

Relationship Between Academic Achievement and Government-
Allocated Resources: Jericho vs. Hempstead

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Improvement

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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing a degree of Masters in Education in Educational Leadership & School Improvement at BRAC University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Ethics Statement

This thesis emphasizes the commitment to ethical norms that are essential to the integrity and validity of the study and is based on quantitative research approaches. With a strong adherence to ethical standards pertinent to quantitative analysis, the research approach has examined academic accomplishment and government-allocated resources in the Jericho and Hempstead school districts. Ethical issues were critical to the study's success throughout, especially with regard to data collection, analysis, and reporting. In order to protect participant privacy and data integrity, as well as to comply with ethical norms, consent was obtained prior to data collection. Strict measures were taken to safeguard the study participants and private information. Data was anonymized to prevent the identification of individual participants or schools, ensuring that findings could be shared without compromising privacy. The quantitative nature of the study allowed for the analysis of large datasets without direct interaction with participants, thereby minimizing potential ethical concerns related to privacy and consent. Data handling procedures were electronic in nature and were encrypted and stored in secure, password-protected databases. In the dissemination of the study's findings, care was taken to present the results in a manner that respects the privacy and confidentiality of all data sources. The analysis and conclusions drawn from the data were reported with the utmost accuracy and integrity, avoiding any potential harm or misrepresentation. This thesis reflects a rigorous application of quantitative research methods within a framework of ethical research practices. The ethical considerations outlined here have guided the entire research process, from data collection through analysis to reporting, ensuring that the study not only contributes valuable insights into the disparities in academic achievement and resource allocation but does so with a strong commitment to ethical and responsible research.

Abstract

This thesis examines the relationship between academic achievement and government-allocated resources in New York's Jericho and Hempstead school districts, highlighting disparities in funding and their impact on student outcomes. Focusing on the significant financial gaps between districts, it explores how these disparities affect educational opportunities and academic achievements. The study utilizes Department of Education data and surveys to analyze the effects of resource allocation on educational equity and academic achievement. Findings underscore the importance of equitable funding in enhancing educational outcomes, especially for students from diverse demographics, including but not limited to racial, ethnic, and socio-economic backgrounds. By comparing two distinct districts that are in close proximity to each other, this research contributes to the discourse on educational equity, emphasizing the need for fair resource distribution to ensure all students have access to quality education.

Dedication

This thesis is affectionately dedicated to my beloved grandmother, a beacon of love, support, and unwavering sacrifice. Her enduring spirit and profound influence have been my guiding light throughout this journey, inspiring me to pursue my dreams with tenacity and grace.

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CHAPTER 1: INTRODUCTION & BACKGROUND

1.1 Introduction

The Black Lives Matter Movement, founded in 2013 and experiencing a significant increase in organization since 2020, has placed a strong emphasis on the importance of community development through education. Public schools serve as centers of learning, and thus are integral parts of the communities and populations they serve. Chung labels them as place-based institutions, stating they are part of a neighborhood's physical fabric (Chung, 2005). It is said that schools and education systems may have an impact on local housing markets and the character of the community as well (ibid, 2005). Recognizing this, the insistence by the Black Lives Matter movement that 'One cannot ignore structural racism, anti-blackness, and institutionalized violence in schools and call themselves an education reformer' (Quick, 2016) underlines the necessity for education systems to actively confront and dismantle these systemic barriers. This call to action serves not just as a critique, but as a foundational principle for school improvement and equity, emphasizing that true educational reform cannot occur without addressing the underlying issues of racial injustice that affect students and communities alike.

Due to this central role that the education system takes within the community, they should be consciously included in development efforts. In order to both develop the communities positively and utilize these education centers to the full extent possible, it is crucial to first identify where they currently stand. Development efforts include evaluating how these schools function and the

resources they use to remain active. Thus, studying both achievement patterns of students and the resources made available for them can serve as an informative measuring tool.

However, many have highlighted that funding provided to various educational facilities serve as a point of unequal distribution across the entire nation. For example, following a Texas Supreme Court ruling in 2016 which upheld the funding system as constitutional, Justice Don Willett wrote that it is still “undeniably imperfect” (Collier, 2016). Focusing particularly on the state of New York, we can see wide gaps of funding disparities from district to district. On Long Island, one district can wildly contrast from another, though both are located on Long Island. A *Newsday* analysis recently reported that the wealthiest districts can be found to be spending \$6,000 more per student compared to the poorest districts on the island (Hildebrand and Ebert, 2020).

These funding differences can be linked to an impact on the achievement patterns of these educational centers. Research has consistently emphasized the role of funding and resources and its impact on achievement. The Learning Policy Institute highlights a positive and statistically significant relationship between student achievement gains and financial inputs. They state that money matters, as does schooling resources that cost money. These all have been linked to improved student outcomes. The effects are positive, but it is reflected that the impacts are larger in particular studies. They state that in both cases, the students showcase that these resources and funding matter more for some students than others, especially for students from low-income families that have access to fewer resources outside of school (Baker, 2017).

Drawing attention to the aforementioned research on funding and achievement, this study will highlight the education system within New York, focusing on different school districts. The study

focuses primarily on New York State, with comparison of two school districts: Jericho Union Free School District and Hempstead Union Free School District. This niche may be relevant in particular given the distance between the two districts. The study reviews how resources are provided across various school districts and how this may translate to performance and achievement levels for students. Academic achievement and opportunities can be understood as a range of properties including but not limited to: access into schools, necessary resources towards receiving an equitable education, and academic performance of students in the education stream. Data from the Department of Education will be analyzed, along with surveys from teachers and alumni of the school districts.

1.2 Research Topic: School District Funding

The topic of this research centers on funding made available for educational institutions, in this case, on the district level. Jericho and Hempstead are two school districts located on Long Island which will be studied in order to find connections between the achievement rates and funding levels of the districts. Both districts are under 13 miles apart, roughly a 24 minute drive between them. They are home to students of diverse backgrounds and demographics as well.

In 2018, Jericho Union Free School District in Nassau County was named the best school district within the United States (Thorne, 2018). Currently, it is ranked second in the nation by Niche.com, while it remains the best in the state. The district has a 99% 4 year graduation retention rate. Furthermore, in rating how well students are being prepared for life beyond high school, the district ranked 4 on a scale of 1-4. The vast majority of the students hail from Asian and White demographics.

In comparison, Hempstead Union Free School District is Nassau's largest K-12 district. In terms of taxable wealth, this district ranks as the poorest district in Nassau (Hildebrand and Ebert, 2020). The 4 year graduation retention rate is 63% within this district. In terms of rating the readiness of students for life beyond high school, the district ranks 3 on a scale of 1-4. The demographics of this school showcase a large majority of Latino and Black students. A very minor fraction consists of White and Asian students.

The research coordinates insight as to how funding works and relates to academic achievement for certain students. This draws an emphasis to racial demographic and cultural background as well. It seeks to understand and compare a well resourced and an under-resourced school district to analyze a relationship between achievement data, funding, and demographic.

1.3 Statement of the Problem

Government-allocated funding provided to school districts across New York requires a close investigation to ensure equitable education for all students. A deeper review of the funding procedures may shed light on any disparities that may be impacting the quality of education. A close look at how funds are distributed can also help ensure that students from diverse backgrounds receive the quality education they deserve. Overall, investigating funding allocation is crucial for identifying and rectifying the root causes of educational disparities.

New York State is home to 732 school districts which serve 2,598,921 students on the K-12 level. These districts have communities of diverse backgrounds across the state. Sometimes, these districts can be within just a few miles, yet have varying results in terms of funding, demographics,

and academic achievement. Furthermore, one of the pressing issues over education within the state is in regards to funding. Foundation Aid, established in 2006 as the primary funding formula for education in the state, has been the subject of ongoing debate, stating that this formula may not be equitable (Williams, 2019). Overall, school districts receive inadequate and inequitable government allocated funding (ibid, 2019).

As the funding is structured and majorly distributed on the state level, the issue has affected the education system by disadvantaging learners, particularly students of certain demographics. Inequitable funding has also incited lawsuits against the state. For example, *New Yorkers for Students Educational Rights (NYSER) v. State of New York* is a current lawsuit which was brought by a coalition of major statewide organizations (Bialek, 2021). The lawsuit covers the district of New York City along with other districts. The aim of this lawsuit is to ensure every student is provided the "meaningful opportunity for a sound basic education." (Rebell, 2023). These rights are guaranteed directly under the New York State Constitution (ibid, 2019).

Along with the legal matters of funding, we can also see that this issue has impacted the learning process for students. A recent lawsuit was filed on March 9th 2021 by civil rights attorneys and student plaintiffs finds that the largest district, New York City. They have mentioned that the current measures reciprocate and have even worsened racial inequality, hindering an equal learning platform for all students. Furthermore, this may not be limited to academic learning, but all educational activities in general. This suit argues that segregation and improper access to resources are structured. This is conducted early on, when students are sorted into different academic tracks (Shapiro, 2021).

Overall, this suit references issues of disparities based on demographic and resources made available to them. A 2001 ruling by a New York judge was referenced to support the claims as well. The judge had ruled that the state's system for funding was deficient and violated student's rights to basic education. However, this ruling was determined 10 years after the suit was filed (Shapiro, 2021). This highlights the climate of issues and how it has impacted the students the public districts serve.

Teachers have also been impacted by this, especially with the new concerns and teaching methods due to COVID-19. With the added element of the pandemic, countless students have suffered both learning losses and psychological impacts. Social workers have mentioned that students of the public districts have exhibited signs of depression, suicide ideation, injurious behavior, and substance abuse. As teachers are unable to meet students in person, this has been rather difficult for them to work through. The New York City Teachers Union has requested \$1 billion of the city's Federal Education Relief Funding to help public school students recover from these learning losses and assist with mental health (Sanchez, 2021).

Addressing these ongoing issues, both legally and within the framework of highlighting student's academic achievement, there is a clear source of concern rooted in government allocated funding and academic achievement for students. Furthermore, it seems that certain students may be impacted more than others. A study of two public school districts may help recognize how the allocation may translate to the levels of academic achievement for those particular students within these districts. By evaluating the demographic breakdown, achievement data, and the resources,

we can analyze if there is a relationship present between the demographic's achievement rates and the resources made available to them.

1.4 Research Questions:

1. **Key Question:** Is there any relationship present between the current method of educational funding and academic achievement for students of diverse demographics within New York?
 - 1.1. **Sub-Question:**
 - 1.1.1. Do certain school districts receive more funding?
 - 1.1.2. Does the funding formula allow students of certain demographics to achieve higher than others?

1.5 Purpose of the Study

This study aimed to provide insights into the public-school systems of New York. With a particular emphasis on educational funding, it examined the formula and its methods of allocation into districts. Through this examination, the study sought to draw connections and measure the relationship to equitability. Additionally, by narrowing the focus to two specific districts, it was possible to compare the impact of funding by analyzing academic achievement rates and outlining the resources made available to students in each district.

Focusing on specific districts allowed the study of demographics and diverse communities as well. By utilizing this data, connections were drawn to determine if the funding formula translated into achievement for all demographics equally. Overall, the research in this study focused on how

government-allocated resources are critical players in academic achievement and how this impacts students of various demographics.

1.6 Significance of the Study:

Many educational leaders and activists have discussed matters of equity in providing resources in the education system in America (Strauss, 2020). Additionally, various lawsuits have been filed, focusing on funding and equity against the State of New York. Drawing on the sentiment surrounding these issues, it seems that there has been a consistent effort from many to bring change and improve educational equitability for students across the state. Therefore, this study can procure the data-based resources required to make the focus of these arguments more distinct.

With the added situation caused by the pandemic, teachers have called attention to the further focus on how funding is the starting point of how to move the educational system ahead (Sanchez, 2021). The data and results of this study may be significant due to its insight as to how exactly the government impacts the outcome of student's futures through its funding methods. This can be used to supplement those who are fighting for equity in education across New York. With the focal point on two particular districts within close proximity, this study may be significant by helping to understand policy-based allocation methods and decisions. This may even help to further develop and improve these decisions if needed.

