data of 2004 that shows an increase of 15.6% of parents not being engaged in these ways in their child's life. This trend of the ELS data showing increases in parents not being engaged with their child continues for all types of activities except helping with homework and having conversations about things that interest their child.

When digging deeper into the data, we see that on average in 1992, 9.88% of parents weren't academically involved with their children but by 2012 that number had dropped to

7.6%. Life participation followed a similar path with 6.68% of parents not being involved in 1992 with that number decreasing to 5.9% by 2012. Looking at individual academic variables, we see decreases to the number of parents indicating they never help with homework, selecting which courses to take, and preparing for the college entrance exams but increases in the number of parents that never helped in the college application process. With life participation, parents became more engaged with their children's hobbies and interests, as well as job and career advice, but became less engaged with discussions of community, national and global events, as well as what troubles their children.

Association of Parental Involvement and Student Achievement Over Time

To what extent does parental involvement associate with student achievement over time?

The results indicate that the association between parental involvement and math standardized test scores varies over time and across different forms of involvement. Results of the regression indicate that there was a significant relationship between parental involvement in both academic involvement and life participation, and student achievement for the NELS but only a significant association for parental academic involvement on student achievement for the ELS and HSLS when accounting for just parental involvement (Model 1). Table 2 presents the regression coefficients and standard errors for all three surveys with statistically significant findings in bold.

Table B: Regression Coefficients (Results in bold are significant to the .05 level) Note: Additional outputs available upon request.

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
NELS Academic	**0.817**	0.058	0.160	**0.357**	0.052	0.070	**0.421**	0.128	0.082

Life	**-0.510**	0.068	-0.086	**-0.496**	0.060	-0.083	-0.269	0.148	-0.045
SES				**3.529**	0.078	0.399	**4.713**	0.458	0.532
Male				**0.591**	0.162	0.030	**0.561**	0.162	0.030
Asian				**6.497**	0.934	0.163	**6.500**	0.934	0.163
Latinx				1.723	0.913	0.053	1.748	0.913	0.053
Black				**-1.822**	0.915	-0.054	**-1.815**	0.915	-0.054
Native Am.				**4.144**	0.883	0.187	**4.144**	0.883	0.187
Acad*SES							-0.029	0.046	-0.040
Life*SES							-0.089	0.052	-0.112
r^2		0.017			0.249			0.249	
ELS									
Academic	**0.155**	0.055	0.034	**0.103**	0.049	0.022	0.067	0.123	0.015
Life	0.031	0.067	0.005	**-0.262**	0.060	-0.047	-0.224	0.144	-0.040
SES				**3.249**	0.082	0.361	**3.278**	0.464	0.364
Male				**1.415**	0.172	0.071	**1.414**	0.172	0.070
Asian				**2.536**	0.326	0.069	**2.535**	0.327	0.069
Latinx				**-4.286**	0.269	-0.146	**-4.281**	0.269	-0.146
Black				**-6.553**	0.286	-0.206	**-6.550**	0.286	-0.205
Native Am.				**-5.481**	0.976	-0.048	**-5.477**	0.976	-0.048
2+ Races				**-1.249**	0.426	-0.025	**-1.251**	0.426	-0.025
Acad*SES							0.013	0.043	0.017
Life*SES							-0.015	0.052	-0.020
r^2		0.001			0.247			0.247	
HSLS									
Academic	**0.719**	0.048	0.214	**0.479**	0.045	0.142	**0.362**	0.098	0.108
Life	-0.006	0.053	-0.002	**-0.175**	0.049	-0.047	-0.110	0.106	-0.030
SES				**2.396**	0.076	0.348	**2.167**	0.365	0.315
Male				**0.424**	0.207	0.021	**0.425**	0.207	0.021
Asian				**6.228**	0.406	0.161	**6.214**	0.406	0.161
Latinx				**-1.238**	0.307	-0.044	**-1.230**	0.307	-0.044
Black				**-4.704**	0.347	-0.143	**-4.695**	0.347	-0.143
Native Am.				**-3.801**	1.257	-0.031	**-3.822**	1.257	-0.031
2+ Races				-0.237	0.373	-0.007	-0.235	0.373	-0.007
Pac. Isl.				-0.993	1.551	-0.006	-1.000	1.551	-0.007
Acad*SES							0.039	0.029	0.093
Life*SES							-0.021	0.032	-0.049
r^2		0.045			0.234			0.234	

NELS

When predicting for math standardized test scores, parental engagement for academic involvement ($\beta = 0.160$, $p \leq .05$) and life participation ($\beta = -0.086$, $p \leq .05$) were significant predictors (see Table B). The overall model fit was $R^2 = .017$, therefore, 1.7% of the variation in math achievement was predicted by academic and life involvement. However, when gender, race, and SES were added to the regression, 24.9% of the variation was predicted. The estimate for academic involvement was initially moderate and positive while life participation was small and negative. When accounting for gender, race, and SES, the estimate for academic involvement decreased while life stayed relatively the same. This suggests that the association of academic involvement is mediated through the observed family background characteristics. The parental involvement and SES interactions were not significant, suggesting there is no additional association beyond the main effects..

