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The Mystery of Wide Variation in Rates of Inclusion: Does Money Make a Difference?

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Abstract

Inclusion has become a strong value in educating students with disabilities. Historically, beginning with the passage of PL 94-142 (1975), the inclusion of students with disabilities in the least restrictive environment has become a focal point for litigation and a rallying issue for advocates. Yet, it is not generally known that levels of inclusion vary wildly across states and school districts. In one state, recent data show variation from 34% to 91% in the proportion of special education students who are "fully included" in general education settings. Opportunities for inclusive education should not depend on where a student resides. This study attempted to formulate an explanatory model for district inclusion levels based on demographic and economic characteristics. Using data from all 501 school districts across the Commonwealth of Pennsylvania, including comprehensive demographic and financial information, and combining data from over 200,000 students, enabled multiple regression explanation of only 7% of variation across districts. Understanding factors that promote or detract from the probability of any one student having an inclusive school experience should be of great interest to all stakeholders, from families to policy makers.

The motivation for this research arose from a mystery. Ever since the Federal government began to require reporting levels of inclusion of students with disabilities in general education settings (U.S. Department of Education, 2000), analysts and advocates noticed that states varied tremendously in the overall degree of inclusion they report. The junior author of this article, and many others, wondered - Why? What could explain the differences among and across the states? Was it – a natural first guess – funding? Or could it be some combination of demographics, ethnic discrimination, poverty, and state history/policy that would explain it?

Almost from the beginning of reporting, states were required by the Office of Special Education Programs (OSEP) of the Department of Education to report inclusion – or "Least Restrictive Environment" (LRE) in these categories:

For each student, report whether he/she is inside a General Education Classroom for:
80% to 100% of the school day
40% to 79% of the school day
0% to 39% of the school day

The most common way of reporting the complex data arising from that scheme is to say what percentage of students were reported to be in the top category, i.e., spent 80% to 100% of his/her school day in a general education classroom. As reported by Kurth (2014):

> On average, about 37 percent of students on the spectrum spent at least 80 percent of their school day in inclusive environments. But the numbers varied considerably from one place to the next, ranging from just 8 percent in Washington, D.C. to 62 percent in Iowa.

We call attention to the numbers – from 8% in one state to 62% in another. What combination of factors could possibly explain such extreme differences across the states? They all operated under the same rubric spelled out in the Individuals with Disabilities Education Act (IDEA) and everyone concerned understood the concept of "least restrictive environment" (LRE). Kurth's (2014) analysis was only about students on the autism spectrum. The variations in other disability categories were just as great and some were greater.

This anomaly persisted for two decades. It was always a goal of the junior researcher in this study to obtain detailed financial information about school districts to see if the hypothesis – more money, more inclusion – was true. Perhaps the money variable would explain those huge variations in LRE and inclusive practices across states, neighborhoods and school districts. It did not matter which level of analysis – the discrepancies continued to exist at every level. Research has not yet demonstrated the most fundamental thing – funding levels for special education is related to inclusion levels in a district while other factors (e.g. race) are held constant. This study tested this relationship in the historical context of the development of federal special education policy and the inevitable links to the enactments of funding formulas at the state level(s).

Historical Background – Federal Policy, Funding Practices and Litigation

Federal involvement, including funding, in the education of students with disabilities began to occur in the late 1950s and early 1960s. In the Education of Mentally Retarded Children Act of 1958 and Training of Professional Personnel Act of 1959, Congress appropriated funds to train leaders and teachers to educate children with intellectual disabilities. In 1965, the Elementary and Secondary Education Act (ESEA) was passed and signed by President Lyndon Johnson as an important component of the war on poverty. For the first time, the federal government directed funding to approve educational opportunities for disadvantaged children, including students with disabilities who attended state schools for students identified as deaf, blind, and/or having an intellectual or developmental disability (Huefner, as cited in Yell, 2006).

Prior to 1975, students with disabilities were frequently denied adequate services and access altogether by their schools (Greene, 2007). Many individuals with significant disabilities were sent to institutions. In fact, Congressional findings in 1974 indicated that more than 1.75 million students with disabilities did not receive educational services and more than 3 million students with disabilities were not being educated in a way that was meeting their individual needs. Educational opportunities for students with disabilities were significantly limited in two ways: (a) many students were completely excluded from public schools and (b) students with disabilities who were admitted to public schools did not receive an education appropriate to their needs (Yell, Drasgow, Bradley & Justesen, as cited in Yell, 2006).

