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# The Influence of Preschool Funding on High School Graduation Rates and Economic Status in New Jersey

Theresa Roessner  
*Walden University*

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# Walden University

College of Health Sciences and Public Policy

This is to certify that the doctoral dissertation by

Theresa Ann Roessner

has been found to be complete and satisfactory in all respects,  
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Review Committee

Dr. Donna Christy, Committee Chairperson,  
Public Policy and Administration Faculty

Dr. Olivia Yu, Committee Member,  
Public Policy and Administration Faculty

Chief Academic Officer and Provost  
Sue Subocz, Ph.D.

Walden University  
2024

Abstract

The Influence of Preschool Funding on High School Graduation Rates  
and Economic Status in New Jersey

by

Theresa A. Roessner

MA, New York University, 2002

BA, Kean University, 1999

Dissertation Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy  
Public Policy and Administration

Walden University

May 2024

## Abstract

Lack of student success and graduation rates concern legislators in New Jersey. Funding to increase student success and graduation rates is primarily focused on early childhood education with less urgency on the students as they progress into high school. This quantitative correlational study aimed to determine the relationship between the Abbott/Student Development Authority Legislation and student success and graduation rates throughout New Jersey. The significance of the relationship is that it may inform an understanding of how legislators can better distribute funds to provide necessary programs to promote student success and reduce high dropout rates. The theoretical framework for this study was path dependency theory. This was a nonexperimental quantitative study using correlational methods to examine the relationship between the funded Abbott legislation programs and their graduation rates and the nonfunded school districts and their graduation rates. This study used statistical analyses to establish and describe the relationship between funding applied to preschool programs as required and graduation rates. The analysis demonstrated the lack of an increase in high school graduation rates over the 4-year cohort from 2012-2016. The implications for positive social change include informing policymakers and the state department of education of the Abbott/Student Development Authority legislation's successes or failures in contributing to students' graduation and success throughout the state.

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## Dedication

This dissertation is dedicated to my parents and my son. Your unwavering encouragement and steadfast support have been the guiding forces behind the completion of this dissertation. In moments of doubt, your playful manner and humorous way kept me laughing, reminding me not to take any single disappointment too seriously and also of the importance of perseverance and dedication.

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## Chapter 1: Introduction to the Study

### **Introduction**

There is a strong push toward early childhood education (ECE) as a foundation for student success; ECE has gained support over the past decades to indicate future success (Brown & Wright, 2011; McCoy et al., 2017; Temple & Reynolds, 2015). The ultimate student success can be identified as high school graduation to begin a successful life in future education or employment. The School Development Authority (SDA; formerly the Abbott legislation) is the groundwork for early childhood equity in education across the 584 public school districts in New Jersey. Funding 31 disadvantaged school districts will improve infrastructure and ECE (New Jersey SDA, n.d.). Walker (2004) indicated that the State of New Jersey is accountable for providing a fair and equitable education to all students of the state regardless of the income levels of the community, starting with equal opportunities for ECE. This study analyzed the relationship between state funding, specifically SDA funding, and the graduation rates of all areas of the state for a particular 4-year cohort. This study highlighted that the successes of SDA funding do not expand into long-term outcomes. As stated above, graduating from high school leads to more successful futures, educationally or in employment goals.

### **Background**

The SDA in New Jersey is equivalent to universal prekindergarten or preschool for all by providing additional funding to 31 school districts for free preschool for all students. Walker (2004) provided an overview of the Abbott legislation and how it affected the initial 30 most impoverished school districts, which have since increased to

31 districts in New Jersey. Walker further described the political forces that work with or impede the legislation. Walker indicated that the state's funding system needs to be improved in appropriately allocating funds to the most disadvantaged areas based on the poverty level. Additionally, Walker delineated the impact of funding early childhood programs in the lowest income areas instead of continuing to support the more affluent districts in whole-school reform and that the reform is specific to ECE. The purpose of the funding further acknowledges that money is poured into early childhood programs while less programming is available in New Jersey public schools for older youth. The New Jersey constitution indicates that the DOE is accountable for ensuring that each child receives a fair and equitable education per the Abbott legislation (Gruber, 2012).

Walker et al. (2000) discussed the ability of the state to allow school districts in New Jersey to have more say in the management of their schools. This legislation gives more power to the New Jersey public schools participants to decide where funding can be best distributed to help all students throughout their formative years in all districts. State funding is specifically administered for early childhood programs and use in facilities.

### **Problem Statement**

Low high school graduation rates in New Jersey result in less productive citizens at higher costs for the community, lower income employment, more health concerns, and a higher incarcerated population (Lee-St. John et al., 2018 ). Increased SDA funds are devoted to preschool, based on studies that imply that quality preschool contributes to increased successful outcomes in disadvantaged communities (Pendola et al., 2022). Impoverished communities throughout the state are given additional funds to provide quality preschool programs to meet the goals of the New Jersey state constitution

(Gruber, 2012). The goals of the New Jersey state constitution consist of providing a thorough and efficient free education for all children ages 5 to 18. New Jersey has provided these same funds for the past 38 years with the same intent on success in disadvantaged communities (Gruber, 2012). The problem is that if the funding is distributed appropriately, the graduation rates should increase in all communities. The state is currently focused on legislation that would create a task force to develop a study of high school dropout rates, specifically in the inner cities (Nieto-Munoz, 2022). This would indicate that New Jersey legislators recognize that this problem is ongoing and the path of dependence on increasing funding in early child care is not the only solution to the problem of increased dropouts in underprivileged communities.

The State of New Jersey has funding for quality ECE in the whole school reform legislation. These districts are known as SDA Districts, formerly known as Abbott Districts. They were created in 1985 due to a 1981 case, *Abbott v. Burke*, where the ruling stated that education in poor communities in New Jersey was constitutionally substandard (Education Law Center, n.d.). The court ordered funding for those districts to match the education and success of the more economically advantaged communities. The Abbott District system was replaced in 2007 by the New Jersey SDA.

As New Jersey continues to provide additional funds for quality preschool in underprivileged communities, high school dropouts and their effects on the communities may grow. Some issues that arise after preschool are not addressed because students of all ages have educational needs that funding could address. This demonstrates the path dependence of the SDA legislation and how the communities continue to suffer the long-term impacts of the cycle of poverty or development trap, which is also path dependence

(Castro Teixeira & Cosme da Costa Vieira, 2016). Castro Teixeira and Cosme da Costa Vieira (2016) indicated that there should be better education and training to help end the poverty trap. This should include funding for high school graduation requirements. This research identified whether this funding decreased high school dropout rates, which would be the ultimate indicator of success for the students and the communities of New Jersey.

### **Purpose**

#### **Practical Problem Statement**

This quantitative correlational study compared the relationship between state-funded SDA Districts' and non-SDA Districts' high school graduation rates and community economic status for a 4-year cohort. The variables of interest in this study were the state funding for SDA and non-SDA schools, the graduation rates from 2012-2016, and the economic status of the SDA and non-SDA communities. The significance of the relationship between funding and graduation rates was that it informed an understanding of how legislators address the problem of high dropout rates and for legislators to understand that continued funding of particular programs may or may not be creating better communities, which should be reviewed more frequently. This study was conducted to determine whether preschool funding addresses the social problem of high school dropouts, creating prosperous economies in all communities in New Jersey.

### **Questions**

The following research questions and hypotheses guided this study:

RQ1: Is there a difference in graduation rates between SDA and non-SDA districts during a 4-year cohort in districts that receive SDA funding?

*H*<sub>0</sub>: There is no difference between SDA and non-SDA districts' high school graduation rates in New Jersey during a 4-year cohort.

*H*<sub>1</sub>: There is a difference between SDA and non-SDA districts' high school graduation rates in New Jersey during a 4-year cohort.

RQ2: Did SDA funding impact poverty rates over 40 years in New Jersey?

*H*<sub>0</sub>: SDA funding did not impact poverty rates over 40 years in New Jersey.

*H*<sub>1</sub>: SDA funding did impact poverty rates over 40 years in New Jersey.

### **Theoretical Framework**

This study was based on the path dependency theory (PDT). This theory explains that the outcomes of a particular policy are based on the history of the issue and the proposed solutions to that social problem (Mahoney, 2000; Zhang, 2017). Economists originated the idea of path dependency in terms of events compounding to determine the future of all like events because change after extended periods is unlikely (David, 2007; Pierson, 2000; Zhang, 2017). PDT has predominantly been an economic theory applied to sociology (David, 2007; Mahoney, 2000) and public policy (Torfing, 2009). The history of path dependence began in economics, and it has been used to describe matters in social and political sciences (David, 2007). Path dependency has spanned different fields with historical backgrounds in many areas of study. A change will occur based on historical data, such as in the technology of renewable energy and emissions, as described by Raineau (2022) or the evolution of the rights of persons with disabilities and particular

education standards (Powell et al., 2016). In that case, the PDT is suitable for public policy research.

The funding for ECE in New Jersey's most economically disadvantaged communities has been a consistent initiative for over 40 years since its inception in 1980. Despite the lack of conclusive evidence on the long-term benefits of this particular preschool education, this funding has been maintained and even increased over time. This phenomenon can be explained through the PDT, which posits that past decisions and actions can shape current policies and make them resistant to change. In this case, the consistent allocation of funding for preschool education has become a standard policy, which is difficult to reverse, regardless of the success or lack thereof of the program. Therefore, while the efficacy of this policy remains a topic of debate, the PDT suggests that legislators are likely to continue to fund preschool education in economically disadvantaged communities to promote the overall success of these students.

Based on the PDT, preschool is essential to a student's future success. If the department of education ensures that marginalized areas where children do not have preschool are provided the funding to offer preschool for all, these lower income areas should have similar success rates to the entire student population of the state. PDT is a lens to look at the history of ECE. It does not take into account the current conditions of society or what can be done to increase graduation rates based on the technology and society of today.

PDT has been used in different areas of research, as mentioned above. However, PDT is relevant in public policy and education as depicted in the history of Title I, a

policy created in 1965 by Lyndon Johnson, which has evolved in an effort to create a better education for all children in disadvantaged communities (Fuller & Wright, 2007). As the years go by and society and legislators continue to be entrenched in Title I and all subsequent fixes, the path dependence course has been set. PDT is relatable to my research because the funding provided by New Jersey is precisely to ensure a fair and equitable education for all students, and the preschool-for-all funding makes that goal come to fruition; however, through the continued embedding of policy into this path, legislators may not be basing the policy on the state's current circumstances. This study determined the relationship between state funding and high school graduation rates throughout New Jersey and the economic status of all communities over the policy's life through the current day.

### **Nature of the Study**

This study involved a secondary analysis of data available from the New Jersey Department of Education (NJDOE). These public data were found through the Department of Education and the U.S. Census. This study was a nonexperimental time series because the assignment of the independent variable was determined by the presence of SDA funding, which the New Jersey SDA defines. This was a quantitative study using correlational methods to examine and compare the relationship between the funded SDA programs and their graduation rates and the nonfunded school districts and their graduation rates, as well as compare the economic status of the communities with SDA-funded programs and those that do not have the additional funds. These districts were defined by the New Jersey SDA, a New Jersey school district.

No samples were selected because the data represent the total education population statistics published by New Jersey's Department of Education annually. The 2012–2016 cohort was selected to avoid any impact on the data that might have resulted from the COVID-19 pandemic.

The research design was correlational because the study examined the association between the graduation rates of the school districts receiving the SDA funds and the economic statuses of the communities. The dependent variables were the graduation rates based on the total enrollment by New Jersey district and were separated into two groups. The groups were those who received SDA funds and those who did not; second, there was no flexibility in manipulating the school districts and the communities that received the funding, which were the independent variables (O'Sullivan, 2017). The results were determined with an independent samples *t* test. Data were collected and statistically analyzed to examine the relationship strength between the previously mentioned variables.

### **Definitions**

*Economic status:* Economic status refers to the poverty estimates in the SDA communities based on census data (U.S. Census Bureau, 2020).

*Universal preschool:* Classroom specialized preschool program for all New Jersey eligible 3- and 4-year-olds (NJDOE, n.d.).

*Abbott district:* Abbott districts are the 31 school districts in New Jersey that are provided funds to ensure a thorough and efficient education. These districts were chosen by a New Jersey Supreme Court ruling that required all schools in New Jersey to ensure that all students receive an adequate and efficient education, with funding provided to

ensure equity throughout all districts in New Jersey. This funding is intended to improve preschool education and school facilities (Education Law Center, n.d.).

*School Development Authority (SDA):* SDA is a state agency in New Jersey that was created to provide funding for 31 school districts to ensure preschool education and improved school facilities, formerly known as Abbott districts (New Jersey SDA, n.d.).

*Non-SDA-funded districts:* Non-SDA-funded districts are the remaining 553 districts in New Jersey that do not receive the SDA funds.

*Cohort:* A cohort is a group of students who enter ninth grade during the same school year. In New Jersey, all first-time ninth graders are assigned to a cohort. During high school, the cohort is adjusted yearly to add verified transfers and subtract verified transfers. (NJDOE, n.d.)