ELS

When predicting for math standardized test scores, parental engagement for academic involvement ($\beta = 0.034$, $p \leq .05$) was a significant predictor of math scores but life participation ($\beta = 0.005$, $p = .647$) was not. The overall model fit was $R^2 = .001$, therefore, only 0.1% of the variation in math achievement was predicted by academic and life involvement. However, when gender, race, and SES were added to the regression, 24.7% of the variation was predicted. The estimate for academic involvement was initially low and positive while life participation was not a significant predictor. When accounting for gender, race, and SES, the

estimate for academic involvement decreased while life participation became a significant predictor, albeit a weak and positive one. This suggests that the association of academic involvement is mediated through the observed family background characteristics. The parental involvement and SES interactions were not significant, suggesting there is no additional association beyond the main effects.

HSLS

When predicting for math standardized test scores, parental engagement for academic involvement ($\beta = 0.214$, $p \leq .05$) was a significant predictor of math scores but life participation ($\beta = -0.002$, $p = .909$) was not. The overall model fit was $R^2 = .045$, therefore, 4.5% of the variation in math achievement was predicted by academic and life involvement. However, when gender, race, and SES were added to the regression, 23.4% of the variation was predicted. The estimate for academic involvement was initially high and positive while life participation was not a significant predictor. When accounting for gender, race, and SES, the estimate for academic involvement decreased while life participation became a significant predictor, albeit a low and negative one. This again suggests that the association of academic involvement is mediated through the observed family background characteristics. The parental involvement and SES interactions were not significant, suggesting there is no additional association beyond the main effects.

Association of Parental Involvement and Student Achievement Across SES

To what extent does the association of parental involvement and student achievement differ across the socio-economic distribution?

Beyond the primary findings, the results above illustrated that SES had a far stronger association with math test scores than parental involvement. In addition, there was no evidence from the interaction terms that SES moderated the association between parental involvement and math achievement. To explore this relationship further, a sub-group regression analysis was performed to assess whether the association between parental involvement and math achievement was different at the low and high ends of the SES distribution. As Table 3 shows, for low SES families, academic involvement had a weak and positive relationship to math test scores, and life participation wasn't a significant predictor of math scores. However, for high SES families, life participation is a significant predictor of math test scores, albeit with a low and negative relationship . This trend has not changed substantially across the three surveys. Of note, recent data from the HSLS shows that academic involvement for high SES families has a moderately positive estimate ($\beta = 0.118$, $p \leq .05$).

Finally, as was mentioned before, parental engagement has been increasing with an overall academic involvement increase of 27% and an overall life participation increase of 35% (Table D). However, these increases are not equal between low and high SES families. Low SES families saw an increase of 22% to academic involvement compared to 32% for high SES families. Furthermore, low SES families saw an increase of 25% to life participation to 41% for high SES families. Additionally, the data distribution for low SES families has increased while it has stayed relatively constant for high SES families.

Table C: Regression Coefficients for Low and High SES (Results in bold are significant to the .05 level)

	Low SES			High SES		
	B	SE B	β	B	SE B	β
NELS						
Academic	**0.235**	**0.107**	**0.062**	-0.007	0.097	-0.001
Life	-0.174	0.124	-0.040	**-0.476**	**0.106**	**-0.085**
ELS						
Academic	-0.113	0.108	-0.029	0.107	0.091	0.024
Life	-0.234	0.123	-0.054	**-0.409**	**0.115**	**-0.073**
HSLS						
Academic	**0.260**	**0.090**	**0.098**	**0.460**	**0.099**	**0.118**
Life	-0.114	0.096	-0.040	**-0.418**	**0.108**	**-0.098**

Table D: Descriptive statistics with filtered SES levels. Note: Percentage change added to show difference between NELS and HSLS.