Moreover, this study may help draw insight for educational policies not only in New York, but even for the rest of the nation. As educational funding is typically gathered mostly at the state-level. With the results and insights from this study, we may be able to see what a particular state is doing, and this can further be used in comparison to other states if desired. Overall, having as

much data to make and support calculated decisions for the equity of the nation's education system is necessary.

In conclusion, by starting with examining the allocation methods into two separate districts, we will seek to better understand New York's educational funding formula. This can be used to study trends of comparisons to ensure they are both funded with the best educational efforts in mind. Using this clarified knowledge, the study can then focus on how this impacts the academic experience for students. By sorting through academic achievement based on demographic, we may be able to discover a relationship between the funding and academic achievement. This will help to better understand the resources and policy-based allocation methods and if it plays a direct role in academic achievement, specifically for students of various demographics. This may draw insight into legislative and policy level work which may be positively improving the scenario within these schools or which may need to be improved.

CHAPTER 11: LITERATURE REVIEW & CONCEPTUAL FRAMEWORK

This literature review will present information from various sources, such as articles and documents, that have been reviewed to understand the topic of government allocated funding in the public education system. It will particularly focus on the state of New York, addressing the funding formula and its impact on academic achievement. The following categories have been formed in order to sort the research: 1) federal level educational funding, 2) state and local level educational funding, 3) funding and politics, and 4) relationship between funding and academic achievement.

2.1.1 Relationship Between Funding and Academic Achievement

Bruce Baker presents a flow-chart to conceptualize why money matters in the academic world. This draws a line between the revenue to student outcomes. The chart shows the impact of financial input, including staff quality and quantity. Baker shows that these are both critical components to student outcomes. He states that both money, and its wise spending, yields benefits (Baker, 2017).

Daniel Green's *Investing in High School*, provides a methodological format of issues related to funding, challenges in acquiring funding, and implementation and results of a better funded school. Brookline High School's (BHS) teachers required funding to develop a mentorship program for teachers within the school. This school serves a diverse community in close proximity to Boston. Students of this school hail from over 76 countries and speak over 36 languages, showcasing a

need for a well equipped educational institution. However, the achievement gap was widening, with a divide between White and Asian students outperforming the Black and Latino students. Furthermore, the BHS school administration had an insufficient budget to address this divide in academic achievement (Green, 2012).

Green focuses on BHS's struggles with acquiring funding, drawing them to take matters in their own hands. This allows them to organize a means of locally based funding. Green also highlights that this may or may not always be possible, as sometimes private sector funding may come from a stream which community members may have moral issues with. Coca-Cola and private banks are cited as an example, which may lead to controversies. This further reflects complications schools face with acquiring proper funding. BHS, however, manages to acquire funding and start their successful program (Green, 2012).

The fund's benefits are listed and detailed by Green to exemplify the benefits funding has on the education system as a holistic process. It also places a spotlight on students of minority backgrounds. The first benefit of the high school's funding program, 21st Century Fund, was that it created a leadership factory (Green, 2012). Flieshchman and Heppen's report on how to improve low-performing high schools highlights the need for an adequate supply of effective teachers (2009). Green documents the funding had trained teachers into more innovative and motivated professionals. In turn, it allowed for higher levels of teacher retention in this line of profession. Metzger, one of the main initiators of this program, worked an extra 12 years past retirement. This is an example of funding breeding an ongoing cycle of resources which are referred to as "assets".

Additionally, the training was supportive and geared towards supporting at-risk teens (Green, 2012).

Not only do the funds help teachers become better equipped to increase student learning, it also expanded student learning opportunities and nearly closed the achievement gap. Students state that the school had better access to a diverse range of interesting classes, with more engaging methods of instruction. A lack of strong instructional focus and effective practice is noted as a major hurdle toward academic achievement (Flieschman and Heppen, 2009). A student stated that they had been able to focus better with the medium taken away from lecturing to more physical and creative means. Academic support programs have also allowed for Black and Latino students to achieve higher as well. Between 2005-2010, Black and Latino students scoring proficient/advanced on the Massachusetts Comprehensive Assessment System increased 84% for language arts and 71% for math. Additionally, the African American Scholars Program (AASP) performed better on the SATs in comparison to their white counterparts in writing. There has also been over a 100% increase in the induction of AASP scholars into the National Honors Society (Green, 2012).

2.1.2 Federal Level Educational Funding

Educational funding in the United States is generated from federal, state, and local sources (Biddle and Berliner, 2002). Largely, the responsibility for public education is placed at the State and local level, as indirectly appointed by the U.S. Constitution. However, it is important to note that the Constitution does not explicitly guarantee education, rather the 14th Amendment is the reference point for equal opportunities and protection of the law. This amendment was the foundation point for the cause of *Brown v Board of Education* (Bowen, 2020). In 1973, during the case of *San*

Antonio School District v. Rodriguez, The Supreme Court ruled that education “is not among the rights afforded explicit protection under our Federal Constitution” (United States, Supreme Court, 1973). Currently, the federal government provides assistance to state schools as a supplementary means of support for the quality of the public schools in the nation (US DOE, 2014). Aside from funding, the State level also establishes schools, develops curricula, and determines the requirements for enrollment and graduation of students (US DOE, 2021).

The US Department of Education cites that the Federal contribution for public education at the elementary and secondary level is roughly 8% (2021). The funding scale has never exceeded 10% in the past (Ravitch and Loveless, 2000). This funding is not derived only from the Department of Education (DOE) but other Federal agencies, such as the Department of Health and Human Services and the Department of Agriculture, are contributors also. The DOE cites that their contributions are small, hence they focus the tax-payer provided funds where they are able to make the most change (2021). Overall, the sources of revenue for the federal government circle back to taxes. The Tax Policy Center (TPC) reports that revenue is sourced about 50% from individual income taxes, 7% from corporate income taxes, and 36% from payroll taxes that fund social insurance programs (2020). The rest comes from a mix of sources (ibid, 2020).

Two important legislative procedures can highlight the federal government’s efforts in working to provide funds in the education sector: 1) Elementary and Secondary Education Act (ESEA), 2) No Child Left Behind Act of 2001 (NCLB), and 3) Every Student Succeeds Act (ESSA).

Beginning in 1965, the ESEA authorized grants from elementary and secondary school programs across the nation. Children of low-income families are the target audience this program seeks to serve. The funds are typically spread to school library resources, textbooks, and other instructional

materials. In addition, supplemental education centers and services, the strengthening of state education agencies, education research, and professional development for teachers are funded through this act (US DOE, 2014).

The NCLB was formed in 2001 and served as a reauthorization of ESEA. The overarching goal was to raise achievement and close the achievement gap for all students. The methods utilized are accountability, research-based instruction, flexibility and options for parents (ibid, 2014). Heise mentions the Act held schools responsible for the learning and achievement of students by overemphasizing standardized testing (2017). This reduced school district and state autonomy over the education system. Additionally federally funded programs in school have been believed to weaken the authority of the principal (Hill et. al, 2000). Schools who received federal funding to educate low-income students faced consequences, such as replacing the principal and staff (Nelson, 2015). In *The Federal Role in Education*, the authors state that receiving funding, however minimal, allowed the school to focus on directives and regulations instead of teaching and learning (Hill et. al, 2000).

In 2015, President Obama replaced this with the Every Student Succeeds Act (ESSA). This still allocated funds to poor schools and measured achievement using testing in reading and math. However, it no longer allows the federal government to hold those schools directly accountable for the quality of education. Nelson states that this puts the states, not Washington, in charge of holding schools accountable (2015). This means that states are able to reduce their efforts to improve schools for poor and minority children, as opposed to the NCLB which gave the federal government more power over their education. ESSA required states to form their own goals for

students and hold their schools responsible for progress towards that goal. The bottom 5% schools were required to be developed by the state along with funding for pre-K programs (ibid, 2015).

Ravitch and Loveless inform that even with the legislative efforts, the funding remains limited and is directed to “categorical” programs (2000). The two largest categories referenced serve poor (Title I) and handicapped (special education) students. This leaves out the majority of American children as they may not qualify under these programs. Most students in the majority of schools receive merely a penny or so of each education dollar funded by Washington (ibid, 2000). When refined, we may even see inequitable funding from a school level point of view. Certain classrooms may receive more or less funding within a school compared to others (Rothstein, 2000). This is a result of the variety of disadvantaged students who are not included in budget allocation discussions by education leaders.

Furthermore, Jennings compares ESSA and NCLB, stating that the underlying logic and design of the two acts are nearly equivalent (2018). The need for federal involvement is mentioned, but with more active and positive ways. He argues that Democrats and Republicans should already be working hard at developing a replacement to the current ESSA (ibid, 2018).

According to the Organization for Economic Cooperation and Development (OECD), the United State’s approach to school funding is described as “one of the most dysfunctional systems in the world” (Jennings, 2018). Porter compares other advanced nations, stating the vast majority invest equally or disproportionately in disadvantaged student populations (2013). The United States is noted to be doing the opposite of this (Jennings, 2018). Public schools, especially those in low-

income districts, are critically underfunded. Federal government provides funding, but they are primarily concerned with how well districts are complying with federal regulations because their key responsibilities are in supportive and target funding. (US DOE, 2021). Jennings states that the “off limit” attitude and/or indirect influence through punishments, rewards, and guidelines have a low impact on achievement and improvement for students (Jennings, 2018). Rather, he argues the federal government’s involvement and educational policy should focus on areas such as: 1) preschool education, 2) teacher quality, 3) curriculum, and 4) school funding (ibid, 2018).

2.1.3 State and Local Level: NYS Funding Formula

States and localities are the primary source of funding for education across the United States. Roughly, 92% of the educational expenses are sourced at the non-Federal level (US DOE, 2021). During the 2018-19 school year, 47% of the funding, or \$346 billion, were from state sources; and 45%, or \$330 billion, were from local sources (NCES, 2020). The U.S. Department of Education referenced the 2004-05 school year, where the federal government’s involvement was about 8.3%. During this period, 83 cents of every dollar came from state and local funding (US DOE, 2014). Currently, the federal involvement is about 7%. New York State’s Open Budget states that in 2021-22, the two major functional areas the state will look to spend are in health (43%) and education (19%). The chart depicting the state budgets from 1995 to the current year notes there have been no adjustments for inflation (Open Budget, 2024).

In general, nearly 50% of all educational funding made available is derived from local property taxes. Biddle and Berline state that this creates a great disparity between wealthy and impoverished communities (2002). Local revenues for funding include sources such as local property taxes,

consumer utility taxes, sales taxes, and investments (EdBuild, 2021). Other sources of income can be through student activities, such as textbooks sales, transportation and tuition fees, and food service revenues. Additionally, these sources include revenues from intermediate sources such as education agencies with fundraising capabilities that operate between the state and local government levels (NCES, 2020).

The state constitutions' across the nation have clauses that address the state and their responsibilities for providing free public education to its citizens. The Constitution of the State of New York makes the legislature responsible for providing maintenance and support to public schools. The clause also specifies that all children may receive education through this system. Some states have specifications in their clauses, such as Alabama, noting only ages 7 to 21 may receive the benefit of this public education (Alabama Legislature, 2022).

New York's approach is tied to the student population. By assigning a "base amount", the district evaluates how much to spend per student. "Multipliers" are then calculated and added to supplement additional needs for individual students. The categories for this include English Language Learners and students of special needs. Students with special needs do not receive individual amounts, rather, they are all provided the same amount regardless of the diversity of learning disabilities. While no additional funding is provided for poverty on an individual level, districts of low-income areas may receive additional funding as a whole. This is known as "concentrated poverty." Additionally, there is more additional funding for special or gifted students currently (EdBuild, 2021).

