

2007

An "Adequate" Education Needs an "Adequate" Approach to School Funding

Atanu Das

Assoc. Leydig, Voit, & Mayer, Chicago, IL

Follow this and additional works at: <http://lawcommons.luc.edu/pilr>



Part of the [Education Law Commons](#)

Recommended Citation

Atanu Das, *An "Adequate" Education Needs an "Adequate" Approach to School Funding*, 12 Pub. Interest L. Rptr. 81 (2007).

Available at: <http://lawcommons.luc.edu/pilr/vol12/iss2/3>

This Feature is brought to you for free and open access by LAW eCommons. It has been accepted for inclusion in Public Interest Law Reporter by an authorized administrator of LAW eCommons. For more information, please contact law-library@luc.edu.

AN "ADEQUATE" EDUCATION NEEDS AN "ADEQUATE" APPROACH TO SCHOOL FUNDING

by ATANU DAS*

INTRODUCTION

The United States Constitution and the Constitutions of many states have been interpreted to provide a fundamental right to an "adequate" education.¹ While the federal and state courts generally acknowledge the obligation of the states to offer such an "adequate" education, they have been unable to define "adequacy" with any precision.² With no definition of "adequacy," the courts cannot determine whether the level of funding provided by a state to public

schools is sufficient to meet the state's constitutional obligation.³ That determination is further complicated by the apparently endless debate about the relationship between educational funding and educational "adequacy." This Article will not end this debate, but will attempt to offer answers to two questions: (1) What is an "adequate" education; and (2) How much does it cost to fund this "adequate" education? The Article answers the first question by formulating a pragmatic definition of "adequacy". It answers the second question by performing a statistical regression analysis on the factors contributing to this definition of an "adequate" education.

I. DEFINING "ADEQUACY"

A. GENERAL POLICY CONSIDERATIONS

Courts, state legislators, education experts and parents all have different views on the requirements of an "adequate" education.⁴ However, all agree that an "adequate" education "suggests something beyond equity."⁵ "[That] 'something else' is a notion of sufficiency. . .to achieve some performance objective."⁶ This point raises the questions: "'Adequate' to do what? 'Adequate' how? 'Adequate' for what purpose?"⁷ Two leading education experts answer these questions by requiring education policy makers to make "a two-fold policy judgment about (1) learning or performance levels to be attained and (2) resource levels likely to permit schools to accomplish these learning purposes with students."⁸

B. DEFINITIONS BY THE COURTS AND STATE LEGISLATURES

Although the Supreme Court has implied an "adequate" education is a fundamental right guaranteed by the Constitution, it has never defined "adequacy."⁹ One approach to finding a definition is to allow school district residents to define the objective through the political process, which means electing local school boards to establish "adequacy" metrics, such as reading and writing skills, performance on state exams and national exams, and others.¹⁰ Another approach looks to the state legislature to define an "adequate" education through these same metrics.¹¹

A third option is coaxing a definition out of reluctant courts through litigation.¹² This approach succeeded in *Rose v. Council for Better Education*, where

the Kentucky Supreme Court outlined seven principles of an "efficient" education system.¹³ The seven *Rose* principles are:

1. Sufficient oral and written communication skills to enable students to function in a complex and rapidly changing civilization;
2. Sufficient knowledge of economic, social, and political systems to enable the student to make informed choices;
3. Sufficient understanding of governmental processes to enable the student to understand the issues that affect his or her community, state, and, nation;
4. Sufficient self-knowledge of his or her mental and physical wellness;
5. Sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage;
6. Sufficient training and preparation for advanced training in either an academic or vocation field so as to enable each child to choose and pursue his or her life work intelligently; and
7. Sufficient levels of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market.¹⁴

Although these principles are still abstract, they are more tangible than state courts' previously offered definitions¹⁵ and constitute the most developed definition of "adequacy" thus far.¹⁶

Finally, education finance researchers approach defining "adequacy" as "a set of strategies, programs, curriculum and instructions with appropriate adjustments for special-needs students, districts, and schools, and their full financing, that is sufficient to teach students to high standards."¹⁷ Again, this is an abstract definition which very few find tangible and concrete.¹⁸

C. NO CHILD LEFT BEHIND ACT'S IMPACT ON "ADEQUACY"

In 2002, the No Child Left Behind Act became Congress' most recent federal education law to attempt to increase the standard of education for students across the nation.¹⁹ The Act's main objective requires that schools be accountable for meeting certain standards as measured by students' performance on standardized tests.²⁰ The Act requires States to set academic proficiency levels for their students to achieve by 2014.²¹ These proficiency levels become the measure of an "adequate" education for practical purposes.²² Each year, schools report their Adequate Yearly Progress (AYP) to the federal government to ensure the school will meet its proficiency goals by 2014.²³ If schools do

not meet their AYP goals, the federal government can sanction and may ultimately withhold funding from the school.²⁴

At this policy crossroads, the Act has the potential to have a powerful impact on the definition of an “adequate” education. However, to avoid the threat of sanctions and secure federal funding, states may respond by setting their standards too low, resulting in “inadequately” educated students.²⁵ That is, states may set proficiency levels low to meet the requirements of the Act, but do not take into account whether achieving the proficiency levels will prepare students to pass college admissions tests allowing them to be admitted into college.²⁶

D. DETERMINING “ADEQUATE” EDUCATION FUNDING LEVELS

Three main models have been used to determine “adequate” school funding.²⁷ According to the Professional Judgment Approach, considered an input approach, a group of educational experts study different prototype schools, such as elementary and high schools of varying size,²⁸ then decide what inputs (for example, staff, equipment, or programs) are needed to give students an “adequate” education.²⁹ The cost of these inputs determines the “adequate” education funding level.³⁰

There are two major criticisms of the Professional Judgment Approach. First the subjectivity of this method leads to widely different price tags for “adequacy.”³¹ For example, different expert panels utilizing the same methodology may arrive at inconsistent results with cost figures varying up to 20% higher³² from one group to another.³³ . Another major problem is the conflict of interests issue inherent in appointing a group of education experts to determine school funding,³⁴ where education experts benefit from increases in education funding and may artificially inflate their recommendations to secure such increases.³⁵

In Illinois, the state legislature implemented a second methodology called the Successful School approach to calculate “adequate” school funding across the state.³⁶ This approach is called an output methodology because it focuses on the “outputs” of the successful schools such as student test scores.³⁷ The Successful Schools approach examines every school district in the state, and identifies which schools meet certain pre-determined standards, such as the Illinois State Achievement Test.³⁸ The funding level of the schools which meet or exceed the pre-determined standards is taken as the baseline “adequate” fund-

ing level.³⁹ According to Steve Smith, Senior Education Policy Specialist for the National Conference of State Legislatures, the rationale underlying this approach is that "any district should be able to accomplish what some districts do accomplish."⁴⁰

There are several drawbacks to the Successful School Model. First, because this model operates on a set of objective standards,⁴¹ choosing the incorrect standard can result in funding an "inadequate" education.⁴² For example, ACT scores may be a better metric than a state achievement exam in measuring a "successful school."⁴³ Additionally, achievement at a school may depend not only on funding, but also on demographics or other factors.⁴⁴ To overcome this criticism, experts utilizing this method have developed weighted factors for students residing in poor districts. These experts adjust a school's per pupil spending according to the student's economic situation. Such adjustments presumably would allow higher "adequate" funding levels for poor students than students attending affluent schools.⁴⁵

This article applies a third methodology, the Advanced Statistical Approach, in determining educational funding that has yet been implemented in a state school funding study. The Advanced Statistical Approach was applied to the 159 high schools in and surrounding Chicago.⁴⁶ This output approach proposes that any input, whether programs and practices, student demographics, or locality factors, can be identified, then their effect on student performance determined, by using advanced statistical techniques.⁴⁷ "This approach has great promise with the increasingly comprehensive data being collected in educational settings and with more refined statistical techniques."⁴⁸ However, state education officials are reluctant to use this method because its complexity blurs their understanding of the method.⁴⁹

This model allows education funding analysts to choose locality factors, and then examine the correlation between these factors and student performance.⁵⁰ Although the complex nature of the analysis leads policymakers to believe statistical modeling provides accurate quantitative results, "the precision implied by statistical modeling may be misleading because each of the [locality factors], and the rationales for their use, requires assumptions and judgments that are not necessarily more precise than those of professionals operating without statistical models."⁵¹ Therefore, I suggest using statistical modeling not as a quantitative panacea for determining an "adequate" education, but as a qualitative tool for identifying "inadequately" funded schools.⁵²