Yet, it was not until the later part of the 1960s and the early 1970s following the civil rights movement that concern for the equality of educational opportunities was expanded to include individuals with disabilities. In 1970, Title VI of the ESEA was replaced by the Education of the Handicapped Act (EHA) with the purpose of consolidating and expanding previous federal grant programs and to continue funding pilot projects at state and local levels. In terms of funding, each state receiving federal special education monies were required to establish a goal of providing full educational opportunities for all students with disabilities (Yell, 2006).

The first references to including students with disabilities in the mainstream came into the national spotlight with two critical court cases – *Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania (*PARC, 1972) and *Mills v. Board of Education* (1972). In both landmark cases, the Courts interpreted the Due Process Clause of the Fourteenth Amendment to give parents specific rights, striking down local laws that excluded students from schools establishing that children with disabilities had the right to a public education stating that whenever possible, children with intellectual disabilities must be educated in general education classrooms rather than be segregated from the general school population (Alexander & Alexander, 1985). The junior author of this article, became curious about this issue during the mid to late 1970s enforcement phase of the lawsuit that "started it all" – the PARC (1972) case in Pennsylvania. Because some parts of Pennsylvania, particularly the City of Philadelphia, were seen as not living up to the elements of the consent agreement – particularly around LRE and inclusion – the plaintiffs went back to court seeking a ruling demanding enforcement. They retained a pro bono statistician to help pin down just how inclusive the average student's school experience was. The variations across neighborhoods and school subdivisions were immediately revealed to be tremendous.

Bending to increasing pressure, landmark federal legislation in the form of the Education for All Handicapped Children Act, 1975 (PL 94-142) was enacted assuring the rights of all children with disabilities to a public school education. Subsequently, in 1991 and 1997, PL 94-142 was re-authorized and issued as the Individuals with Disabilities Education Act (IDEA); and then again in 2004, IDEA became the Individuals with Disabilities Education Improvement Act (IDEIA). The new law insured that children with disabilities be granted basic educational rights by providing: (a) an free appropriate public education (FAPE); (b) an individualized education program (IEP); (c) special-education and related services; (d) due process services; and (f) a least restrictive environment (LRE) in which to learn (Alexander & Alexander, 1985). Funding was to flow from the federal government - 40% of excess costs of educating students with disabilities - to the state educational agencies (SEAs), and finally, the local educational agencies (LEAs). Federal money was to *supplement* state and local dollars and not be used to *supplant* those funds (Yell, 2006). However, the promise of 40% was never realized leaving the burden of funding for special education to the states and local communities.

Following the initial enactment of PL 94-142 (1975), several trends were observed. An increase in the number of school-age children requiring special education services initiated a surge in litigation as parents and school districts turned to the courts to find answers to complex questions regarding appropriate educational placement for children with disabilities (Alexander & Alexander, 1985). Initially, in an attempt to both comply with the new laws and do what was perceived as best for students with disabilities, special education programs followed a system of diagnosing, labeling, and removing students from the general education population and placing them in settings that were separate from their non-disabled peers using different curriculum and instructional strategies. A dual system of education, including funding practices, evolved into two independent branches - general and special education. Increasingly over the years, the practice of labeling a student with a disability and the building of separate programs for general and special education has been questioned in the courts and across stakeholder groups including legislators, educators, and parents (D'Alonzo, Giordano, & Van Leeuwen, 1997).

In the early 1990s, *P.J. et al v. The State of Connecticut* (1992) was filed in Connecticut. Once again, acting as an expert witness, the junior author of this article found variations across 169 school districts in inclusion among students with intellectual disabilities that were very wide. This time, he had access to individual student data – over 80,000 students in special education (with identifiers stripped) and their age, gender, ethnicity, placement, inclusion level, and – with some extra work – indicators of district wealth and poverty. In court testimony and research findings, he reported that no combination of student and district characteristics could explain more than a small proportion of the variations – less than 15%. In the late 1990s, the Gaskin lawsuit *(Gaskin v. Commonwealth of Pennsylvania,* 1998*)* was filed seeking to increase the number of children with disabilities educated with non-disabled peers, and to ensure schools provided real supports for inclusion work as required by IDEA. To reach those goals, the lawsuit sought to change Pennsylvania's systems for training districts in inclusion and for monitoring and enforcing their compliance (Public Interest Law Center, 2012). As expert witness, the junior author of this article gained access to the individual inclusion levels and characteristics of all the students in special education in the Commonwealth – more than 250,000. Again, no amount of statistical analysis could account for the variation in average inclusion rates by district (501

districts) from a low of about 25% of students spending more than 80% of their days in regular classrooms to a high of 80%.