Amin explains the state's involvement in education by referencing where the majority of state aid is generated: foundation aid. Foundation aid replaced nearly 20 aid formulas and programs after its creation in 2007 (Amin, 2019). This was a result of a 13 year lawsuit, *Campaign for Fiscal Equity v. State of New York* (Williams, 2019). Amin highlights that the root cause of the lawsuit was that the prior state funding structure was unconstitutional and did not provide "sound basic education". The current formula, using the base amount and multipliers, is said to be adjusted annually by different districts. Amin states this is due not only to the districts' demographic needs, but also based on the districts' knowledge of how much the state would be inclined to give them for operating the education system (2019). The original amount decided in 2007 is stated to still have not been provided fully to the public school districts in New York (ibid, 2019).

While the design of the current formula is based on students, Regent Judith Johnson states this formula has been over 10 years old. She notes that a review on the policy and updates should be done every 10 years (Amin, 2019). Philip Gigliotti, further drawing emphasis on the need for review, raises questions about how student needs are calculated. While researching school funding in New York, he highlights how student needs and costs are weighed. For example, Gigliotti stated that at the time, student poverty was measured, in part, using data from the 2000 U.S. Census, instead of the most recent one conducted in 2010. This was reflected according to state education documents posted online. In addition, for poverty to be a problem, he states that poverty would need to be changing very quickly in those districts or rapidly increasing. Also, the formula accounts for labor costs using 13-year-old figures, which Amin referenced some have stated should be updated (2019).

2.1.4 Funding and Politics

Though formed to make education equitable in New York, the state has not funded Foundation Aid evenly for districts. Williams defines political activity as a key reason. He analyzes the increases in funding between Democratic and Republican representation. When Democrats won control of both chambers of the Legislature in 2018, he recognized spending on Foundation Aid rose by 3.5% in comparison to the previous year. In Democrat-dominated New York City, it went up by 4.4%. In contrast, Republican areas of Western New York only went up by less than 1%. William states they had received much higher increases the year before. This was when the GOP still controlled the state Senate (William, 2019).

Similar to Gigliotti, Williams stresses the criticism of outdated metrics, also referencing the poverty data from the 2000 U.S. Census. Unreliable regional distinctions are also presented by Williams. For example, grouping together the Lower Hudson Valley and Upper Hudson Valley, despite an influx of wealthier commuters in Lower Hudson Valley who have made the area much more expensive. In 2017, Cuomo unsuccessfully pushed a controversial proposal to change the formula in 2017. This would have decreased the amount that the state would allocate in Foundation Aid. Two years later, Cuomo also called Foundation Aid a “scam” due to directing funding to districts instead of individual schools. This leaves district officials in charge of deciding funding increases for schools. Williams states that this leaves poorer and underperforming schools of the district at the mercy of district leaders. Cuomo stated that these leaders might favor better performing schools through this system (William, 2019).

Williams discusses how the funds are divided between various parts of the state through what is called a “shares agreement”, which he identifies less as a formula and more of a geo-political gentlemen's agreement. He states this method allocates 38.86% to New York City, 12.96% to Long Island, and the rest go upstate and to New York City’s northern suburbs. New York City has 42% and Long Island 14.5% of the state’s population. However with the passing of the COVID-19 stimulus, the concept of ‘shares’ is not incorporated. Hildebrand states the emergency funding recognizes the need for aid in poverty stricken areas, thus the funds will follow the poorest students rather than division via shares.

Through President Biden’s American Rescue Plan, Long Island’s schools will receive \$324 million in aid. This will be directed to help districts with students from below the poverty line, with Hempstead, the poorest district, receiving \$19.3 million in aid as per Senator Schumer. Overall, New York City will receive 58% of the aid, as 40% of the student enrollment takes place in this region. The distribution methods are at the discretion of the state who will distribute as they see fit. Two-thirds of the funds will be dispersed immediately, while the rest will be completed as states submit plans. These plans will outline their plans for reopening schools safely while meeting the needs of students (Hildebrand, 2021).

As Hildebrand discusses the agenda of Washington’s financial “rescue” of public education from COVID-19, he addresses various ongoing concerns the districts have had. These are primarily due to a lack of funding. Long Island’s William Floyd district is mentioned to draw attention to their struggles with a “digital divide”. The district’s students struggle with technological achievements, including Wi-Fi connections access. In comparison to other families and districts living within

close proximity, the district has struggled to close this gap, reflecting inequality among students of different communities. School officials are hopeful that this federal support can assist in increasing access and equitability in these matters. Teachers are referenced as particularly vocal in matters of this extra focus on low-income areas by the federal government. Long Island teachers have been cited to have complained that they are financially shortchanged by Albany, the state's capital, during budget allocations (Hildebrand, 2021).

2.2 Conceptual Framework:

According to Ravitch & Riggan (2017), when you start figuring out what you want to study, that's the beginning of your research journey. This is exactly what is known as a conceptual framework. This framework is shaped following comprehensive research of the overarching subject. As research progresses, a conceptual framework emerges as a pivotal component of the research process. It then leads to building a strategy to answer new questions that pop up as you do your main research. Essentially, the conceptual framework serves as a scholarly instrument, directing the researcher in exploring and resolving intricate research inquiries within the study.

This section aims to offer a conceptual framework which will assist our understanding of government-allocated money in the public education system. The state of New York and the impact of its funding formula on academic achievement will be highlighted specifically. All things considered, this has allowed for a comparison of the academic achievements of two distinct school districts based on government resources. Four primary groups will comprise our framework:

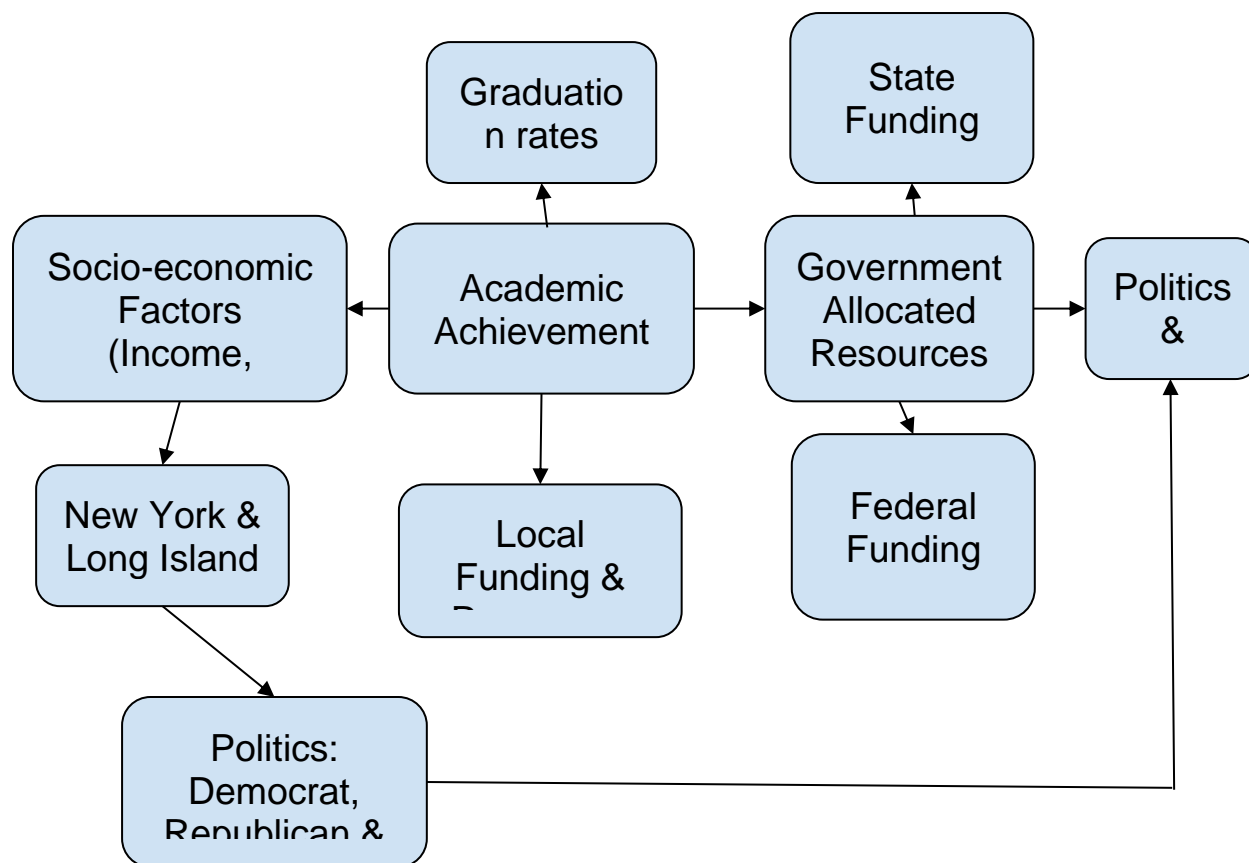
- 1. Relationship Between Funding and Academic Achievement**
- 2. Federal Level Educational Funding**

3. State and Local Level Educational Funding

4. Educational Politics

Our comparative investigation into two school districts will be guided by this expanded conceptual framework, which will enable us to investigate the complex relationship between funding and academic results. We can learn more about the intricate relationships that exist between demographics, educational attainment, and resources in various educational contexts by taking into account the unique characteristics of every district.

Chart 2.2: Conceptual Framework of Study



CHAPTER III: METHODOLOGY

This chapter describes the research methodology utilized for this study. This includes the research approach, research site, research participants, sampling procedure, data collection methods, research tools, and data analysis procedures. Also, it includes an account of the methodology on the specific design of the study, which is quantitative, along with why this method was determined to be suitable for measuring the purpose of this study.

3.1 Research Approach

The purpose of this study is to gain insight on the public school systems of New York and how funding influences and impacts the academic achievement of students. Additionally, this study focuses on how funding impacts certain students in comparison to others. This can be based on racial or socioeconomic demographics. As this study was tasked to be a comparative focus on two particular districts, this study sheds light on government-allocated funding mechanisms and academic achievement levels of the students in both districts. Due to this, the research was conducted via a quantitative approach.

Quantitative research explores and answers the research questions through the use of statistical data. This allows the methodology to be scientific in nature (Daniel, 2016). Because this study focuses largely on funds and academic results, Bryman states quantitative approaches are beneficial as the emphasis is placed on numbers and figures in the collection and analysis of data (2001).

The comparison of Hempstead and Jericho's school districts provide insight for the particular districts, but also how funding places a role in education overall. With a quantitative approach, generalization is made possible (Daniel, 2016). It allows for problem-solving within a wider society possible as well. Thus this study may provide overall insight to the entire nation's education system.

3.2 Research Site

The research was conducted in two school districts: Jericho Union Free School District and Hempstead Union Free School District. These two areas represent the context of two contrasting school districts and demographics. As my study focuses on how funding is affecting achievement rates, these districts portray the two various scenarios that can be present: high achievement and low achievement. By outlining the community and demographics, we are also able to see a pattern on how certain demographics are being served.

Jericho Union Free School Districts is considered the second-best school district in the United States by Niche.com, and the best in New York State. It has a \$126 million budget, with roughly \$40,124 spent per student. This is generated mostly from local sources (91%), with state (8%), and federal (1%). There are 3,075 students across 5 schools. Nearly 61.4% of the structures of the district were built prior to 1970, 31.8% built between 1970-1999, and 6.8% after 2000. There are 324 teachers, yielding a student to teacher ratio of 1:9. White students make up 60% of the population with a follow up of 28% Asian students. Minority enrollment of Black and Latino at this school district is 4% (Black) and 5% (Latino). Roughly 173 students are English Language

Learners (ELL) and 384 are students with Individualized Education Program (IEP). The White and Asian demographics in this district are 5% (White) and 2% (Asian).

Furthermore, the community reports about 6.9% homes as renter occupied and 93.1% owner occupied. Households with broadband internet average about 94.8%. Overall, the district is doing well in terms of poverty, with only 3.6% of families with income below the poverty level and 0.6% receiving Food Stamps/SNAP benefits. The median income per household is \$184,179, with 91% of the households being married couples with 77.4% of the district having a bachelor's degree or higher.