E. THE ILLINOIS CONTEXT

1. The Illinois Public Education Funding Scheme

Discussing the Illinois education funding scheme and proposing a definition of an “adequate” education, the research presented in this Article studies high schools located in four Illinois counties which include Chicago and its surrounding suburbs. After examining the funding for all the high schools in this study, the school with the lowest funding spends \$4,273 per student,⁵³ while the school with the highest funding receives more than twice as many funds with \$9,940 per student.⁵⁴ It appears that the Illinois’ school funding scheme maybe the reason for this disparity and it will be explained later in this Article.⁵⁵ Before discussing the particulars of the scheme, the Article presents the judicial and legislative context for Illinois public education funding.⁵⁶

As mentioned previously, the U.S. Constitution provides no express or implied right to education.⁵⁷ Under the Tenth Amendment, all power not expressed by the U.S. Constitution or Congress is delegated to the States.⁵⁸ In Illinois, public schools are funded by monies from “various federal, state, and local sources.”⁵⁹ The Illinois General Assembly empowers local school districts to fund their schools by levying property taxes on its residents,⁶⁰ limiting the property taxes to some maximum rate.⁶¹ The obvious consequence of this funding scheme is that in “wealthy districts - those with substantial taxable property wealth per pupil - are able to raise more revenue per pupil at a given rate than poor districts.”⁶² This method of funding schools creates a huge disparity in educational resources between wealthy and poor school districts.⁶³

2. Judicial Inaction

Student advocates have filed lawsuits claiming that the Illinois public education funding scheme violates the State Constitution’s equal protection clause by favoring students residing in wealthy school districts and discriminating against students who live in poor school districts.⁶⁴ These advocates argued that the Illinois public education funding scheme is unconstitutional because it infringes upon the fundamental right to an education which they argued is guaranteed by the Illinois Constitution.⁶⁵ Finally, the student advocates questioned whether the state education funding scheme provides an “efficient” or “high quality” education as declared in the Illinois Constitution.⁶⁶

The Illinois Supreme Court quickly disposed of the plaintiffs' arguments.⁶⁷ First, it held the Illinois Constitution does not provide a cause of action for the students against the State for failing to provide an "efficient" or "high quality" education.⁶⁸ Second, leveraging the *Rodriguez* decision handed down by the U.S. Supreme Court, the Illinois Supreme Court held that the Illinois Constitution did not provide education as a fundamental right.⁶⁹ Finally, using the rationale from the *Rodriguez* Court, it found that poor people are not a suspect class, therefore the funding scheme should be analyzed under rational review and not under strict scrutiny.⁷⁰ Hence, the state legislature's purpose behind its educational funding scheme need be only rationally related to the scheme.⁷¹ The state rationalized the scheme by explaining its desire to preserve the American tradition that local school districts control their own school districts.⁷² The Court concluded that plaintiffs should petition the state legislature to reform the Illinois public education funding scheme instead of seeking a remedy through the courts.⁷³

3. State Legislature Responds with the Illinois "Adequate" Funding Study

Fortunately, the Illinois state legislature responded by contracting with an education consulting firm to analyze the minimum funding level for Illinois schools.⁷⁴ The firm used the "successful schools" approach in determining an "adequate" minimum funding level, which it calls the foundation level. The Illinois Standards Achievement Test (ISAT) administered to third, fifth, and eighth graders was the metric for success.⁷⁵ Successful schools were those in which the 67% of their students met or exceeded ISAT proficiency levels and were efficient with their spending.⁷⁶ Therefore, we can conclude that Illinois's measure of an "adequate" education provided by a school requires 67% of students in a school to meet the ISAT standards.⁷⁷

Along with successful schools, the study also defined "efficient" schools.⁷⁸ The study evaluated efficiency by using statistical multi-variable regression to predict what a school's spending should be considering its students, teachers, facilities, and other factors.⁷⁹ Schools that spent less than their predicted value were considered efficient.⁸⁰ Using this information, the study identified twelve successful school districts with varying characteristics from across the state.⁸¹ However, only four unit districts, one elementary district, and one high school district allowed the firm access to its general budget information needed to analyze the spending data.⁸² The study incorporated several factors and alter-

natives, including percentage of low income students, to provide the state with recommended funds for each school district.⁸³

The Study listed the operating per pupil⁸⁴ spending required for students to achieve a certain score on the ISAT.⁸⁵ The average per pupil spending across all achievement scores was just less than \$7,700 for high schools.⁸⁶ The study also determined a weight formula to increase the funding for schools with a large percentage of low income students.⁸⁷ Thus, a school whose concentration of low income students is between 20-35% provides \$800 per pupil and \$2,050 per pupil when the concentration of low income pupils is greater than 60%.⁸⁸

The study does not claim that providing a 90% low income population high school with \$10,858 per pupil will guarantee a certain score on the ISAT.⁸⁹ In fact, the study states that there is no unambiguous way in which achievement and spending can be related.⁹⁰ The hope is that with this budget, a high school can emulate the administration of successful schools to facilitate students' achieving a certain performance level on the ISAT.⁹¹

II. RESEARCH RESULTS

A. A DEFINITION OF "ADEQUATE"

A college education provides the knowledge for a young adult to control her own destiny.⁹² Thus, schools should supply an "adequate" education for the majority of their students to be able to attend college.⁹³ This should most effectively include either a four-year college or a two-year community college.⁹⁴ College admission is based primarily on high school grades, ACT or SAT scores, extra-curricular activities, and character.⁹⁵ Understanding that ACT and SAT scores are a major component to college admission, high schools should provide an "adequate" education such that their students can achieve a score that would qualify them for college admission.⁹⁶

Examining the 60 Tier 4 colleges, the lowest qualifying score for admission is an ACT Score of 16.⁹⁷ Twelve of the sixty schools require only a 16 on the ACT to qualify for admission.⁹⁸ Therefore, a practical definition of "adequacy" could include that high schools educate its students to score an average of 16 on the ACT.⁹⁹ Pragmatically, this translates into 50% of its students qualifying for admission to a four-year college.¹⁰⁰ The significant portion of

the students scoring below the average can still gain an "adequate" post-secondary education by attending a community college, earning an Associate's degree, then transferring to a four-year college to graduate with a Bachelor's degree.¹⁰¹ Thus, at least most high school students will receive an "adequate" education to control their destiny.¹⁰²

B. THE RAW DATA

To answer whether Illinois high schools provide this level of "adequate" education, a study was conducted to analyze data from the 2002-2003 (Published in 2004) school year that includes the ACT scores of all the high schools¹⁰³ in four Illinois counties: Cook County (which includes the City of Chicago), Lake, DuPage, and Will Counties.¹⁰⁴ Next, four factors were analyzed to determine whether they contribute to ACT score. The factors¹⁰⁵ are: (1) Percentage of Low Income Students in a High School;¹⁰⁶ (2) Per Pupil Spending;¹⁰⁷ (3) Average Class Size;¹⁰⁸ and (4) Percentage of Students with Parental Contact.¹⁰⁹ Education experts, such as Patricia First and Barbara DeLuca speculate that these factors contribute to student performance.¹¹⁰

When first examining the raw data, it is difficult to determine whether there is any correlation between any of the factors and ACT Score. Plotting each factor on a graph with respect to ACT score could reveal a correlation between that factor and ACT Score. First, the study examined the relationship of Low Income students to ACT Score. Observing Chart 1, there is an overall negative relationship between Percentage of Students from Low Income Families within a high school and its average ACT Score. Next, the study determined the contribution of the amount of per pupil spending on ACT performance. Examining Chart 2, there is a slight positive relationship between ACT performance and Per Pupil Spending, especially after Per Pupil Spending increases past \$5,488. However, when the data are plotted on a graph, it is difficult to identify a clear correlation between ACT Score and Per Pupil Spending.

Next, the study analyzed whether Average Class Size affects ACT Score. Viewing Chart 3, it is difficult to determine whether there is any relationship between Average Class Size for a high school and the school's Average ACT Score. Finally, Chart 4 examines the relationship between ACT score and the percentage of students with Parental Contact with respect to their schoolwork. There may be a positive relationship between Parental Contact and ACT per-

formance. Again, as with the two previous factors, it is difficult to affirmatively find any relationship between ACT Score and Parental Contact.