Special Education Finance and Funding Systems

Historically, prior to the 1997 federal reauthorization of IDEA, funding was based on each state's count of children receiving special education services (limited to 12% of the regular school-age population). In the literature, this is often referred to as a "bounty" system where school districts receive state funding based on the size of their special education programs, so in effect they receive a bounty for each child placed in special education (Parrish & Wolman, 2004). During the early implementation of PL 94-142, states frequently enacted funding formulas similar to the bounty system applied at the federal level. All 50 states, including the Commonwealth of Pennsylvania, implemented contrasting systems and formulas to allocate funding for special education, and at varying points in time, added special provisions that acknowledged the excess costs of special education.

An important issue at federal and state levels is that funding mechanisms for education often contained financial incentives for serving students receiving special education services in more restrictive settings, which is counter to the least restrictive environment (LRE) provisions of the IDEA (1997). Parrish (2001) stated that the way special education is funded can create incentives for developing programs that run counter to "best practice", and in some cases, to the letter or spirit of federal and state law. For example, funding provisions can create incentives for placing students identified with disabilities in more restrictive settings instead of promoting the least restrictive environment (LRE) provisions of IDEA (1997). Specifically, Greene and Forster (2002) found that the effect of a bounty system accounted for 62% of special education enrollment growth experienced by bounty states during their study. Greene (2007) continued to find that the bounty system of educating students with disabilities provided financial incentives for schools to over identify students as disabled; and once identified, under serve those students.

As discussion continued, states struggled with determining the most equitable and effective use of funding mechanisms to provide services for students identified with disabilities, and the courts began to challenge the legality of the various systems being implemented. One researcher, Cullen (2003) focused on how changes brought about by litigation in special education financing within a state affected identification of students as disabled. In essence, after the court order took effect in districts where the amount of money provided for placing a student in special education went up, special education enrollment went up more than in other districts. Supporting researchers Parrish (2001) and Greene and Forster (2002), Cullen (2003) found that the "bounty" system explained a 35% growth in special education in Texas from the 1991-92 school year through the 1996-97 school year. Out of this litigation, several major issues were found to be motivating the states to seek changes in the special education funding mechanisms employed by their state systems including the elimination of fiscal disincentives for least restrictive placements (e.g., allocations based on the type of student placement). Agreeing with state officials, researchers found that the high cost of special education assessment and program administration, the strict categorical nature of special education services, and important to this study, fiscal policies that worked at cross purposes with special education inclusion policies pressured states across the country to seek funding reforms for special education (Moore et al.; Shields, Jay, Parrish, & Padilla, as cited in Parrish, 2001).

Pennsylvania's Reform Efforts in Special Education Finance Systems

Historically, the Commonwealth of Pennsylvania has attempted to provide equal access to special education programs, as well as increase achievement and inclusion for Pennsylvania's children with disabilities. Parrish (2001) found that Pennsylvania was one state that specifically designed its reform efforts to address rising special education costs and enrollments, as well as other policy (including LRE) concerns. Prior to 1991, Pennsylvania used the "Excess Cost System" (24 P.S. §25-2509) to fund special education. Similar to a bounty system, the state formula paid school districts for the difference between special and general education costs based on the actual number of students in special education and was intended to meet the actual needs for each district. However, there was no effective limitation on cost increases and, as a result, the system included potential incentives for over-identification of students for special education and encouraged the use of expensive systems and programs (Special Education Funding Commission Report, 2013).