	Total			Low SES			High SES		
	M	σ	n	M	σ	n	M	σ	n
NELS									
Academic	10.294	1.928	11,202	9.448	2.267	2,092	10.758	1.640	3,753
Life	9.965	1.659	11,202	9.527	1.952	2,092	10.160	1.515	3,753
ELS									
Academic	9.599	2.175	10,339	8.957	2.377	2,015	10.000	1.990	3,350
Life	10.713	1.788	10,339	10.062	2.086	2,015	11.000	1.573	3,350
HSLS									
Academic	13.080	3.050	7,561	11.546	3.399	1,413	14.218	2.449	2,258
Life	13.425	2.772	7,561	11.920	3.189	1,413	14.295	2.248	2,258
Academic % Change	27%	58%		22%	50%		32%	49%	
Life % Change	35%	67%		25%	63%		41%	48%	

Chapter 5 – Conclusions

The benefits of parental engagement on a student's academic achievement has been well researched. The benefits can vary from improved school behavior, positive outlooks towards education, improved self-esteem, increased motivations, and better educational outcomes. Much of this research has focused on the primary school years with some studies focusing on middle school. However, little research has been done regarding high school students and even less so as a longitudinal analysis. This study's goal was to add insight into this area. There has been progress in understanding how communities define parental engagement and classify the types of engagement, especially for people of color (Zarate, 2007; Braley et al., 2009; Hayes, 2012; Delale-O'Connor et al., 2019), and there has been some research into the association of socioeconomic status on student achievement (Horvat et al., 2003; (Bakker et al., 2007; Cheung et al., 2008). Furthermore, much of the research that has been done on parental engagement has been focused on the quantity and not the type of engagement (Jeynes, 2007). This study looked at how the types of parental engagement are associated with student achievement, how socioeconomic status influences those associations, and how those associations have changed over time.

For decades, educational policy researchers have written extensively about the benefits of parental involvement on student achievement and educational policy makers have attempted to react to that research by increasing parental engagement. Analysis of three longitudinal studies from the National Center for Education Statistics (NELS, ELS, and HSLS) show that parental engagement has been generally increasing over the past thirty years, with some of the biggest growth in the last decade, but the distribution of parental involvement has

become less consistent across SES. While lower SES parents are more involved in their children's academic and non-academic lives than they were a few decades ago, the growth has not been as successful as it has been for high SES parents and it has been less consistently so in distribution. This growing parental engagement gap between low and high SES families appears to possibly be reflecting the wealth and income gaps we have seen over the same time period (Pew Research Center, 2020).

Additionally, as parents have become more engaged with their children, the ability to see parental engagement as an influence on student achievement has decreased while SES has maintained its predictive relationship to math standardized test scores. Even though academic involvement in a child's life is still overall a positive influence on academic achievement, it is not to a great degree and a child's SES still holds more of an influence. It is also worth noting that not all forms of academic involvement saw decreases in parents who never were involved. Parents who never help their children with the college application process has increased. This could be due to improvements to the application process by organizations like Common Application, incorporating parts of the process as aspects of college entrance exams, or other improvements to the process from the expansion of the digital age.

Furthermore, it is interesting to note that although a parent's life participation in their child's life saw larger increases over the past thirty years of this study, it was also a low to moderate negative influence on a child's academic achievement, especially for high SES families. Many factors could be contributing to this, from higher educational standards that demand more of a child's time in the form of increases to homework and after school programs

(clubs, sports, volunteering) that life participation activities by parents are taking away from, to parents feeling societal pressures to be more actively involved in their child's life than previous generations, causing increased family pressures that negatively impact the student. More research is needed to fully understand these findings.

The recommendation on this study is for educational researchers to look deeper into the trends of what types of parental engagements are predictors of student academic achievement, especially through the lens of cultural definitions of parental engagement rather than educational systems definitions. This study was limited in types of engagement and more research is needed to fully understand the association of parental influence on a child's success, particularly when accounting for socioeconomic status. For educational policy makers, while it is clear that efforts to get parents more involved have been successful, the results have not been evenly distributed with lower SES families not increasing at the same rate as higher SES families. Additionally, as parents have become more involved, the influence of their involvement appears to have been more predictive on student achievement for academic involvement and less predictive for life participation. More research is needed to understand possible underlining conditions that may be causing this.

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Bibliography

Abrahamson, R. P. (2020, April 10). *As frustration grows, some parents are giving up on home schooling*. TODAY.Com. https://www.today.com/parents/some-parents-refuse-remote-learning-will-there-be-consequences-t178188

Annenberg Public Policy Center. (n.d.). *National Congress Of Mothers Is Formed*. Annenberg Classroom. Retrieved May 21, 2020, from https://www.annenbergclassroom.org/timeline_event/national-congress-mothers-formed/

Arguea, N. M., & Conroy, S. (2003). The Effect of Parental Involvement in Parent Teacher Groups on Student Achievement. *The School Community Journal*, *13*(2), 119–136.