C. DESCRIPTION OF THE STATISTICAL MODEL

Because of the difficulty in identifying clear correlations between the factors and ACT score, statistical multi-variable regression analysis¹¹¹ was performed on the data with hope of discerning some relationships.¹¹²

1. Interpreting the Accuracy of the Study's Results

Using regression analysis, the study yielded the following multi-variable regression equation.¹¹³

$$\text{Estimated ACT Score} = 2.9689*PC + 0.171971*ACS + 0.000247*PPS - 7.008*LI + 14.1241$$

Where the Estimated Average ACT Score for high school can be determined from its values for PC (Parental Contact), ACS (Average Class Size), PPS (Per Pupil Spending), and LI (Percentage of Low Income Students).¹¹⁴ For example, according to the regression equation, a High School with 95% students with Parental Contact, an Average Class Size of 19, a Per Pupil Spending of \$7,000 and a Low Income Students Percentage of 20% would have an Estimated Average ACT Score equal to 20.5394.¹¹⁵

Examining certain statistics of the regression equation measures its accuracy in predicting Estimated ACT Score.¹¹⁶ Along with the F-statistic, the coefficient of determination (r^2) provides insight into the accuracy of the regression equation.¹¹⁷ The r^2 for the regression equation is equal to 0.749.¹¹⁸ Theoretically, the value ranges from 0 to 1.¹¹⁹ The closer its value is to 1, the more correlation between the factors and ACT Score.¹²⁰ As a point of reference, the correlation of Law School GPA to the factors of LSAT Score and Undergraduate GPA is about 0.4-0.5.¹²¹ Therefore, our four factors seem to contribute more toward a student's high school ACT Score than Undergraduate GPA and LSAT score contribute to Law School performance.¹²² In addition, r^2 describes the amount of variation within ACT score due to the four factors.¹²³ Hence, with r^2 0.749, the four factors account for close to 75% of the variability in ACT Score.¹²⁴

However, some factors are stronger contributors to ACT Score than others.¹²⁵ Using statistical techniques, it was found that the Parental Contact factor in this data set does not significantly contribute to the regression equation.¹²⁶ Those same techniques show that Low Income and Average Class Size factors are much stronger than the Per Pupil Spending factor for this data set.¹²⁷ Readers may conclude that Per Pupil Spending does not matter when viewed from the lens of this statistical study.¹²⁸ However, that is not necessarily the case.¹²⁹ It is merely not as strong a factor compared to Average Class Size and Low Income.¹³⁰

The following example illustrates that increasing Per Pupil Funding may be a way to improve the quality of education.¹³¹ Using the statistical regression model from the study, let Parental Contact equal 95%, Average Class Size equal to 19, Low Income of 90%, and the ACT Score equal to 16. Using the regression equation the Per Pupil Spending is calculated to be \$8,482.57. Thus, the model shows that a school trying to achieve an average ACT score of 16 will need at least \$8,482.57 per pupil given the other factors.

III. APPLICATIONS AND POSSIBLE FUTURE AVENUES OF RESEARCH

A. APPLICATIONS

1. The "Adequate" Application

As mentioned above,¹³² the regression equation can be a useful tool to provide evidence to increase, redistribute, or re-administer education funding. For example, the study can try to determine the funds needed to achieve an "adequate" education. For this analysis, an "adequate" education enables its students to attend college. Furthermore, "adequate" education is one that allows a high school's average ACT score to be 16, qualifying its student for admission to at least 12 universities.¹³³ For example, given the Low Income, Average Class Size, and Parental Contact Factors, the study can then calculate for each school's Per Pupil Spending using the study's regression equation. Comparing the Calculated per Pupil Spending with each School's Actual Per Pupil Spending results in a finding that the schools are under-funded by an average of 72.7%. After calculating the standard deviation, the study finds that two-thirds of the schools are under-funded between 27.15% and 118.14%. However, the author cautions the reader once again, that the statistical regression analysis is only as good as the factors and "adequate" education definition chosen by the author. Hence, the reader should not take the num-

bers at face value. Conversely, the author has studied the statistical regression model and determined that it is statistically accurate to be used as a qualitative tool in this manner.

2. Comparing Research Results to the Illinois Funding Study Results

Next, we compare the statistical model to the Illinois State Board of Education Funding Study.¹³⁴ Once again, the statistical model uses an ACT Score of 16 as the defining metric for an “adequate” education.¹³⁵ Alternatively, the Illinois Funding Study recommends “adequate” funding based on 67% of students in a school meeting ISAT standards.¹³⁶ Comparing the per pupil spending calculations of the two approaches, we can determine whether the Illinois Funding Study recommends “adequate” funding according to my metric, which is achieving an ACT Score of 16.¹³⁷ Recall that the NCLBA allows states to define its own level of “adequacy,” but some education experts such as Professor Ryan of the University of Virginia School of Law, are suspicious that state education officials may define it artificially low in order to maintain their federal funding.¹³⁸ Thus, by comparing the two approaches we can determine whether the Illinois Funding Study or the statistical model is a better tool to determine “adequate” education funding to provide an average ACT Score of 16.¹³⁹ Comparing the high schools scoring less than 16 on their ACT, the Illinois Funding Study funds high schools, on average, 32.29% lower than the statistical model.¹⁴⁰ After calculating the Standard Deviation of the difference, two-thirds of the schools are 32.29% +/- 52.63%.¹⁴¹ Because of the high variability between the two approaches, it is inconclusive whether one approach is better than the other in determining funding to achieve the definition of an “adequate” education (ACT Score = 16). A better way to compare the two approaches is to have the same definition of “adequacy” and then compare the results using the two different approaches. However, comparing the Illinois Funding Study recommendation with the actual per pupil spending, we calculate that the Illinois Funding Study recommends on average 18% +/- 8.35% more than current funding levels.¹⁴² Thus, even according to the Illinois Funding Study recommendations, we can only conclude that these schools are under-funded and need to increase their funds to achieve an “adequate” education.¹⁴³

B. POSSIBLE FUTURE AVENUES OF RESEARCH

From both the "Adequate" Application and Comparison to the Illinois Funding Study we conclude high schools are qualitatively under-funded.¹⁴⁴ How are these schools going to increase their funding to an "adequate" level? One blunt method requires increasing local property taxes. However, about 85% of these students are from low income families.¹⁴⁵ These families can not afford to pay more property taxes.¹⁴⁶ For example, students from low income families comprise 85.2% of Hyde Park Academy student population, and those families are taxed 3.97 percent on homes that average \$109,554 in value resulting in \$4,349 per pupil spending.¹⁴⁷ While Stevenson High School has only 0.9% of students from low income families, the local taxpayers are taxed only 1.86% on property that average \$638,609 in value, resulting in \$11,878 raised per pupil from local property taxes.¹⁴⁸ It would put undue financial hardship on low income families to be taxed even more¹⁴⁹.

Some states have redistributed local property tax revenue from wealthy districts to poorer districts.¹⁵⁰ However, some wealthy district residents vehemently oppose this type of reform.¹⁵¹ These residents argue that the wealthy would unfairly subsidize the education of poor students and receive no benefit in return.¹⁵² A twist to a redistribution education financing scheme includes "Robin Hood" programs, in which wealthy school districts only subsidize neighboring poor districts.¹⁵³ However, even this proposal is not a complete solution because poor districts which are unlucky to *not* neighbor a wealthy district would receive no subsidies.¹⁵⁴

Another method for raising education funds requires the state or federal government to supplement local property tax education funding. For example, local property taxes only account for 44.1% of Hyde Park Academy's funding, with 37.3% coming from state aid and 16% from federal aid.¹⁵⁵ Conversely, Stevenson High School receives 83% of their funding from local property taxes, 10% from other local sources, and only 6.2% from state aid and less than 1% from federal aid.¹⁵⁶

Some experts, such as A+ Illinois, an Illinois education advocacy group, have proposed that to achieve uniform quality education throughout a state, the state must break the link of school funding and local property taxes.¹⁵⁷ These same experts propose a uniform state property tax in which wealthy districts could augment funds for their local schools.¹⁵⁸ Alternatively, states and the

federal government can raise income taxes to increase education funding.¹⁵⁹ This method would be less objectionable to wealthy school district residents than redistributing their local property tax revenues.¹⁶⁰ The State legislature can raise funds by raising the sales tax universally across the state,¹⁶¹ but this would again cause financial hardship on the poor. Instead, the State can increase sales taxes on luxury items¹⁶², thereby relieving the burden on Low Income families and having the wealthy subsidize poor district. The wealthy may still clamor that they should receive the benefits of their hard work, and have their tax dollars spent where there is not benefit to them.¹⁶³ However, according to the Supreme Court in *Plyler v. Doe*, this is a short term, myopic view of understanding the benefits of having the poor educated.¹⁶⁴ An “adequate” education benefits wealthy individuals in myriad ways, including reduction of crime, increased work force productivity, and increased wealth in the economy.