In the late 1980s, studies revealed problems with the "Excess Cost" system such as too many referrals for special education, too long a wait for evaluations, too many placements in programs for mild learning disabilities, too little movement back to general education programs, too much segregated programming, and too little connection between special and general education programs as contributing factors increasing the identification of students with disabilities (Feir, 1995). In 1990, in response to associated rising costs and increasing evidence of inequities in funding practices surrounding the Excess Cost System, the Governor proposed an alternative system of funding to be provided to districts based entirely on the ADM of *all* students. The new system was designed to end fiscal incentives associated with special education placements and to provide districts greater control over funding decisions, and subsequently, programing for students placed in special education. In 1991, Pennsylvania adopted the "Census System" (24 P.S. §25-2509.5). Districts received a fixed amount of funding per assumed student whether they had more or less than this 16 percent overall level (Special Education Funding Commission Report, 2013). Under this system, the funding formula for special education was amended or changed in some small way over a ten year period. In April 2013, the General Assembly established and charged the Special Education Funding Commission with the task of reviewing and making recommendations related to inequities in special education funding across the Commonwealth.

Findings of the Special Education Commission - Factors Affecting Costs and Expenditures

High-poverty communities with low property values and taxes that are already very high are unable to effectively generate more local revenue; given limited state funding and increasing costs, some Local Education Authorities (LEAs) have sought to satisfy mandates by reducing the resources allocated to general education programs. Due to legal mandates, increasing special education costs, flat state funding, and caps on property tax increases, districts have little choice beyond reducing costs in other program areas to preserve special education services. Special education funding reforms were once again needed to "benefit families and communities by strengthening the education of all students, increasing instructional effectiveness, reducing dropout rates, improving student performance, and lowering long term societal costs" (Special Education Funding Commission Report, 2013).

At the conclusion of the hearings, it was found that the ability of the Commonwealth to provide equal access to special education programs as well as increase achievement and inclusion for Pennsylvania's children with disabilities has been repeatedly undermined by past special education funding formulas. Acknowledging the complexities of the issues, the Commission (2013) found that a variety of student and community-based factors affect special education costs and the ability of LEAs to provide quality services for students with disabilities. Student-based factors vary widely based on personal needs for accommodations and support for students with disabilities from relatively simple to highly complex requiring more costly services. Community-based factors included the relative capacity of LEAs to address poverty levels, local property taxes, and local cost of living. Students in poverty, especially children with disabilities, tend to have more complicated academic needs thereby imposing additional educational challenges and costs on LEAs. As a result, it was recommended that state funding should be more accurately and equitably distributed based on actual student enrolment, level of student need based on associated costs and services, school district wealth, and local tax burden. (Special Education Funding Commission Report, 2013).

In summary, public officials, researchers, and advocates from across the country have noticed and documented that states have varied tremendously in the overall degree of inclusion reported in response to the LRE requirements. In addition, funding amounts and formulas have varied widely increasing the challenges faced by stakeholders in providing resources and supports for students with disabilities. The purpose of this research was to investigate possible relationships between the development of special education law, availability of funding and inclusionary practices for students identified with disabilities in one state, the Commonwealth of Pennsylvania.

Method

Research Question/Hypotheses

This study followed an historical perspective to better understand the context and relationships between funding and inclusionary practices for students with disabilities. In order to bring some understanding to these complex issues, this study focused on the following main research question: What are the relationships between special education funding mechanisms and inclusionary practices for students with disabilities in one state – the Commonwealth of Pennsylvania.

This study sought to identify patterns and relationships between district funding (special education expenditures per student) and the levels of inclusion among special education students in each district. The quantitative data collection and analysis of this study focused on revealing the predictive power of variables related to funding and inclusionary practices for students with disabilities in general education classrooms. The data collection process included multiple sources of public data merged into one spreadsheet for a large sample including all 501 public school districts in the Commonwealth of Pennsylvania.

Procedures

Quantitative research designs may be classified as either experimental or non-experimental and are frequently known for their emphasis on objectivity and quantification of phenomena. This study employed a quantitative non-experimental design. A descriptive/comparative component

provided a summary of the existing phenomenon, assessing the nature of the characteristics of the variables as well as investigating whether there were differences between the groups being studied. In addition, a multiple linear regression analysis was applied to determine the degree of the relationships between variables and the districts being studied via the Statistical Package for the Social Sciences (Leech, Barrett, & Morgan, 2008).

