NCLB and Accountability: How Do Testing and Teachers Impact Retention?

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Abstract

This study seeks to uncover the role that high-stakes testing mandated by "No Child Left Behind" legislation and student-teacher ratio has on the retention of the traditional high-school student with an emphasis on the retention disparity between minority students and their White peers. This empirical, quantitative analysis uses school level data from the Common Core of Data. This data set was used to observe national trends between minority students and their White counterparts because minority students are generally the group plagued by underachievement and high dropout rates. Given the already expansive body of work surrounding what we refer to as the achievement gap, which can include issues of achievement ranging from grades to standardized test scores and even the issue of retention rates which this study focuses on, this study seeks to approach the issue from a different direction with a broader data set. Analyses showed that for minority male students (Black and Hispanic) a lower-student teacher ratio greatly contributed to their retention yet conversely White females' retention seemed to be somewhat unaffected by student-teacher ratio fluctuations and high-stakes testing. Therefore, this study suggests that although student- teacher ratio and testing do have an impact on retention, this impact is primarily only for minority students, impacting minority males at the highest level.

Introduction

Problem Statement

Education is often considered to be the impetus by which societies are able to change, however within the last decade the United States of America has managed to fall behind other industrialized countries in terms of graduation rates and overall education of American students. This issue is particularly relevant for members of minority communities who seem to become victims of the achievement gap that is present in American education. Since minorities seem to achieve at a lower rate than their peers, it forces the researcher to question why and more importantly how this is able to persist in a democracy where all are perceived to have equal access to upward mobility. Therefore, since education is flawed in America, it allows for a wide breadth of analysis and for the purposes of this study, the ideas of retention and teacher impact will be reviewed.

Purpose of Study and Research Question

This study aims to contribute to the body of literature about the current graduation rate problem and also education inequalities as a whole. The chosen analysis hopes to uncover the impact that student-teacher ratio and testing have on the retention of high-school students. The research question that seeks to expose this impact, if any is as follows: What impact, if any, do high-stakes testing and student-teacher ratio have on the retention of minority students in traditional high schools?

Significance of Research

Given the importance of education for upward mobility, the issue of retention is both timely and relevant. If students make the decision to drop out of school there is a whole host of issues and at the forefront given the recession is the economic strife that accompanies persons who fail to reach the higher echelons of education. This is not to say that without an education one cannot be successful but more so a statement of the general consequences for not pursuing education.

Summary of Analytical Framework

The analytical framework in this study serves as my mode of analysis and the way that I chose to approach the issue of retention. The factors listed are all pieces of the much larger issue of retention disparities.

Race and gender. For the purposes of this study, race and gender qualify as "minority status" and thus serve as the indicators of how much these two factors impact the retention rate of the traditional high-school students. These factors were reported by school officials, nationally.

"No Child Left Behind" Testing. Although the data set chosen for this study does not offer actual test scores, it does possess the years befo e and after this legislation was put into place which in effect offers the informa ion that lends itself for analysis. By seeing how retention changes, or does not ch nge, one can attempt to deduce that perhaps this testing may have had some form of impact especially given the debate over high-stakes testing which will be discussed further in Chapter Two.

Student- Teacher Ratio. Student-teacher ratio is the amount of students to teacher in the classroom. For example, 15 students in a class with one teacher will provide a student-teacher ratio of 15: 1.

Retention Rate. The retention rate is the rate at which students are retained throughout high-school which means the rate at which they progress from the 9th grade and get promoted to the next. Retention was used as the "achievement" measure because graduation rates have some skepticism about proper calculation and also due to limits of the data set. This issue will be discussed in further detail in Chapter Three.

Analysis and Discussion of the Literature and Presentation of Analytic Framework

"No Child Left Behind"

"These reforms express my deep belief in our public schools and their mission to build the mind and character of every child, from every background, in every part of America." This statement was made by President George W. Bush in January of 2001. Bush made the announcement of *No Child Left Behind,* which will herein be referred to as NCLB, only three days after taking office because he felt that "too many of our neediest children are being left behind." As a result of this sentiment, President Bush called for solutions based on accountability (school not necessarily student), choice and flexibility in Federal education programs.