Another aspect of school finance reform for further research includes an investigation of whether the legislation is the best vehicle for reform of the education funding scheme. It is not clear that the parents of low income students have the political power to lobby the state legislature for such reform. Advocates must gather evidence to show that the poor have limited access to the political process and develop litigation strategies to remedy the disparity in education funding between poor and wealthy students.

An analysis using the requirements for “adequate” education and the statistical model set forth in this article, shows that Illinois high schools are underfunded. Whether using either the Successful Schools Approach or the Statistical Model, Illinois must invest more money in schools attended by a large number of low income students. An avenue of future research, given such a scarcity of funds for low income students, is to find inexpensive but effective programs available to attain their “adequate” education. These approaches may include increased per pupil spending, hiring more teachers, or more school programs targeted toward poverty stricken students.¹⁶⁵

CHART 1 LOW INCOME VS. ACT SCORE

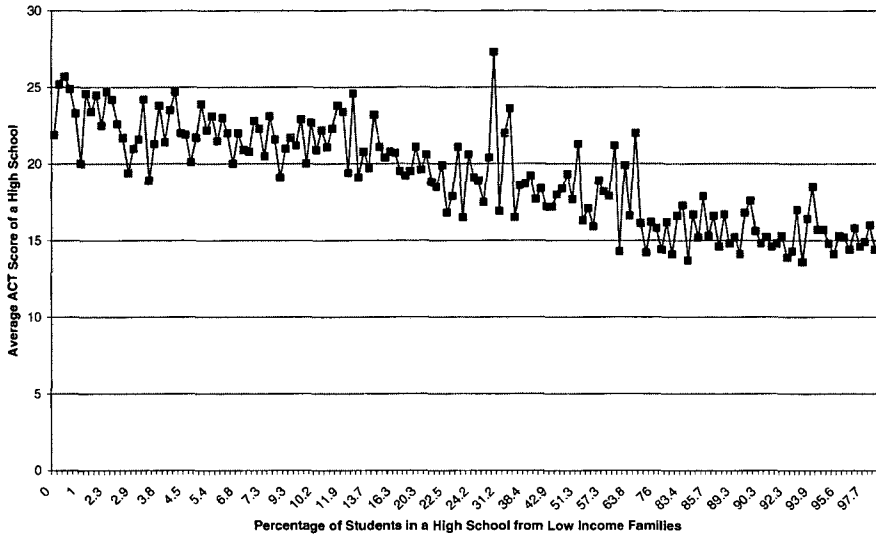


CHART 2 PER PUPIL SPENDING VS. ACT SCORE

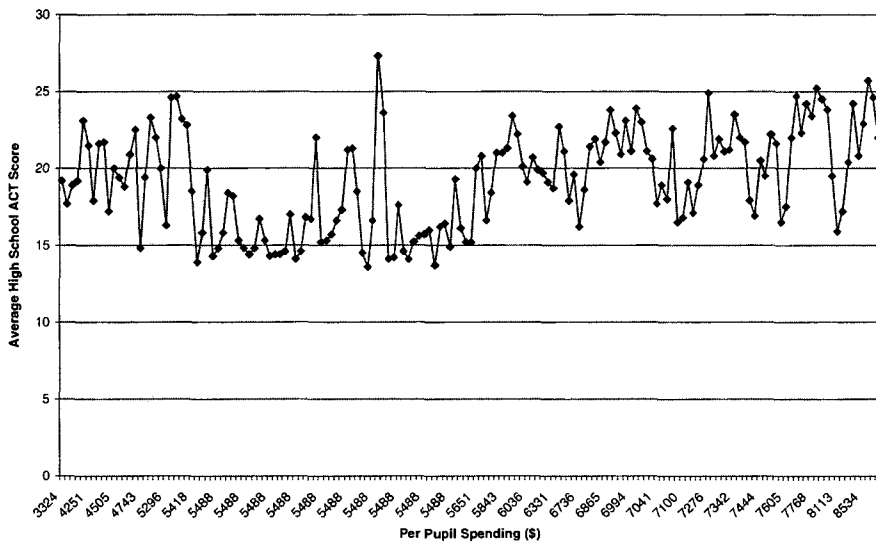


CHART 3 AVERAGE CLASS SIZE VS. ACT SCORE

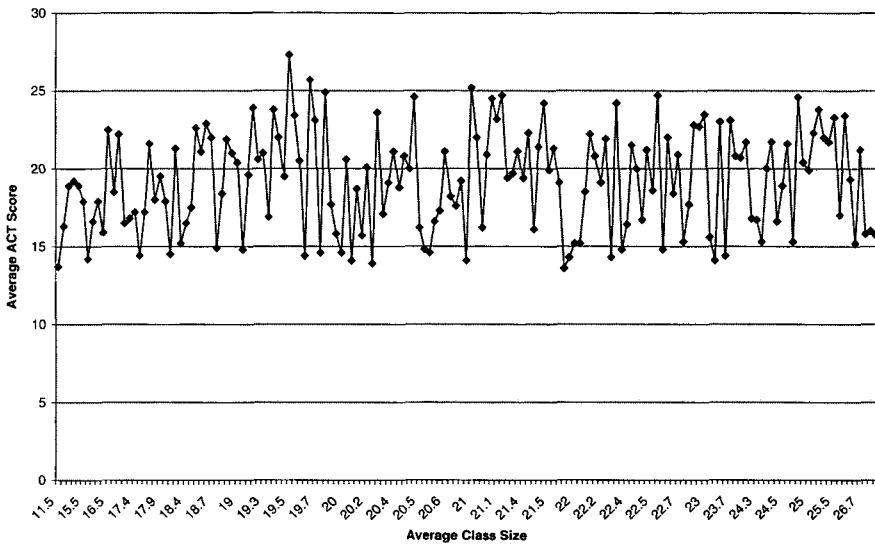
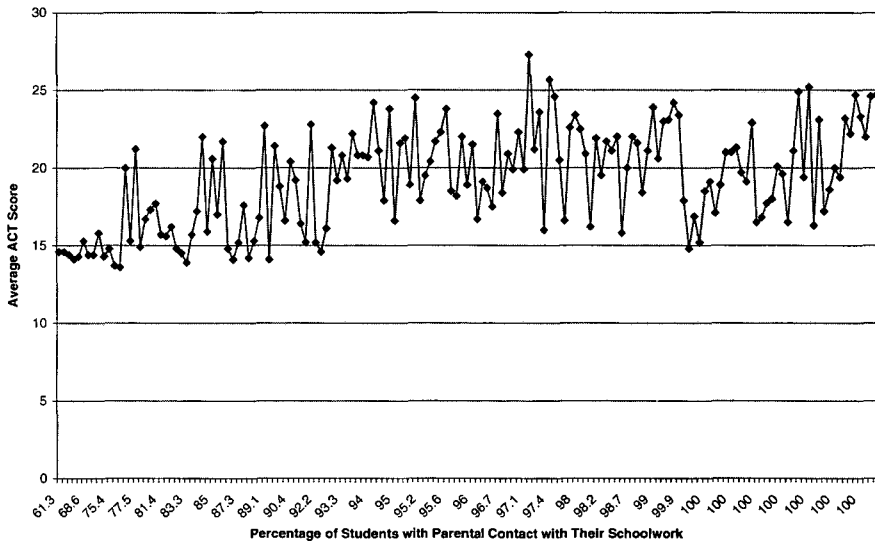


CHART 4 PARENTAL CONTACT VS. ACT SCORE



NOTES

* J.D. candidate, Loyola University Chicago School of Law, Class of 2006; M.S. in Electrical Engineering, University of Illinois Urbana-Champaign, 1998; B.S. in Electrical Engineering, University of Illinois Urbana-Champaign, 1996; First Year Associate at Leydig, Voit, & Mayer, Chicago, Illinois, September 2006. The author would like to give his heartfelt thanks to Dean Michael Kaufman for all his helpful comments, constant encouragement, and unwavering support to this article throughout this past year. The author would also like to express his gratitude and appreciation to Prof. Sacha Coupet, whose enthusiasm and willingness to review this article and teach him the fundamentals of statistical regression analysis in a social science setting. In addition, the author would like to thank Loyola Research Coordinator Jack Corliss for reviewing and consulting on the statistical regression aspect of this article. The author would also like to thank Sara Khan, Sandi Kim, Yangsu Kim, and Lindsay Morgan for all their comments, feedback, and discussions that improved the quality of this article. Finally, the author would like to thank his wife, Noreen Abbasi, for all her support and sacrifice while he was authoring this article.