Initial quantitative data were collected and analyzed on multiple variables including district characteristics, poverty levels, race, district enrollment rates for general and special education, inclusion rates, and district expenditures per special education student for the 2010-2011 school year. The primary databases utilized for the collection of data were found in large public data sets collected and maintained at federal and state levels that may be accessed by the public**.** Prior to conducting the descriptive/comparative and multiple linear regression analysis, the researcher completed several steps to prepare the data for analysis including looking for missing data, errors in data entry and consistency in the formatting of the variables. While completing this process, the researcher found one district that did not have data related to special education expenditures, enrollment, and inclusion practices. All students identified with disabilities were provided services through a neighboring district. As a result, the decision was made to base the analysis for this study on 500 verses 501 public school districts in the Commonwealth. After an exhaustive review of the data, the primary researcher proceeded with the two statistical techniques used in this study.

Results

Results 1: Comparative/Descriptive

First, the researcher conducted descriptive statistical techniques using the selected variables for 500 public school districts in the Commonwealth for the 2010-2011 school year. Six variables were selected based on the research question investigating the relationship between funding in special education and inclusionary practices in general education classrooms for students identified with disabilities including special education enrollment, special education expenditure per pupil, and percentage of special education students included in general education settings for 80% or more of the school day. In addition, total district enrollment, percent white, and percent poverty were added as variables providing descriptors of the demographics of the school districts included in this study.

As shown in Table 1, the mean expenditure per special education student was $11,586.84 (*SD*=3076.60); the mean percent of students enrolled in special education was 16% (*SD*=3.21); the mean rate of high inclusion - percentage of students identified with a disability in general education settings for 80% or more of the school day - was 63% (*SD*=11.60); the mean rate of total district enrollment was 3,414.43 (*SD*=8137.21) for *all* students; the mean percent white was 86% (*SD*=17.10); and the mean rate of poverty - based on 2010 US Census Data - was 16% (*SD*=8.22). Of particular interest to the researcher, and noteworthy in the results, is the wide range (Min/Max) in the data for all of the selected variables for the 500 school districts across the Commonwealth.

McMillan and Schumacher (2006) describe the *median* as the point that divides a rank-ordered distribution into halves with 50% of the scores lying below the median and 50% lying above it. To further investigate the wide range and distribution of values for each of the selected variables in this study, the median was calculated to determine if they were normally distributed across a

bell-shaped symmetrical curve. When data is distributed unevenly; that is the distributions are unsymmetrical, the scores are termed either positive or negatively *skewed*. Researchers consider data to be approximately normal in distribution if the skewness values fall between -1.0 and +1.0. As shown in Table 1, three out of six variables selected for this study are considered to be normally distributed including the percent of students enrolled in special education (.33), the rate of high inclusion (-.45) for students with disabilities, and the percentage of poverty (.88) in communities across the Commonwealth. In contrast, three out of six variables are not distributed evenly including expenditures per special education student (1.21), total district enrollment for *all* students (18.39), and the percentage of white (-2.46) students in Pennsylvania public school districts.

Given the wide range (Min/Max) in the values presented for all of the selected variables, the examination of skewness provided valuable insights regarding the distribution of the data provided for the 500 school districts across the Commonwealth. In terms of the amount spent for students with disabilities, approximately 50% of the districts spent less than $11,033.00 per special education student for the 2010-2011 school year. Total district enrollment with less than 2166 students in approximately 50% of the school districts reflected relatively small district sizes. Finally, when looking at the racial profile of public school districts, approximately 50% have a student population that is predominantly white (0.92). The data did not appear to be skewed for the variable of poverty, however the researcher was surprised that the median value (15.37) indicated a larger percentage of communities in poverty than would be expected. Given the design of the demographics and locations of two large urban communities in the southeastern and southwestern corners of the Commonwealth, the data suggests that there are a large number of smaller rural districts being impacted by the issues of poverty. Looking at the data collected in more detail offered the researcher a clearer picture of community demographics across the Commonwealth and provided a framework for more complex statistical techniques to follow.

Results 2: Multiple Regression Models of Inclusion

During the second phase, the researchers conducted a multiple linear regression analysis to investigate the possible complex interrelationships among inclusionary practices and several possible associated variables. A single multiple regression equation was developed to determine the best linear combination of poverty rate, percent white, district enrollment, and special education expenditure per pupil in order to predict the percentage of students in high inclusion situations for the selected 500 school districts in the Commonwealth.

The dependent variable, InclusionHigh, was the proportion of special education students for whom inclusion was reported as 80% to 100% of the day in a general education classroom. The regression equation model used to explain the variance in the dependent variable of high inclusion was as follows:

> InclusionHigh = PovertyRate + PercentWhite + DistrictEnroll + PercentSpEdEnroll + SpExpendPerPupil.

