educational considerations
Educational Considerations is celebrating its 40th anniversary. The biannual publication was first produced in 1973 – and has been hosted at Kansas State University since its inception.

I credit the publication's success to strong leadership who provided this venue as a voice for educational issues, particularly educational finance and policy issues. Editors have carefully selected thematic issues focusing on real challenges that impact education discussions in a meaningful and substantive ways. The journal has flourished because of its relevance to the world of theory and practice, as well as theory into practice.

As the journal continues in its growth pattern, it is particularly noteworthy that in 2012 it became an affiliate journal for the National Education Finance Conference. Further, the journal is indexed with several national databases, and all prior issues have been uploaded to EBSCO.

So, on its 40th anniversary, please join me in celebrating Educational Considerations contributions! Thank you to our subscribers and readers for their continued support.

Debbie Mercer, Dean
College of Education, Kansas State University
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Introduction to the Special Issue

Faith E. Crampton, Executive Editor, Board of Editors
David C. Thompson, Chair, Board of Editors, and 2013 Recipient of the NEFC Lifetime Achievement Award
R. Craig Wood, Board of Editors, and Chair, National Education Finance Conference

We are pleased to bring you the second of two special issues of Educational Considerations comprised of papers presented at the 2012 National Education Finance Conference in San Antonio, Texas. A total of twelve papers were selected for publication through a call for papers and a peer review process. In each issue, six of these appear. They address a range of contemporary education finance issues facing elementary, secondary, and higher education. A number of articles in this special issue reflect the challenges of providing adequate and equitable education funding, particularly for some of the most vulnerable children in our society—those who live in poverty, students with disabilities, and undocumented immigrant children. In addition, articles in this issue address current higher education finance issues like student debt levels and faculty engagement in online education.

This special issue opens with “And Then There Were Ten: Equity and Adequacy of New York City Schools after Recentralization.” In this article, Alexander examines the equity and adequacy of the New York City school system after its 32 decentralized community school districts were reorganized into ten administrative regions in 2003, and she finds mixed results with regard to the benefits of recentralization. The conceptual model used was that of the production function where inputs were defined as adequate numbers of teachers; throughputs as core curriculum offerings; and outputs as student test scores in English language arts. The school was the unit of analysis. Results of the analysis found an increase in the percentage of students who scored at the “proficient” level in English language arts after recentralization. At the same time, there was little change in the mean number of schools that employed an adequate number of teachers in core subjects. Third, changes in the percentage of core curriculum offerings by school were inconsistent over time.

In the second article, “Predicting Student Achievement in Ohio: The Role of Expenditure Distribution,” De Luca and Hinshaw investigate the relationship of instruction and non-instruction related expenditures to student achievement in Ohio school districts in order to test the “65 percent solution,” an education reform proposal that asserts at least 65% of a school district’s operational budget should be spent on classroom instruction in order to maximize student achievement. Multiple regression results in this study indicated that attempts to predict student achievement based upon this model yielded weak and inconclusive results. In sum, De Luca and Hinshaw found the wisdom of this reform in the real world to be questionable.

The third article also focuses on Ohio school finance. In “The Role of Expenditures in Predicting Adequate Yearly Progress for Special Needs Students in Ohio,” Ziswiler, De Luca, and Stedrak used logistic regression to determine which special education expenditure categories would best predict AYP in reading and mathematics. Expenditure categories were defined as instruction, support services, catastrophic costs, and transportation. However, only expenditures related to “catastrophic costs,” a state aid program that provides additional financial support to districts with special education students whose education needs exceed $25,000 annually, were statistically significant. As expected, the negative impact of student poverty on special education student achievement was also statistically significant. In their conclusions, the authors pointed up the need for further research in this area and the need for development of conceptual or theoretical models to guide the research.

This issue of Educational Considerations features a new section titled Perspectives. Perspectives provides analysis of current issues in education finance, policy, and leadership. The final three articles in this issue are found under Perspectives on Legal Issues in Education and Perspectives on Online Education.