All of the information relevant to this study is paraphrased and taken from the Department of Education's section of the website devoted to NCLB and thus allows for a fairly simple analysis of what exactly NCLB is. This legislation requires that states set annual objectives in order to demonstrate progress for the next year and to show that they are making strides to close the achievement gap between minority students and their White peers. These objectives are required to take into account socio-economic factors. The goal ofNCLB is that *all* high school students regardless of any socioeconomic status, achieve proficient levels of knowledge by 2014. Although this goal is a rather large one, it is indeed necessary for the promotion of the democracy known as the United States in which all people are able to have viable voice in the country. Without an education, some voices are being silenced because they lack the literacy to process the world that surrounds them which is extremely unfortunate and frankly undemocratic.

NCLB requires high schools to report graduation data which is part of a school's yearly objectives. As a result of this, some states have decided that exit exams may assist with fulfilling all of the requirements ofNCLB because that helps with the graduation rate reporting, adequate yearly progress reporting and the annual testing requirement.

The Problem with Testing

By implementing tests that can restrict students from being able to graduate one would presume that this would simply further contribute to students deciding to drop out from high-school. "Critics see it as fundamentally unfair to deny diplomas to students who have successfully completed thirteen years of schooling. They also see it as cold-hearted, considering that possessing a high school diploma is an important predictor of future life outcomes." (Cameron and Heckman 1993) According to Cameron and Heckman, although there are so called high school diploma equivalents such as the ORE, there is still no real substitute for the diploma because there are still differences in wages and hours of work or even in terms of post certification education and other training decisions. According to these economists, a high school diploma is essential in order to live the best life possible or at least better than those who do not possess the diploma. Therefore the exit exams that essentially guard the pathway to

this upward mobility are thought of as extremely unfair and thus many people have an issue with state's interpretations of NCLB.

"Even some proponents of exit exams agree that they would lead to fewer students graduating. They argue that the tests are necessary in order to assure that high school diplomas are meaningful." (Greene Winters 2004) The assumption is that exit exams measure proficient levels of knowledge and if students do not possess this after 13 years of schooling then they should not be granted a diploma anyway because the diploma will no longer be a measure of academic achievement because one does not necessarily have to be capable academically to obtain one. However, given this idea one may beg the question of whether or not these tests really assess proficient levels of knowledge. If they do indeed assess proficiency then how is it that students in Florida were able to be accepted into college and the military but could not pass their exit exams and thus could not progress to what is the next step of their lives. (Steinback) The more interesting part about the Florida bit is that for both the military and college, there are tests that are in place for students to demonstrate their intellectual ability. Therefore, what is so different between the exit exam that supposedly assesses proficiency and standardized test such as the SAT which demonstrates college preparedness? One would think that if a student was extended admission to a college or university that they would have proficient levels of knowledge but according to these exit exams they do not.

Amrein and Berliner (2002) have already examined whether states that adopted exit exams have seen increased dropout rates, decreased graduation rates, or increased percentages of students pursuing a GED. They found that 66% of states that implemented high school exit exams were negatively impacted by tests because of movement toward less desirable outcomes. However, some question the validity of this study due to methodological issues (Greene Winter 2004).

One issue is that they compared the graduation rates to national averages instead of simply states without exit exams which would have offered a clearer, more accurate distinction. Also, their measure failed to control for the magnitude of the changes in graduation rates, dropout rates, and rates at which students seek GEDs. As a result ofthese discrepancies, Greene and Winter (2004) decided to conduct their own study to determine if exit exams impact graduation rates and they found that exit exams have no effect. However, they admit that further research needs to be conducted to determine the validity of their study also.

Accountability According to Chicago?

Chicago, like many urban school districts, is plagued with academic underachievement. With high crime rates, poverty, and low education levels of many parents the education system in urban (and rural) communities face challenges that other areas of the country do not have to be concerned with. As a result of failing to educate many students adequately, Chicago decided to partner with Bill and Melinda Gates to create the Chicago High School Redesign Initiative which broke down their large high school into smaller learning communities. Most students who attended these schools were from impoverished communities in which they failed to excel academically. By breaking these large schools into smaller ones, positive outcomes were observed. Of particular concern was the observation of the difference in student-teacher relationships, which may seem minor but that are a major part of the educational experience.