## **Assumptions**

### **Theory**

The PDT leads to some assumptions that the ECE policies are with good intent to increase graduation rates and successful outcomes. The assumption is that staying on the path of funding these programs will lead to these successes, and students will graduate from high school and contribute to healthy and thriving communities.

### **Phenomenon**

The assumption I was making while doing this research was that all schools were meeting the minimum standards of their funding requirements. I also assumed that all school districts accurately reported their graduation rates. I further assumed that these data reflected all students who had stayed within one district or moved to another and would not be a data duplication. I assumed that outside environmental factors did not

significantly impact the 2012–2016 cohort as the COVID-19 pandemic would impact the 2016–2020 cohort.

There was also an assumption that graduation rates are a good guide for measuring the success of a school district. Additionally, when I completed this research, it was assumed that the funding New Jersey provided for ECE was used appropriately by the school districts and that the provided curriculum was approved.

### **Methodology**

There were also assumptions being made about the methodology. When using an independent samples *t* test, the difference between the means of two independent groups can be determined (Warner, 2008). Using this method, I tested whether there was a statistical difference in the means of the two groups because I had one continuous dependent variable and one dichotomous independent group variable where the elements were equal across both groups. It also meant that all schools receiving SDA funds had similar graduation rates; finally, it would indicate that all public schools not receiving SDA funds had similar graduation rates.

The methodology of the second research question had similar assumptions that one dependent variable was measured continuously, and the independent variables were measured as between and within factors (Warner, 2008). The assumption I made while doing this research was that all schools were meeting the minimum standards of their funding requirements. I also assumed that all school districts accurately reported their graduation rates. I further assumed that these data reflected all students who had stayed within one district or moved to another and would not be a data duplication. I assumed

that outside environmental factors would not impact the 2012–2016 cohort as the COVID-19 pandemic would impact the 2016–2020 cohort.

### **Scope and Delimitations**

High school dropouts are complex and have many causes, such as absenteeism, poor mental health, instability at home, economic instability, and poor physical health (Morgan, 2020). This research was based on reasons for dropping out of high school and how funding could affect the outcomes, completing studies successfully, and contributing to positive results for the community (Morgan, 2020). The State of New Jersey has funding for quality ECE in the whole school reform legislation. This study explicitly compared the funding and the outcomes for the students and the community. In Chapter 2, the negative impacts of dropping out are described as a social problem impacting many communities (Lynch, 2015). I used the variables of high school graduation rates and the economic statuses of the communities of New Jersey to demonstrate the impact of the funding. The specific concern was that there might be better ways to distribute funds to ensure that the funds address issues that will best impact the success rates of students in all New Jersey districts and affect the communities and their economic statuses further.

The scope of this study encompassed all New Jersey school districts and students except those who moved out of state. This population was chosen explicitly because the funding spanned over 30 years in select districts throughout the state. In this study, I compared the graduation rates of the funded districts to those of the nonfunded districts. I also compared the economic statuses of the funded districts over time to see if this funding had made an impact. The available data followed cohorts of students throughout the state to ensure that children who moved amongst districts were accounted for in the

study. This study focused on graduation rates instead of dropout rates; however, one reflects the other. The impact of the economic statuses was drawn from the census data over time.

There were delimitations to this cross-sectional study. One delimitation was that, in the case of analyzing the relationship between the SDA districts and the other school districts in the state, the study did not take into consideration other variables, such as levels of income, family structure, or the impact of the community on the student's success. Then, the dropout rates in the SDA districts might or might not have been due to using funds solely for preschool programming. This limitation was a good rationale for additional studies; however, this study was correlational and not causal. To avoid any skewing of data due to the COVID-19 pandemic, the 2012–2016 cohort was explicitly chosen. The results may need to be more adequately proven concerning whether the SDA districts are responsible for lower than usual graduation rates, but they described the association between the variables.

### **Limitations**

There are limitations to a quantitative cross-sectional study. In a study like this, there is an inability to pinpoint each dropout incident and the indicator for that student to drop out. In this study, I only compared the total statistics for each district and did not look at each instance independently. As a worker in the field for over 20 years, I, as the researcher, had beliefs about the causes of these instances. While this bias could have existed, it was more likely to be diminished when looking at the statistics and data for each district. Each district reports its data, which were analyzed based on what was reported to determine if the dropout rates were higher or lower between the funded or

nonfunded districts. This limitation may be a good rationale for additional studies; however, this study was correlational and not causal. The results may not adequately prove whether SDA funding needs to be more responsible for lower than usual graduation rates but describe the association between the variables.

### **Significance**

I conducted this study in an attempt to fill the gap in the research that links SDA funding with student success-rates measured by high school graduation rates and whether the graduation rates impact the community's well-being as measured through the economic status over time. It will enrich the knowledge associating school funding with student outcomes and community economic success. The path dependence of the funding was evaluated in terms of whether or not the 38-year span of the funding had, in the short term, created higher graduation rates in the defined districts and, in the long term, whether the communities had benefitted with better successful economic statuses.

While preschool is critical to a student's success, programs at every developmental level can contribute to a student's total academic success. The path dependence of the funding and student success was compared. In New Jersey, a significant amount of funding is provided to preschool and preschool expansion, primarily in 31 SDA districts. Legislators and fund administrators can use this study to compare the relationship between critical measures of student success, such as graduation rates in the 31 SDA districts and those in the remainder of the state of New Jersey since the inception of the Abbott Legislation in 1981 and the 2015–2016 school year. Based on research, one of the critical elements of success in poor communities is the public funding of their schools (Goertz, 1994).

## Summary

Chapter 1 addressed the current issues in New Jersey regarding the high school graduation rates and the SDA-funded districts' economic status. The SDA districts described the history of the funding and how it had continued over time. In this study, I compared graduation rates between SDA-funded districts and those that were not funded, as well as compared the economic impacts of the districts throughout the SDA districts from the legislation's inception.

The theoretical foundation of the PDT was also described as why it was chosen to advise New Jersey legislators on what has been instituted in the past. The funding may need to be revised to current standards, or funding can stagnate with outdated practices or practices that are a solution to a problem perpetuated by time.

The basis for this research was provided with the background, problem statement, purpose of the study, research questions, and hypotheses. The theoretical framework of the PDT was introduced, along with definitions of terms related to this work. I rounded out the chapter with the nature of the study and the scope, limitations, and delimitations. The assumptions about reporting and educational successes are laid out for the reader to present the significance of this study.

For Chapter 2, I completed a comprehensive literature review addressing the PDT and how it related to this study. I further examined the importance of high school graduation to communities and individuals and lower graduation rates. I demonstrated the gap in the research between preschool funding and successful outcomes in the form of high school graduation.

## Chapter 2: Literature Review

### **Introduction**

High school graduation is the focus of many programs throughout the United States, and New Jersey is no different (Nieto-Munoz, 2022). However, low high school graduation rates continue to be a problem throughout the United States (U.S. Department of Education, n.d.). A significant concern for communities is that students from economically disadvantaged communities are 2.4% more likely to drop out than those from middle-income communities and 10% more likely to drop out than those from high-income communities (Lynch, 2015). As the statistics compound, the problem is exacerbated.

The U.S. Department of Labor Employment and Training Administration (n.d.) indicated that high school graduates are 33% more likely to find a job than their counterparts and are likely to earn 40% more income than those without a high school diploma. Dropping out of high school leads to numerous disadvantages in today's society (Campbell, 2015a), such as economic disadvantages, physical health issues, lifetime earnings impacts, and more incarceration paths, which negatively impact the community with costly social price tags (Lee-St. John et al., 2018).

While graduation rates are slowly rising nationwide, with an 83% peak in 2015, much is needed to solve this social problem that negatively impacts communities across America (Lee-St. John et al., 2018). Preschool expansion or universal prekindergarten is increasingly advocated throughout the United States to reduce achievement disparities. The achievement disparities that New Jersey describes for preschool expansion occur in the most disadvantaged communities and impact long-term achievement throughout the

student's educational career (Garver et al., 2022). Students in areas needing more preschool are not ready for school and take longer to meet the same educational levels as students who have had quality preschool (Garver et al., 2022). In New Jersey, public policy continues to fund preschool to create kindergarten readiness, leading to higher achievement later in the students' careers in underserved populations (Edyburn et al., 2017). The idea is that preschool creates equity between disadvantaged communities and more affluent areas in education and fills the void of these disparities, as children are more prepared for school once they are enrolled in formal public education systems (Fuller & Wright, 2007). The education system in New Jersey funds disadvantaged communities that have less financial support than others to provide quality preschool programming. This funding should present desirable outcomes, including higher graduation rates.

As stated above, it has been established that high school graduation is essential to a successful future, and setting high school graduation as the desired outcome when dispersing funds for education is a goal of legislators (Morgan, 2020). As previously indicated, dropping out of high school leads to higher rates of adverse outcomes (Campbell, 2015a; Lee-St. John et al., 2018). However, if students are not graduating with equity amongst all of the districts in the state, then the funding may be better distributed to meet the state's goals.

In this introduction, I have stated the social problem of dropping out of high school and the purpose of the literature review to identify high school graduation as a suitable outcome for determining the success of educational funding. In the next section, I review the search strategy to exhaust all existing literature on preschool funding and

high school graduation and the specific information available on the New Jersey funding model. Following a review of the search strategy, I describe the theoretical framework. Then, I take a deep dive into the reasoning for this research and how, by identifying the problem, one can take a deeper look into solutions for the future.

### **Literature Search Strategy**

The strategy used to complete the literature review for this dissertation was to use the Walden Library Thoreau database, ERIC, Public Administration Abstracts, Political Science Complete, and Education Source filtered to find peer-reviewed journal articles, as identified by Walden University. Searches were related to public policy on ECE in New Jersey, equity in education, policy on funding for ECE programs, articles related to student success, and student rates of graduation information. I also used Google Scholar to review terms and search for appropriate theories to fit this research.

Other critical terms were related to the PDT and its association with public policy, political science, equity, and social justice. The searches were in Google Scholar to identify Abbott's initial years. I focused on years from 1985 to the present, as 1985 was the year of the first *Abbott v. Burke* case ruling. As a result of further literature review, the years of interest became apparent in the cohort school years of 2012–2016. Cohorts are the current reporting practice that adds relevance and accounts for transfers.

I used keywords such as *Abbott; Abbott v. Burke; public policy on school funding; whole-school reform; student success; early childhood education and student success; policy on educational financing; path dependence; path dependency theory; achievement disparities, implementation, and public policy; equity in education; and student reform.* I

searched terms related to *student success, subsidized programming, income levels of affected areas, and the impact of public policy.*

## **Theoretical Foundation**

### **Origin of Path Dependency Theory**

This study was based on PDT, with the NJDOE as the public organization. The PDT posits that the outcomes of a particular policy are based on the history of the issue and the proposed solutions to that social problem (Mahoney, 2000; Zhang, 2016). Economists originated the idea of path dependency in terms of events compounding to determine the future of all like events because change after extended periods is unlikely (David, 2007; Pierson, 2000; Zhang, 2016). PDT has lent itself to purposes ranging from economic theory to sociology (David, 2007; Mahoney, 2000) and public policy (Torfing, 2009).

The history of path dependence began in economics, and the concept has been used to describe matters in social and political sciences (David, 2007). Path dependency has spanned different studies with historical backgrounds in many fields. A change will occur based on historical data, such as in the technology of renewable energy and emissions described by Raineau (2022) or the evolution of the rights of persons with disabilities and particular education standards (Powell et al., 2016). In that case, the PDT is suitable for public policy research.

Theorists from economics and sociology have presented cases for path dependence to explain various phenomena where trends outlast their usefulness (Mahoney, 2000). There are many historical definitions of path dependence, and pioneers

in these fields have proposed varying explanations of path dependency (David, 2007; Mahoney, 2000).

### **Path Dependency Propositions**

Different users have defined PDT in a variety of ways. For example, economists have described path dependence as habit purchases or uses of items out of habit (Pollak, 1970). David (2007) indicated that path dependence had been linked to economics; however, it has become a much more precise term when referring to social history in development processes, where growth relies upon the history of the process and the course determined by its ongoing funding. Others postulate that path dependence looks for deviation from the path instead of the expected outcome (Mahoney, 2000). Path dependence, for many others, indicates that once a process or policy has been set in motion with historical roots, the policy will follow the prescribed outcomes (Pierson, 2000).

Some economists describe path dependency as something too costly to reverse course once the process has been set in motion; for years, whether the outcome has been achieved or not, the path must be compounded until success from the process has been achieved (Levin-Waldman, 2009; Pierson, 2000). Path dependence is spotlighted in the public funding of preschool education, which has been consistently subsidized with no signs of reduction. The course has been set with legislators continually debating the accountability of the funding.