Perspectives on Legal Issues in Education contains two articles. In “State Challenges to Plyler v. Doe: Undocumented Immigrant Students and Public School Access,” Sutton and Stewart offer a timely analysis of the ongoing challenges undocumented immigrant students still face more than 30 years after the landmark U.S. Supreme Court decision that unequivocally guaranteed them access to a free public education. In spite of this historic ruling, some states have sought to obstruct that
right. Sutton and Stewart offer examples from California in 1994 and Alabama in 2011. California’s Proposition 194 directly challenged *Plyler v. Doe* by declaring illegal immigrants ineligible to attend public schools while Alabama’s House Bill 56 took a more indirect approach by requiring public schools to determine immigration status when enrolling new students and reporting it to the state. Both laws have been successfully challenged in the courts.

In the second article, “Transparency and Accountability: What If the Federal Gainful Employment—Debt Measures Rules Applied to Law Schools?”, Mattox compares recent changes the American Bar Association (ABA) has made to reporting requirements for the law schools it accredits and finds that some of these are consistent with those found in the federal regulations for non-degree, career-oriented postsecondary programs. These include reporting accurate and timely statistics on employment rates and types of employment. However, unlike the federal regulations, new ABA guidelines do not provide prospective law students with institution-by-institution data on student debt levels or debt-to-earnings ratios that would empower them to “comparison shop.” Mattox ends by noting that even though accountability and transparency are desirable in all career-oriented higher education programs, implementation of the federal Gainful Employment—Debt Measures Rules is in limbo due to litigation by the Association of Private Colleges and Universities.

*Perspectives on Online Education* features the final article in this special issue, titled “Online Education and Contingent Faculty: An Exploratory Analysis of Issues and Challenges for Higher Education Administrators.” In this article, Stedrak and Ortagus address the phenomenal growth of online education in higher education along with the growing use of contingent faculty in academe. Their analysis describes the challenges higher education administrators face in engaging tenured and tenure-track faculty in online teaching due to faculty concerns that the investment of time required for online course development and maintenance will reduce available time for research activity critical to tenure, promotion, and salary increases. The authors offer a number of evidence-based recommendations for higher education administrators to consider, ranging from release time for online course development to formal, institutional recognition of the value of development and teaching of online course in terms of faculty career and salary advancement.
And Then There Were Ten: Equity and Adequacy of New York City Schools after Recentralization

Nicola A. Alexander

Introduction

New York City has the largest public education system in the United States, serving over 1.1 million students in 1,700 schools. Given its size, the city school system is a good place to explore the potential associations between various educational reforms and questions of adequacy and fairness. Education research linking governance to equity and adequacy is not new (Elmore, Abelman, and Fuhrman 1996; Ward 1991; Coleman 1986). Wise (1983) indicated that the origins of adequacy in the school finance literature probably stem from San Antonio v. Rodriguez, a landmark federal case in 1973. In the early stages of equity discourse, Garms (1979, 416) recognized that "...any attempt to separately analyze the effects of multiple goals must have a way of separating the allocations for those goals." This challenge remains as we consider what it means for an education system to be "adequate." The very terms begs the question, "Adequate for whom, and for what?" (Clune 1994). Guthrie (1983, 471) noted, "It is difficult to define adequate [emphasis in original] with respect to education. Research has provided little scientific 'truth' to help in this effort, and no uniform set of societal values exists with which to measure adequacy."

The purpose of this study was to assess the equity and adequacy of the NYC schools through analysis of the distribution of key resources before and after its 32 decentralized community school districts were recentralized into ten administrative regions in 2003. The study used a framework for assessing adequacy based on economic, sociological, and legal perspectives where the discussion is framed around adequacy of educational inputs, school processes, and educational outputs (Alexander 2004).

Background

Researchers from a broad array of disciplines have grappled with the question of how organizational structure and governance can affect student performance. Scholars and practitioners alike have argued the benefits and disadvantages of top-down or bottom-up reform (Honig and Hatch 2004); centralization and decentralization (Weiler 1990); and loosely
coupled or open systems (Weick 1976; Sunderman, Levin, and Slee 2010). In New York City, there had been a longstanding argument to decentralize its schools that dated back to the school system’s initial decentralization in the 1960s. It took more than three decades and years of lobbying on the part of New York City mayors for the pendulum to swing to mayoral control of public schools and greater centralization. This change was important because as Tyler (1987, 315) noted, “[T]he internal processes of the school [are] …the articulation and elaboration of the inter-relationship among tasks, people, goals and structures.” This articulation can affect the perceived adequacy of the educational system as a whole, from the inputs invested, to the programs offered, to the performance of the students served.