1 San Antonio Indep. Sch. Dist. v. Rodriguez, 411 U.S. 1, 33-34 (1973); *id.* at 36-37 ("Even if it were conceded that some identifiable quantum of education is a constitutionally protected prerequisite to the meaningful exercise of either right [effective speech or informed electoral choice], we have no indication that the present levels of educational expenditures in Texas provide an education that falls short"); ILL. CONST. art. X, § 1 ("A fundamental goal of the People of the State is the educational development of all persons to the limits of their capacities. The State shall provide for an efficient system of high quality public educational institutions and services."); TEX. CONST. art. VII, § 1 ("A general diffusion of knowledge being essential to the preservation of the liberties and rights of the people, it shall be the duty of the Legislature of the State to establish and make suitable provision for the support and maintenance of an efficient system of public free schools").

2 See Rodriguez, 411 U.S. at 36-37; Rose v. Council for Better Educ., 790 S.W.2d 186, 212 (Ky. 1989) (providing seven principles to guide the state of Kentucky in providing an "adequate" education for its students, however these principles themselves are vague). See *infra* note 13.

3 Rose, 790 S.W.2d at 211-212.

4 See Rodriguez, 411 U.S. at 36-37. See also Rose, 790 S.W.2d at 186; Comm. for Educ. Rights v. Edgar, 672 N.E.2d 1178, 1193 (Ill. 1996); Illinois Funding Study, *infra* note 22, at 6-7; James W. Guthrie & Richard Rothstein, *Enabling "Adequacy" to Achieve Reality: Translating Adequacy into State School Finance Distribution Arrangements*, in EQUITY AND ADEQUACY IN EDUCATION FINANCE: ISSUES AND PERSPECTIVES 209, 214 (Helen F. Ladd et al. Eds., 1999).

5 Guthrie & Rothstein at 214.

6 *Id.*

7 *Id.*

8 *Id.* at 214-215.

9 See Rodriguez, 411 U.S. at 36-37.

10 Patricia F. First & Barbara M. DeLuca, *The Meaning of Educational Adequacy: The Confusion of DeRolph*, 32 J.L. & EDUC. 185, 200-201 (April 2003).

- 11 *Id.* at 200-201.
- 12 *Id.* at 206-207.
- 13 *See Id.* at 206-207. *Rose*, 790 S.W.2d at 212-213.
- 14 *Rose*, 790 S.W.2d at 212-213.
- 15 First, *supra* note 10, at 207.
- 16 *Id.* at 206-207.
- 17 *Id.* at 210.
- 18 *Id.* at 211.
- 19 No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002).
- 20 James E. Ryan, *The Perverse Incentives of the No Child Left Behind Act*, 79 N.Y.U. L. REV. 932, 940 (June 2004).
- 21 *Id.* at 940; Brandi M. Powell, *Take the Money or Run?: The Dilemma of the No Child Left Behind Act for State and Local Governments*, 6 LOY. J. PUB. INT. L. 153, 164 (Spring 2005).
- 22 AUGENBLICK & MYERS, INC., REPORT TO THE EDUCATION FUNDING ADVISORY BOARD, 1, (June 2001), <http://www.isbe.net/EFAB/html/reports.htm>. [hereinafter Illinois Funding Study].
- 23 Ryan, *supra* note 20.
- 24 Powell, *supra* note 21, at 176 (“If a state fails to carry out parts of its [AYP] plan, the Department of Education may withhold funds.”). For NCLBA sanctions before it withholds funding, *see* Ryan, *supra* note 20, at 942-943. If a school fails to comply for two consecutive years with the AYP Plan, the school must update its plan and obtain technical assistance to comply with it. Also, students may opt to attend a different public school or charter school. After three years of non-compliance, students must be provided out of class tutoring. After four years of non-compliance, schools must replace staff or institute a new curriculum. Finally, after five years of non-compliance, the state government will take control of the school and reopen it as a charter school or hand over its management to a private company.
- 25 Powell, *supra* note 21, at 947-48.
- 26 *Id.*
- 27 Steve Smith, *Education Adequacy Litigation: History, Trends and Research*, 27 U. ARK. LITTLE ROCK L. REV. 107, 115 (Fall 2004).
- 28 *Id.* *See also* Janet D. McDonald, Mary F. Hughes, & Gary W. Ritter, *School Finance Litigation and Adequacy Studies*, 27 U. ARK. LITTLE ROCK L. REV. 69, 91 (Fall 2004) (“[A] professional panel of well-qualified educators and school finance experts is gathered for each of the prototype schools.”). *See also* R. Craig Wood, *Constitutional Challenges to State Education Finance Distribution Formulas: Moving from Equity to Adequacy*, 23 ST. LOUIS U. PUB. L. REV. 531, 553 (2004) (“The Professional Judgment Model calls for a panel of practicing educators, as well as state and local policymakers, to determine what constitutes an adequate education. Once this adequate education is determined, then the task is to determine the actual costs of such a program.”).
- 29 Smith, *supra* note 28, at 116; *See also* McDonald, *supra* note 29, at 91 (“The panel develops an underlying philosophical approach that characterizes the resource needs to allow the prototype school to achieve state adequacy standards. The cost of each of these resources is combined to determine the total cost of services in the prototype schools. The resource needs may include the following: a certain number of classes, a particular class size, supplemental learning opportunities, pre-kindergarten services, equipment, professional development, technology, support services, and non-academic activities.”).

- 30 Smith, *supra* note 28, at 116.
- 31 *Id.*
- 32 *Id.*
- 33 *Id.*
- 34 *Id.*
- 35 *Id.* at 117.
- 36 See Illinois Funding Study, *supra* note 22, at 3.
- 37 See McDonald, *supra* note 29, at 91-92
- 38 See Illinois Funding Study, *supra* note 22, at 3. See also McDonald, *supra* note 29, at 91-92 ("The approach relies upon school districts already achieving state standards to establish the cost of an adequate education. . . [T]he average expenditures of the successful schools providing an adequate education yield the base cost. The base is then adjusted for students with special needs or students considered at-risk.").
- 39 Smith, *supra* note 28, at 117. See also Wood, *supra* note 29, at 553 ("In the Successful Schools/Districts Model, one can articulate that subjectivity is limited by simply determining the successful schools/districts based on achievement in relationship to expenditures. Success can be defined in a number of ways as determined by the state. Generally, a number of school districts are selected to represent a cross section so as to reflect wealthy, as well as poor, districts.").
- 40 Smith, *supra* note 28, at 117.
- 41 *Id.*
- 42 *Id.* at 117-18.
- 43 JENNIFER L. KOBRIN & ROCHELLE S. MICHEL, THE SAT AS A PREDICTOR OF DIFFERENT LEVELS OF COLLEGE PERFORMANCE, 1 (2006) available at <http://www.collegeboard.com/research/abstract/109965.html>, (Hereinafter SAT Predictor Study) ("Hezlett et al. (2001) performed a comprehensive meta-analysis of approximately 3,000 validity studies with more than 1million students, and found that the SAT is a valid predictor of first-year college grade point average (FGPA). . ."). The ACT and SAT are both considered as predictors to college performance and used by colleges as major part of their admissions criteria. See, *infra* note 99, Tier 4 Rankings.
- 44 See generally Illinois Funding Study, *supra* note 22, at 17.
- 45 *Id.* at 24.
- 46 *Id.* (Stating that while advanced "statistical analysis of school district performance and expenditure data". . . has [not] actually been used by a state, it is one of the "four approaches that academicians and policymakers have been examining in recent years.").
- 47 Smith, *supra* note 28, at 118-119.
- 48 *Id.* at 118.
- 49 *Id.*
- 50 First, *supra* note 10, at 209-210. (Stating that children living in different locality factors have different education needs. Therefore, they may need more educational funding to be provided with an adequate education.). Guthrie, *supra* note 4, at 222.
- 51 *Id.*
- 52 See Illinois Funding Study, *supra* note 22, at 2. (Stating that advanced statistical analysis has not yet been used in state funding studies, but "academicians and policymakers have been examining" it as an alternative approach.).
- 53 See Illinois School Report Card Website Noble Street Charter High School Report Card 2004, *infra* note 86.
- 54 See Illinois School Report Card Website Evanston Township High School Report Card 2004 *infra* note 84.