Bakker, J., Denessen, E., & Brus-Laeven, M. (2007). Socio-economic background, parental involvement and teacher perceptions of these in relation to pupil achievement. *Educational Studies*, *33*(2), 177–192. https://doi.org/10.1080/03055690601068345

H.R.1 - 107th Congress (2001-2002): No Child Left Behind Act of 2001, no. 107–110 (2002). https://www.congress.gov/bill/107th-congress/house-bill/1

Braley, R., Slate, J. R., & Cavazos, J. (2009). Parental Involvement and Perceived At-Risk Student Performance: Views from Predominantly Hispanic Parents. *International Journal of Educational Leadership Preparation*, *4*(1). http://eric.ed.gov/?id=EJ1068501

Bryant, D., Peisner-Feinberg, E., & Miller-Johnson, S. (2000). *Head Start Parents' Roles in the Educational Lives of Their Children*. https://eric.ed.gov/?id=ed446835

Cheung, C., Lam, C., & Ngai, S. S. (2008). Help from the parent–teacher association to parenting efficacy: Beyond social status and informal social capital. *The Journal of Socio-Economics*, *37*(3), 1134–1152. https://doi.org/10.1016/j.socec.2006.12.068

Chun, H., & Devall, E. (2019). A Parental Involvement and Academic Socialization Model: A Cultural Approach. *School Psychology*, *34*(5), 555–565.

Delale-O'Connor, L., Huguley, J. P., Parr, A., & Wang, M.-T. (2019). Racialized Compensatory Cultivation: Centering Race in Parental Educational Engagement and Enrichment. *American Educational Research Journal*, 000283121989057. https://doi.org/10.3102/0002831219890575

Durand, T. M. (2011). Latino Parental Involvement in Kindergarten: Findings From the Early Childhood Longitudinal Study. *Hispanic Journal of Behavioral Sciences*, *33*(4), 469–489. https://doi.org/10.1177/0739986311423077

Education Longitudinal Study of 2002 (ELS:2002)—Overview: Purpose. (n.d.). National Center for Education Statistics. Retrieved August 9, 2020, from https://nces.ed.gov/surveys/els2002/

EFFECTIVE PARENT-TEACHER ASSOCIATIONS. (1914). *The Journal of Education*, *80*(21), 575.

Gonzales, S. M., & Gabel, S. L. (2017). Exploring Involvement Expectations for Culturally and Linguistically Diverse Parents: What We Need to Know in Teacher Education. *International Journal of Multicultural Education*, *19*(2), 61–81. https://doi.org/10.18251/ijme.v19i2.1376

Hayes, D. (2012). Parental Involvement and Achievement Outcomes in African American Adolescents. *Journal of Comparative Family Studies*, *43*(4), 567–582. JSTOR.

Haynes, N. M., Comer, J. P., & Hamilton-Lee, M. (1989). School climate enhancement through parental involvement. *Journal of School Psychology*, *27*(1), 87–90. https://doi.org/10.1016/0022-4405(89)90034-4

Henderson, A. T., & Mapp, K. L. (2002). *A New Wave of Evidence: The Impact of School, Family, and Community Connections on Student Achievement* (Annual Synthesis 2002, p. 241). National Center for Family & Community Connections with Schools, Southwest Educational Development Laboratory. https://eric-ed-gov.offcampus.lib.washington.edu/?id=ED474521

Hong, S., & Ho, H.-Z. (2005). Direct and Indirect Longitudinal Effects of Parental Involvement on Student Achievement: Second-Order Latent Growth Modeling Across Ethnic Groups. *Journal of Educational Psychology*, *97*(1), 32–42. https://doi.org/10.1037/0022-0663.97.1.32

Hoover-Dempsey, K. V., Battiato, A. C., Walker, J. M. T., Reed, R. P., DeJong, J. M., & Jones, K. P. (2001). Parental Involvement in Homework. *Educational Psychologist*, *36*(3), 195–209. https://doi.org/10.1207/S15326985EP3603_5

Horvat, E. M., Weininger, E. B., & Lareau, A. (2003). From Social Ties to Social Capital: Class Differences in the Relations between Schools and Parent Networks. *American Educational Research Journal*, *40*(2), 319–351.