The five independent variables significantly predicted the rate of high inclusion of students with disabilities in the general education classroom, $F(5,472) = 7.87$, $p \leq .001$. The resulting equation with its standardized beta coefficients was:

InclusionHigh = (.057 x PovertyRate) + (.189 x PercentWhite) + (-.043 x DistrictEnroll) + (-.155 x PercentSpEdEnroll) + (-.052 x SpExpendPerPupil).

The standardized beta weights, presented in Table 2, suggest that higher percent white (.189) positively contributes the most to predicting high inclusion of students identified with disabilities in general education classrooms. The PercentSpEdEnroll, meaning the percentage of students in the district who have been identified for special education, was also significant, but in a negative direction (-.155): the higher the percentage identified, the lower the proportion of students spending 80% or more of their day in general education classrooms. It is important to note that expenditures per special education student did *not* predict inclusion rates either way, when other independent variables were being controlled for in the regression equation.

This combination of variables significantly predicted the rate of high inclusion of students with disabilities in the general education classroom, with two variables, PercentWhite and PercentSpEdEnroll, significantly contributing to the prediction. The adjusted *R* squared value was .07. This indicates that 7% of the variance in rate of high inclusion of students with disabilities in the general education class is predicted by this model. According to Cohen (1988), this is a very small effect.

In summary, the results for the comparative/descriptive and correlation statistical techniques were applied to six selected variables for the 500 public school districts in the Commonwealth including: a) expenditures per special education student, b) district enrollment, c) special education enrollment, d) percent white, e) poverty rate, and f) high inclusion rate. The comparative/descriptive results reported on the mean, standard deviation, median, and the minimum and maximum for each of the variables. Given the wide range in the values across the selected variables, the skewness of the data was also taken into consideration. A multiple linear regression equation was derived looking at the connections between one independent variable, inclusion rates for students with disabilities, and the remaining five dependent variables. Overall, only two dependent variables were significantly related to inclusion of special education students in general education classrooms including ethnicity (as reflected by the percentage of white students) and the percentage of students identified for special education. Based on Cohen (1988), the effect sizes for these correlations (Standardized Beta = .189 and .155) should be considered small.

Focusing on inclusion practices, the use of two statistical procedures suggested that there continues to be wide variations in the rates of high inclusion; and districts with higher percentages of white students demonstrate higher rates of inclusion in general education contexts for a greater part of the school day across the Commonwealth. During the review of the results, it was interesting to note that initial questions regarding potential connections between funding and high inclusion rates for students with disabilities in general education classrooms for 80% of the school day, were *not* found to be significant. In other words, with all the data at the researcher's disposal, high levels of inclusion could *not* be predicted with great predictive power, and funding level in particular was not a significant predictor.

Discussion

One of the most confusing aspects of the modern effort to include students with disabilities in everyday school life is that the level of inclusiveness varies tremendously across states, districts, and schools. This has been found by the U.S. Department of Education in its annual reports to

the Congress concerning the implementation of IDEA – and in state level litigation showing that inclusion in school districts varies from 10% to 90%. The results from this study support these findings.

The problem we addressed in this part of a larger study of school funding impacts was simply – Why? Was it funding? Or could it be some combination of demographics, ethnicity, size, poverty, and state history/policy that would explain it? Prior analyses had shown that ethnicity, socioeconomic status (SES), geographic location, age, and other variables had very little explanatory power. In this study, we compiled overall funding levels for special education in 501 districts of Pennsylvania and used these data in a regression methodology to see how much of the variation in inclusion was "explained by" the amount of money being spent for each child in special education. To our knowledge this had not been done before.

The initial descriptive/comparative analysis of selected variables found a wide range in the rate of high inclusion for students with disabilities in the general education classrooms for the 500 school districts across the Commonwealth of Pennsylvania. However, and more importantly, the regression results indicated that knowing the amount of money expended per student gave us *no* additional explanatory power at all. The only variables at our disposal that turned up statistically significant in the equation were an indicator of the ethnic makeup of a district – percentage white – and an index of what proportion of students were identified for special education – and its correlation with inclusion was negative. Taken together, the explanatory power and these two variables was very small – the entire regression equation with four of the most likely candidates for "explaining" inclusion only accounted for 7% of the variation. This left us with 93% of the explanation of high versus low inclusion practices unexplained, unaccounted for.