In contrast, Hempstead Union Free School Districts is considered the poorest district in Nassau County, and a low wealth high needs district. The current budget is \$225 million, of which 62% come from State aid and 35% from local streams. Federal aid comprises 4% of the budget. Roughly \$27,834 is spent per student. During each of the last two fiscal years, the District overspent its budget, explaining a good portion goes towards Charter school tuition, which is \$49 million. The District only receives \$11 million for charter schools. The Districts states that disparity is having a serious impact on the District's ability to provide a full range of services to its students.

The District is home to 10 schools, 73.3% of which were built prior to 1970, 21.5% built between 1970-1999, and 5.2% after 2000. It serves nearly 9,000 students, 6,500 of which attend schools in the District, and 2,500 attending charter schools. It employs about 457 teachers, yielding a student to teacher ratio of 1:17. Minority enrollment at this school district is 98%, with a majority hailing from a Latino background. This is more than the New York public school average of 57% which

is majority Latino or Black. Roughly 2,764 students are English Language Learners (ELL) and 1,194 are students with Individualized Education Program (IEP). The White and Asian demographics in this district are 5% (White) and 2% (Asian). More than 80% of the students are eligible for free or reduced price lunch.

The community reports about 68.5% homes as renter occupied and 31.5% as owner occupied. Households with broadband internet average about 75.6%. This district is home to 31.8% of families with income below the poverty level and 29.4% receiving Food Stamps/SNAP benefits. The median income per household in this district is \$55,569. The household type in this district is 44% female householder with no husband present, 39% married-couples, and 17% male householder with no wife present. In terms of educational attainment, 43.5% of this district have less than a high school graduate, and 26.7% are high school graduates. Only 9.4% have a bachelor's degree or higher.

3.3 Research Participants

Teachers and alumni from the districts and schools serve as participants in this study, providing valuable quantitative data on fiscal and academic matters. Additionally, their firsthand experiences offer deeper insight into the data collected, enriching the study's findings.

3.4 Sampling Procedure

This study utilized a convenience sampling procedure for participants to be surveyed. Participants who have experience with either school district have been surveyed. The participants are teachers of the district. The sample was drawn from a population that was most easily accessible. Since this

study seeks to draw connections between funding and academic achievement, teachers are important resources in this procedure.

The respondents in this sample represent the larger target population as they may have direct knowledge of resources, funding, and academic achievement rates. For teachers in specific, they are responsible for gathering and submitting data reports, making them a reliable source of information. They provide insight as to how their students' academic careers are impacted based on what funding and resources that were made available to them. In addition, it also presents data about demographics of the communities and their experiences.

3.5 Data Collection Methods

3.5.1 Survey

Due to the impacts of COVID-19, the data collection was largely done with minimal face-to-face interaction. Therefore using a survey was a safe and informative means of data collection. Zoom calls were also conducted in order to explain the intent of the research. In addition, emails were sent to reinforce the topic of the survey and purpose of the research. Upon communicating and gaining consent, surveys were done through a digital platform. Google Forms was utilized for this, and shared with the participants.

Surveying helps to keep a structure for gaining and acquiring the data required for this study. It also allows the researcher to compare results for the same questions. All the questions on the survey were set as "required", hence the participant is unable to skip the question. Therefore there is no option to forego and fall short on the results for any particular category. This mode of data collection is also less time consuming and allowed for a wide selection of data for the researcher.

3.5.2 Documents and Records

This research deals with financial records and reports. Therefore collecting these documents and records for analysis is crucial to ensure factual data and statistics are thoroughly incorporated into the study. This is also time efficient and effective as the data is collected from reliable sources, such as a particular government organization which is responsible. The role of the government in statistical research is crucial as they often collect information on demographics and other important information on people.

The governmental organizations collect data through various means. This can be a part of other activities, such as academic reports from schools. Using their documents and records allows the researcher to utilize the data that is already present. It allows the researcher to use their time more efficiently, for example, to track changes that may be present in the data.

3.6 Role of the Researcher

In this quantitative study, as the researcher, I assumed the role of a quantitative analyst. This involved remaining steadfast in the commitment to data collection, which was done using surveys. This helped to gather data in real time throughout this study effort. This methodology ensures that the data collection process is both structured and flexible, which improves the study results. As the researcher, my primary responsibility is to gather data in an orderly and systematic manner. In addition to being a researcher and data collector, I've taken on the duty of data analysis. My goal is to find important information, connections, and relationships by carefully examining and interpreting the data that was gathered.

3.7 Data Analysis

In this study, a quantitative approach was utilized to deeply analyze and derive meaningful insights from the collected data. The objective was to investigate the interrelationships between various factors such as demographics (race and socio-economic demographics), graduation percentages across both school districts, spending patterns over the years, as well as teacher certification and experience.

3.7.1 Descriptive Analysis:

Initially in the research, we utilized descriptive analysis. With the goal to summarize and identify the demographic data in our dataset, descriptive statistics were adopted. Gaining an in-depth understanding of the ethnic, racial, and socioeconomic backgrounds of the study participants as well as the larger student population reflected in the data was the primary objective. We were able to create a reliable baseline for our next investigations due to this procedure.

3.7.2 Inferential Analysis:

In the next stage of our research, we utilized inferential statistical techniques. Inferential analysis was used to examine and compare graduation rates among different school districts. Furthermore, it took into consideration the diverse demographic within these school districts. Discovering any patterns in graduation rates that could be related to demographic differences was our key objective during this stage. To gain a deeper knowledge of the educational environment under research, inferential analysis was utilized to identify any connections between graduation outcomes and demographic characteristics.

Each of the aforementioned steps was crucial in synthesizing the findings of this research, allowing for an understanding of the dynamics affecting graduation rates, which serves as an indicator of student achievement, in the studied school districts. In our data analysis process, significant emphasis was placed on the visual representation of the collected quantitative information. Initially, the raw data, encompassing aspects such as demographics, graduation percentages, spending variations, and teacher certification and experience levels, were systematically sorted and cleaned to ensure accuracy and relevance. Following this, the refined data was strategically organized into a variety of graphs, each designed to highlight specific trends, comparisons, and insights.

Bar graphs were predominantly utilized to depict demographic distributions and the diversity in socio-economic backgrounds, facilitating an intuitive understanding of the community's composition. Additionally, they illustrated the trends in spending over the years, showcasing the evolution of financial allocations and priorities. They were also employed to visualize the relationships between variables such as teacher experience and graduation rates, allowing for an exploration of correlations or the lack thereof. These visual tools served as instrumental aids in showcasing the patterns, disparities, and core findings of our research, enabling a more comprehensive and accessible interpretation of the data's story and implication.

3.8 Ethical Issues and Concerns

This research has ethical and confidential considerations as part of conducting the study. The purpose of this study and the way the data will be used has been explained to the participants of the study. The protection of integrity of the participants have been outlined for them as well. Followed by consent waivers to ensure workability and understanding of the procedure have been issued to them. As the surveyees are employees of the district, anonymisation is key to this study. The research and study suspends all use of personal data of the participants and ensures that the storage of the data will also be confidential to protect the participants.

3.9 Credibility and Rigor

In this study, the data analysis and findings were meticulously constructed by leveraging both institutional financial and resource records, as well as individual data, to ensure accuracy and comprehensiveness. By amalgamating diverse datasets, we aimed to cultivate a multifaceted understanding, allowing for a more robust and nuanced interpretation of the findings. Utilizing a combination of these various data sources not only fortified the credibility and reliability of our analysis but also enriched the depth and breadth of the insights gleaned from our research

3.10 Limitations of the study

Conducting research is a detailed process that demands extensive research skills, sufficient time, and adequate funding, and this study is consistent with these requirements. This particular investigation focused on two diverse school districts, each characterized by various facilities and contributing factors, which might render the findings somewhat specific and limit broader applicability.

The survey questions were crafted to be straightforward and easily comprehensible. However, there were instances where some questions were misunderstood during the participation process, affecting the accuracy of the responses. The COVID-19 pandemic presented additional challenges, with schools being closed and in-person data collection being unfeasible. This situation necessitated the exclusive use of online platforms for conducting interviews and surveys, adding a layer of complexity to the research process.

Additionally, the current pandemic circumstances influenced participants' willingness to engage in the survey, with some individuals expressing discomfort, further constraining the breadth of our data and insights. This aspect could impact the richness and diversity of the perspectives gathered in this study.

CHAPTER IV: RESULTS

4.1 Introductions

This study is divided into two key sections:

1. **Comparison Across Multiple Schools and Districts:** This portion of the study explores the link between funding and academic achievement across a range of schools and school districts. In order to better understand the connection between financial resources and academic achievement, we analyzed 1,845 schools and school districts. High schools in New York made up the majority of these establishments, along with a few school districts that included data on financial expenses and academic achievement. Data from 2019 and 2020 were incorporated into our research to offer a comparison viewpoint between these two years and determine any relationships that are present.
2. **Comparison of Jericho and Hempstead School Districts:** This section delves into a detailed examination of the Jericho and Hempstead School Districts. Data sources include reports from the Jericho School District's Business and Finance Department, Hempstead School District's Budget Information, the New York State Education Department, and the National Center for Education Statistics. The analysis includes the drawing of overall inferences through a comparison of students and schools in relation to graduation rates. It also examines per pupil funding and the allocation of teachers as a key resource. The study contrasts the two districts by analyzing their graduation rates, funding per student, and teacher resources. This comparison focuses on the years 2019 and 2020, allowing for an evaluation of year-over-year changes and the identification of factors that may have influenced these changes. In line with the research objectives, this section presents both financial and graduation data for the Jericho and Hempstead districts.

Results are presented as followed:

- I. Overall Inference of Schools and Districts: 2019 vs. 2020
 - A. The Number of Schools vs. Graduation Rate

- B. The Number of Students in Schools with a Graduation Rate of 75%+
 - C. Per Pupil Funding
 - D. Percentage of Certified & Inexperienced Teachers
 - E. Principal findings
- II. Hempstead vs. Jericho
- A. Segregated Demographic Data Reflects Challenges in Equity
 - 1. Racial/Ethnic Demographic
 - 2. Non Race/Ethnicity Based Demographics
 - B. Graduation Percentage
 - C. Per Pupil Funding
 - D. Percentage of Certified & Inexperienced Teachers

4.2 Overall Inference: 2019 vs. 2020

4.2.1 The Number of Schools with 75%+ Graduation Rate

In 2020, a trend in the data indicated that academic achievement was improving. In particular, the data showed that the average graduation rate had increased by 3%. This surpassed the 75% graduation rate threshold point. The increase in the number of schools beating this criteria for graduation rate indicates an uptick in academic success.

On the other hand, the number of schools with graduation rates below 75% decreased proportionately. This decrease highlights a decrease in underperforming schools, which makes a

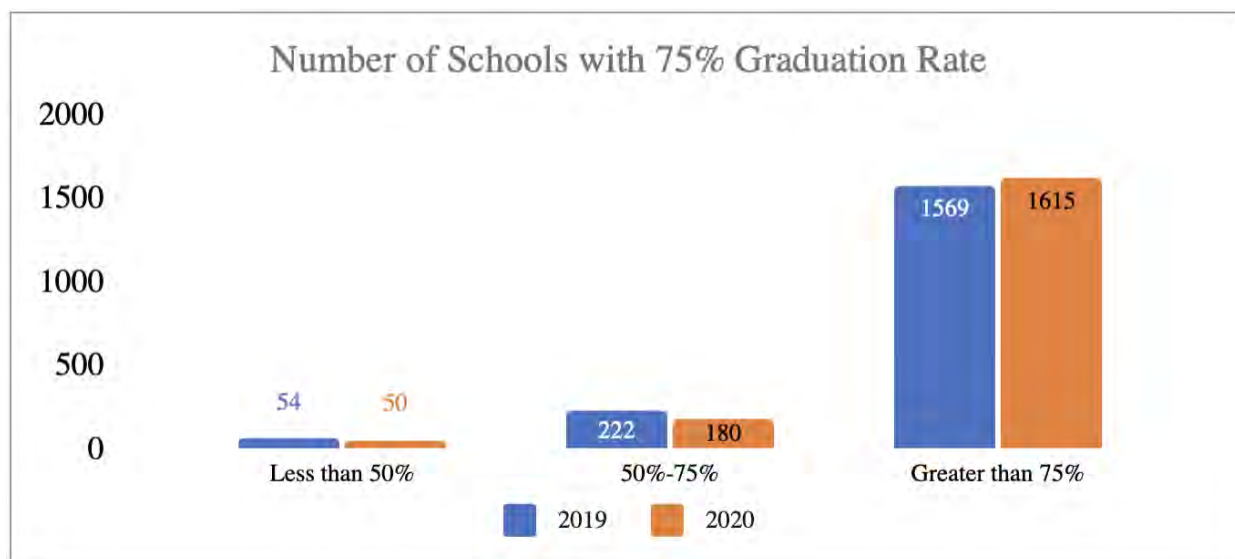
significant contribution to the improvement of academic results as a whole. Therefore, it is reasonable to say that, in comparison to the data from the previous year, 2019, where less students graduated, the schools' overall performance in 2020 showed notable improvement.