In the case of this research, if it is found that the Abbott funding that began in the early 1980s following court cases from the late 1970s, *Robinson v. Cahill* and *Abbott v. Burke*, through the current SDA funding, has met the goals of the State of New Jersey,

then the path dependence has succeeded. It may be too late to change course if it has not. The model of PDT would indicate that SDA funds are too set in their course to turn back even without substantial success.

### **Research Literature on Path Dependency**

There have been many comparative studies with a theoretical path dependence as the foundation. Path dependence has been used economically, politically, and socially.

Economically, this theory has been used to describe the path dependence of financial policies (Levin-Waldman, 2009). The living wage policies were initially instituted to provide equality, and the path taken to continue these policies cannot be strayed from to avoid the appearance of perpetuating a lack of equality (Levin-Waldman, 2009). This could be said for the ECE policies around the United States. The policies are instituted to create equity in education, but have the policies proven to attain long-term goals?

PDT, as a political foundation in some contexts, addresses the hurdles to status change because of the belief in the amount of time and effort spent on existing policy (Torfing, 2009). Political paths are a part of the intuitions and political parties that are formed and the resulting policies (Torfing, 2009).

The context of social constructs for path dependence has been tested by Marchildon and Hadaya (2022) while discussing social media. In social media, users “lock in” on a specific social media platform as they have spent much time and energy on the application. Consumers are apprehensive about altering their habits as substantial costs could be associated with these changes, regardless of the quality of the existing application (Marchildon & Hadaya, 2022).

### **Path Dependency and Public Opinion in Universal Preschool**

Generally, the idea of preschool is well accepted by the public, even with tax increases to support as much as \$5,400 per student for Head Start throughout the United States (Gibbs et al., 2022). While many educators believe quality preschool programs are essential for children in all communities, some outliers believe preschool programs only set a child up for short-term benefits (Curran, 2015; Frede, 1995). Public preschool has been ongoing through legislation since 1964. President Johnson initiated the Head Start Program (Kretchmar, 2021; Thomas, 2021). With over 58 years to expand on the preschool legislation and the consistent reports that show a lack of considerable improvement in the students receiving the service, the path dependence has continued bipartisan support for universal preschool (Gibbs et al., 2022; Thomas, 2021).

### **Path Dependency Theory and New Jersey Educational Outcomes**

Educational funding in New Jersey is based on policies created in the late 1970s and has evolved. These policies were created based on several lawsuits that stated that children needed to receive an equitable education throughout New Jersey (Education Law Center, n.d.). In 1973, the New Jersey Supreme Court ruled that property taxes funding education continued to support school districts throughout the state disproportionately. Year after year, New Jersey legislators imposed the state funding formula to better the education system and ultimately work toward a thorough and efficient education, which the New Jersey State Constitution requires.

## Equity in Education Funding

### History of Funding Policy in New Jersey

New Jersey has been working diligently for many years to appropriately fund all school districts with equity and ensure that all students are given the same opportunities for success. New Jersey legislators and education professionals have been required to provide a thorough and efficient education since 1875, when the New Jersey constitution was amended to require legislators to establish such a system (Education Law Center, 2019). In 1970, the first of a long line of legal battles was initiated by *Robinson v. Cahill*. Disparities in educational funding were found among the urban districts in the state and the remainder (*Robinson v. Cahill*, 1970). In 1973, the New Jersey Supreme Court ruled that property taxes funding education continued to support school districts statewide. Year after year, New Jersey legislators imposed the state funding formula to better the education system and ultimately work toward a thorough and efficient education.

Abbott districts were created in 1985 due to a 1981 court case, *Abbott v. Burke*, where the ruling stated that education in economically disadvantaged communities in New Jersey was constitutionally substandard. The court ordered funding for those districts to match the funds available in districts that were not as underprivileged (*Abbott v. Burke*, 1985). The court required that these districts provide funding for many items to ensure a thorough and efficient education; however, early childcare funding was at the forefront of the expenditures (*Abbott v. Burke*, 1985).

Early childcare funding is intended to create an equitable environment for students in all communities; court-ordered funding for those districts to match the funds available in districts that were not as needy. The Abbott district system was replaced in

2007 by the New Jersey SDA (Education Law Center, n.d.). There are currently 31 SDA districts in the State of New Jersey. Abbott districts or SDA districts are funded for free preschool education to children ages 3 and 4 in the local school district.

Additionally, Walker (2004) indicated that the NJDOE of 1998 needed to have educated New Jersey students thoroughly and efficiently throughout all districts as required. Quality preschool is pivotal to building solid foundations (“Pre-K Program Benefits Last into Middle School, New Study Finds,” 2017). Government funding and policy throughout the state are designed to provide equity focusing on preschool, ensuring that all children are afforded the same opportunities to succeed.

The New Jersey SDA is the agency in New Jersey that provides ECE and maintains and modernizes school facilities in 31 of the most economically disadvantaged communities in New Jersey (New Jersey SDA, n.d.). The non-SDA districts are the remaining 553 school districts in New Jersey. While the SDA focuses on ECE and facilities, once SDA students complete the second grade, services are no longer available to assist them in succeeding. While there could be many reasons that the dropout statistic is high, a possible cause of this problem is a need for more appropriate funds to support students in the education system. This study determined the relationship between the SDA school districts and graduation rates and graduation rates throughout the remainder of New Jersey. The significance of these relationships relates to understanding whether the funding creates an environment that fosters higher success and equitable education for all students in New Jersey.

ECE is an essential component of SDA funding. ECE significantly impacts well-rounded students throughout elementary education (Press et al., 2021). ECE provides

benefits for youth that outweigh other factors, such as a lack of parental support and developmental risks (Press et al., 2021). However, there needs to be more research on the success and graduation rates of the students who have benefitted from the early impacts of the state's funding of these programs. Researching the graduation rates of the students in these districts is a starting point for evaluating whether the programs are ultimately successful and if there are more beneficial policies and allocations of the funds.

This research considered if the public policy in New Jersey achieved higher success rates with the funding provided in preschool and if preschool is an essential component of a student's success. The Department of Education ensures that marginalized areas where children do not have preschool are provided the funding to offer quality preschool for all. In that case, these lower income areas should have success rates similar to those of the student population. However, the PDT posited claims that public administration would result in equity amongst the populations in a position of being marginalized. SDA addresses society's ability to assist disadvantaged families by providing preschool, whether voluntary or required sessions, and whether communities fit this type of programming. VanAssche et al. (2021) intimated that the governing body can create systems with a narrative in mind. Those within the governing body can believe that the outcome of a situation will benefit the community, however, if the politicians pay attention to the history of the path over the previous years. In that case, the policy may only evolve into a prosperous future for the students of New Jersey.

Funding focused solely on ECE can be a solution for success in lower-income regions. However, it may also raise concerns about achieving successful graduation rates

(Press et al., 2021). However, using the PDT and this research, it can be determined whether the funding is well distributed to provide successful outcomes.

### **Funding and Prekindergarten Throughout the United States**

New Jersey is not the only state that is battling these issues. Many studies have been completed to evaluate ECE to close the equity gap between disadvantaged communities and the remainder of the populations throughout the United States (Brown & Wright, 2011; Pendola et al., 2022). The research reveals mixed outcomes for preschool programs; while some anticipated benefits are not universally observed, factors such as the quality of pre-k programming (Valentino, 2017), and the potential for long-term benefits (Vandell et al., 2010), and the effectiveness of teacher training (Phillips et al., 2017) play crucial roles in influencing results. Furthermore, Durkin et al. (2022) report that, across various states, students in funded preschool programs across do not consistently demonstrate enhanced behavioral or academic skills beyond the third grade. This contradicts many beliefs that quality preschool is the key to equity amongst disadvantaged and other students throughout the states.

### **Policies on Funding Preschool Expansions**

Preschool expansion funding has gained traction in several states, such as New Jersey, to promote educational funding equality within the state. Traditionally, Head Start has been responsible for funding preschool programs in economically disadvantaged communities nationwide (Cascio, 2023). These funds are allocated based on varying eligibility requirements, often prioritizing the neediest communities (Blau, 2021; Cascio, 2023).

The differences in criteria from state-to-state impact disbursement formulas and influence the age groups served. Funding primarily focuses on four-year-olds, although some states have extended coverage to include three-year-olds (Blau, 2021; Cascio, 2023). For example, New Mexico, like New Jersey, has implemented a preschool program to address economic disparities across the state, explicitly emphasizing four-year-olds (Courtney et al., 2023). In contrast, New Jersey provides public preschool for three- and four-year-olds in 31 selected areas (Courtney et al., 2023).

In addition to addressing funding equality, the cost-effectiveness of preschool funding has been initiated in 43 states, including but not limited to New Jersey's SDA, the Boston Prekindergarten (BPK), Maryland's Extended Elementary Education Program (EEEP), and North Carolina's More at Four (NCMF) (Cascio, 2023; Courtney et al., 2023). These evaluations consider the efficiency and impact of investing in preschool education, potentially providing valuable insights for future funding decisions once the outcomes are evaluated.

Overall, expanding preschool funding across states seeks to promote equity in educational funding (Blau, 2021). The specific criteria, age groups targeted, and geographical focus may vary. However, the overarching objective remains consistent: to enhance access to quality preschool education and improve educational opportunities for young children while considering the cost-effectiveness of such investments in select states. These programs intend to increase access to preschool funding to enhance student outcomes (Blau, 2021; Cascio, 2023; Courtney et al., 2021).

## **Graduation Rates as a Measure of Outcomes**

When assessing the long-term impacts of ECE funding, it is important to consider graduation rates as an expected long-term outcome. When examining graduation rates as a measure of outcomes, socioeconomic status has been identified as an indicator in Canada (Robson et al., 2022). Various studies have provided insights into outcomes across different grades, including 2nd grade, 4th grade, 6th grade, and 9th grade (Durkin et al., 2022; McCoy et al., 2017; Oppermann et al., 2023; Vandell et al., 2010; Pendola et al., 2022). However, a gap existed in the literature regarding the association between preschool funding and high school graduation rates.

Research indicates that students who attend quality preschool programs are more prepared for kindergarten and exhibit higher socio-emotional skills through second grade (“Pre-K Program Benefits Last,” 2017). However, the long-term impact of quality preschool appears to diminish over time for students from various backgrounds, although a recent study suggests that the benefits may continue into middle school (“Pre-K Program Benefits Last,” 2017).

While the existing literature does not explicitly address the relationship between preschool funding and high school graduation rates, there are documented benefits of the positive influence of quality preschool programs on early academic and socio-emotional development. However, it is essential to consider the potential fade-out effects and the need for research to understand the long-term impact on educational outcomes, including high school graduation rates.

## Summary and Conclusions

Students in New Jersey must receive a thorough and efficient education, resulting in comparable outcomes. There are policies in New Jersey that focus large amounts of funding on Early Child Care in disadvantaged areas to ultimately achieve successful outcomes, which should be fair and equitable (Gruber, 2012). Lack of high school graduation is an excellent concern for thriving communities throughout New Jersey. The PDT provides a theoretical framework to explain how stagnating funding patterns and legislators' continuous emphasis on preschool funding for disadvantaged communities might not lead to increased graduation rates. This perspective suggests that entrenched funding allocations reinforce existing educational trajectories, potentially limiting the impact on long-term outcomes, such as graduation rates. The current literature indicates that dropping out of high school in disadvantaged communities is an issue throughout the United States, including New Jersey (Campbell, 2015b; Lee-St. John et al., 2018). The literature also indicates that the funding provider is focused on ECE to create equitable outcomes in these disadvantaged communities (Walker, 2004).

The PDT is based on economic theories (Mahoney, 2000; David, 2007). In this research, the idea is that ECE in one area of the state that results in positive outcomes should result in positive outcomes when reproduced in other school districts around New Jersey. The literature indicated that equitable funding in ECE would produce positive outcomes, while the PDT also implies that this would hold. However, this study will examine whether funding creates higher success rates.

In this chapter, I described the problem with high dropout rates and the current purpose of the SDA funding. I also expressed equitable kindergarten readiness as the

intended outcome of the SDA funding. High school graduation is a more suitable outcome as graduating from high school is essential and indicates many other future successes.

In Chapter 3, I defined the variables of this study. Additionally, I discussed this study's research design, rationale, and methodology. I indicated the source of the data provided and how the data was collected.

## Chapter 3: Research Method

### Introduction

This quantitative correlational study compared the relationship between state-funded SDA districts' and non-SDA districts' high school graduation rates for a 4-year cohort and compared the SDA districts' economic status from the legislation's inception to current data. The variables of interest in this study were the state funding for SDA and non-SDA schools and the graduation rates from 2012–2016. Legislators are increasing funds for preschool expansion around New Jersey in the most economically disadvantaged communities. The relationship between funding and graduation rates is significant because it may inform an understanding of how legislators address the problem of high dropout rates from this particular approach.

In this chapter, I define the variables of this study. Additionally, I discuss this study's research design, rationale, and methodology. I indicate the source of the data provided and how the data were collected.

### Research Questions

The following research questions and hypotheses guided this study:

RQ1: Is there a difference in graduation rates between SDA and non-SDA districts during a 4-year cohort in districts that receive SDA funding?