Seeds of Centralization

The early years of New York City school system were marked by corruption and a centralized system of education that promulgated that corruption. In response, the state legislature re-established an independent board of education, whose members were appointed by the mayor. However, once the membership was appointed, the board was able to operate as an independent agency; its membership had fixed terms and the power to hire the school superintendent and oversee policies. This state of affairs continued for almost a century from 1873 until 1969 (Ravitch, 2010; 1974).

In 1969, a new, more decentralized system of governance was established. Over time, schools were overseen by a seven-member board of education. Each of the city’s five borough presidents selected one member of the central board with the mayor appointing two members. With this arrangement came the sharing of power between the 32 community school districts and the central school board. Members of the local community boards were elected by the general public, and they, not the central board, had authority over school personnel and budgets. However, while the vestiges of centralization were being removed, the corruption of the system remained; that is, the decentralized nature of the NYC public education system was also marked by its own issues of corruption and a lack of accountability. As noted by Moscovitch et al. (n.d., 45), “The new [1969 hybrid governance model] was large, unwieldy, and yielded virtually no academic achievement. There was little accountability amid competing power struggles between the central board of education, the community school boards, and the appointed chancellor.”

Quest for Mayoral Control

New York City mayors continued to wage a battle with the local community boards in an attempt to wrest power from their grasp. In 1996, then Mayor Rudolph Giuliani achieved a victory when a state law removed the operational functions of the community school boards and detailed the power of the city chancellor of schools. The power of local boards was greatly diminished but not eliminated. While the chancellor hired all district superintendents, the choice was limited to a list approved by the community school boards. Still, governance of the school system became more centralized under this change.

In 2002, the legislature granted Mayor Bloomberg control of the New York City school system shortly after he was elected to office in that year.1 The law was set to sunset in July 2009, but was renewed for another six years until June 30, 2015. The city’s business community remains a strong supporter of maintaining mayoral control, but many lawmakers and interest groups, including the New York City Civil Liberties Union, have been devising plans to weaken the mayor’s power.

Governance and Adequacy in New York City Schools

The years from 2002 through 2007 marked important changes in governance beyond the transfer of power from local communities to the mayor. During that time, the mayor and his appointed chancellor of schools, Joel Klein, reorganized city schools from 32 community districts into ten administrative regions. Proponents of this change argued that it would increase accountability, efficiency, and performance. While these measures are important aspects of how one assesses the success of the NYC schools, this article is primarily concerned with the associations between important changes in governance and questions of equity and adequacy.

Adequacy of inputs is aligned most closely with past research on equity of resource allocation where fiscal neutrality, horizontal equity, and legitimate differences serve as important guideposts for policymakers who seek, or are forced to consider, greater equity (Alexander 2004). Providing equity in access characterizes this focus. Miner (1983) articulated an early example of this approach when he defined adequacy by identifying the required quantity of schooling inputs per pupil and determining the unit cost based on regional differences.4 However, the assumed linkage between resources and outputs remain.

That missing link is often subsumed in discussions of adequacy of schooling processes. Research in this area is grounded in sociology and often involves quantitative and/or qualitative descriptions of how schools work and the interactions among individuals within them. This research yields insights into what educational policies mean for students and other individuals who have to operate within school systems; it provides an important foundation for discussions on how money matters. This consideration of adequacy may be illustrated in the curricular offerings made available to students.

Discussions of adequacy bring to the discourse arguments on how these outputs may be achieved by explicitly linking schooling inputs, schooling practices, and the attainment of particular standards. While fiscal neutrality marks a focus on inputs, neutrality of results is a focus on outputs. With regard to the latter, this means there should be no systematic association between student characteristics and achievement under the appropriate funding formula for an adequate system. In this context, adequacy of outputs is reflected in the proportion of students meeting proficiency standards set by the state and local governments.5

Research Methods

This study encompasses the time period 2002-2007. These years were chosen because in 2002 the state legislature granted mayoral authority over the NYC schools that led to a
major reorganization of the school system where its 32 decentralized community school districts were recentralized into ten administrative regions in 2003. Then in 2007, the NYC schools underwent another major reorganization, and the legislature revamped the state education funding system.

Three measures of adequacy were analyzed: (1) student proficiency rates in English language arts (ELA); (2) the distribution of full-time-equivalency teachers across the school system's ten administrative regions; and (3) the distribution of core curricular offerings. The data source for ELA student proficiency rates and number of teachers was the New York State Department of Education school report card database.