These patterns highlight the educational system's adaptability and resilience to the particular difficulties faced during that time. This points to a better future for students in all academic fields. It also indicates that more institutions were, and can continue to successfully guide their students to graduation. In conclusion, an evident increase in graduation rates can suggest that these schools were effectively assisting their students in completing their high school diplomas.

Table 4.2.1: Number of Schools with 75% Graduation Rate

Number of Schools	2019	2020	Growth
Less than 50%	54	50	-7%
50%-75%	222	180	-19%
Greater than 75%	1569	1615	3%

Graph 4.2.1: Number of Schools with 75% Graduation Rate



4.2.2 The Number of Students in Schools with a Graduation Rate of 75%+

In addition to schools with an increase in graduation rates, it is noteworthy to emphasize that an overwhelming 93% of the student body attend institutions where the average graduation rate exceeds the 75% benchmark. The figures below highlight the pattern of academic achievement in the vast majority of schools that kids attend. A high proportion of students attending schools with graduation rates significantly higher than 75% not only showcases the commitment of administrators and teachers as a team, but it also suggests a supportive learning environment that promotes excellent academic performance.

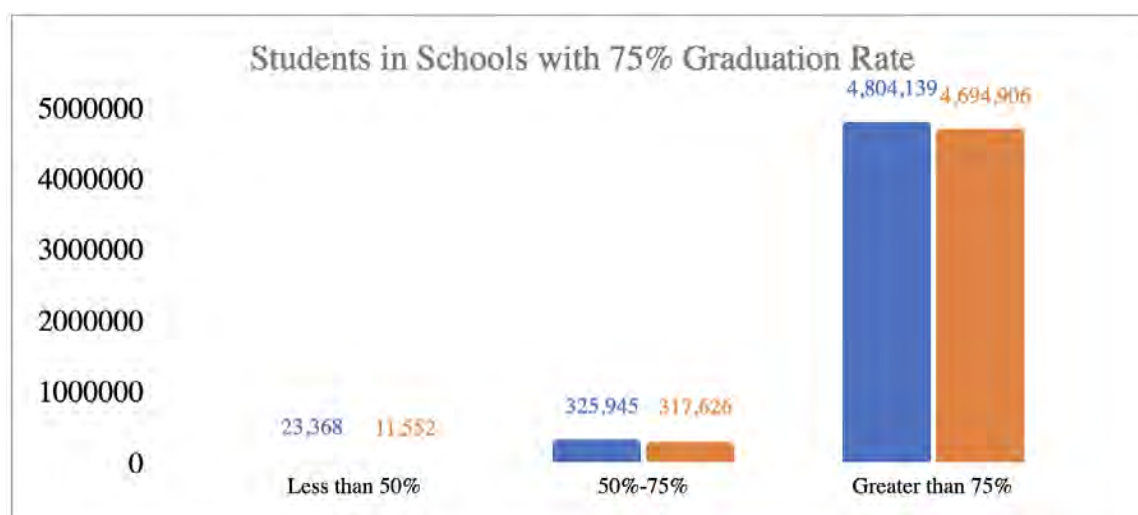
Based on the data, it appears that the majority of students attend schools that are seeing growth in terms of graduation rates, which is good news for the educational system as a whole. It demonstrates how dedicated these schools are to helping their students fulfill their potential and succeed academically. Schools have many priceless resources, such as administrators, teachers, support personnel, and other crucial components. When taken as a whole, these resources help to

create a supportive environment for students. Therefore, this high percentage further emphasizes how crucial it is to keep funding and supporting these institutions so they have the necessary resources to succeed. Lastly, it is crucial to address any inequalities that might exist in the 7% of schools with lower graduation rates in order to guarantee that all children have equitable access to high-quality education.

Table 4.2.2: Students in Schools with 75% Graduation Rate

Number of students	2019	2020	%Share
Less than 50%	23,368	11,552	0%
50%-75%	325,945	317,626	6%
Greater than 75%	4,804,139	4,694,906	93%

Chart 4.2.2: Students in Schools with 75% Graduation Rate



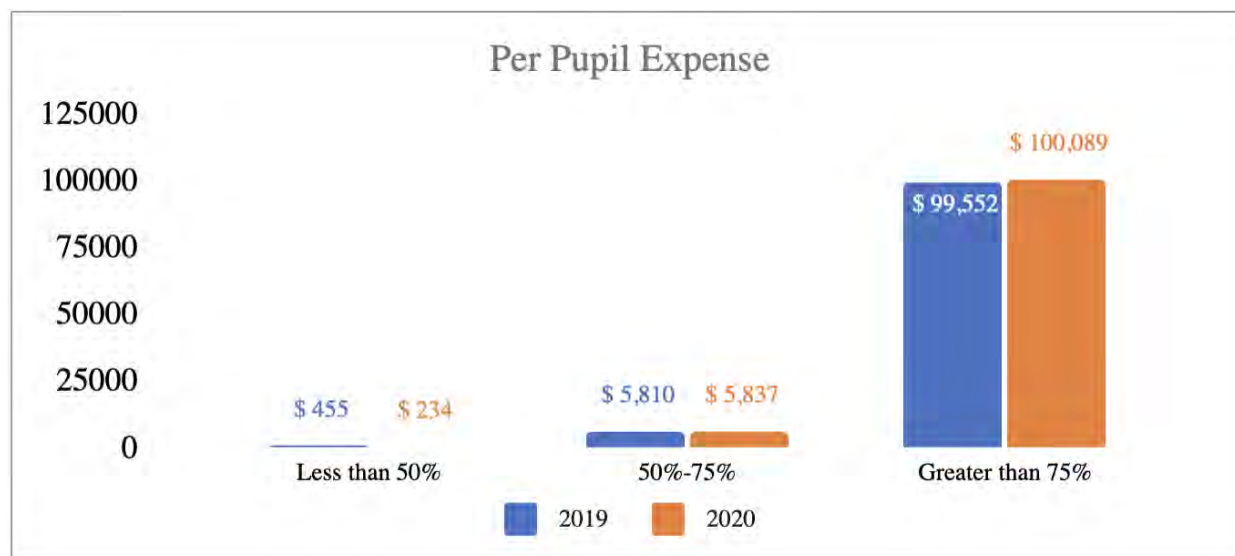
4.2.3 Per Pupil Funding

Let's analyze the possible causes of the noted rise in the number of schools achieving graduation rates over the 75% mark. It's important to remember that many of these institutions may be struggling to receive financial investments. Overall, the public education system isn't recognized for making major investments in education. However, by 2020, there was an increase— a 1% increase—in the per pupil spending within these schools. This slight increase in expenditure observed within schools with higher graduation rates may appear modest, but it can also emphasize a relationship to the notable 3% rise in graduation rates.

Table 4.2.3: Per Pupil Spending

Per pupil average federal, state and local expense (in Millions)	2019	2020	Growth
Less than 50%	\$ 455	\$ 234	-48%
50%-75%	\$ 5,810	\$ 5,837	0%
Greater than 75%	\$ 99,552	\$ 100,089	1%

Charter: 4.2.3 Per Pupil Spending



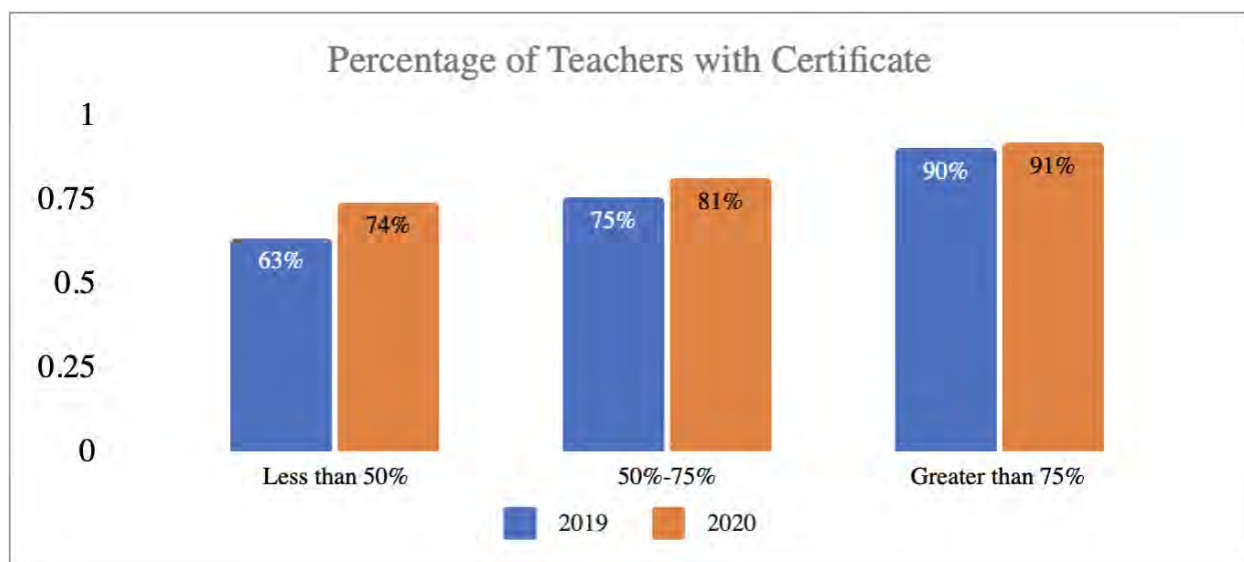
4.2.4 Percentage of Certified & Inexperienced Teachers

Teachers are a crucial investment and resource within schools to ensure students are being met where needed, ensuring they receive the necessary support. The data from the schools with the highest graduation rates indicate that 91% of their teaching staff is certified. Faculty certification can be a driving factor behind the improvement of graduation rates. This high percentage of qualified teachers emphasizes the value of professional qualifications and educational expertise, while also acknowledging the necessities of the community they serve. This shows that a highly trained teaching workforce is essential to improving educational equity.

Additionally, these schools also stand out for having the lowest percentage of inexperienced teachers among their faculty. This further emphasizes how crucial it is for teaching staff to have experience and knowledge. These variables can have a positive impact on student engagement, classroom dynamics, and instructional quality which all translate to graduation rates. In summary, the combination of a high certification rate and a low percentage of inexperienced educators creates a conducive learning environment, potentially contributing significantly to the schools' improved overall graduation performance.