$H_0$ : There is no difference between SDA and non-SDA districts and high school graduation rates in New Jersey during a 4-year cohort.

$H_1$ : There is a difference between SDA and non-SDA districts and high school graduation rates in New Jersey during a 4-year cohort.

RQ2: Did SDA funding impact poverty rates over 40 years in New Jersey?

$H_0$ : SDA funding did not impact poverty rates over 40 years in New Jersey.

$H_1$ : SDA funding did impact poverty rates over 40 years in New Jersey.

## **Research Design and Rationale**

### **Variables**

The independent variables for this study were the SDA-funded districts and the non-SDA-funded districts. These independent variables were measured as categorical, dichotomous variables, “yes,” they are SDA funded, or “no,” they are not SDA funded, which were coded as “1” for funded and “0” for not funded. The dependent variable of graduation rates was a continuous variable representing the independent populations of the percentage of students who graduated from high school in both SDA-funded and non-SDA-funded school districts. The relationship between SDA-funded and non-SDA-funded programs was analyzed. All school districts in New Jersey must report their graduation rates as a part of their annual statistics. I used the cohorts of the 2012–2016 school years, as these were the most recent data provided that were not affected by the COVID-19 pandemic.

A second research question also addressed whether the SDA funding impacted the poverty rates over 40 years. The dependent, continuous variable was the poverty rates. The between-subjects were the group, including the control variable, the communities of the non-SDA-funded school districts, which were not provided additional funds, and the test group of the communities of the SDA-funded programs. The within-subject factors were the pre-SDA-funded period of 1980 and the post-SDA-funding time frame of 2020.

## **Research Design**

I used a quantitative, nonexperimental, nonequivalent groups independent sample  $t$  test as a research design. An independent samples  $t$  test tested the null hypothesis and determined if there was no statistical significance between the graduation rates of the SDA-funded school districts and the non-SDA-funded school districts.

A quantitative method was chosen to use a mathematical approach to present fixed numerical data into results that compared two identified variables (Mohajan, 2020). The identified variables were the SDA districts and the non-SDA districts. I used a nonexperimental approach because I did not manipulate the independent variable, as I did not have any control over any of the variables; after all, I used existing data (Mohajan, 2020). The variables were a part of defined groups, thereby not having any bias on research outcomes. Furthermore, the nonequivalent groups were required because they were randomly a part of the study based solely on their participation as an SDA-funded district or not participate as an SDA-funded school district. Using quantitative research, I determined whether the SDA funding had benefitted the students with high school graduation and whether the communities had benefitted economically from the SDA funds over the 40-year time frame. I did this through the correlation of the quantifiable variables, with no regard to their casualty, which cannot be determined in this type of quantitative study (Mohajan, 2020).

## **Methodology**

### **Data Collection**

Secondary data were initially collected by one organization and made available for use in other research (Alchemer, 2021). The secondary data sources were the NJDOE

and the U.S. Census documents. The NJDOE currently has a compilation of the data for all school districts, including their graduation rates, which were collected to determine school growth, student performance, and academic achievement throughout New Jersey.

These data were found on the following website:

<https://www.nj.gov/education/schoolperformance/grad/ACGR.shtml>. The U.S. Census results are collected to provide equity amongst different geographical areas throughout the country by identifying areas of need geographically and demographically with different types of services, such as social services, schools, and business needs (U.S. Census Bureau, 2020). The data collected were used to determine the economic statuses of the SDA districts in 1980 to be compared to those of 2020. They were retrieved from <https://www.census.gov/programs-surveys/decennial-census/decade/2020/2020-census-main.html>. The reason for using these data was that they were publicly available and were compared for the research findings.

The allocation of additional funding for preschool education in economically disadvantaged communities was targeted toward 31 specific school districts in New Jersey. These 31 school districts were individual communities covered explicitly in the census data. Conversely, all other school districts in New Jersey were combined into the remainder of the state's communities as one. This approach allowed for a more focused analysis of the impact of preschool education on economically disadvantaged communities as opposed to the impact on the state's broader population. By specifically targeting these 31 school districts, policymakers can better understand this program's effectiveness in addressing the challenges faced by students in these communities and make informed decisions regarding the allocation of funding for ECE.

The school district or the community's population self-reported the available data. I retrieved the school districts' data from the NJDOE's website. The community data are available through the U.S. Census Bureau at <https://www.census.gov/>. I assumed that the data reported by the districts and the public were valid and verified by the NJDOE and the U.S. Census Bureau.

**Table 1**

*Variables, Measurement Level, and Data Source*

Variable	Measurement Level	Data Source
School district by funding	Nominal	<a href="https://www.nj.gov/education/schoolperformance/grad/ACGR.shtml">https://www.nj.gov/education/schoolperformance/grad/ACGR.shtml</a>
Poverty rate	Ratio	<a href="https://www.census.gov/">https://www.census.gov/</a>
High school graduation rates	Ratio	<a href="https://www.nj.gov/education/schoolperformance/grad/ACGR.shtml">https://www.nj.gov/education/schoolperformance/grad/ACGR.shtml</a>

## Population

The methodology for this research study involved examining the current graduation rates by the public school districts from the NJDOE. Each public school district was defined as an SDA-funded or non-SDA-funded district. There were 584 school districts in New Jersey during the researched time frame, 31 of which were defined as SDA districts (NJDOE, n.d.).

Based on the accessibility of the data and the requirement of all school districts in New Jersey to report their data annually, there was no reason to eliminate any data from the sample size. Based on 584 school districts, the total population of all New Jersey

school districts, a sample size of 232 with a 5% margin of error is required to attain a 95% confidence level (Raosoft, 2004). The presented data indicated that 352 school districts could have been eliminated from the research, and reliable results would still have been expected; however, doing so would have affected the strength of the overall research.

### **Operationalization of Variables**

In this research, I compared the graduation rates of the SDA districts and the non-SDA districts throughout New Jersey. Each variable is detailed below by type.

#### **Independent Variable**

The independent variables for this study were dichotomous, categorical variables of independent groups, defined by their receipt of the SDA funds, either “yes” they do receive the SDA funds or “no” they do not. I coded the two variables as such: The non-SDA-funded districts were coded as (0), and the SDA-funded districts were coded as (1).

For the second research question, the independent variables were continuous, categorical variables known as factors and were the between-subjects factors and the within-subject factors. In this type of test, variables were also referred to as factors or categorical predictor variables (Warner, 2008).

#### **Dependent Variables**

The dependent variables for this research were continuous, represented by the percentage of those who did not graduate. Graduation rates were the percentages of students in each district who graduated versus the total number of students enrolled for the given years. The graduation rates throughout New Jersey were derived from the data posted by the New Jersey Department of Education at

<https://www.nj.gov/education/schoolperformance/grad/ACGR.shtml>. The data were transformed into percentages by dividing the total number of students in each district by the total number of students who graduated and those who did not graduate and multiplying by 100. The graduation rates were from the 584 school districts throughout New Jersey during the 2012 through 2016 cohort; as stated above, this cohort was selected to minimize the impacts of COVID-19.

The dependent variable for the second research question was the poverty rates of SDA-funded districts. The data were drawn from the U.S. Census Bureau, which determined the poverty levels of each community through various data collection formats and posted the final data to the <https://www.census.gov/> website (U.S. Census Bureau, 2020).

### **Data Analysis Plan**

Data were collected as an Excel spreadsheet from the NJDOE and were imported into IBM SPSS version 28 for analysis. The data analysis plan used an independent samples *t* test. There was one independent, dichotomous variable, those who received SDA funds and those who did not receive SDA funds; there was also one dependent variable, the percentage of students who graduated. The alternative hypothesis was that the SDA funds impact graduation rates.

The second research question also used data collected from the NJDOE and the U.S. Census Bureau and then put into Excel spreadsheets, which were analyzed with IBM SPSS version 28. For this data analysis plan, I used a two-way mixed ANOVA, with one dependent variable as the poverty rates and the independent variable or between-subject factors as the SDA district and the control group of the non-SDA districts. There were

also within-subject factors of the pre-SDA funding (1980) and the post-SDA funding (2020). This two-way mixed ANOVA determined if there was a significant statistical difference between the means of pre-SDA/Abbott-funded and post-SDA/Abbott-funded communities' economic statuses. I determined the relationship by rejecting the null hypothesis or accepting the alternative hypothesis to determine that there is no impact on the economic status of SDA-funded districts' communities.

### **Threats to Validity**

There are threats to the validity of the data that exist. External validity was critical to this research because of the research's relevance to current public policy (Warner, 2008). Internal validity was also considered when conducting this study to safeguard the ability to make causal inferences about the data (Warner, 2008).

#### **External Validity**

An essential aspect of external validity is its generalizability, which makes it relatable to future studies and for future reference (Mohajan, 2020; Warner, 2008). New Jersey is a leader in this type of funding for education and has contributed to a nationwide appeal for preschool funding to enhance future outcomes (Kim, 2021). Additionally, the fact that *Abbott v. Burke* was the first in a string of court cases that initiated legislation for free preschool for all 3- and 4-year-olds across the United States had become a critical concern for both the Obama and Biden administrations (Kim, 2021). Creating similar legislation is essential to ensure that this research can be conducted in other areas.

#### **Internal Validity**

An intense study can be used as evidence of a causal inference, where data are used appropriately, described, and properly bridged between all variables (Warner, 2008).

Strong internal validity ensured that all requirements of the research method were attained (Mohajan, 2020).

### ***Maturation***

The data were retrieved from the NJDOE and synthesized into cohorts to account for all students in the state for 4 years. For students who moved in and out of the district, there was the threat that some students in an SDA-funded district might move into non-SDA-funded districts. If this occurred, then the data can be slightly skewed. An additional threat was that students who may have transferred out of state or passed away over the 4-year cohort were accounted for; however, the lack of graduation from a funded or nonfunded district would have skewed the study data. When analyzing the data, it was essential to note the number of students who started in one district and completed their school careers in another.

### ***History***

New Jersey also suffered the consequences because the country faced the COVID-19 pandemic. The cohorts of 2012–2016 were explicitly chosen to minimize the threat of data impacted by the COVID-19 pandemic.

### ***Selection and Statistical Regression***

New Jersey school districts were selected for this study as this is the state where the legislation exists and the data are maintained. All districts were included, as all existing data were uploaded by all the school districts throughout the state. The data included all the state's urban, suburban, and rural districts.

### **Ethical Procedures**

The ethical procedures defined by Walden University were followed when completing this study. The Institutional Review Board (IRB) was consulted and approval was obtained before data collection. All data were drawn from the internet and are readily available to the public, requiring no participant consent. No individuals were identified as the data were collected by the governing agency and displayed to the public as a whole organization.

### **Summary**

This chapter reflected the data collection process and contained a description of the methodology, identifying variables and comparing relationships of the funded versus nonfunded districts in New Jersey over the school years from 2012 through 2016, and economic statuses over time from the initiation of the funding through the current day. I further described the method of data analysis, and the threats to the validity were identified, ensuring that the reader was aware of the possible limitations of the study. The next chapter describes the data collection, analysis, and results.

## Chapter 4: Results

### **Introduction**

This quantitative correlational study compared high school graduation rates and community economic status between state-funded SDA districts and non-SDA districts within a 4-year cohort. This study hypothesized that the benefit of preschool funding in 31 school districts in New Jersey does not have a long-term impact as legislators hope. The variables, which included the funding, the graduation rates, and the communities' economic status, were used in formulating the research questions. First, I was interested in investigating if there was a significant difference in graduation rates between SDA and non-SDA districts during a 4-year cohort in districts that receive SDA funding. Second, I probed the long-term impact of SDA funding on poverty rates over 40 years in New Jersey. Next, this chapter will describe the process of data collection, which relied on the secondary data sources of the NJDOE and the U.S. Census Bureau (Bureau of Census, 1983; NJDOE, n.d.; U.S. Census Bureau, 2020). Finally, I will describe the results of the research and whether or not there was statistical significance. I will investigate these research inquiries and proposed hypotheses, and the upcoming sections outline the process of gathering data and revealing the results, providing insights into their statistical significance.

### **Data Collection**

The secondary data sources were the NJDOE and the U.S. Census documents. The first research question included data from the NJDOE, which provided all graduation rates between 2012 and 2016. I intended to use the data from all of the school districts in New Jersey; however, once I pulled the 1980 data, it was clear that the state had

redistricted and regionalized several districts over the 40 years. I was still able to retrieve and use data from 219 school districts that existed in 1980 and were still operating in 2020. The minimum sample size was 232 based on a 95% confidence level. However, I feel that the regionalization of schools still accounted for all communities, and none of the 31 original Abbott/SDA districts were affected by the redistricting in the past 40 years.