- 55 See Illinois Funding Study, *supra* note 22, at 6-7.
- 56 *Id.* See also Comm. for Educ. Rights v. Edgar, 672 N.E.2d 1178, 1180 (Ill. 1996).
- 57 Rodriguez, 411 U.S. at 35 ("Education, of course, is not among the rights afforded explicit protection under our Federal Constitution. Nor do we find any basis for saying it is implicitly so protected.").
- 58 See U.S. CONST. amend. x.
- 59 Comm. for Educ. Rights, 672 N.E.2d at 1181. See also Illinois State Board of Education website Report Card, *infra* note 84, for each school. The range of funding from local property taxes is about 60-80%, from state sources range from 10-30%, and federal funds range from 10-20%.
- 60 Comm. For Educ. Rights, 672 N.E.2d at 1181; 105 ILL. COMP. STAT. 5/17-2.
- 61 105 ILL. COMP. STAT. 5/17-2.
- 62 Comm. for Educ. Rights, 672 N.E.2d at 1181.
- 63 *Id.* at 1182 (stating that during the 1989-1990 school year that the wealthiest 10% elementary schools had an average tax base over 13 times that of the poorest 10% of elementary schools); *id.* (stating for high school and unit school districts the tax base ratios were about 8:1).
- 64 *Id.* at 1182.
- 65 Comm. for Educ. Rights, 672 N.E.2d at 1193 (indicating that student plaintiffs are arguing education is a fundamental right under the Illinois Constitution by stating "plaintiffs do not argue that the school funding scheme involves a suspect classification such as race or national origin. Thus, the applicable standard of review in this case depends on whether education is a fundamental right. If so, to the extent that funding disparities can be said to impinge on or interfere with the right to an education, the system for financing public schools would be subject to strict scrutiny. On the other hand, if education is not a fundamental right, the highly deferential "rational basis" test would apply.").
- 66 Comm. for Educ. Rights, 672 N.E.2d at 1182 ("Based on these allegations, in counts I through III plaintiffs seek a declaratory judgment that to the extent that the statutory school finance scheme "fails to correct differences in spending and educational services resulting from differences in [local taxable property wealth]" the scheme violates our state constitution's equal protection clause (count I), prohibition against special legislation (count II) and education article (count III). Counts IV and V of the complaint pertain to the educational opportunities available to certain socio-economically disadvantaged children who are at risk of academic failure (at-risk children).").
- 67 *Id.* at 1193.
- 68 *Id.* ("We conclude that the question of whether the educational institutions and services in Illinois are "high quality" is outside the sphere of the judicial function. To the extent plaintiffs' claim that the system for financing public schools is unconstitutional rests on perceived deficiencies in the quality of education in public schools, the claim was properly dismissed. For the foregoing reasons, we affirm the dismissal of plaintiffs' claims under the education article of our state constitution."). See also Thomas Britton & W. Bradley Colwell, *Survey of Illinois Law: Education Law*, 21 S. ILL. U. L.J. 815, 817 (Summer 1997) ("In October 1996, the Illinois Supreme Court affirmed the trial and appellate courts' decisions dismissing the complaint for failure to state a claim for relief. In reaching its conclusion, the court's majority reviewed the history of the constitution's education article and other states' school finance case law and determined that the efficiency provision was not intended to provide a substantive guarantee.").
- 69 Comm. for Educ. Rights, 672 N.E.2d at 1194 ("While plaintiffs and *amici* perceptively characterize the relationship between education and certain basic aspects of citizenship, we disagree with their conclusion that this relationship justifies treating education as *itself* a fundamen-

tal right for equal protection purposes.”). *See also* Britton, *supra* note 70, at 817 (“The majority determined that education was not a fundamental right. . .”).

70 Comm. for Educ. Rights, 672 N.E.2d at 1193 (“In reviewing a claim that a statute violates equal protection, the court applies different levels of scrutiny depending on the nature of the statutory classification involved. Classifications based on race or national origin or affecting fundamental rights are strictly scrutinized. Intermediate scrutiny applies to discriminatory classifications based on sex or illegitimacy. In all other cases, the court employs only a rational basis review. Because the present challenge to the school funding scheme does not involve a classification based on gender or illegitimacy, the intermediate level of scrutiny does not apply. Moreover, plaintiffs do not argue that the school funding scheme involves a suspect classification such as race or national origin.”); *See also* Britton, *supra* note 70, at 817 (“The majority determined that . . . no suspect classification was involved.”).

71 Comm. for Educ. Rights, 672 N.E.2d at 1196 (“While education is certainly a vitally important governmental function, it is not a fundamental individual right for equal protection purposes, and thus the appropriate standard of review is the rational basis test. Under the rational basis test, judicial review of a legislative classification is limited and generally deferential.”) *See also* Britton, *supra* note 70, at 817 (“[T]herefore, the court utilized the rational relationship test and determined it was satisfied.”).

72 Comm. for Educ. Rights, 672 N.E.2d at 1196 (“In accordance with *Rodriguez* and the majority of state court decisions, and for all the reasons set forth above, we conclude that the State’s system of funding public education is rationally related to the legitimate State goal of promoting local control.”).

73 Comm. for Educ. Rights, 672 N.E.2d at 1196 (“While the present school funding scheme might be thought unwise, undesirable or unenlightened from the standpoint of contemporary notions of social justice, these objections must be presented to the General Assembly.”).

74 *See generally* Illinois Funding Study, *supra* note 22, at 1.

75 *Id.* at 6-7.

76 *Id.* at 7.

77 *Id.*

78 *Id.*

79 *Id.*

80 *Id.*

81 *Id.*, at 11.

82 *Id.*, at 12.

83 *Id.*

84 *See* e-Report Card Public Site, http://www.isbe.state.il.us/research/htmls/report_card.htm [hereinafter Illinois School Report Card Website]. There are two per pupil spending metrics used by Illinois schools, instructional and operating, per pupil spending. Instructional per pupil spending only takes into account teachers’ salaries, administrators, and any instructional after-school or extra-curricular programs. Operating per pupil spending not only includes instructional per pupil spending but also includes cost for building and maintaining facilities. On estimate, instructional per pupil funding is about 60% of operating per pupil spending.

85 See Illinois Funding Study, *supra* note 22, at 15.

86 *Id.*

87 *Id.* at 17.

88 *Id.* at 17-18.

89 *Id.* at 23.

90 *Id.*

91 See also *supra* note 22, Illinois Funding Study at 3 (“The successful school (district) approach relies on a different logic than the professional judgment approach, seeking to infer a base cost figure from the actual spending of school districts, or schools, determined to be successful because they meet whatever standards are used by a state to evaluate student and school performance. Using this approach, a set of school districts (or schools) are selected from among all school districts (or schools) that meet a variety of criteria related to: (1) their level of success in meeting state standards; (2) socio-economic characteristics such as district wealth or proportion of pupils from low income families; and (3) their efficiency in terms of spending. Once districts have been selected, their basic spending (excluding spending for capital purposes, transportation, special education, other special programs, and any service funded by federal revenue) is examined to determine a base cost level.”).

92 Senator Edward M. Kennedy, *A Senator’s Perspective on American Higher Education in a Global Economy*, 47 ARIZ. L. REV. 1, 6 (Spring 2005) [hereinafter Senator Kennedy] (“[F]amilies today . . . [t]heir own parents survived the Great Depression, worked hard, saved money, and sent them to college so that they could have a brighter future.”).

93 *Legislators Commit to Tackle School Funding and Quality, Related Budget Concerns in 2007* (November 29, 2006), available at <http://www.aplusillinois.org/media/press.asp?pressReleaseID=264> (Quoting State Senator Lightford, Chair of the Senate Education Committee as saying “[a]dequate education and health and human services for families in need are not partisan issues. All state leaders need to come together to solve the problems that are common to kids and families throughout Illinois.”).

94 See generally Senator Kennedy, *supra* note 94, at 6 (“Men and women with a college degree now earn seventy-five percent more than those without it. That is a million dollars more in earnings over a lifetime. Jobs requiring at least some postsecondary education are estimated to account for over forty percent of total job growth over the next decade.”).

95 Alberto F. Cabrera & Kurt R. Burkum, *College Admission Criteria In the United States: An Overview*, 3,19 (2001), available at <http://www.education.umd.edu/EDPA/faculty/cabrera> [hereinafter Cabrera].

96 See Cabrera, *supra* note 97, at 3. See also SAT Predictor Study, *supra* note 43, at 1.

97 See National Universities: Tier 4, http://www.usnews.com/usnews/edu/college/rankings/brief/natudoc/tier4/t4natudoc_brief.php [hereinafter Tier 4 Rankings]. See SAT I - ACT Score Comparisons [hereinafter SAT-ACT Converter], <http://www.collegeboard.com/sat/cbsenior/html/stat00f.html>.