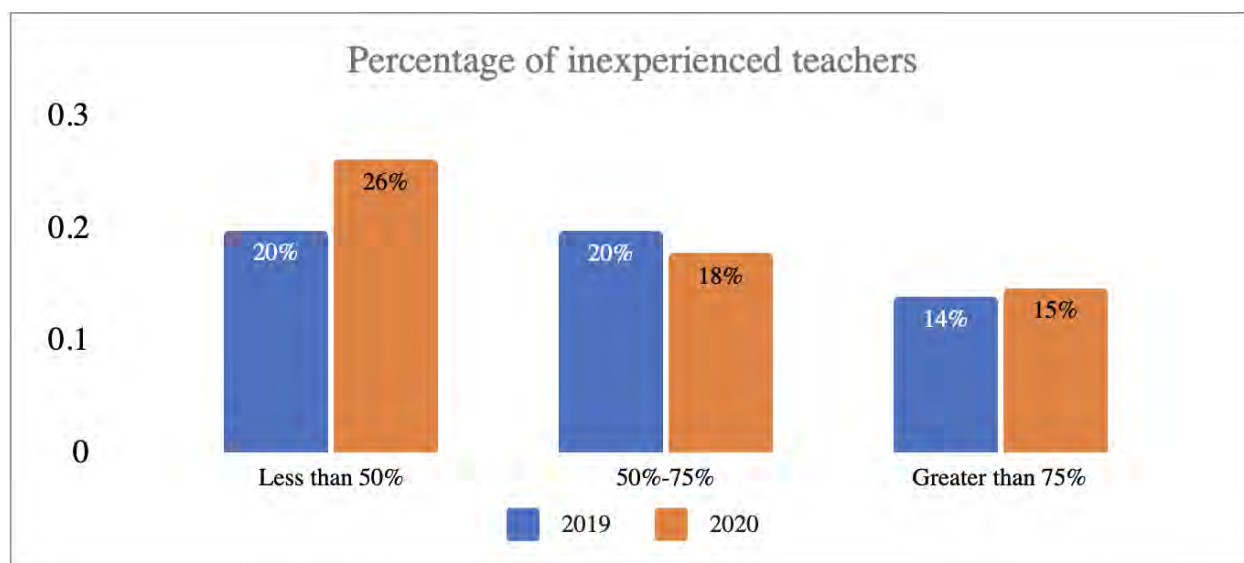
Table 4.2.4A: Certified Teachers

Percentage of Teachers with certificate	2019	2020	Average
Less than 50%	63%	74%	68%
50%-75%	75%	81%	78%
Greater than 75%	90%	91%	91%

Chart 4.2.4A: Certified Teachers**Table 4.2.4B: Inexperienced Teachers**

Percentage of inexperienced teachers	2019	2020	Average
Less than 50%	20%	26%	23%
50%-75%	20%	18%	19%
Greater than 75%	14%	15%	14%

Chart 4.2.4B: Inexperienced Teachers



4.2.5 Principal Findings

The study presents a comprehensive analysis, demonstrating a significant relationship between funding, resources, and academic achievement, particularly in terms of graduation rates. The results highlight improvements in academic achievement, evidenced by an increased average graduation rate and fewer underperforming schools. A substantial number of students are in schools with graduation rates above 75%. This indicates a more educational environment for students. There is also a rise in per-pupil spending in schools which have higher graduation rates, suggesting a link between financial resources and academic success, even though the increase in spending is limited in scale. Moreover, schools achieving higher graduation rates generally employ a larger proportion of certified and experienced teachers, reinforcing the value of qualified educators. It is important to note that teacher experience and certification are also linked to higher funding due to the associated costs of higher salaries. This indicates that investment in quality teaching staff is a direct outcome of increased funding. It is a key factor in enhancing student achievement and graduation rates.

In conclusion, the findings showcase that schools with increased funding tend to have higher graduation rates. This correlation suggests that financial resources play a crucial role in educational outcomes. Analyzing a broad range of schools and districts was a critical initial step as it provided a comprehensive framework to assess any overarching trends. This approach ensured a more robust comparison before focusing on specific school districts, thereby minimizing potential errors and biases in the analysis.

4.3 Jericho vs Hempstead School Districts

4.3.1 Segregated Demographic Data Reflects Challenges in Equity

After reviewing the demographic composition of both school districts, it is clear that both districts serve contrasting racial/ethnic communities. In both settings, we can see the lack of diversity. The enrollment of each district is directly related to the demographic of those living in the area, even though they are mere minutes apart from each other. Asian or Native Hawaiian/Other Pacific Islander (60%) and White (34%) students are overwhelmingly overrepresented in this district. In contrast, they comprise only 3% combined in Hempstead UFSD. Hempstead UFSD serves a majorly Latino or Hispanic demographic (76%), followed by Black or African American (21%).

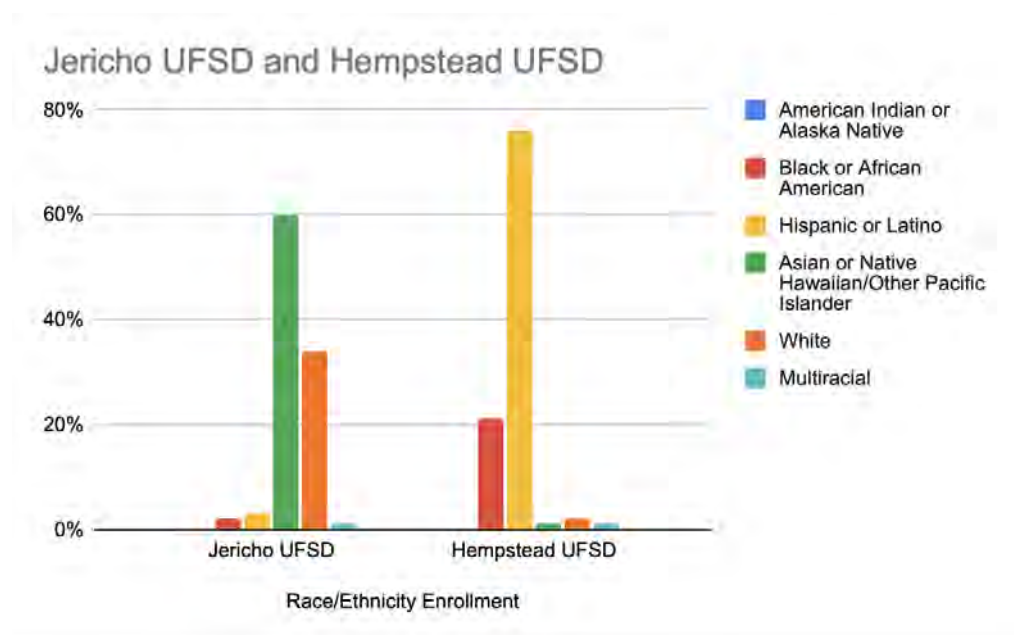
Through the non race/ethnicity based demographic data, we can see the socioeconomic demographic's inequity is visible in the review. Hempstead UFSD reflects a larger community of economically disadvantaged students (68%). Meanwhile, Jericho UFSD's enrollment of economically disadvantaged students reflects 16%. Hempstead UFSD also has a larger percentage of English Language Learners (40%) compared to Jericho UFSD (6%). Both school districts have

a comparable demographic of students with disabilities: Jericho UFSD (12%) vs. Hempstead UFSD (11%).

Based on the demographically segregated assessment, a pattern of one district being more in need than the others can be clearly recognized. In particular, it is clear from reviewing data from Hempstead Union Free School District (UFSD), this district has a greater variety of challenges such as language and economic barriers that were previously mentioned. This apparent difference highlights how much more important it is for Hempstead UFSD to handle equity-related issues because their demands are far greater than those of Jericho. Therefore, these pressing demands can have observable effects on their rates of academic achievement. This further emphasizes the need to resolve inequities to ensure fair educational opportunities in the area in comparison to Jericho, which will require increased resource allocation and a strong commitment to meeting the needs of the students with those resources— both of which are dependent on funding.

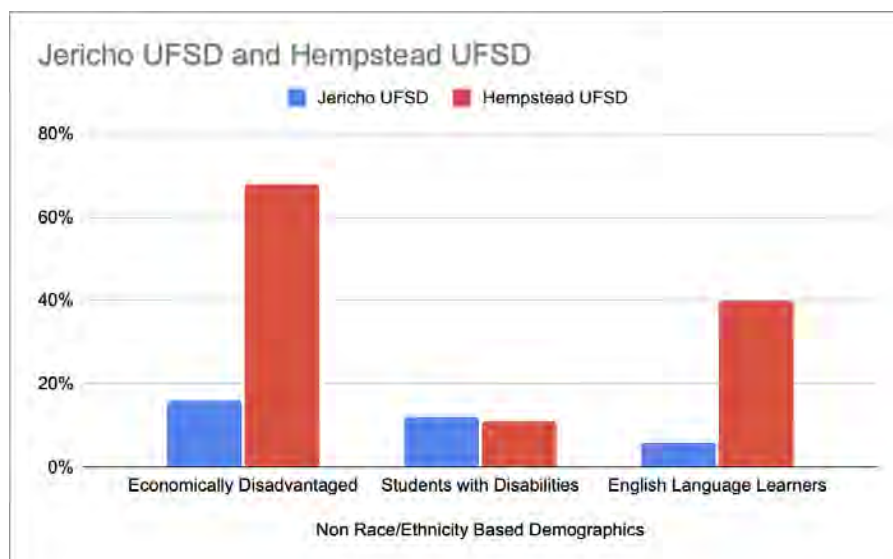
Table 4.3.1A: Racial/Ethnic Demographic Comparison

Race/Ethnicity Enrollment	Jericho UFSD	Hempstead UFSD
American Indian or Alaska Native	0%	0%
Black or African American	2%	21%
Hispanic or Latino	3%	76%
Asian or Native Hawaiian/Other Pacific Islander	60%	1%
White	34%	2%
Multiracial	1%	1%

Chart 4.3.1A: Racial/Ethnic Demographic Comparison**Table 4.3.1B: Non Racial/Ethnic Based Demographic Comparison**

Non Race/Ethnicity Based Demographics	Jericho UFSD	Hempstead UFSD
Economically Disadvantaged	16%	68%
Students with Disabilities	12%	11%
English Language Learners	6%	40%

Chart 4.3.1B: Non Racial/Ethnic Based Demographic Comparison



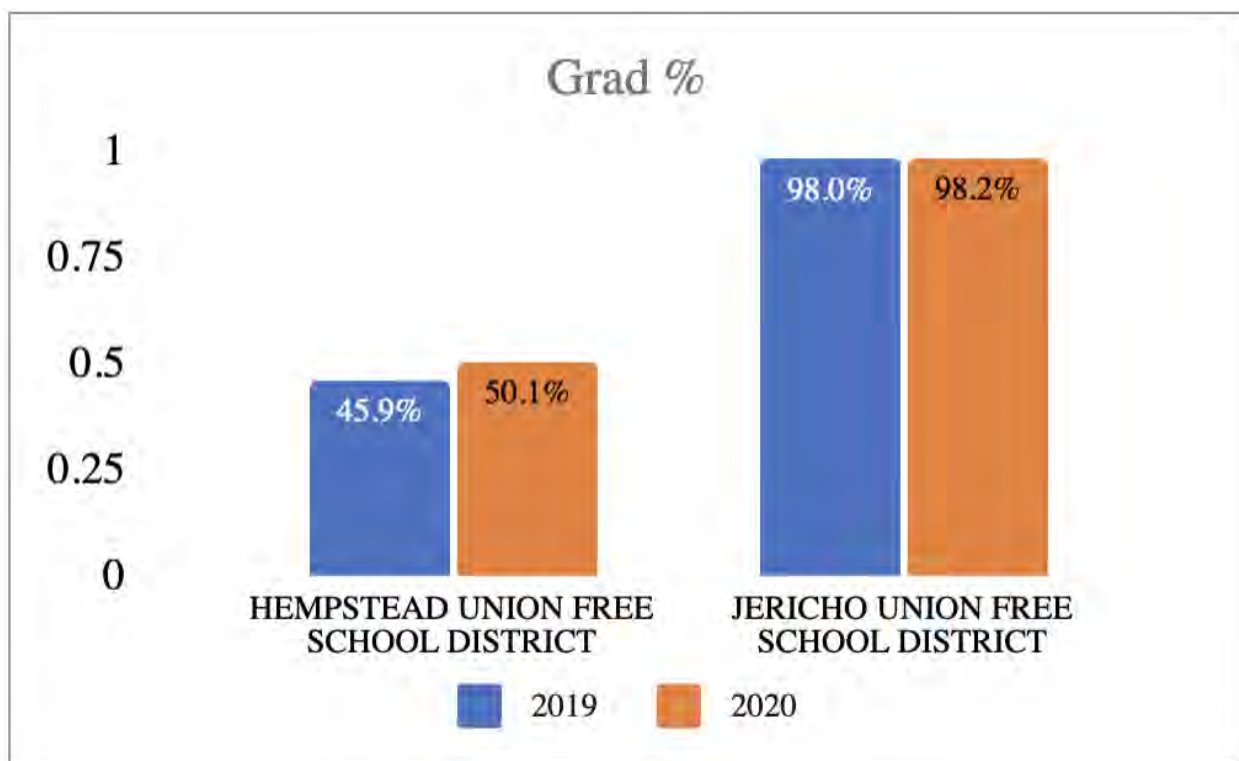
4.3.2 Graduation Percentage

The most important finding from the data is that, in comparison to 2019, the Hempstead Union Free School District (UFSD) saw an important rise in their graduation rate in 2020. The result was a 9% increase in the graduation rate, from 45.9% to 50.1%. The graduation rate within the Jericho Union Free School District, on the other hand, increased slightly from 98.0% in 2019 to 98.2% in 2020, indicating a rise of 0%. This suggests that the Hempstead UFSD's performance has significantly improved over the year.