Chapter 3's initial plan was to comprehensively analyze changes across 40 years using data from all New Jersey school districts. However, disparities were addressed during the data collection process due to statewide redistricting and the regionalization of numerous districts. Upon retrieving the 1980 data, it was evident that consolidations had transformed multiple districts in the non-SDA data. Consequently, the intended dataset was transformed, allowing data available for only 219 school districts operational in 1980 and 2020. Though this subset fell slightly below the minimum sample size required for a 95% confidence level, the analysis persisted under the assumption that the regionalization represented all communities, specifically in the control samples. Notably, the redistricting had no impact on the original Abbott/SDA districts, preserving the integrity of their data over the 40 years and ensuring that their funding remained unaffected. While the non-SDA districts were subject to redistricting, the findings were not biased by these adjustments, underlining the intricate influence of redistricting on the sample and highlighting potential limitations and biases in the research.

## Independent Variable

### *RQ1*

The independent variables for this study were the SDA-funded districts and the non-SDA-funded districts. These independent variables were measured as categorical, dichotomous variables, “yes,” they are SDA funded, or “no,” they are not SDA funded, which were coded as “1” for funded and “0” for not funded. These data were located on the NJDOE website. Each district is required to report its graduation rates as well as detailed performance reports. The available data followed cohorts of students throughout the state to ensure that children who moved amongst districts were accounted for in the study.

The 31 school districts that receive the SDA funding were chosen as disadvantaged areas of concern, which were identified as a result of a lawsuit that deemed the education in those districts unconstitutional (Education Law Center, n.d.). The non-SDA districts were 188 school districts that were not given those additional funds.

### **Table 2**

#### *RQ1: Between-Subject Factors*

	Value	SDA type	<i>N</i>
Non-SDA	0	Non-SDA	188
SDA	1	SDA	31

**RQ2****Table 3***RQ2: Within-Subject Factors*

Poverty rates	Dependent variable
1	Poverty_Rates_1980
2	Poverty_Rates_2020

**Dependent Variable****RQ1**

The dependent variable was the graduation rates of each school district. The dependent variable of graduation rates was a continuous variable representing the independent populations of the percentage of students who graduated from high school in both SDA-funded and non-SDA-funded school districts. This information was drawn from the NJDOE website, where each school district is responsible for inputting the graduation rates for a 4-year cohort. The 2012 through 2016 cohort was chosen as the last cohort unaffected by the COVID-19 pandemic.

An independent-sample *t* test was run to determine if there were differences in graduation rates between non-SDA-funded and SDA-funded school districts. Non-SDA-funded school districts had higher graduation rates ( $91.66\% \pm 5.49$ ) than the SDA school districts ( $77.300 \pm 9.0$ ). The difference was significant,  $t(221) = -8.541, p < .001$ .

**Table 4***Descriptive Statistics of RQ1*

		Group	Statistic	Std. error		
Graduation rate	Non-SDA funded	Mean	91.6630	.39646		
		95% confidence interval for mean	Lower bound	90.8810		
			Upper bound	92.4450		
		5% trimmed mean	92.1280			
		Median	93.0225			
		Variance	30.179			
		Std. deviation	5.49355			
		Minimum	71.83			
		Maximum	98.79			
		Range	26.96			
		Interquartile range	6.97			
		Skewness	-1.201	.175		
		Kurtosis	1.348	.349		
			SDA funded	Mean	77.3001	1.63420
				95% confidence interval for mean	Lower bound	73.9626
		Upper bound	80.6376			
		5% trimmed mean	77.4691			
		Median	77.0550			
		Variance	82.789			
		Std. deviation	9.09885			
		Minimum	59.17			
		Maximum	92.24			
		Range	33.07			
		Interquartile range	14.13			
		Skewness	-.408	.421		
		Kurtosis	-.614	.821		

The non-SDA mean graduation rate was -14.36 (95% CI, -17.78 to -10.94), higher than the SDA mean graduation rate. There was a statistically significant difference in mean graduation rates between non-SDA and SDA-funded school districts,  $t(33.617) = -8.541, p = .000$ .

### **RQ2**

The impact of the economic statuses was drawn from the census data over time.

There was a statistically significant difference between means ( $p < .05$ ); therefore, I reject the null hypothesis and accept the alternative hypothesis.

**Table 5**

#### *RQ2: Descriptive Statistics*

Year	SDA type	Mean	Std. deviation	N
Poverty_Rates_1980	Non-SDA	5.7543	4.12575	188
	SDA	18.6032	7.05268	31
	Total	7.5731	6.44981	219
Poverty_Rates_2020	Non-SDA	6.8904	4.75112	188
	SDA	19.7968	7.61374	31
	Total	8.7174	6.90469	219

## **Results**

### **Research Question 1**

This research was intended to determine whether the SDA funding was creating a better community with an outcome of higher graduation rates. The analysis of the data available from 2012 to 2016 indicated that the SDA funding distribution did not generate

a distinct increase in high school graduation rates within the 4-year cohort despite the targeted financial support directed toward the 31 specific school districts in New Jersey. The independent-samples  $t$  test was conducted to assess differences in graduation rates between non-SDA-funded ( $91.66 \pm 5.49$ ) and SDA-funded school districts ( $77.300 \pm 9.0$ ) and showed a statistically significant gap of  $-14.36$  (95% CI,  $-17.78$  to  $-10.94$ ),  $t(221) = -8.541$ , signifying a considerable difference between the groups. Notably, the exact  $p$ -value was  $p = .000$ , accenting the significance of this inconsistency in graduation rates. The mean graduation rate in SDA districts was 77.3%.

In comparison, non-SDA districts demonstrated a notably higher mean rate of 91.6%, highlighting the substantive differences in educational outcomes between these categories of school districts. The findings indicate a statistically significant difference in graduation rates compared to the school districts that do not receive the funding. This outcome spotlights the issues of the SDA. It prompts a critical reassessment of the ability of the funding to address the challenge of equity and long-term success of the students in the 31 districts, specifically in their high school dropout rates. These findings should prompt policymakers and legislators to reevaluate the strategies and programs as they seek to create more effective and equitable solutions to elevate long-term educational outcomes.

### ***Assumption Testing***

**Homogeneity of Variances.** The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances ( $p = .000$ ). However, a Welch  $t$  test was run to determine if there were differences in graduation rates between SDA-funded school districts and non-SDA-funded school districts. The graduation rates

were higher in school districts not receiving SDA funding ( $M = 91.66$ ,  $SD = 5.49$ ) than in school districts receiving SDA funds ( $M = 77.30$ ,  $SD = 9.09$ ), a statistically significant difference,  $M = -14.36$ , 95% CI, [-16.69, -12.03],  $t(33.62) = -8.541$ ,  $p = .000$ .

### **Research Question 2**

The study revealed a critical understanding of the relationship between SDA funding and poverty rates over 40 years. The mean poverty rates were notably higher in SDA-funded districts ( $M = 19.2$ ) compared to non-SDA districts ( $M = 6.32$ ), underscoring substantial differences in economic circumstances between these categories of school districts. The standard deviation values between these means would offer a better understanding of the inconsistency within each group. The statistical significance of the main effect of poverty rates ( $F(1,217) = 8.27$ ,  $p = .004$ ) indicates notable changes over time, revealing a clear impact on poverty rates within these districts. However, the lack of a significant main effect concerning SDA type ( $F(1,217) = 219.15$ ,  $p < .001$ ) suggests a consistent, higher poverty rate in SDA-funded districts across the entire period examined. The critical aspect is the interaction between SDA type and poverty rates over time, with a statistically significant effect ( $F(1,217) = 0.005$ ,  $p < .001$ ). These findings would indicate that the influence of SDA funding on poverty rates fluctuates over the 40 years, suggesting an inconsistent impact and no real benefit to the already high poverty rates of the SDA districts.

The only factor within subjects included belonging to the control or the experimental group, and analysis was applied as a two-way mixed analysis of variance (ANOVA), which was conducted to investigate the impact of SDA funding on the poverty rates over the 40-year time frame from 1980 to 2020. There was a significant

main effect of poverty rates,  $F(1,217) = 8.27, p = .004$ . However, there was not a significant main effect of SDA type,  $F(1,217) = 219.15, p < .001$ , with SDA-funded school districts ( $M = 19.2$ ) having higher poverty rates overall than non-SDA-funded school districts ( $M = 6.32$ ).

**Table 6**

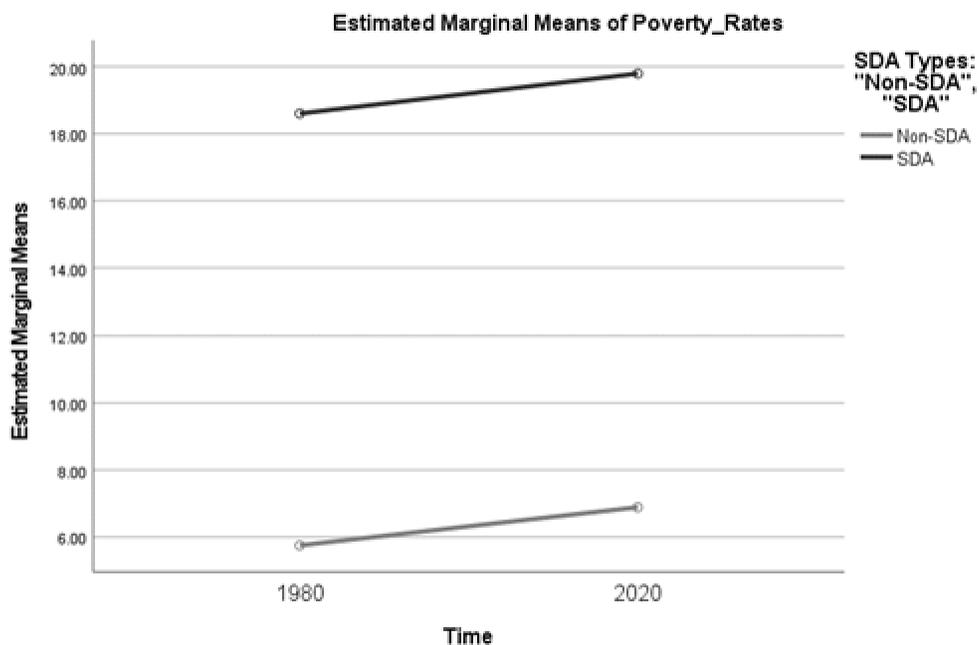
*RQ2 Tests of Within-Subject Effects*

	Source	Type III sum of squares	<i>df</i>	Mean square	<i>F</i>	Sig.	Partial eta squared
Time	Sphericity assumed	72.219	1	72.219	8.266	.004	.037
	Greenhouse- Geisser	72.219	1.000	72.219	8.266	.004	.037
	Huynh-Feldt	72.219	1.000	72.219	8.266	.004	.037
	Lower-bound	72.219	1.000	72.219	8.266	.004	.037
Time * SDA_Type	Sphericity assumed	.044	1	.044	.005	.944	.000
	Greenhouse- Geisser	.044	1.000	.044	.005	.944	.000
	Huynh-Feldt	.044	1.000	.044	.005	.944	.000
	Lower-bound	.044	1.000	.044	.005	.944	.000
Error(Time)	Sphericity assumed	1895.886	217	8.737			
	Greenhouse- Geisser	1895.886	217.000	8.737			
	Huynh-Feldt	1895.886	217.000	8.737			
	Lower-bound	1895.886	217.000	8.737			

There was no statistically significant interaction between the SDA type and time on,  $F(1, 217) = .005, p = .944$ , partial  $\eta^2 < .001$ .

Additionally, there was a significant interaction between SDA type and poverty rates over time,  $F(1,217) = 0.005, p < .001$ . An interaction between SDA type and poverty rates over time, despite having a minimal numerical value like 0.005, can hold substantial practical significance. The relationship between SDA funding and poverty rates changes over the 40 years under study. While the number might seem small, the  $p$ -value being less than 0.001 suggests this finding is highly unlikely to have occurred by chance. It is implied that the impact of SDA funding on poverty rates is not consistent or straightforward across the entire time frame. In practical terms, this insight is crucial for understanding how adequate or influential SDA funding might be in addressing poverty. These findings highlight the need for further investigation and a better understanding of how these variables relate and change over time. These findings could guide future policies or interventions to adapt more effectively to the changing dynamics between funding and the long-term benefits of the funding.

Figure 1 shows that in the initial assessment, the mean in the experimental group is significantly higher than the mean in the control group of the existing census data. The data demonstrate the motive behind the initiation of the funding. The mean poverty rate in the experimental and control groups slightly increased from 1980 to 2020 at the same rate as the initial assessment. However, the funding should have created some effect on the community to indicate some success of the funding. The Abbott/SDA funding did not affect the poverty rates over the 40 years.