Student proficiency in English language arts was selected because research indicates that reading ability is a good proxy for future academic success (Cunha, Heckman, Lochner, and Masterov 2006; Heckman 2006; Heckman and Masterov 2007). Second, research makes clear that of the schooling factors that matter, teachers matters most. Because there is little consensus on what are good indicators of high-quality teachers (Allgood and Rice 2002), this study used the proxy measure of adequate numbers of teachers, based upon the following prototype: 24 teachers for a prototypical elementary school (grades K-5) where prototypical was defined as an enrollment of 432 students; 18 teachers for a prototypical middle school (grades 6-8) where prototypical was defined as an enrollment of 450 students; and 24 teachers for a prototypical high school (grades 9-12) where prototypical was defined as an enrollment of 600 students.

Next, the study calculated how many teachers would be considered adequate for each NYC school. First, the ratio of actual school enrollment to prototypical enrollment was calculated. Then, the ratio was multiplied by the number of teachers considered adequate for the prototypical school. For example, an elementary school with 300 students would have a ratio of .694 which would then be multiplied by 24 to yield 17 as the adequate or number of teachers for this particular elementary school. Similar steps were followed for all schools in the study. Finally, an adequacy ratio was calculated for each school by dividing the actual number of teachers employed by the adequate number of teachers required. If the ratio was equal to or greater than 1.0, the school was designated as having an adequate number of teachers. If the ratio was less than one, the school was not considered to have an adequate number of teachers. The mean and coefficient of variation were then calculated to determine the mean level of adequacy that existed across schools in terms of the number of teachers employed. The distribution of this measure was also calculated to get a sense of the equity of this distribution.

While the adequacy measures described above served as a useful proxy for the equity of the school system over the years examined, several limitations need to be acknowledged. First, to the extent the demographic makeup of the school deviated from the prototypical school as defined in this study, the adequate number of teachers needed may be underestimated. Second, the calculation of the adequate number of teachers needed presumed a prototypical schooling organization that spanned specified grade levels. To the extent that schools did not fit the prototypical grade format, the recommendation regarding the number of core teachers needed may be inaccurate. Fourth, the process of calculating an adequate number of teachers by school does not speak to their knowledge, skills, and dispositions, all of which could influence student performance and the equity of opportunities afforded to children. Notwithstanding these limitations, important insights regarding the level of adequacy and the degree of equity vis-à-vis the presence of adequate numbers of faculty may be gained from this study.

Findings

Figure 1 shows the distribution of the mean and coefficient of variation of the distribution of the percent of students who were proficient in English language arts (ELA) over the six years of the study. The percentage of students considered proficient in English Language Arts increased from 44% in 2002 to 63% in 2004. By 2005, this percentage declined to 50% and then rose to 60% in 2006. While the percent of students considered proficient in ELA rose over time, the coefficient of variation for that distribution dropped. This suggested that gaps between schools in terms of their average student proficiency narrowed over the time period studied.

Figure 2 graphs the distribution of teachers across the school system using the mean and coefficient of variation of the adequacy ratio. These measures remained relatively flat between 2002 and 2004 then rose sharply in 2005, declined slightly in 2006, and again rose in 2007. The difference in the means of the first three and last three years of the study could simply be measurement error; that is, changes in the data format did not allow the adequacy ratio to be adjusted for varying enrollment size. However, while this is a major limitation in terms of comparing trends from 2002 to 2004 with trends from 2005 to 2007, patterns within each set of three years should be consistent. It is important to note that while schools increasingly tended to have an adequate number of core teachers, the gaps between schools on this measure...
seemed to be increasing two years after the assumption of mayoral control of the schools.

Because the employment of an adequate number of teachers does not necessarily speak to the opportunities afforded to children, the study also examined changes in the percent and distribution of core courses taught. The table below contains the mean and coefficient of variation of the percent of core courses taught between 2005 and 2007. There was a decline in the percent of core courses taught from 84% in 2005 to 65% in 2006. This decline was accompanied by an increase in the variation in the distribution, suggesting a widening of the gap between schools and the type of curriculum offerings available. By 2007, the percentage of the curriculum devoted to core courses increased to 77%, which while higher than the previous year, was still lower than the percentage in 2005. In addition, the coefficient of variation also declined, suggesting more horizontal equity among schools on that measure.