Table 4.3.2: Graduation Percentage Change

Grad %	2019	2020	Growth
Hempstead Union Free School District	45.9%	50.1%	9%
Jericho Union Free School District	98.0%	98.2%	0%

Chart 4.3.2: Graduation Percentage Change



4.3.3 Per Pupil Funding

The data presented indicates a difference in the per-pupil costs for the 2019 and 2020 school years between Hempstead Union Free School District (UFSD) and Jericho UFSD. Per-student costs in Hempstead UFSD increased by 0.6%, from \$21,363 to \$21,490. This represents a slight increase in spending. This slight increase in funding may lead to improvements in educational outcomes, such as higher graduation rates. However, the effectiveness of this increase may depend on multiple variables, including how the additional funds are utilized.

In contrast, Jericho UFSD experienced a 1.2% decrease in per-pupil spending, with costs decreasing from \$33,753 to \$33,338. Even with this decrease, Jericho's per-pupil spending still far exceeded Hempstead's, with a figure of \$33,338 in 2020 vs \$21,490 in Hempstead. This disparity

points to an important gap in the financial support that each district has access to, which may have an impact on educational quality and student performance.

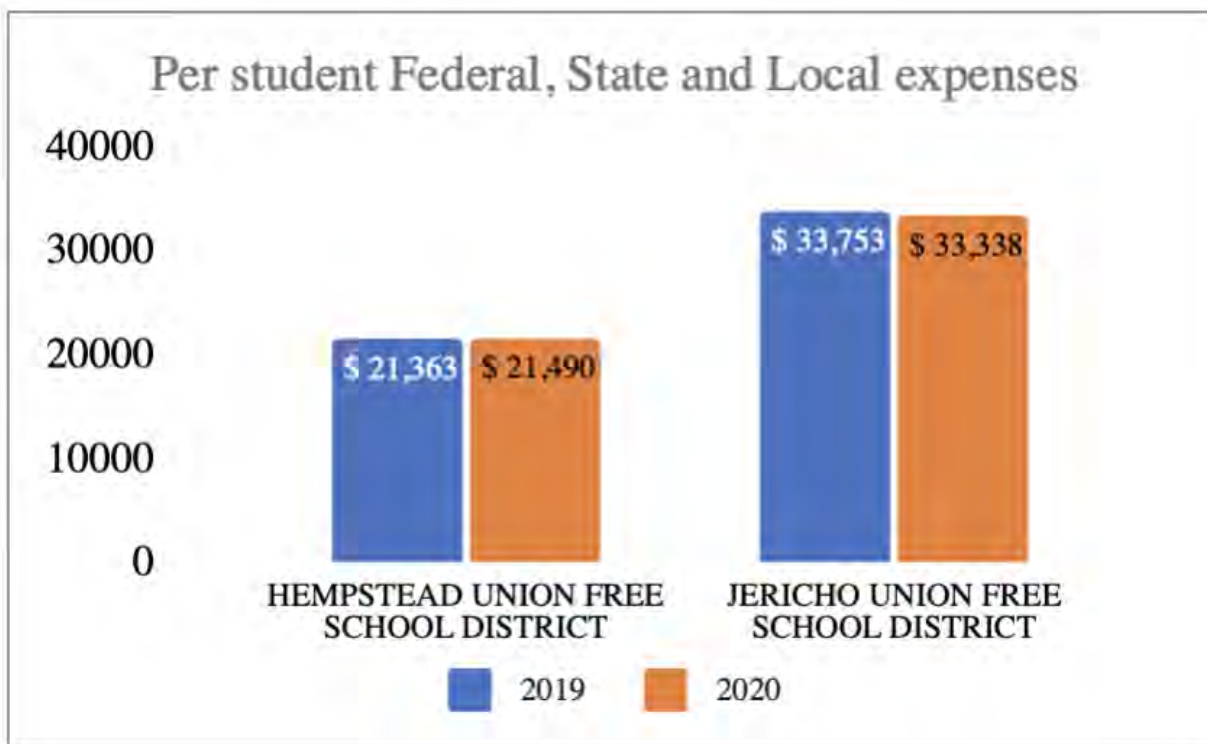
It's essential to note that higher spending does not automatically equate to better educational outcomes. The effectiveness of educational expenditures is also significantly influenced by various contextual factors, student socioeconomic backgrounds, and spending efficiency. Further details on cash distribution, student performance improvements, and other educational reforms or initiatives implemented in these districts would help understand the entire impact of these financial adjustments.

In summary, while Hempstead UFSD's increase in spending might indicate potential improvements in education, the actual impact is contingent on multiple elements beyond just the funding.

Table 4.3.3: Per Pupil Funding

Per student Federal, State and Local expenses	2019	2020	Growth
Hempstead Union Free School District	\$ 21,363	\$ 21,490	0.6%
Jericho Union Free School District	\$ 33,753	\$ 33,338	-1.2%

Chart 4.3.3: Per Pupil Funding



4.3.4 Percentage of Certified & Inexperienced Teachers

The data comparing the percentage of inexperienced teachers between Hempstead Union Free School District (UFSD) and Jericho UFSD over the years 2019 and 2020 provides insightful trends. When comparing the two districts, Hempstead has a higher percentage of inexperienced teachers compared to Jericho. This further signals gaps between the two districts.

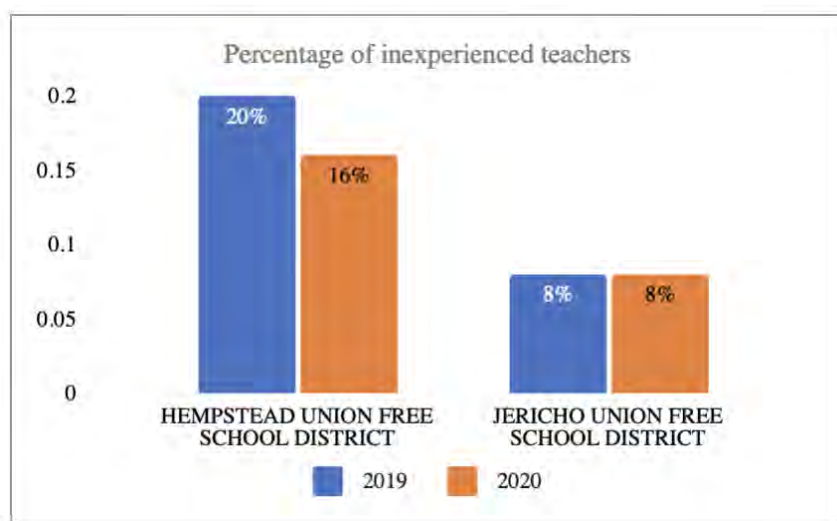
However, Hempstead UFSD had a decrease of inexperienced teachers, dropping from 20% in 2019 to 16% in 2020. This 20% decline suggests a significant shift towards a more experienced teaching workforce. The decrease of inexperienced teachers could be beneficial for the district. In contrast, Jericho UFSD showed no change in the percentage of inexperienced teachers, maintaining a steady rate of 8% in both years. This consistency indicates that Jericho UFSD has a stable and experienced teaching staff.

In conclusion, the high number of inexperienced teachers in Hempstead UFSD during 2019 and the subsequent decrease in 2020 highlights the district's efforts to enhance teaching quality. Meanwhile, Jericho's consistent rate suggests a continuous emphasis on experienced teaching staff.

Table 4.3.4: Percentage of Inexperienced Teachers

Percentage of Inexperienced Teachers	2019	2020	Growth
Hempstead Union Free School District	20%	16%	-20.0%
Jericho Union Free School District	8%	8%	0.0%

Chart 4.3.4: Percentage of Inexperienced Teachers



4.3.5 Key Results

The analysis of Hempstead and Jericho school districts reveals a clear connection between funding, resources, and academic success. Jericho, with higher funding levels, consistently demonstrates high academic success, as evidenced by stable graduation rates and a low percentage of inexperienced teachers. This suggests that ample funding and resources contribute significantly to

educational achievements. Hempstead, on the other hand, with relatively lower funding, has faced more challenges. However, its recent increase in per-student spending and efforts to reduce the number of inexperienced teachers indicate a move towards improving educational outcomes. This trend highlights the importance of adequate funding and resources, especially in districts serving diverse and economically disadvantaged populations, in fostering academic success.

The correlation between increased funding access and higher academic achievement, observed in the study of 1,845 schools and districts, is mirrored in these research findings. In both cases, a modest rise in educational resources has been linked to improved achievement rates. This highlights that even small increases in funding, or reductions in less effective resources such as inexperienced or non-certified teachers, have translated into higher academic achievement. It also suggests that strategic investment, even if modest, in enhancing the quality of teaching staff or providing better educational tools, can lead to substantial improvements in student performance. This insight is critical for educational policy and resource allocation, demonstrating that focused and thoughtful improvements can yield meaningful outcomes in the academic sphere.

Chapter V

Discussion and Conclusion

5.1 Discussion

The findings of this research are crucial as they draw attention to a relationship between funding disparities on academic achievement within different socio-economic contexts. By highlighting the contrasting outcomes between the well-funded Jericho district and the less-resourced Hempstead district, the study stresses the vital role of adequate financial support in educational success and equity. These insights are invaluable for policymakers and educators, stressing the need for equitable resource allocation to ensure all students, regardless of their district's economic status, have access to quality education. This research not only contributes to the understanding of educational equity but also suggests a pathway for practical reforms to bridge the academic achievement gap.

This research delves into the intricate interplay between educational funding and academic achievement, exploring funding sources at federal, state, and local levels. It scrutinizes per-pupil spending data and factors in teacher certification and experience, which have direct ties to funding and academic outcomes. The study begins by analyzing multiple schools and districts to establish a broader understanding of the relationship between funding and academic achievement. Subsequently, it narrows its focus to conduct a detailed investigation within the Jericho and Hempstead school districts.

5.1.1 Correlation Between Funding and Academic Achievement:

This research establishes a significant connection between educational funding and academic achievement. In Jericho, with higher funding levels, there is a notable pattern of stable graduation rates. In contrast, Hempstead, with lower funding, has shown challenges but improvements are evident with the recent increase in per-pupil spending. Furthermore, across the broader study of 1,845 schools and districts, even a modest rise in resources correlated with improved academic outcomes, categorized by higher graduation rates. These findings, derived from both the general study and the specific case studies of Jericho and Hempstead, highlight the tangible impact of financial investment on educational success.