This study was correlational in nature, so repetition of the caution against assuming causality is justified. One must not leap to the interpretation that ethnicity or labeling practices 'cause' the level of district inclusion. The correlations may suggest possible causal connections, but they cannot be demonstrated without strong scientific controls – such as random assignment and control groups – which will probably never be realistically feasible in our education systems.

Study Limitations

The purpose of this study was to investigate the role of funding in the inclusion of students with disabilities in general education classrooms. While this study yielded constructive information in the areas of special education funding and inclusion in general education settings for students identified with disabilities, there were potential limitations that arose during the completion of this research. First, the foundation of this research was based on quantitative data collected for 501 public school districts in one state – the Commonwealth of Pennsylvania. This study highlighted the rules, statutes, codes, and regulations adopted by the federal and state legislatures, interpreted and enforced through the Pennsylvania Bureau of Special Education and implemented by local public school districts regarding funding and inclusion practices across the Commonwealth. Therefore, readers need to be aware of the differences in contexts and mandates that exist in different states. In addition, this study was limited to a single year nearly a decade ago. That limitation, combined with the fact that we studied only one state, suggests strong caution in generalizing our findings.

Second, the quantitative outcomes that were garnered during this study found that the primary predictor of inclusion **was** a high percentage of white students. It is possible that uninvestigated

predictors may have impacted the dependent variable and may have affected the significance of the model. Results of regression analysis are most reliable when the selected variable categories are equally distributed. In this study, three out of six variables were considered to be normally distributed and three out of six variables were *not* distributed evenly. Therefore, the results may have been skewed from the selected prediction model.

Implications for Future Research and Policy

The role of research in policy development has been described as an integral part of a "rational decision-making model" beginning with the identification of goals and objectives (problem to be solved), proceeding with an analysis of various courses of action, a prediction and evaluation of possible consequences of those actions, and finally, the formulation of a policy to make it possible to obtain the objectives stated at the beginning of the process. Hopefully, rigorous research helps to inform that process. However, this rational-decision making model often neglects the underlying moral beliefs and ideals that are held firmly by the very individuals that political bodies are trying to help (Stone, 2012, p.11). The Commonwealth of Pennsylvania attempted to address this issue by including all stakeholders at the table - legislators, parents, district leaders and advocacy groups - when discussing reforms to funding policies for Special Education.

The most recent recommendations by the Pennsylvania Special Education Funding Commission (2013) acknowledges historical inequities in special education funding by addressing individual and community issues. Yet, in its new form it can be argued that in some ways, the Commonwealth WENT BACK to a "bounty" funding formula with the addition of a "weighted" system – more money for students identified with more complex needs. As a researcher, and pertinent to this study, one of our first questions would be – does this new system, intentionally or unintentionally, establish incentives to identify more students with disabilities or encourage higher/lower rates of inclusion in general education classrooms? The results from this study focused on funding and inclusion practices for one school year during the use of the census-based formula. Strong connections between inclusion and several variables, including funding, were *not* found. There was a big change in the funding formula since our study – we should see if inclusion levels or anything else in the data has changed. A future comparative study over time may be able to judge the effectiveness of the most recent recommended changes in the funding formula to better inform the changes that need to be made going forward. Future research and policy should encourage inclusion, and not give incentives to over-label or underserve students with disabilities.

This study failed to support the notion that the wild variations in school district levels of inclusion could be "explained by" variations in funding. It also failed to reveal what *does* explain that variation. In this scientific situation, our best strategy is to speculate about the underlying causality of inclusion, and suggest directions for future research and informed policy development. The junior author has discussed this mystery with many leaders and researchers over the years, and has begun to suspect that the most powerful determinant of inclusive practices at the school and district level might be leadership. That, we suggest, will be a fruitful direction for future research: measuring the correlation between leadership attitudes toward inclusion and actual inclusion practices. The policy implication of this hypothetical "causal factor" is that special education training programs, including undergraduate and graduate, plus continuing education, should include increased focus and emphasis on the nature and outcomes

of inclusive approaches in classrooms, schools, and districts. In addition, understanding key leadership principles and actions should be explicitly taught. Teachers, supervisors, administrators, and superintendents must all share the value of inclusion if it is to be maximally implemented.