### Summary and Conclusion

This article analyzed the equity and adequacy of the New York City Schools after its 32 decentralized community school districts were recentralized into 10 administrative regions in 2003. Looking at measures of performance after the initial implementation of mayoral control, there tended to be a general increase in the percentage of students who were considered proficient in English language arts. Moreover, this improvement did not come at the expense of increased gaps among schools. This pattern suggests that there may have been key benefits to centralization as indicated by the advocates of greater mayoral control. However, the spike in improvement and subsequent dips give pause to accepting that explanation fully. Because the initial sharp rise occurred shortly after implementation of mayoral control and the recent inauguration of the new mayor, it is not clear how much of the improvement merely reflected the novelty of the approach.

Weiler (1990) argued that decentralization is an example of political expediency where the benefits of increased accountability, efficiency, and responsiveness are more rhetoric than reality. A similar prognosis may be made of the patterns found in the question regarding the increased adequacy of the resources provided to New York City schools after recentralization. In the years immediately following implementation of mayoral control, there was little change in the mean number of schools that employed an adequate number of full-time-equivalent core teachers. This fact coupled with the sharp rise in this ratio was promising if it was not merely reflecting a change in the measure of that ratio. If the changes were indeed valid, this was supportive of the mayor’s claims that increased control would allow for a more efficient and adequate allocation of resources. However, the bad news was the widening gaps between schools, as evidenced by a rising coefficient of variation for this distribution. If overall improvement came at the expense of those schools that were previously not well-served by the system, then that should give policymakers pause on continuing down that path.

The provision of an adequate number of teachers and the relative performance of children may be considered inputs and outputs into the education system, respectively. In addition to looking at those factors, this study also looked at the throughput of core curriculum offerings in between 2005 and 2007. Over this short time period, changes were inconsistent where a rise in the percent of core courses initially fell but rose again. The only encouraging result was that an increase in the mean was associated with a decrease in the coefficient of variation. In the end, the results of the analysis of the equity and adequacy of NYC public schools in the years immediately preceding and during mayoral control offered mixed results.

### Endnotes

1. Thanks to Andrew Barron for his assistance with data gathering for this study.
2. General information about New York City Schools, including demographic information, may be found at the New York City Department of Public Education web site: http://schools.nyc.gov/AboutUs/default.html.
3. By 2002, the aftermath of the September 11, 2001, terrorist attack decreased opposition to mayoral control on the part of teacher unions, and the increased lobbying efforts on the part of advocates of mayoral control came together to give Mayor Bloomberg a decisive victory.
4. The 2010 consultant report by Odden, Fermanich, and Picus is an extension of that approach.
5 Tying notions of adequacy to academic standards set by state policymakers is consistent with trends in the legislative and judicial arena, including litigation in New York State (Campaign for Fiscal Equity 2000), Ohio (Ohio Coalition for Equity and Adequacy 2003) and Kentucky (Rose v. Council for Better Education 1989).

6 Hereafter, all references to teachers are to full-time-equivalency teachers.

7 Schools not listed as part of a district within New York City were excluded from the analysis.

8 This is consistent with the approach of Odden, Goetz, and Picus (2010,146-147) whose recommendations for an adequate number of core FTE teachers were based in part on the organizational level of the school.

9 If schools did not fall clearly into these categories, they were grouped where they fit most appropriately. For example, schools that ranged from K-5 were categorized as elementary schools, and schools that had grades ranging from 7-8 were categorized as middle schools. Schools serving grades that had overlapping categories (e.g., PK-8) were categorized based on the number of grades in one category and the highest grade served. Thus, schools serving PK through 6 were grouped with other elementary schools. Alternative schools that spanned grade levels labeled "UE" (ungraded elementary) were excluded from the analysis.

References


Predicting Student Achievement in Ohio: The Role of Expenditure Distribution

Barbara M. De Luca and Steven A. Hinshaw

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Steven A. Hinshaw is a veteran of public finance for almost 20 years and currently works at the City of Centerville as the Deputy City Manager/Finance Director. He also serves as an adjunct professor at the University of Dayton teaching school finance and research methodology courses.

Introduction and Background

In the spring of 2005, political columnist George Will coined the phrase the “65 percent solution” in his Washington Post column in reference to an Arizona referendum that would have required at least 65% of every school district’s operational budget be spent on classroom instruction. The originators of this idea, according to Toppo (2006), a journalist for USA Today, were Tim Mooney, a Republican political consultant, and an entrepreneur, Patrick Byrne, founder of Overstock.com, who discovered that, “...the top-performing states on federal skills tests...spend, on average, a little over 64% of school operating budgets in the classroom; those at the bottom spend as little as 49%.”