**Figure 1***Estimated Marginal Means of Poverty Rates*

This research intended to investigate the impact of SDA funding on Poverty Rates across 40 years from 1980 to 2020, focusing on the distinction between control and experimental groups. The analysis, conducted through a two-way mixed ANOVA, revealed a significant main effect of Poverty Rates, indicating a notable influence over the entire timeframe. Although the main effect of the SDA Type on poverty rates was not statistically significant, indicating no overall difference between funded and non-funded districts, data showed that SDA-funded school districts consistently reported higher poverty rates than non-funded districts throughout the study period. An important finding emerged regarding the interaction between SDA Type and poverty rates over time, signifying some relationships. While SDA funding didn't significantly impact poverty rates, the interaction effect prompts a closer look to understand how this funding might

influence poverty rates across the 40 years. These findings highlight the need for a better understanding of the relationship between SDA funding and poverty rates, urging further investigation into what long-term impacts or benefits, if any, are created by SDA funding.

Policymakers need to understand and look at additional interventions, highlighting the need for flexible strategies that acknowledge the dynamics between funding and long-term community benefits. These findings suggest that further study would benefit future policies and interventions in education in New Jersey.

### ***Assumption Testing***

An analysis of the data revealed several important observations. In preparing the data for analysis, several statistical challenges, including outliers and non-normal distribution of poverty rates were encountered. First, four outliers, identified via a boxplot examination, were confirmed as unusual values without errors in data entry. Despite their atypical nature, these outliers were retained in the analysis to maintain the integrity of the study's results, as their removal could have distorted the overall findings. Additionally, the distribution of poverty rates was determined to be abnormal based on a Normal Q-Q Plot assessment. Despite these issues, I proceeded with the analysis because the sample size and the consistency across groups justified the approach.

Furthermore, tests for homogeneity of variances and covariances—conducted through Levene's and Box's M tests, respectively—revealed significant discrepancies ( $p < .05$  for variances and  $p < .001$  for covariances). These disparities persisted after attempts to transform the data. The fact that the disparities were consistent after the data was transformed indicates a robust effect within the data. As indicated by Mauchly's test, violating the assumption of sphericity affected the analysis of the two-way interaction.

Subsequently, when scrutinizing the results using Huyn-F, it was determined that there was no statistically significant interaction regarding poverty rates between the years 1980 and 2020, as reflected by a minute F-value ( $F(1, 217) = .005$ ) and a high partial eta-squared value (partial  $\eta^2 = .944$ ).

### **Summary**

The results of a quantitative correlational study comparing state-funded SDA (SDA) districts and non-SDA districts in terms of high school graduation rates and community economic status over a four-year cohort are presented. Two research questions guided the investigation. Firstly, the study was intended to determine if there was a significant difference in graduation rates between SDA and non-SDA districts within a four-year cohort. Secondly, it examined the long-term impact of SDA funding on poverty rates over 40 years in New Jersey. Data for this research was collected from the NJDOE and the U.S. Census Bureau. This research is critical in education policy, as the long-term benefits of the SDA funding are more important than the immediate impacts. It is crucial to discern the immediate impacts of funding disparities on educational outcomes and comprehend the long-term implications on community economic well-being, providing crucial insights for policy and implementation.

For Research Question 1 (RQ1), the independent variable was the funding status, categorized as "SDA" or "Non-SDA," representing whether a district received SDA funding or not. The 31 SDA districts were identified as disadvantaged areas through a lawsuit, while the 188 non-SDA were identified as the school districts that did not receive additional support. The analysis revealed a statistically significant difference in graduation rates between the two groups, with non-SDA districts having higher

graduation rates than SDA districts. The findings suggest that the targeted SDA funding did not improve the SDA districts' graduation rates.

For Research Question 2 (RQ2), the study examined the impact of economic status, measured using poverty rates in 1980 and 2020. A two-way mixed ANOVA was conducted to assess the effect of SDA funding on poverty rates over 40 years. The results showed a significant main effect of time on poverty rates, indicating changes over the years. However, the SDA type had no significant effect, with SDA-funded districts having higher poverty rates overall. Importantly, there was no significant interaction between SDA type and time on poverty rates. The data suggests that the SDA funding did not have a discernible impact on poverty rates within the 31 SDA districts over the 40-year timeframe. analysis revealed a significant main effect in Poverty Rates ( $F(1,217)=8.27, p=.004$ ), indicating variations over time. However, there was no significant main effect of SDA Type ( $F(1,217)=219.15, p<.001$ ), with SDA-funded districts ( $M=19.2$ ) consistently displaying higher poverty rates than non-SDA districts ( $M=6.32$ ), highlighting enduring economic discrepancies.

In conclusion, the investigation into the long-term effect of SDA funding on poverty rates and graduation rates revealed significant insights. Despite targeted financial support, SDA funding did not significantly improve high school graduation rates or community economic status within the designated districts in New Jersey over the 40-year study period. These results call for re-evaluating the effectiveness of such funding initiatives in addressing educational and economic disparities in disadvantaged communities.

The findings of this study on SDA-funded districts versus non-SDA districts shed light on the lack of long-term impacts of targeted funding on educational outcomes and community economic well-being. Two questions in educational policy were addressed, revealing that despite concerted financial support, SDA funding did not yield substantial improvements in high school graduation rates or reduce poverty rates within the designated districts in New Jersey. This research has significant implications for the field of education policy, emphasizing the need to move beyond immediate impacts and consider the sustained effects of funding initiatives on disadvantaged communities.

These results strongly prompt a reevaluation of the impacts of targeted funding in addressing educational and economic disparities. Future research and policy decisions should focus on innovative strategies that extend beyond short-term impacts, probing into more holistic approaches to address the challenges faced by disadvantaged communities. This includes considering broader socio-economic factors influencing educational outcomes and community well-being, aiming for effective and sustainable solutions. The study emphasizes the necessity for policies that can elevate and support disadvantaged districts, fostering long-term positive changes in educational achievements and economic statuses.

Chapter 5 will encompass several vital components, including an interpretation of the research findings, how they should impact future research, and the validity and limitations of this research. I will also make recommendations for lawmakers, and finally, I will discuss the implications of the research.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

In this concluding chapter, I will reiterate the primary intention of this quantitative correlational study: to compare the link between educational policy on funding and long-term outcomes such as high school graduation rates and community economic status in state-funded SDA districts versus non-SDA districts across a 4-year cohort. The findings of this research have shed light on a concerning disparity in educational outcomes in school districts receiving SDA funding, and another revelation from the research was the lack of substantial improvement in economic statuses within SDA district communities over a 40-year time frame. This contrast in graduation rates raises essential questions about the effectiveness of SDA funding in improving educational equity.

Another revelation from the research was the lack of substantial improvement in economic statuses within SDA district communities despite the infusion of financial resources to address educational disparities. The expectation was that SDA funding would enhance educational opportunities and pave the way for greater economic prosperity among these communities. However, the data indicated that this expectation had not been met, casting doubt on the overall impact of the funding.

In light of these findings, it becomes evident that while SDA funding may contribute to better kindergarten readiness, it does not adequately prepare students for successful futures, as indicated by the persistently lower graduation rates and unimproved poverty rates in the SDA district communities. This conclusion underscores the need for a more comprehensive examination of the factors contributing to these disparities and

reevaluation of the strategies to ensure accurate educational equity and economic advancement in underserved communities.

This research is vital to recognize the efficiency of the SDA funding on long-term goals, but it also intimates that more research is needed to expand on these findings and what future actions can be taken.

### **Interpretation of the Findings**

The SDA funding is intended to create a fair and equitable education for all students in New Jersey. These findings indicate that after 40 years of funding, New Jersey school districts have not created any significant strides in increased outcomes in the SDA district communities regarding graduation rates and overall economic status, specifically. The peer-reviewed literature in Chapter 2 indicates that preschool funding like that of the SDA creates equity (Education Law Center, n.d.; Fuller & Wright, 2007; New Jersey SDA, n.d.).

This research indicates no impact of SDA funding over 40 years from 1980 through 2020, which challenges the widespread narrative that long-term financial support of ECE will improve educational outcomes or community well-being. The findings contradict the optimistic perspectives often associated with sustained educational funding, particularly the assumption that continued financial backing automatically results in positive, enduring impacts. Such perceptions have been visible in the ongoing bipartisan support for initiatives like universal preschool programs, as evidenced in the historical timeline of the Head Start Program and subsequent legislation.

These findings enhance prior debates regarding the value of continued financial support in educational programs, which is the critical component of PDT, highlighted in

the peer-reviewed literature. Despite years of bipartisan backing and substantial investments in programs like Head Start, the lack of significant improvement over 58 years resonates with the arguments of Curran and Frede (2015), who have questioned the long-term benefits of preschool initiatives. Despite the widespread public acceptance of the preschool concept and the willingness to support it through tax increases, this research indicates that the investment, amounting to as much as \$5,400 per student for Head Start nationwide, has not yielded significant improvements (Gibbs et al., 2022). This research echoes the literature laid out in Chapter 2 indicating that despite the continuous existence of public preschools since 1964, initiated by President Johnson's Head Start Program, there has been a persistent lack of notable progress in students who avail themselves of these services (Kretchmar, 2021; Thomas, 2021). Additionally, the 40-year period that this research covered supports the research of others that during the 58-year duration of the preschool, legislation had an absence of considerable improvement, which raises questions about the efficacy of the approach, underscoring the path dependence that has led to continued bipartisan support for universal preschool (Gibbs et al., 2022; Thomas, 2021). The results emphasize a difference between the anticipation of enduring positive outcomes and the actual observed impact. This continued funding exemplifies the PDT as there has not been an impact on the graduation rates or economies of the SDA communities over the 40-year time frame. It further challenges the assumed trajectory of consistent improvement associated with prolonged funding, suggesting a need for reevaluation and adaptation of strategies to better align with educational objectives other than solely kindergarten readiness. The findings indicate a need to reconsider the belief in the automatic, continuous progress resulting

from extensive funding. The consistent allocation of funding for preschool education in New Jersey, despite a lack of conclusive evidence on long-term benefits, was analyzed through the lens of PDT, which explained how past decisions shaped current policies and made them resistant to change (David, 2007; Powell et al., 2016). This research builds upon the existing literature on PDT's application in public policy, illustrating how entrenched policies, such as the longstanding SDA initiative, have evolved to create a path of dependence that may not align with current circumstances, such as in the research of Fuller and Wright (2007). The suggestion that the Department of Education ensures preschool availability in marginalized areas, aligning with PDT, further expanded the existing literature on the theory's relevance in public policy and education. By linking the historical context of ECE funding to current societal conditions and technology, the recommendation acknowledges the nuanced application of PDT and how it can inform decision-making in the present.

Legislators should critically assess their approach to educational equity and long-term outcomes. Further research would be beneficial, and this research indicates that there could be other ways to fund education that may be more beneficial to the students and communities throughout New Jersey regarding graduation rates and economic statuses. There is a distinct possibility that children of all ages could benefit from funding that could incorporate strengthening families. There are other areas of concern for children that would expand beyond just quality preschool, which could lead to more success for students throughout their educational careers.

### **Limitations of the Study**

Chapter 1 detailed a quantitative cross-sectional study to assess the relationship between dropout rates and funding within specific school districts. However, this study encountered several limitations that impacted the trustworthiness and generalizability of the findings. One major constraint was the methodology used in the study. The inability to isolate individual dropout incidents creates doubt in identifying the precise causes of these instances. While the research relies on total statistics for each district, this approach cannot investigate the particulars of each dropout case and the indicators specific to those individual students. This is a limitation of aggregate data analysis. Specifically, in Chapter 1, there was a reference to the ability to identify individual dropouts versus students moving between districts. The data were reported in a way that captured those transitions between districts. Despite years of experience in the field and personal insights into the likely causes, the study could only examine reported data, limiting the depth of analysis and potentially leaving out critical factors influencing dropout rates. This constraint indicates the need for more detailed approaches to explain the causal factors contributing to dropout rates.

The limitation described in Chapter 1 that identified the lack of reasoning for the low graduation rates or the economic statuses of the SDA communities is still a concern. This study only showed that the districts receiving the additional funds showed no increase in graduation rates or economic status. This is important to legislators because it indicates that preschool funding is not creating an equitable education for students in disadvantaged districts. While additional research should be completed to identify strategies to distribute the funds better, it is crucial to understand that the path

dependency on funding preschool is insufficient to create the atmosphere for improved long-term outcomes.

The findings primarily described the association between variables and do not necessarily prove causation. Although the research identifies correlations between funding and graduation rates, it does not confirm whether these funding variables directly cause lower than usual graduation rates. The study's correlational design restricts the capacity to draw definitive conclusions about the causative link between funding and dropout rates. This limitation emphasizes the need for more controlled research methodologies to establish causation better and present all factors contributing to dropout rates.

The reliance on reported district data constitutes another significant limitation to the study's reliability and generalizability. The research hinges on the accuracy and completeness of the reported data from each district. The study's conclusions are inherently dependent on the credibility and accuracy of the information provided by individual districts. This constraint raises questions about the integrity and completeness of the reported data, emphasizing the need for more comprehensive and robust data collection methods to ensure the trustworthiness of the findings and their potential generalizability. If districts report inaccurate data, the findings will not include all of the dropouts or students who indeed graduated, which will skew the findings to the benefit or the detriment of the district. A strategy that can remedy the reliance on these data for future studies would be to develop a method to validate the data year by year on reported information. Additionally, a researcher could do a longitudinal study and follow the students' progress from first grade through high school. This would add value to the

study that may identify why students drop out and what policies assist in student retention.