The study of leadership across all organizations including corporations, non-profits, and public entities such as schools has been widely discussed. Higher education institutions in the field of developing future educational leaders often look to practices within the corporate world to provide guiding principles in educational leadership. There is an endless supply of authors and researchers who look to present a wide variety of approaches to be emulated in developing outstanding leadership practices. As a result, looking at leadership as a causal factor in solving the *mystery* in wide variations of inclusion rates and practices across states and districts is broad and overwhelming. Helpful in focusing research and defining outstanding leadership, two authors, Botello and Powell (2018), take a look at leadership through the lens of *intentionality*. In essence, where we put our attention and energy can and does change how complex problems are solved in practice. Funding and inclusion practices clearly fall into this category. The authors state that "when leading with intent, leaders are able to translate their vision, goals, and acute awareness of context into [organizational] intention for every action they engage in" (p. 46). The conceptual understanding of *intentional leadership* requires leaders to clearly understand and believe in the concept or theory, in this case, inclusion of students with disabilities in general education classrooms. Leaders must first be clear within themselves about the "why" and then be able to communicate that to others (Botello & Powell, 2018, p. 48). Looking at the concept of intentionality in leadership is relevant to the discussion of inclusion rates and practices and the development of funding policy. In researching and understanding the historical context of funding practices over time, one observation can be made – focus on funding for special education has consistently been linked to identification practices with *little/no* reference to inclusion of students with disabilities in general education settings.

The study of organizational dynamics and policy development often focuses on how to motivate individuals and/or entities to comply with new mandates? Are we going to employ a 'stick' mentality (comply or else) or the 'carrot' approach with rewards attached? In the education world, increased funding is closely aligned with enrollment practices. Unfunded mandates are often full of legal ramifications – follow the rules or you will be taken to court. Inclusion practices (also known as Least Restrictive Environment) in the IDEA regulations are highly dependent on legal ramifications for non-compliance (*costing* districts large amounts of money). In essence, we are not *rewarding* them (providing financial incentives) for compliance and best practices in the field. If nothing in our data set "explains" district inclusion, then I would argue there is a strong probability that leading with intention plays a strong role in determining the success or failure of inclusion practices in many school districts and worth studying.

So, from a policy perspective, how might we develop strong leadership practices (state, district and school) based on *intentionality* to achieve what we believe is a valued outcome – inclusion of students with disabilities in general education settings for a greater part of the school day? We would suggest that a policy action to enhance that outcome would be to provide a fiscal incentive in the state funding formula. In addition to focusing our intention of providing financial formulas aligned with identification of students with disabilities lets shift our focus to include best practices in inclusion. On a sliding scale, districts achieving higher average inclusion levels (averaging across all students with IEPs, as we did in the present study) would

receive higher funding shares. Modifications of funding formulas are, as we have seen in Pennsylvania, a long and contentious process. However, fiscal incentives are still a powerful force in public agency behavior, so it might be worth setting this as a long term goal of advocacy. In terms of increasing inclusion of students with disabilities, we need to commit to developing intentional leadership at both the state and local levels. Fiscal incentives will shift our intent in a positive direction tipping the scales towards providing greater opportunities for students with disabilities to be included in general education settings for a greater part of each school day.

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Table 1
Descriptive/Comparative Analysis for Selected Variables

Variables	*N*	*M (SD)*	*Mdn*	*Skew*	*Min*	*Max*
Special Education Expenditure Per Pupil	497	11586.84 (3076.59)	11033	1.21	5201	27471
Percent Special Education Enrollment	498	15.53 (3.21)	15.00	.33	5.0	28.00
Percent Inclusion High	500	62.51 (11.60)	62.45	-.45	0.0	91.90
District Enrollment	499	3414.43 (8137.21)	2166	18.39	200	173021
Percent White	479	86.12 (17.10)	92.70	-2.46	3.0	100
Percent Poverty	500	16.04 (8.22)	15.37	0.88	1.28	53.16
Valid N (list wise)	478					

Table 2
Inclusion Model in General Education Settings for Students with Disabilities

Independent Variables	Standardized Beta Weights	Significance
(Constant)		.000
Special Education Expenditure per pupil	-.052	.336
District Enrollment	-.043	.367
Percent White (*higher percent white – higher inclusion)	.189	.001
Poverty Rate	.057	.309
Percent Special Education Enrollment (*lower percent special education enrollment – higher inclusion)	-.155	.002

Note: Dependent Variable: Rate of Inclusion