5.1.2 Role of Qualified Educators:

The research indicates the importance of employing qualified and experienced teaching staff. In the case of Jericho, where there is a higher proportion of certified and experienced teachers, stable high graduation rates are observed. Not too far away, in Hempstead, with a recent focus on reducing the number of inexperienced teachers, there is a promising sign of improvement of graduation rates as well. This pattern is exemplified in the broader analysis of 1,845 schools and districts as well. In this study, schools with higher graduation rates consistently employ more qualified teachers. These findings from both the macro-level study and the focused analysis of Jericho and Hempstead suggest that the quality of teaching staff is a critical factor in enhancing student academic achievement, and a critical factor in educational spending.

5.1.3 Impact of Funding on Diverse and Economically Disadvantaged Populations:

The demographic analysis of the Jericho and Hempstead school districts revealed significant contrasts in racial, ethnic, and socio-economic compositions, which are reflected in their

educational outcomes. Hempstead, serving a predominantly Latino or Hispanic demographic and a higher percentage of economically disadvantaged students, faces more challenges. Jericho, which has a higher representation of Asian or Native Hawaiian/Other Pacific Islander and White students, and a lower percentage of economically disadvantaged students, severely contrasted from Hempstead. This disparity highlights the critical need for equitable funding and resources. Overall, districts like Hempstead, face many additional challenges such as language barriers and economic disadvantages.

Incorporating elements from the entire study, the data from the 1,845 schools and districts, along with the specific cases of Jericho and Hempstead, we can infer that there are solutions for meeting the needs of districts like Hempstead. Increasing spending to address disparities, such as per-pupil funding and the recruitment of high-quality teachers, can lead to educational equity. This approach, as demonstrated in Jericho's higher success rates and Hempstead's improvements following increased funding, highlights the effectiveness of targeted financial investments in bridging the gap in educational resources and outcomes.

5.2 Conclusion

While this research confirmed some anticipated trends, it also unveiled several unexpected aspects. The extent of segregation in districts, and the disparity in non-certified and inexperienced teachers, were initially unanticipated factors. Conducting this study during the COVID-19 pandemic might have influenced the outcomes. Although analyzing data from a broad spectrum of 1,845 schools and districts was insightful, a more extensive dataset covering several years and more individuals from Jericho and Hempstead would provide deeper understanding. This research journey has been enlightening, particularly in understanding the challenges of conducting research in a highly

connected, yet disparate world. The impact of inequities, such as WiFi access, became significantly apparent during the pandemic, affecting both the research and the broader educational context.

5.3 Recommendations

5.3.1 Recommendation For School District Administrators and Principals:

- Invest in hiring and retaining qualified teachers, focusing on teacher experience and certification to improve academic outcomes.
- Concentrate on recruiting educators from specialized teaching programs designed to meet specific needs, such as those provided by Urban Teacher or City Year. These programs often prepare teachers for the unique challenges and opportunities in urban educational settings.

5.3.2 Recommendation For Local and State Governments:

- Increase equitable funding across school districts by advocating for legislative changes at the state and/or federal level that promote equitable funding for schools and address funding disparities.
- Provide supplemental funding for schools with a high concentration of at-risk students to support additional programs and services.
- Increase teacher salaries and offer financial incentives for educators who work in high-need districts or teach high-need subjects.

5.3.3 Recommendation To Federal Government:

- Increase federal funding for education programs, such as Title I grants, to provide additional support to schools in high-poverty areas.

- Allocate funds for teacher professional development, particularly in high-need subjects, underserved schools, districts, and communities.

5.3.4 Recommendation To Federal Policy Makers:

- Implement policy reforms to address disparities in educational funding, ensuring fair resource distribution among socio-economically diverse districts.
- Develop initiatives to bridge the digital divide, particularly in underserved communities, to ensure equal access to educational technology and resources.

5.3.5 For Educational Researchers and Analysts:

- Conduct long-term studies to assess the impact of funding and resource allocation on student achievement over extended periods.
- Conduct long-term studies to assess the impact of resource allocation on student achievement over extended periods.

5.3.6 For Community Leaders and Non-Profit Organizations:

- Engage in community support programs for schools, especially in economically disadvantaged areas, to supplement educational resources and involvement.
- Involve stakeholders from the local community, including parents, educators, community leaders, and local government officials, to form a task force or committee responsible for designing the funding mechanism.

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Appendices

Appendix A: Consent Form

Participant Consent Form for Survey Data Collection

Relationship Between Academic Achievement and Government Allocated Resources:
Jericho vs. Hempstead

The purpose of the study: I understand that the purpose of this study is to understand more about **academic funding** and **academic achievement** within the school districts of **Jericho** and **Hempstead**. This is not an experiment. The researcher

will not attempt to change the manner in which this data is presented. I agree to and understand the following as per this consent form:

1. This survey may provide information to the researcher including socio-economic demographics, racial/ethnic demographics, academic achievement information, and resources available to all within the school district.
2. I may ask for clarification and information about the study upon request.
3. I can accept or decline this invitation without repercussions and still participate in other parts of the study.

Furthermore, I understand that:

1. Participation is strictly voluntary. I can refuse to answer any questions that I do not wish to answer.
2. The information gathered will not affect grades or any other evaluations made by the teacher of this course.
3. The information gathered will be confidential. Participant names or any other identifying factors will be removed from any report or publication of the data or results.
4. I may opt out of the project at any time and for any reason I deem necessary with no repercussions if I give written notice to the researcher.
5. Participation in this study will not directly provide any benefits to me.
6. Declining participation in this study will not cause adverse actions to be taken against me.

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I have been given a copy of this consent form.

Participant Name PRINTED _____

Participant Signature _____ Date _____

If I do NOT wish to participate, I will not return this form. No adverse actions will be taken against me if I choose this option.

Researcher's Signature _____ Date _____

If you have any questions or concerns, please contact:

Sayra Rafiuzzaman, 347-934-1481, sayra.rafi@gmail.com

Appendix B: Survey Questions for Hempstead Union Free School District

Hempstead Union Free School District

Personal Information

- I am a _____.
 - Teacher
 - Alumni
- I am __ years old.
- I have been a part of this school district for ____ years.
 - 0-5
 - 5-10
 - 10-15

- I identify as:
 - White
 - Black
 - Asian
 - Latino/Hispanic
 - Pacific Islander
 - Native American
 - Other/Mixed Race:
- For teachers: the majority of my students are-
 - White
 - Black
 - Asian
 - Latino/Hispanic
 - Pacific Islander
 - Native American
 - Other/Mixed Race:

Academic Resources

- My school has the following resources: (Check all that apply)
 - Textbooks in good condition
 - Adequate technology access (ie. computers or laptops for students in each classroom)
 - Software (ie. Microsoft Office)
 - Gym
 - Library
- I am or know a student who could not complete a class activity/assignment due to the lack of technology or WiFi access.
 - Yes
 - No
 - Maybe
- Our schools have access to additional support for those who need it (ie. tutoring, mentorship, etc.)
 - Yes
 - No
 - Maybe
- There is access to Regents study programs for anyone who requires it.
 - Yes
 - No
 - Maybe
- Schools have interesting courses such as photography, coding, performing arts, etc.
 - Yes
 - No
 - Maybe

Non-Academic Resources

- My school has the following resources: (Check all that apply)
 - Health office/Nurse

- Football field
 - Track field
 - Basketball court
 - Softball/Baseball field
 - Parking Lot
 - N/A
 - Other
 - If you checked "other" to the last question, please specify: _____
 - Our schools help students prepare for the real world through non-academic related means (ie. providing information on acquiring their driving permits or licenses). (Open-ended)
-
-

- At the high school level, is there adequate parking for students who drive to school?
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- Do schools host events such as fundraisers, dances, or sports days?
 - Yes
 - No
 - Maybe
- Teachers: Check all that apply
 - Helpful and responsive to students
 - Provide extra support when needed
 - Not enthusiastic about topic being taught
 - Not accessible outside of class time
- Instruction & Assessment Methods (Check all that apply)
 - Classes are mostly lecture-based
 - Teachers use computers/technology as aids in class
 - Case studies, role playing, or simulations were used in class
 - Term Papers and Exams
 - Group based projects
 - Laboratory exercises for important topics
- My school communicates with guardians/parents through:
 - Phone calls home when urgent messages/issues only
 - Regular phone calls home
 - Text messages
 - School newsletters
 - Online networks or emails
 - Parent Teacher Conference
 - Information sent home with student
 - School does not communicate unless absolutely necessary

In my experience... (Strongly Disagree, Disagree, neutral, agree, Strongly Agree)

- The quality of resources at school needs some improvement

- Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- Students have to wait to get help from an adult in school
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- Learning spaces feel crowded
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- The school's technology needs to be updated
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- The school's facilities need repairs
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- It is difficult for students to get extra support if they need it
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- The school should hire more specialists to support students
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- Teachers spend their own money on classrooms
 - Yes
 - No
 - Maybe
- Additional resources are required to support learning

- Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- School struggles due to a lack of resources
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree

Appendix C: Survey Questions for Jericho Union Free School District

Jericho Union Free School District

Personal Information

- I am a _____.
 - Teacher
 - Alumni
- I am __ years old.
- I have been a part of this school district for ____ years.
 - 0-5
 - 5-10
 - 10-15
- I identify as:
 - White
 - Black
 - Asian
 - Latino/Hispanic
 - Pacific Islander
 - Native American
 - Other/Mixed Race:
- For teachers: the majority of my students are-
 - White
 - Black
 - Asian
 - Latino/Hispanic
 - Pacific Islander
 - Native American
 - Other/Mixed Race:

Academic Resources

- My school has the following resources: (Check all that apply)
 - Textbooks in good condition
 - Adequate technology access (ie. computers or laptops for students in each classroom)
 - Software (ie. Microsoft Office)
 - Gym
 - Library
- I am or know a student who could not complete a class activity/assignment due to the lack of technology or WiFi access.
 - Yes
 - No
 - Maybe
- Our schools have access to additional support for those who need it (ie. tutoring, mentorship, etc.)
 - Yes

- No
- Maybe
- There is access to Regents study programs for anyone who requires it.
 - Yes
 - No
 - Maybe
- Schools have interesting courses such as photography, coding, performing arts, etc.
 - Yes
 - No
 - Maybe

Non-Academic Resources

- My school has the following resources: (Check all that apply)
 - Health office/Nurse
 - Football field
 - Track field
 - Basketball court
 - Softball/Baseball field
 - Parking Lot
 - N/A
 - Other
 - If you checked "other" to the last question, please specify: _____
 - Our schools help students prepare for the real world through non-academic related means (ie. providing information on acquiring their driving permits or licenses). (Open-ended)
-
-

-
- At the high school level, is there adequate parking for students who drive to school?
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
 - Do schools host events such as fundraisers, dances, or sports days?
 - Yes
 - No
 - Maybe
 - Teachers: Check all that apply
 - Helpful and responsive to students
 - Provide extra support when needed
 - Not enthusiastic about topic being taught
 - Not accessible outside of class time
 - Instruction & Assessment Methods (Check all that apply)
 - Classes are mostly lecture-based
 - Teachers use computers/technology as aids in class
 - Case studies, role playing, or simulations were used in class
 - Term Papers and Exams

- Group based projects
- Laboratory exercises for important topics
- My school communicates with guardians/parents through:
 - Phone calls home when urgent messages/issues only
 - Regular phone calls home
 - Text messages
 - School newsletters
 - Online networks or emails
 - Parent Teacher Conference
 - Information sent home with student
 - School does not communicate unless absolutely necessary

In my experience... (Strongly Disagree, Disagree, neutral, agree, Strongly Agree)

- The quality of resources at school needs some improvement
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- Students have to wait to get help from an adult in school
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- Learning spaces feel crowded
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- The school's technology needs to be updated
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- The school's facilities need repairs
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- It is difficult for students to get extra support if they need it
 - Strongly Disagree
 - Disagree
 - Neutral

- Agree
 - Strongly Agree
- The school should hire more specialists to support students
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- Teachers spend their own money on classrooms
 - Yes
 - No
 - Maybe
- Additional resources are required to support learning
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree
- School struggles due to a lack of resources
 - Strongly Disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly Agree