In summation, the limitations encountered in this study have notable implications for both trustworthiness and generalizability. For one, the inability to isolate individual dropout incidents due to the chosen methodology impacts the trustworthiness of the findings. The doubt in identifying precise causes of dropout instances diminishes the study's ability to offer a nuanced understanding of the factors contributing to dropout rates. This limitation hinders the study's internal validity, as the inability to probe into individual cases may lead to oversimplification and a lack of depth in the analysis. The findings, therefore, might not accurately represent the complex reliance on the variables in influencing dropout rates and economic statuses.

Secondly, the lack of reasoning for low graduation rates or the economic statuses of the SDA communities adds another layer of limitation. The study's focus on districts receiving additional funds not showing an increase in graduation rates or economic status raises concerns about the generalizability of the findings. The applicability to other contexts may be limited without a comprehensive understanding of the factors contributing to low graduation rates and economic differences. The absence of this information restricts the study's external validity, making it challenging to generalize the findings to broader educational settings.

Furthermore, the study's correlational nature limits the ability to establish causation. While the research identifies associations between funding and graduation rates, the lack of a causal link limits the study's ability to make definitive claims about the impact of funding on dropout rates. This limitation affects the study's internal validity,

emphasizing the need for more controlled research methodologies to establish causation and provide a more robust foundation for policy recommendations.

Finally, the reliance on reported district data introduces a significant limitation to reliability and generalizability. The findings are contingent on the accuracy and completeness of the reported data from each district. Any inconsistencies or inaccuracies in these data could compromise the reliability of the study's conclusions. This limitation raises questions about the external validity of the findings, as the study's pertinence to other regions depends on the credibility and completeness of the information provided by individual districts. Future research should use a more rigorous data collection method to ensure the accuracy and comprehensiveness of the information used in the analysis to enhance trustworthiness and generalizability.

### **Recommendations**

The following are recommendations for further research rooted in the strengths and limitations presented in the study. Considering the feasibility of the recommendations, it is practical to suggest that future research on preschool programs' long-term impact should leverage existing data and evaluation mechanisms. This approach allows for a cost-effective and efficient exploration of the potential inequities in education outcomes without requiring extensive new resources. Additionally, collaborating with established preschool programs for data collection can enhance the feasibility of a more extended evaluation, as these programs often maintain comprehensive records.

Conducting a comparative analysis of preschool funding and outcomes across different states aligns with the practicality of leveraging existing data and research

initiatives. It is possible to benefit from shared resources and expertise by collaborating with researchers and organizations already engaged in education equity initiatives in various states. This collaborative approach would reduce the burden on individual researchers and institutions, making the investigation more feasible within resource constraints.

PDT's role in educational policy outcomes can be approached with a focused and targeted study design. Leveraging available historical data and policy documents reduces the need for extensive new data collection. This targeted approach aligns with the practical considerations of time and resources, providing a feasible way of understanding the impact of historical funding models on the success of educational programs.

Investigating the complexities underlying high dropout rates in economically disadvantaged communities is feasible through a strategic and focused research design. Leveraging existing sociodemographic data and collaborating with community organizations can provide valuable insights into the specific challenges students face in these communities. This approach enhances the practicality of the research by utilizing available resources and expertise.

Combining multiple datasets and factors beyond financial ones to comprehensively understand the relationship between preschool funding and high school graduation rates can be achieved through data integration initiatives. Leveraging existing databases and collaborating with institutions already collecting diverse data sets reduce the need for extensive new data collection efforts. This pragmatic approach enhances the feasibility of exploring the multifaceted aspects of educational outcomes.

In conclusion, the proposed areas of future research align with practical considerations by leveraging existing resources, time, and data. These recommendations emphasize collaboration, strategic use of available information, and targeted study designs, ensuring that the suggested research areas are implementable within realistic constraints. The solid foundations laid by the literature review and study methodology provide a basis for actionable and feasible research.

The study highlights the potential inequities in education outcomes, especially concerning the impact of ECE funding on high school graduation rates. Future research should focus on a more extended evaluation of preschool programs. This study suggests that ECE might not consistently produce lasting benefits. Therefore, investigating whether quality preschool initiatives contribute significantly to long-term academic achievements is crucial. Legislators could evaluate the influence of preschool quality, where parental engagement and additional support to students once they surpass Grade 2, on graduation rates by longitudinally tracking cohorts from preschool to high school, which could provide valuable insights.

While New Jersey serves as a case study, examining and comparing preschool funding and outcomes across different states with similar equity initiatives would enrich the understanding of educational funding and create a more robust data pool. Evaluating varying criteria, geographical focuses, and age groups targeted across states to comprehend the efficiency and impact of ECE policies could provide comprehensive insights. A comparative analysis can reveal if there are more effective funding models beyond New Jersey's system and identify best practices for preschool funding. Identifying states that fund preschool and ensure parent engagement in all districts to

confirm equity would help identify whether adding the parent engagement variable increases graduation rates. Parent engagement or student support past second grade would be a way to determine differences that could increase graduation rates if those models showed increased success.

Further research should investigate the role of PDT in educational policy outcomes. Specifically, analyzing whether the historical context and long-standing funding models affect the success of educational programs like ECE could be insightful in New Jersey or throughout the United States with similar models. Understanding the role of path dependence on funding policies' trajectory and outcomes might explain if changes are needed in long-standing systems if they have successfully met the intended goals or if the goals of funding should be expanded into long-term perspectives.

Future research should focus on understanding and addressing the complexities underlying high dropout rates in economically disadvantaged communities. Investigating why students from these communities are more prone to drop out is vital. Identifying the specific challenges, support structures, and interventions needed to reduce dropout rates could be invaluable. Future research could include examining sociodemographic factors, family dynamics, and community support systems in later years after second grade.

Combining multiple datasets and factors beyond financial ones may offer a more comprehensive understanding of the relationship between preschool funding and high school graduation rates. Data merging could incorporate educational statistics and socio-economic, familial, and community factors, creating a more complete understanding and comprehensive approach to funding and policy implementation.

The literature review and study methodology are solid foundations for future research addressing the relationship between preschool funding and high school graduation rates. The proposed areas of research could offer critical insights into policy effectiveness, long-term impact, and equitable educational outcomes, providing valuable guidance for educational funding and policy implementation across diverse areas throughout the United States in addition to New Jersey.

### **Implications**

These findings have implications for significant positive social change at various levels. The three levels that this study will identify where change would show the most significant impact are at individual, familial, and legislative levels.

At an individual level, these findings challenge the conventional perception that long-term funding automatically translates into improved educational outcomes, which could prompt a shift in mindset among students, parents, and educators. It may lead to a reevaluation of individual educational journeys, encouraging students to seek to take an active role in their educational path. This study's findings, which indicate that long-term funding for ECE may not guarantee improved educational outcomes, directly challenge the conventional belief that sustained financial investment inherently leads to better academic achievements. This insight has significant implications for individuals, prompting a necessary reevaluation of educational journeys at the personal level. As the study suggests, students, parents, and educators might benefit from adopting a mindset that goes beyond the assumption of automatic improvement with prolonged funding. This shift could encourage students to play a more active role in shaping their educational paths, considering factors beyond the duration of financial support. The study's

revelations thus form a crucial link between the research findings and their potential impact on individual perspectives, emphasizing the importance of a nuanced understanding of the relationship between funding and educational outcomes at both the policy and personal.

A deeper understanding of the complexities of educational success could benefit families. Parents might reevaluate their beliefs in the automatic positive effects of continuous funding, which could result in more proactive and critical involvement in their children's education. Parents may have grown accustomed to the school and community support that may have created a lax attitude toward their child's education. Parent involvement may give the specific attention that their child needs and identify specific concerns with their child sooner than waiting for school personnel to identify them. This would allow the district and funding to focus on other influential factors such as teacher quality, curriculum design, and community support systems and empowering families to recognize that sustained financial investment might not be the sole solution and could prompt them to participate in the education of their children and support for their children.

Legislation, especially those focused on educational and funding policies, may need to critically reassess their strategies. These findings could prompt the reevaluation and adaptation of long-term funding structures to ensure a more comprehensive impact on educational outcomes. This could shift policy focus from financial support to addressing other significant aspects such as familial involvement, student support, and community engagement. Legislators could shift their strategies to address the limitations

of the past, possibly leading to a more complete approach to educational programs that go beyond solely financial support.

### **Theoretical Implications**

From a methodological standpoint, this study suggests the need call for broader investigations that extend beyond traditional financial indicators to more accurately measure educational success. Future studies should adopt a multi-factorial approach, integrating quantitative and qualitative elements. Incorporating qualitative aspects, such as student and teacher narratives, can provide an understanding of the contextual factors influencing educational outcomes. Long-term assessments are crucial, requiring researchers to conduct follow-up studies that track students' progress over an extended period. These assessments should go beyond simplistic measures and delve into the qualitative aspects of educational experiences, capturing the complexities that influence long-term academic achievements. Additionally, employing a mixed-methods approach that combines quantitative data with qualitative insights can offer a more holistic understanding of the multifaceted nature of educational success and the role of sustained funding.

Moreover, considering the theoretical insights related to PDT, future research should reevaluate this theory's applicability to educational policy. Researchers could investigate how sustained funding influences policy trajectories and outcomes over time, acknowledging the dynamic interplay of historical factors and their impact on educational programs. Qualitative research methods, such as interviews and case studies, can provide in-depth insights into the historical and contextual aspects shaping the implementation and effectiveness of educational policies. Longitudinal studies that span several policy

cycles will be essential to capture the evolving nature of educational initiatives. By incorporating these methodological enhancements, future research can address the limitations identified in the current study and contribute to a more robust understanding of the intricate relationship between sustained funding, educational policy, and long-term.

Overall, these results challenge existing beliefs and offer an opportunity to re-examine strategies, prompting individuals, families, and legislators to regroup and guide their approaches to educational success and contribute to more inclusive and effective policies, potentially leading to positive social changes in long-term educational equity and outcomes. This is not to say that all aspects of the funding do not benefit the students. Students in disadvantaged communities can reach educational goals directly related to this funding, such as school readiness.

### **Conclusion**

This research has exposed the reality regarding the impact of SDA funding on the graduation rates within the targeted school districts. The study's purpose, in Chapter 1, was to identify the relationship between the Abbott/SDA funding and high school graduation rates and, ultimately, community economic statuses. Despite forty years of concentrated financial support directed to these specific districts, the analysis demonstrates the lack of an increase in high school graduation rates over the 4-year cohort from 2012-2016. This research identified the need for immediate attention and action to reassess the needs of these communities and how to better address the underlying issues that perpetuate these high dropout rates and poverty rates. Once the issues are identified, then the solution can be better evaluated.

The statistical comparison between SDA-funded and nonfunded districts exposed a clear difference. The substantial discrepancies in graduation rates, with SDA districts resulting in an inadequate mean rate of 77.3% compared to a significantly higher 91.6% in non-SDA districts, demonstrate a significant deficiency. These findings indicated that the impact of SDA funding on educational outcomes may not be as intended and prompts a critical reassessment of the value of this financial initiative in addressing equity and ensuring the long-term success of students in these districts, especially concerning high school dropout rates. Policymakers and legislators are urged to revisit existing strategies and programs to develop more effective, equitable solutions to enhance long-term educational outcomes for these communities.

Finally, this research reveals the impact of SDA funding on graduation rates within targeted districts, challenging the assumed positive influence of 40 years of financial support. The contrast in graduation rates between SDA-funded and nonfunded districts, with SDA districts exhibiting a significantly lower mean rate of 77.3% compared to 91.6% in non-SDA districts, underscores a substantial deficiency in the effectiveness of this funding initiative. These findings call for a reassessment of the value and impact of SDA funding in addressing equity and ensuring students' long-term success, particularly concerning high school dropout rates. Policymakers and legislators are encouraged to revisit existing strategies and programs to devise more effective, equitable solutions for enhancing the educational outcomes of these districts. Additionally, the research sheds light on the distressing economic disparity persisting over the 40-year timeline and prior, as SDA-funded districts consistently exhibit higher poverty rates. The inconclusive impact of SDA funding on poverty rates prompts a

critical reanalysis of its effectiveness in addressing economic disparities, urging a reassessment and redesign of strategies to uplift these communities from persistent poverty.

In summary, this research underscores the critical need to comprehensively reassess educational funding strategies, revealing that sustained financial support has not significantly improved high school graduation rates as expected. Future studies should prioritize longer-term evaluations of preschool programs to assess their contributions to academic achievement and long-term benefits. Comparative analyses of preschool funding and outcomes across states can enrich our understanding of educational funding efficiency, offering insights into more effective models and best practices. PDT's role in educational policy outcomes and investigating the complexities underlying high dropout rates in economically disadvantaged communities should be prioritized with strategic research designs that leverage existing resources and data. The study's methodological implications stress the importance of a multi-factorial approach, combining quantitative and qualitative elements to understand educational success better, prompting a shift in policy focus beyond financial support and adding additional variables such as parent engagement or expanded services beyond second grade. This research provides a foundation for future studies to contribute to more inclusive, effective policies and positive social changes in long-term educational equity and outcomes.