Approximately a year after Will’s column, Georgia and Kansas had enacted laws adopting the 65% solution. Texas Governor Rick Perry had signed an executive order requiring it, and the Louisiana legislature had passed a nonbinding resolution (Toppo 2006). In addition, ballot initiatives were being considered in several states. However, not everyone was convinced of the merits of the 65% solution. A study undertaken by Standard and Poor’s (2005) found no significant relationship between student achievement and any particular instructional spending level while Bracey (2006, 1), in “A Policy Maker’s Guide to ‘The 65% Solution’ Proposal,” asserted that it “...suffers logical and definitional confusions.”

Long before Mooney and Byrne’s populist initiative came research to answer the broader question: Does money matter in relationship to student achievement? Hanushek (1989, 1994, 1997) found little, if any, relationship between increased resources and improved student achievement. In contrast, Hedges, Laine, and Greenwald (1994) and Greenwald, Hedges, and Lane (1996a, 1996b) did. In a 2010 study, Jones and Slate conducted a study that combined the impact of the 65 percent solution with the impact of expenditure on student achievement. Using data from results of the Texas Assessment of Knowledge & Skills tests, they concluded, “...[I]t is clear that money does influence student achievement (18).” The evidence as to whether money matters, and if it does, whether there is a threshold level, remains inconclusive.
The purpose of this research was to investigate the role of school district expenditures in predicting student achievement in Ohio for the school year 2009-2010. Building upon the concept of the 65 percent solution, the research questions that guided this study were: (1) What percentage of Ohio’s school district’s operating budgets were spent on classroom instruction in comparison to administration, building operations, instruction, pupil support, and staff support; (2) To what extent did these predict student achievement; and (3) Which category of expenditure best predicted academic achievement?

Research Methods

This study included 607 of Ohio’s 613 school districts. Two districts were excluded due to incomplete data, and four districts with very small enrollments were excluded because the authors considered them outliers. All data were secured from the Ohio Department of Education’s Education Management Information System. Variables included were school district operating expenditures on administration, building operations, instruction, pupil support, and staff support for each of the three academic achievement levels (highest, continuous improvement, lowest) for 2009-2010. See Table 1 for definitions of the expenditure categories.

The state of Ohio measures student academic achievement by a “Performance Index Score,” which is continuous, ranging from zero to 120, and is based on the percentage of students scoring at each of six performance levels on state assessments multiplied by the point value assigned to that performance level. The performance levels and accompanying point levels are advanced (1.2), accelerated (1.1), proficient (1.0), basic (0.6), limited (0.3), and untested (0). Ohio students are tested annually in grades three through eight on reading and mathematics skills using the state achievement assessments. Fifth and eighth graders are also tested in science, and tenth graders take the state’s tenth grade graduation assessment (Ohio Department of Education n.d.).

The performance index score for a school district is then translated into one of six designations: excellent with distinction, excellent, effective, continuous improvement, academic watch, or academic emergency.4 (See Figure.) In this study, these six state designations were combined to form three: highest (n=534); continuous improvement (n=64); and lowest (n=9). The highest achievement category included school districts with the designations of effective, excellent, or excellent with distinction. The designation of continuous improvement remained the same while the lowest academic achievement category included state designations of academic watch and academic emergency.

The predictor or independent variables were the percent of total district expenditure for administration, building operations, instruction, pupil support, and staff support. The dependent variable was Ohio’s measure for student achievement, the performance index score. The unit of analysis was the school district. Descriptive statistics were calculated for the independent and dependent variables. Stepwise multiple regression was used to analyze the relationship between predictor and outcome variables. An analysis of residuals was also conducted.