98 See Tier 4 Rankings, *supra* note 97.

99 *Id.* See also Eliot Applestein, *Applications, Admissions, and College Rankings*, Special to the Washington Post August 24, 2000, at C04, available at <http://blast.mbhs.edu/college/Rankings.html>. (Stating that two education experts, “Ronald Ehrenberg . . . and James Monks of the Consortium on Financing Higher Education have analyzed the impact of the rankings on admission’s policies at 30 private institutions that consistently have been ranked as top national universities and liberal arts colleges. Their findings suggest that changes in the yearly ranking have measurable effects on admission outcomes and pricing policies at institutions. ‘If your ranking improved from five to one,’ says Ehrenberg, ‘the number of students who applied went up and the number of students you accepted went down. Of the number who you admitted and

who actually went, SAT scores went up. In addition, these institutions didn't have to use as much financial aid to attract these students.'").

100 The author understands that the average ACT score does not necessarily mean 50% of the students score above it. The median ACT score would provide that statistic. However, with a school of hundreds or thousands of students taking the ACT every year, I believe it would be a close approximation.

101 *USA Associate Degree Programs: Associate degrees Guide*. <http://www.usastudyguide.com/associatedegree.htm> (stating that some students "who want to pursue a bachelor degree but who want to complete the first two years of their undergraduate education (by enrolling in one of the many associate degree programs) at a US community college and then transfer to a four-year US college for the last two years").

102 See Senator Kennedy, *supra* note 94, at 6.

103 As published by each school in its Illinois State Report Card. See Illinois School Report Card Web site, *supra* note 86.

104 The author understands that this may be considered a small sample size but he believes it of sufficient size to contribute to the debate and provide avenues for future research. In addition, some critics may opine that the sample includes a specific region whose data may not translate to other areas of the country. Although this is a valid criticism, the author believes the country has several urban cities with surrounding suburban sprawl to allow the research results to be applied to other areas or at least provide an incentive to research those areas. Finally, the author realizes that no rural schools are studied in this paper. This is another important avenue of future research that needs to be studied.

105 The author used these factors because the following sources have cited that these are key components in a child's education. See Smith, *supra* note 28, at 118-119. See also Guthrie, *supra* note 4, at 222.

106 This factor measures the percentage of students attending a high school who are from Low Income Families. Low Income is defined by earning less than the poverty line. Damian Gosheff, *Brown's Unfulfilled Promise: Education Finance Reform and the Separate But Equal Effect of State Education Clause Remedies – New York as a Model*, 35 U. Tol. L. REV. 889, n. 119 (Summer 2004) ("[T]here is a well documented correlation between poverty and low student academic performance."). This factor states the percent of students within the school are considered from Low Income households as defined by the Illinois State Board of Education. These statistics are taken from each school's report card found at the Illinois State board of Education website. See Illinois School Report Card Website, *supra* note 84.

107 Yohance C. Edwards & Jennifer Ahern, *Unequal Treatment in State Supreme Courts: Minority and City Schools in Education Finance Reform Litigation*, 79 N.Y.U. L. REV. 326, 338 (April 2004) ("A central argument for plaintiffs in many education finance reform cases is that insufficient spending, measured in per-pupil spending, makes it impossible for students to receive an adequate education."). This statistic shows the *instructional* per pupil spending (as opposed to the operating per pupil spending found in the Illinois Funding Study, however, instructional per pupil spending is about 60% of the operating per pupil spending) the school district spent on the student collected from local property taxes, state funds, and federal funds. This data was collected from the School Report card published at the Illinois State Board of Education website. See *supra* note 84, Illinois School Report Card Website.

108 Gregory C. Malhoit & Derek W. Black, *The Power of Small Schools: Achieving Equal Educational Opportunity Through Academic Success and Democratic Citizenship*, 82 NEB. L. REV. 50, 72-73 (2003) ("Studies published since the mid-1980's demonstrate that student achievement, especially for students living in poverty, improves if students are educated in small classes of thirteen to seventeen students during grades K-3. More specifically, this research concludes

that when classes are smaller, teacher morale increases, teachers spend more time on active teaching, classrooms have fewer disruptions, students are more actively engaged in learning, fewer students are required to repeat a grade, and college attendance rates increase, again, especially for poor students.”). This statistic shows the average class size in the school. This data was collected from the School Report card published at the Illinois State Board of Education website. See *supra* note 84, Illinois School Report Card Website.

109 This metric shows the percentage of students of a High School that have parents involved in their schoolwork. Gosheff, *supra* note 108, at n. 119 (stating that lack of parent’s to provide time to help their children with their education contributes to low student academic performance). This statistic shows the percent of parents that have contact with students about school issues. This data was collected from the School Report card published at the Illinois State Board of Education website. See Illinois School Report Card Website, *supra* note 84.

110 First, *supra* note 10, at 208. (Stating that “[h]igh wealth districts were able to provide broader educational experiences for their students including: . . . lower student-teacher ratios, parental involvement programs. See Smith, *supra* note 28, at 120. (“[T]argeting increased funding on certain programs and practices such as teacher quality, lower class sizes, and early literacy programs can improve student performance. Simply stated, the debate has moved from “does money matter?” to ensuring that existing funds are being spent effectively and determining if additional targeted resources are necessary. See *supra* notes 107-111.

111 See *infra* note 115 defining statistical regression analysis.

112 I used both SPSS and Excel to perform the multi-variable regression analysis. The results from both programs were almost identical providing confidence in the results.

113 Education Commission of the States, *Understanding Statistics Tutorial* (February 2004), <http://www.ecs.org/html/educationIssues/Research/primer/understandingtutorial.asp> [hereinafter *Statistics Tutorial*]. (“Multi-variable regression analysis [is] a statistical technique that determines the linear association between a set of predictor variables and a dependent variable and identifies the combination of predictor variables that best estimates the dependent variable”). In the study Parental Contact, Average Class Size, Per Pupil Spending, and Low Income are the set of predictor variables while Estimated ACT Score is the estimated dependent variable.

114 *Id.*

115 See DAVID COPE, *FUNDAMENTALS OF STATISTICAL ANALYSIS* 83-89 (2005). [Hereinafter *Cope*].

116 See *Statistics Tutorial*, *supra* note 113. (Accuracy of a regression equation can also be called inferential statistics. That is, Inferential statistics are “used to make inferences about a population based on the scores obtained from a sample.”). (The correlation coefficient is a “number that indicates the strength and direction of the statistical association between two or more variables. Correlation coefficients vary between -1.00 and $+1.00$. The higher the numerical value, the stronger the association. A correlation of 0.00 indicates the absence of an association. A positive sign means that as one variable increases, so does the other. A negative sign means that as one variable increases, the other variable decreases.”).

117 *Id.* (The F test is a “statistical technique used to test for statistically significant differences between two or more different groups of observations” to determine the accuracy of the regression equation.)

118 *Id.*

119 *Id.*

120 *Id.*

121 Lisa Anthony Stilwell, Susan P. Delessandro & Lynda M. Reese, *Predictive Validity of the LSAT: A National Summary of the 2001-2002 Correlation Studies* 5, (2005), available at <http://>

www.lscnet.org/Research/Predictive-Validity-of-the-LSAT-National-Summary-of-the-2001%E2%80%932002-Correlation-Studies.

122 *Id.*

123 See Understanding Statistics Tutorial, *supra* note 113.

124 See Cope, at 83-89 *supra* note 117.

125 See Cope *supra* note 115, at 89-91 using the t-statistic to determine the strength of the factor in a regression equation.

126 *Id.*

127 *Id.*

128 *Id.*

129 *Id.*

130 *Id.*

131 Although the author acknowledges experts opine that simply increasing per pupil spending may not improve student performance and that efficiently allocated to bring about a more adequate education, the author suggests that a prerequisite to the administration of such resources is an increase per pupil spending. See Smith, *supra* note 28, at 120-121. ("Specifically, research has shown that simply increasing funding will not improve student performance . . . Eric Hanushek, who has conducted extensive research showing that simply providing additional funding without targeting resources will not improve student performance.").

132 See *supra* Section II.

133 12 out of 60 Tier 4 Universities according the U.S. News and World Report. See *supra* note 120, Tier 4 Rankings. The minimum ACT scores of these 12 Tier 4 universities require only an ACT Score of 16 to attend. See SAT-ACT Converter, *supra* note 97.