## References

- Alchemer. (2021). *Why you should consider secondary data analysis for your next study*.  
<https://www.alchemer.com/resources/blog/secondary-data-analysis/>
- Blau, D. M. (2021). The effects of universal preschool on child and adult outcomes: A review of recent evidence from Europe with implications for the United States. *Early Childhood Research Quarterly*, 55, 52–63.  
<https://doi.org/10.1016/j.ecresq.2020.10.009>
- Bouchrika, I. (2023). *High school dropout rate is decreasing but race, income & disability issues persist*. Research.com. <https://research.com/education/high-school-dropout-rate>
- Brown, C. A., & Wright, T. S. (2011). The rush toward universal public pre-K: A media analysis. *Educational Policy*, 25(1), 115–133.  
<https://doi.org/10.1177/0895904810386601>
- Bureau of the Census. (1983). *Characteristics of the population, general social and economic characteristics, New Jersey. 1980 Census of Population*.  
[https://www2.census.gov/library/publications/decennial/1980/volume-1/new-jersey/1980a\\_njc-01.pdf](https://www2.census.gov/library/publications/decennial/1980/volume-1/new-jersey/1980a_njc-01.pdf)
- Campbell, C. (2015a). High school dropouts after they exit school: Challenges and directions for sociological research. *Sociology Compass*, 9(7), 619–629.  
<https://doi.org/10.1111/soc4.12279>
- Campbell, C. (2015b). The socio-economic consequences of dropping out of high school: Evidence from an analysis of siblings. *Social Science Research*, 51, 108–118.  
<https://doi.org/10.1016/j.ssresearch.2014.12.011>

- Cascio, E. U. (2023). Does universal preschool hit the target? Program access and preschool impacts. *Journal of Human Resources*, 58(1), 1–43.  
<https://doi.org/10.3368/jhr.58.3.0220-10728r1>
- Castro Teixeira, A., & Cosme da Costa Vieira, P. (2016). Escaping from poverty through compulsory schooling. *Notas Económicas*, 21. [https://doi.org/10.14195/2183-203X\\_21\\_1](https://doi.org/10.14195/2183-203X_21_1)
- Courtney, J. R., Garcia, J. T., Rowberry, J., Eckberg, N., Dinces, S. M., Lobaugh, C. S., & Tolman, R. T. (2023). Measuring impact of New Mexico pre-kindergarten on standardized test scores and high school graduation using propensity score matching. *International Journal of Child Care & Education Policy*, 17(1), 1–18.  
<https://doi.org/10.1186/s40723-023-00112-9>
- Curran, F. C. (2015). Expanding downward: Innovation, diffusion, and state policy adoptions of universal preschool. *Education Policy Analysis Archives*, 23(36).  
<https://doi.org/10.14507/epaa.v23.1688>
- David, P. A. (2007). Path dependence: A foundational concept for historical social science. *Cliometrica*, 1(2), 91–114.
- Durkin, K., Lipsey, M. W., Farran, D. C., & Wiesen, S. E. (2022). Effects of a statewide pre-kindergarten program on children's achievement and behavior through sixth grade. *Developmental Psychology*, 58(3), 470–484.  
<https://doi.org/10.1037/dev0001301>
- Education Law Center. (n.d.). *The history of Abbott v. Burke*.  
<https://edlawcenter.org/litigation/abbott-v-burke/abbott-history.html>
- Education Law Center. (2019). *Abbott Districts: School funding still unconstitutional*.

- Edyburn, K. L., Quirk, M., & Furlong, M. (2017). Measurement invariance of a school readiness screener for use in preschool and kindergarten. *Early Education and Development, 28*(7), 810–821. <https://doi.org/10.1080/10409289.2017.1282802>
- Frede, E. C. (1995). The role of program quality in producing early childhood program benefits. *The Future of Children, 5*(3), 115–132.
- Fuller, B., & Wright, J. (2007). *Parallel play: Preschool and K-12 finance reform in New Jersey and Texas* (Working Paper 07-3).  
<https://files.eric.ed.gov/fulltext/ED510161.pdf>
- Garver, K. A., Frede, E., Barnett, W. S., Gardiner, B. A., Hodges, K. S., & Sandelier, N. (2022). *New Jersey strategic plan for preschool expansion Phase I: The foundation*. National Institute for Early Education Research.
- Gibbs, C., Ludwig, J., & Miller, D. L. (2013). Head start origins and impacts. In M. J. Bailey & S. Danziger (Eds.), *Legacies of the war on poverty* (pp. 39–65). Russell Sage Foundation.
- Goertz, M. E. (1994). The finances of poor school districts. *Clearing House, 68*(2), 74–77. <https://doi.org/10.1080/00098655.1994.9957200>
- Gruber, K.. (2012). Bringing home the bacon: A case for applying the New Jersey urban school funding remedy from *Abbott v. Burke* to poor rural school districts. *Columbia Journal of Race and Law, 2*(1), 167–198.  
<https://doi.org/10.7916/cjrl.v2i1.2269>
- Kim, R. (2021). Expanding access to pre-k and the legacy of *Abbott v. Burke*. *Phi Delta Kappan, 103*(2), 64–65. <https://doi.org/10.1177/00317217211051155>
- Kretchmar, J. (2021). Education Reform Movements. *Salem Press Encyclopedia*.

- Levin-Waldman, O. M. (2009). Urban path dependency theory and the living wage: Were cities that passed ordinances destined to do so? *Journal of Socio-Economics*, 38(4), 672–683. <https://doi.org/10.1016/j.socec.2009.03.009>
- Lee-St. John, T. J., Walsh, M. E., Raczek, A. E., Vuilleumier, C. E., Foley, C., Heberle, A., Sibley, E., & Dearing, E. (2018). The long-term impact of systemic student support in elementary school: Reducing high school dropout. *AERA Open*, 4(4).
- Lynch, M. D. (2015). A mixed method analysis of an early intervention program for students with behavioural and concentration difficulties in two schools in Malmö, Sweden
- Mahoney, J. (2000). Path dependence in historical sociology. *Theory & Society*, 29(4), 507. <https://doi.org/10.1023/A:1007113830879>
- Marchildon, P., & Hadaya, P. (2022). Understanding the impacts of increasing returns in the context of social media use. *Information Technology & People*, 35(3), 1136–1169. <https://doi.org/10.1108/ITP-01-2020-0016>
- McCoy, D. C., Yoshikawa, H., Ziol-Guest, K. M., Duncan, G. J., Schindler, H. S., Magnuson, K., Yang, R., Koepf, A., & Shonkoff, J. P. (2017). Impacts of early childhood education on medium- and long-term educational outcomes. *Educational Researcher*, 46(8), 474–487.
- Mohajan, H. (2020). Quantitative Research: A successful investigation in natural and social sciences. *Journal of Economic Development, Environment and People*, 9(4). <https://doi.org/10.26458/jedep.v9i4.679>
- New Jersey Department of Education. (n.d.) *DOE Data*. Retrieved from <https://www.nj.gov/education/data/drp/>

- New Jersey School Development Authority. (n.d.) *NJDSA Data*. Retrieved from <https://www.njsda.gov/NJSDA/About/WhatWeDo>
- New Jersey School Development Authority. (2020). *NJDSA Annual Report 2020*. <https://www.njsda.gov/Content/public/reports/2020AnnualReport.pdf>
- Nieto-Munoz, S. (2022). Measure would require state to study high school dropout rate. *New Jersey Monitor*. <https://newjerseymonitor.com/2022/12/02/measure-would-require-state-to-study-high-school-dropout-rate>
- Oppermann, E., Lehl, S., & Burghardt, L. (2023). Associations between preschool quality and children's social-emotional development until 2nd grade of elementary school. *Early Childhood Research Quarterly*, 63, 133–144. <https://doi.org/10.1016/j.ecresq.2022.12.002>
- O'Sullivan, E., Rassel, G. R., Berner, M., & Taliaferro, J. D. (2017). *Research methods for public administrators* (6th ed.). New York, NY: Routledge.
- Pendola, A., Muñoz, I., Zapata, M., & Schaub, M. (2022). Early opportunities and fourth-grade success: State pre-k funding, quality, and access on student achievement. *Education Policy Analysis Archives*, 30(126–128), 1–26. <https://doi.org/10.14507/epaa.30.7144>
- Phillips, D. A., Lipsey, M. W., Dodge, K. A., Haskins, R., Bassok, D., Burchinal, M. R., & Weiland, C. (2017). Puzzling it out: The current state of scientific knowledge on pre-kindergarten effects: A consensus statement. *The Brookings Institution*.
- Pierson, P. (2000). Increasing returns, path dependence, and the study of politics. *American Political Science Review*, 94(2), 251. <https://doi.org/10.2307/2586011>

- Pollak, R. A. (1970). Habit formation and dynamic demand functions. *Journal of Political Economy*, 78(4), 745. <https://doi.org/10.1086/259667>
- Powell, J. J. W., Edelstein, B., & Blanck, J. M. (2016). Awareness-raising, legitimation or backlash? Effects of the UN convention on the rights of persons with disabilities on education systems in Germany. *Globalisation, Societies and Education*, 14(2), 227–250.
- Pre-K Program Benefits Last into Middle School, New Study Finds. (2017, December 12). *States News Service*.
- Press, F., Cooke, M., Gibbs, L., & Warren, R. (2021). Inequality, social justice and the purpose of early childhood education. *Discourse: Journal of Childhood & Adolescence Research / Diskurs Kindheits- Und Jugendforschung*, 16(4), 510–524. <https://doi.org/10.3224/diskurs.v16i4.09>
- Raineau, L. (2022). Rethinking path dependence, technical innovation and social practices in a renewable energy future. *Energy Research & Social Science*, 84. <https://doi.org/10.1016/j.erss.2021.102411>
- Raosoft, Inc. (2004). Sample size calculator. Retrieved from Raosoft: <http://www.raosoft.com/samplesize.html>
- Roberts, K. (2021). Expanding access to pre-k and the legacy of Abbott v. Burke. *Phi Delta Kappan*, 103(2), 64–65. <https://doi.org/10.1177/00317217211051155>
- Robson, K., Malette, N., Anisef, P., Maier, R., & Brown, R. (2022). A comparison of high school graduation predictors Between two Ontario student cohorts. *Canadian Journal of Education*, 45(4), 1027–1054.

- Temple, J. A., & Reynolds, A. J. (2015). Using social-impact borrowing to expand preschool-to-third grade programs in urban schools. *Journal of Education for Students Placed at Risk*, 20(4), 281–292.
- Thomas, J. (2021). Head Start Program. *Salem Press Encyclopedia*.
- Torring, J. (2009). Rethinking path dependence in public policy research. *Critical Policy Studies*, 3(1), 70–83. <https://doi.org/10.1080/1946017090315814>
- United States Census Bureau. (2020). *QuickFacts New Jersey. United States Census Bureau*. <https://www.census.gov/quickfacts/NJ>
- U.S. Department of Labor Employment and Training Administration. (n.d.) CareerOneStop, <https://www.careeronestop.org/>
- Van Assche, K., Duineveld, M., Gruezmacher, M., & Beunen, R. (2021). Steering as path creation: Leadership and the art of managing dependencies and reality effects. *Politics & Governance*, 9(2), 369–380. <https://doi.org/10.17645/pag.v9i2.4027>
- Valentino, R. (2017). Will public pre-k really close achievement gaps? Gaps in pre-kindergarten quality between students and across states. *American Educational Research Journal*, 55(1), 79–116. <https://doi.org/10.3102/0002831217732000>
- Vandell, D. L., Belsky, J., Burchinal, M., Steinberg, L., & Vandergrift, N. (2010). Do effects of early child care extend to age 15 years? Results from the NICHD study of early child care and youth development. *Child Development*, 81(3), 737–756. <https://doi.org/10.1111/j.1467-8624.2010.01431.x>
- Walker, E. M. (2004). The impact of state policies and actions on local implementation efforts: A study of whole school reform in New Jersey. *Educational Policy*, 18(2), 338–363.

Walker, E. M., & Seton Hall Univ., S. O. N. C. for U. L. R. and R. (2000).

Decentralization and participatory decision-making: implementing school-based management in the Abbott districts. *Research Brief*, 1(1) 1-23.

Warner, R.M. (2008). *Applied Statistics: From bivariate through multivariate techniques*. Sage Publications, California.

Zhang, T. (2017). The case for sustained investment in state longitudinal integrated data systems : The value of extended time span coverage. *International Journal of Manpower*, 38(4), 614–631. <https://doi.org/10.1108/IJM-02-2016-0037>