"Almost all of the classrooms contained concrete evidence of generally positive and mutually respectful student-teacher relationships. For example, many of the teachers we observed expressed concern about students' well-being." (Stevens, Sporte, Stoelinga, Bolz 2008) This welcoming and warm environment can greatly impact the way a student approaches the knowledge that a teacher is attempting to impart. This reminds us of the accountability idea explained in Chapter I because these students may feel as if they owe something to the teachers to strive academically because these instructors are verbalizing that they see these young people as an investment and that they care about their well-being. "In response to a student's question about why he had to complete a homework assignment, another teacher replied, "Because I care about you."" (Stevens, Sporte, Stoelinga, Bolz 2008) This difference in teacher attitude, and the student's presumed understanding that instructors actually care about them being a success in life or not is critical to a student being engaged in their education. Therefore, the work being done in Chicago forces one to consider all of the things that impact education and all of the potential reform measures, if it as simple as saying "I care" as a teacher then perhaps policymakers should consider teacher *investment* more.

Summary and Implications of the Literature

After considering the literature, two major issues seem to be rather prominent: a) is high-stakes testing really a reason for students to drop-out and thus lower the retention rate of the school? b) are students more engaged in smaller schools and will that cause them to be retained at a higher rate? Since none of the literature offers a definitive answer for the national population, this study hopes to offer more information that can contribute to the discourse surrounding this issue.

Research Design and Methodology

Purpose of Study and Research Questions

As aforementioned in Chapter I this study aims to contribute to the body of literature about the current graduation rate problem and also education inequalities as a whole. The chosen analysis hopes to uncover the impact that student-teacher ratio and testing have on the retention of high-school students. The research question that seeks to expose this impact, if any is as follows: What impact, if any, do high-stakes testing and student-teacher ratio have on the retention of minority students in traditional high schools?

Data Collection and Data Sources

Data was used from the Public Secondary School Universe Survey Data from the Common Core of Data offered by the National Center for Education Statistics. School level data was used because it offers a different level analysis than the district level data that is also provided.

Data Analysis Strategies

The analysis was a linear regression using the formula: $n12th(year\ x)/n9th(year\ x)$. Data were adjusted as necessary and these adjustments will be discussed in greater detail in the next section.

Strategies for Minimizing Bias and Error

Traditional Public High-Schools only. This study focused only on traditional high schools so in STATA parameters were set to eliminate all schools that extended past the 9th through the 12th grade. For example, some schools went from grades 5 to 12 but those were not of interest for this particular analysis. By eliminating these other schools the study is more generalizable for national standards.

Student-Teacher ratio. In the data set there were some schools who reported 0 teachers for the school which obviously cannot be the case. Therefore, the data was adjusted to only include schools that had at least one full time teacher equivalent per every 100 students present in the school. By adjusting for this, many schools that falsely report information were eliminated.

Ethnic group of study. In order for the ethnic group of study to be included, at least 20 students had to be enrolled at the school for them to be included in the analysis. This adjusted for demographic changes in the community that may have taken place in which a situation occurred where for example only one African American student was in ninth grade and then in subsequent years you have 30 African American students. This gives a false retention rate so by adjusting for at least 20 students of the ethnic group, this helped to reduce issues and false readings.

Ethical Considerations

Given the sensitive nature of discussing minority status and the way that impacts the way minorities interact with their surroundings, there are a lot of assumptions and generalizations made about how both testing and student-teacher ratio impact minority student's retention. Therefore, it must be stated that not *all* minorities fit the conclusions that will be mentioned. Aside from this, all information is school reported and thus according to the National Center for Education Statistics, did not harm any student or participant while collecting demographic data.

Limitations of the Study

School reported information. Since this data was provided by schools, there is a fairly wide margin for error because of falsehoods reported by schools. As of right now, there is no other way to retrieve data so this is the standard limitation that a researcher incurs as a result of human error.

Retention instead of graduation rates. Of vast importance is the fact that retention rates were calculated and not graduation rates. Since this data set does not offer information on the number of diplomas granted, the study is confined to the data that is offered which is the amount of students in each grade each year. Due to the fact that this is not necessarily a study of graduation rates, some may argue that it does not have much bearing on the graduation rate issue. However, it does shed some light on the drop-out problem which certifies that it is still valid.

Same year data. The formula presented earlier in this chapter uses the same year of students. This is a major risk when it comes to making this study generalizable but it had to be done in order to maintain the integrity of the research question.