134 See *supra* note 22, Illinois Funding Study at 7, 24. Illinois Funding Study's recommended instructional per pupil spending is found by first calculating the increase weight of at risk students described by the formula: $\text{weight} = (0.228 \times \% \text{from Low Income}) + 0.346$. The Illinois Funding Study recommends \$7,000 for operating per pupil spending. Also, instructional per pupil spending is 60% of operating per pupil spending. Thus, the recommended Illinois Funding Study instructional per pupil spending is calculated by the formula: $\text{Illinois Funding Study Instructional Per Pupil Spending} = (7000 \times \text{weight} + 7000) \times 0.60$.

135 See Tier 4 Rankings, *supra* note 97.

136 See Illinois Funding Study, *supra* note 22 at 6.

137 *Id.* at 15. The Illinois Funding Study recommends a per pupil spending of \$7,700 per high school, whereas in this article's study, with Parental Contact = 95%, Average Class Size = 19, Low Income Students = 90%, and an ACT Score of 16 would require a per pupil spending of \$8,8482. However, if Low Income students drops to 75% and all other factors remain the same the Per Pupil Spending needed to achieve an average ACT Score of 16 is \$4,226.70 using our regression equation (See Section II.C). The \$7,700 figure reported by the Illinois Funding Study seems to be sufficient to fund schools with Low Income Students that are 87.24% of the student population.

138 Ryan, *supra* note 20, at 940. See also Powell, *supra* note 21 at 169.

139 See *supra* note 22, Illinois Funding Study, at 15, Table 10-C. Compare with this article's regression equation results.

140 *Id.*

141 *Id.*

142 *Id.*, Table 10-C. Compare with this article's regression equation results.

143 *Id.*

144 Compare Illinois Funding Study, *Supra* note 22, at 15, Table 10-C and Tier 4 Rankings, *Supra* note 97.

145 Bindu Batchu, A+ Illinois Campaign Manager, Coffee Talk Discussion at Loyola University Chicago School of Law Child Law Center (2006).

146 *Facts About Illinois' Education Crisis*, available at <http://www.aplusillinois.org/issues/facts.asp> ("Local property taxpayers pay local education taxes ranging from \$6.67 per \$100 of assessed value to \$.94 per \$100 of assessed value - meaning a taxpayer in one district pays seven times the tax rate but students receive less than two-thirds of the amount generated by the lower rate. (The district with the \$6.67 operating tax rate is able to spend only \$8,405 per pupil while the district with the \$.94 rate spends \$13,405 per pupil.)") [hereinafter Illinois Facts].

147 See *supra* note 84, Illinois School Report Card Website, available at <http://webprod.isbe.net/ereportcard/publicsite/searchBySchool.aspx?searchby=schoolName&language=english&year=2005&keyword=Hyde%20park&type=card>. This is only local property tax funding. More funding is received from other local, state, and federal sources.

148 See generally *supra* note 84, Illinois School Report Card Website. Make sure Equalized Assessed Valuation per Pupil is the same as Average Property value. [The cite check comments that the cites are not to each individually and may be the incorrect #s]

149 Illinois Facts, *supra* note 146.

150 Maurice Dyson, *The Death of Robin Hood? Proposals for Overhauling Public School Finance*, 11 GEO. J. ON POVERTY L. & POL'Y 1, 18 (2004) ("[T]he state's wealthiest school districts, with their sophisticated campaigns . . . discredit the Robin Hood system."). See also Laurie Reynolds, *Skybox Schools: Public Education as Private Luxury*, 82 WASH. U. L.Q. 755, 804-805 (2004) ("[T]he taxpayer assesses the legitimacy of taxes much as she would evaluate the potential purchase of a television set, asking whether the money she pays provides her with a sufficient municipal service bang for her tax buck. With the efficiency-driven market approach comes a heightened sense of ownership of the revenues: if I am purchasing services much like I purchase a television set, it is not unreasonable for me to expect that the money that I 'spend' on taxes will redound to my individual benefit. With that mindset, an anti-redistributive attitude is a natural corollary. After all, since I don't pay for your television set, why should I pay for your schools?").

151 *Id.*

152 *Id.*

153 See Dyson, *supra* note 151, at 14 (stating the Robin Hood school finance system in Texas "requires the [wealthy] district's reduction of educational wealth by choosing one of five options: (1) consolidation, (2) detachment by annexation, (3) purchase of attendance credits, (4) contract for education of non-residents and/or (5) tax base consolidation.").

154 *Id.* at 14-15. ("Most property-rich school districts choose to purchase attendance credits or contract for education of non-residents. . . . The poor districts located near wealthy districts benefit greatly . . . while other poor districts, not so geographically blessed, cannot access Robin Hood.")

155 The other 3% comes from other local funds (other than property taxes). See Illinois School Report Card Website Hyde Park Academy Report Card, *supra* note 84.

156 See Illinois School Report Card Website Stevenson High School Report Card *supra* note 86. [The cite check comments that there may be confusion as to whether the 2004 or 2005 data were used.]

157 Reynolds, *supra* note 150, at 810 ("[S]o long as state law preserves the link between local property wealth and school revenues, state reforms will never eliminate the gross disparities in revenues and in educational quality that pervade most state school systems."). See *supra* note 145, Coffee Talk.

158 *Id.* at 810-11 (“[U]rg[ing] the adoption of a uniform statewide property tax, whose revenues will be allocated according to state distribution formulas . . . [and] wealthy districts be permitted to spend beyond the state equalized rate, but only at a steeply graduated tax rate.”).

159 *Id.* at 806.

160 *Id.* (“[T]he sense of ownership that is firmly cemented in the mind of [wealthy school district residents] . . . produces an often virulent resistance to their redistribution of local tax revenues to other less fortunate jurisdictions. In contrast, those same citizens are unlikely to expend similar amounts of vitriol to oppose the substantial redistribution frequently produced by payment of their much higher state and federal income taxes. New jersey residents . . . pay \$2,342 more per capita in federal taxes than they receive in federal spending, yet the Robin Hood rally cry rarely surfaces in anti-tax efforts at those levels of government.”).

161 Dyson, *supra* note 151, at 21 (reporting that Texas Senate proposes raising “the state sales tax from 6.25% to 7.25%.”) Reynolds, *supra* note 151, at 795-96. (Stating that the Vermont state legislature increased state education funding by increasing “the state sales tax, several other taxes and a new lottery.”) See also Molly A. Hunter, *Building on Judicial Intervention: The Redesign of School Facilities Funding in Arizona*, 34 J.L. & EDUC. 173, 174 (April 2005) (“[W]ith strong support from the governor and business groups, the State’s voters approved an increase in the sales tax – from 5% to 5.6% — targeted to education.”).

162 Dyson, *supra* note 151, at 21 (reporting that Texas Senate proposes extending “the sales tax to services now exempt, such as auto repairs, day care, new construction, real estate services, and accounting and legal services . . . [and] increase[ing] the motor vehicle sales tax from 6.25% to 8.75%”). I would refine this proposal to increase the sales tax on only luxury cars of \$50,000 or more, homes of \$1,000,000 or more, and other luxury items such as sailboats, yachts, snowmobiles, etc.

163 See Dyson, *supra* note 150, at 18.

164 Plyler v. Doe, 457 U.S. 202, 230 (1982) (“It is difficult to understand precisely what the State hopes to achieve by promoting the creation and perpetuation of a subclass of illiterates within our boundaries, surely adding to the problems and costs of unemployment, welfare, and crime. It is thus clear that whatever savings might be achieved by denying these children an education, they are wholly insubstantial in light of the costs involved to these children, the State, and the Nation.”).

165 Tico A. Almeida, *Refocusing School Finance Litigation on At-Risk Children: Leandro v. State of North Carolina*, 22 YALE L. & POL’Y REV. 525, 565-568 (Spring 2004) (stating that pre-kindergarten education will provide a better chance for at-risks to receive an adequate education during their K-12 education). See also Phuong T. Huynh et. al., *Can Education Policy Be Health Policy? Implications of Research on the Social Determinants of Health*, 30 J. HEALTH POL. POL’Y & L. 1131, 1144-1145 (December 2005) (“There is also good evidence that differences in readiness to learn can be reduced substantially by appropriately timed and designed interventions, and many of the efforts that have been made so far to improve the cognitive and social capacity of at-risk children in the pre-kindergarten years have had encouraging results. The Center for Educational Research at Stanford and the Institute for Child Study at the University of Toronto have reported that low SES [socioeconomic status] children enrolled in compensatory education programs (Right Start) before going to kindergarten had significantly better developmental test scores at seven, eight, and nine years of age than their peers who did not receive the early enrichment.”).