HSLS:09. (n.d.). National Center for Education Statistics. Retrieved August 9, 2020, from https://nces.ed.gov/surveys/hsls09/

Jeynes, W. H. (2007). The Relationship Between Parental Involvement and Urban Secondary School Student Academic Achievement: A Meta-Analysis. *Urban Education*, *42*(1), 82–110. https://doi.org/10.1177/0042085906293818

H.R.6 - 103rd Congress (1993-1994): Improving America's Schools Act of 1994, no. H.Rept 103-425; H.Rept 103-761 (1994). https://www.congress.gov/bill/103rd-congress/house-bill/6

Kohli, S. (2020, April 8). *Stress levels are high for parents. They worry kids will fall behind in school, survey finds*. Los Angeles Times. https://www.latimes.com/california/story/2020-04-08/coronavirus-parents-students-school-stress-level-survey

Lightfoot, S. L. (1981). Toward Conflict and Resolution: Relationships between Families and Schools. *Theory Into Practice*, *20*(2), 97–104. JSTOR.

Marcucci, O. (2020). Parental Involvement and the Black–White Discipline Gap: The Role of Parental Social and Cultural Capital in American Schools. *Education and Urban Society*, *52*(1), 143–168. https://doi.org/10.1177/0013124519846283

McFarland, J., Hussar, B., Zhang, J., Wang, X., Wang, K., Hein, S., Diliberti, M., Cataldi, E. F., Mann, F. B., Barmer, A., Nachazel, T., Barnett, M., & Purcell, S. (2019). The Condition of Education 2019. *NCES*, *2019144*, 396.

Mehta, J. (2013). How Paradigms Create Politics: The Transformation of American Educational Policy, 1980–2001. *American Educational Research Journal*, *50*(2), 285–324. https://doi.org/10.3102/0002831212471417

Mena, J. A. (2011). Latino Parent Home-based Practices That Bolster Student Academic Persistence. *Hispanic Journal of Behavioral Sciences*, *33*(4), 490–506. https://doi.org/10.1177/0739986311422897

Mulligan, G. M. (2003). Sector differences in opportunities for parental involvement in the school context. *Catholic Education: A Journal of Inquiry and Practice*, *7*(2), 246-. Gale OneFile: Educator's Reference Complete.

National Archives and Records Administration. (n.d.). *The Reagan Presidency*. The Reagan Library. Retrieved August 14, 2020, from https://www.reaganlibrary.gov/sreference/the-reagan-presidency

National Education Longitudinal Study of 1988 (NELS:88)—Overview. (n.d.). National Center for Education Statistics. Retrieved August 9, 2020, from https://nces.ed.gov/surveys/nels88/

Parent-Teacher Associations. (1923). *Outlook*, 617.

Pew Research Center. (2020, January 9). Trends in U.S. income and wealth inequality. *Pew Research Center's Social & Demographic Trends Project*. https://www.pewsocialtrends.org/2020/01/09/trends-in-income-and-wealth-inequality/

Ravitch, D. (1990, January 10). Education in the 1980's: A Concern for "Quality" - Education Week. *Education Week*. https://www.edweek.org/ew/articles/1990/01/10/09200009.h09.html

Reaume, G. (2020, July 31). *Parents worry about mental health impact of distance learning*. KATU. https://katu.com/news/return-to-learn/parents-worry-about-mental-health-impact-of-distance-learning

Shumow, L., & Miller, J. D. (2001). Parents' At-Home and At-School Academic Involvement with Young Adolescents. *The Journal of Early Adolescence*, *21*(1), 68–91. https://doi.org/10.1177/0272431601021001004

Slaughter-Defoe, D. T., Nakagawa, K., Takanishi, R., & Johnson, D. J. (1990). Toward Cultural/Ecological Perspectives on Schooling and Achievement in African- and Asian-American Children. *Child Development*, *61*(2), 363–383. JSTOR. https://doi.org/10.2307/1131098

Tomlinson, T. M. (1987). A Nation At Risk. *Annals of the New York Academy of Sciences*, *517*(1), 7–27. https://doi.org/10.1111/j.1749-6632.1987.tb52779.x

Turney, K., & Kao, G. (2009). Barriers to School Involvement: Are Immigrant Parents Disadvantaged? *Journal of Educational Research*, *102*(4), 257–271.

[USC02] 20 USC 5812: National Education Goals, Pub. L. No. 103–227, 5812 20 (1994). https://uscode.house.gov/view.xhtml?path=&req=granuleid%3AUSC-prelim-title20-section5812&f=&fq=&num=0&hl=false&edition=prelim

Zarate, M. E. (2007). Understanding Latino Parental Involvement in Education: Perceptions, Expectations, and Recommendations. In *Tomas Rivera Policy Institute*. Tomas Rivera Policy Institute. https://eric.ed.gov/?id=ED502065