Findings, Conclusions and Recommendations for Future Research

Findings

Findings of this study are represented in Appendix A. Be advised that this is a graph that represents the general trend represented in the data that answer the research question. Additional data are available upon request if you contact bharrison@nea.org

Conclusions

From the data presented in Appendix A we are able to see that minorities are indeed impacted by student-teacher ratio but not necessarily high-stakes testing. Since the retention rates are fairly similar in both 1999 and 2007, it seems that that may not be a factor in retention rate fluctuations however there could always be other reasons for a retention rate remaining fairly consistent.

Perhaps the most interesting observation that can be made from looking at this data is the fact that Black males seem to be so impacted by the student-teacher ratios. Their female counterparts are pretty consistent in the year 2007. It is also interesting that Hispanic males and females are very similar to Black males in that when classes exceed 41 students per every 1 teacher their retention is drastically reduced. Once again, other factors must contribute to this because perhaps many of these overcrowded classrooms may be in impoverished communities in which educational outcomes are impacted anyway.

Recommendations for Future Research

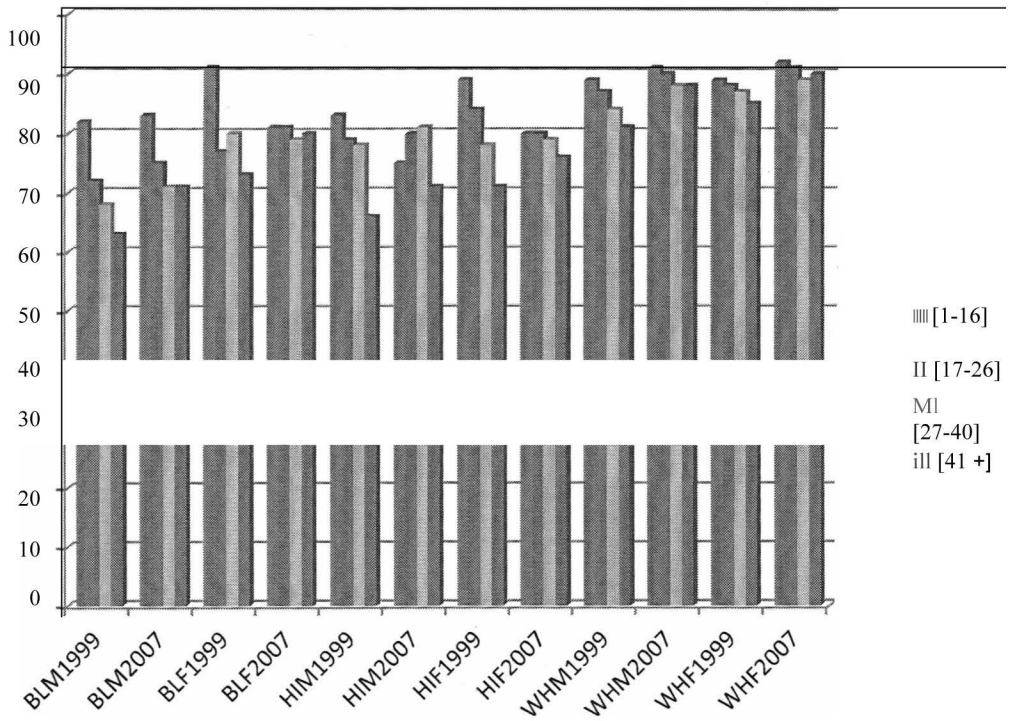
After carefully reviewing the findings and realizing that this issue primarily impacts members of the minority community, I have determine three primary recommendations for future research which are as follows:

Geo-coding and mapping the areas with the lowest retention. By actually seeing where the areas in need are, programs can be constructed and implemented to address the problem in the communities. This could make the study useful for policymakers and those in charge of state legislation, particularly because of the educational implications of a community that lacks education. Rarely do policymakers want to have areas of their communities that are crumbling. It eventually costs taxpayers dollars that could be spent on other things.

Merge findings with census data to control for various neighborhood indicators. Indicators such as crime, socioeconomic status, general income of the area and even average education level obtained by members of the community offers a great deal of context for issues in education. This additional analysis would provide the context in which more conclusions could be drawn about what causes retention rates to fluctuate.

Determine the impact that school finance has on retention rates. Students feel invested in if their teachers say they *care* about them and express that they believe in them. It would be interesting to see if the same could be observed for when students feel financially invested. If they have new buildings, up to date books and the most recent technology, will students have a higher retention rate?

Appendix A



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Note: More citations will be added as this study progresses. This is merely the first phase of the project and thus a longer reference list will be offered when the study is more comprehensive.