Analysis of Results

Descriptive statistics for the independent and dependent variables are found in Tables 2 and 3, respectively. For all three academic achievement groups, instruction represented the category with the highest average percentage of expenditures.5 Average percentages of expenditures for instruction ranged from 52.9% in the academic emergency/academic watch group to 56% in the highest achieving group. The range between the minimum (31.1%) and maximum (66.36%) for instruction was most pronounced for the latter group at 35.6 percentage points. Building operations represented the second highest category of average expenditure percentage. Here the averages for the three groups of school districts were very similar, ranging from 19.2% to 20.73%. Third was administration where the average percentage of expenditures was

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Administration</td>
<td>Costs incurred for the board of education, superintendent’s office fiscal services, business manager, and support services; do not deal directly with the education of the students; encompass planning, research, information services, staff services, and data processing expenditures.</td>
</tr>
<tr>
<td>Building Operations</td>
<td>Salaries for the directors of plan maintenance, transportation, and the food service operation.</td>
</tr>
<tr>
<td>Instruction</td>
<td>Costs incurred for teaching and learning, which generally occur in the building classroom; includes teachers, teacher aides or paraprofessionals, as well as materials, computers, books and other consumable materials that are used with students in the classroom.</td>
</tr>
<tr>
<td>Pupil Support</td>
<td>Costs incurred for support services, guidance services, health services, psychological services, speech pathology and audiology services, attendance and any social work activities, as well as instructional media services for students.</td>
</tr>
<tr>
<td>Staff Support</td>
<td>Costs expended by the central office; include in-service for district staff members, instructional improvement services, and meeting expenses for all staff.</td>
</tr>
</tbody>
</table>

Source: Ohio Department of Education. 2006. Reporting School District and Spending per Pupil. Columbus, OH.
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<th>Performance Index Score</th>
<th>and</th>
<th>AYP Status</th>
<th>Preliminary Designation</th>
<th>Did the Preliminary Designation increase or decrease based on AYP Status?</th>
<th>Preliminary Designation</th>
<th>and</th>
<th>Amount of Growth Using Value-Added Calculation</th>
<th>Final Designation</th>
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<td>100 to 120</td>
<td>and</td>
<td>Met or not Met</td>
<td>Excellent</td>
<td>YES, STOP HERE. If no additional change to designation can occur based on value-added calculation.</td>
<td>Excellent</td>
<td>and</td>
<td>Above expected growth</td>
<td>Excellent with Distinction</td>
</tr>
<tr>
<td>90 to 99.8</td>
<td>and</td>
<td>Met or not Met</td>
<td>Effective</td>
<td>Effective</td>
<td>Effective</td>
<td>and</td>
<td>Above expected growth</td>
<td>Excellent</td>
</tr>
<tr>
<td>0 to 89.9</td>
<td>and</td>
<td>Met or not Met</td>
<td>Continuous Improvement</td>
<td>Above expected growth for at least 3 consecutive years</td>
<td>Continuous Improvement</td>
<td>and</td>
<td>Below expected growth for at least 3 consecutive years</td>
<td>Continuous Improvement</td>
</tr>
<tr>
<td>80 to 89.9</td>
<td>and</td>
<td>Met or not Met</td>
<td>Continuous Improvement</td>
<td>Otherwise no effect on rating</td>
<td>Continuous Improvement</td>
<td>and</td>
<td>Otherwise no effect on rating</td>
<td>Continuous Improvement</td>
</tr>
<tr>
<td>70 to 79.9</td>
<td>and</td>
<td>Met or not Met</td>
<td>Academic Watch</td>
<td>Above expected growth for at least 3 consecutive years</td>
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<td>and</td>
<td>Below expected growth for at least 3 consecutive years</td>
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</tr>
<tr>
<td>0 to 69.9</td>
<td>and</td>
<td>Met or not Met</td>
<td>Academic Emergency</td>
<td>Otherwise no effect on rating</td>
<td>Academic Emergency</td>
<td>and</td>
<td>Otherwise no effect on rating</td>
<td>Academic Emergency</td>
</tr>
</tbody>
</table>

School District Expenditure Categories | Mean | Median | Standard Deviation | Range | Minimum | Maximum
--- | --- | --- | --- | --- | --- | ---
Effective, Excellent, Excellent with Distinction (n=534)
Administration | 12.20 | 12.02 | 2.05 | 21.53 | 4.37 | 25.89
Building Operation | 19.55 | 19.45 | 3.31 | 46.93 | 9.16 | 56.09
Instruction | 56.00 | 55.93 | 3.72 | 35.25 | 31.11 | 66.36
Pupil Support | 9.95 | 9.87 | 2.21 | 16.78 | 4.12 | 20.95
Staff Support | 2.29 | 2.08 | 1.57 | 8.59 | .01 | 8.59

Continuous Improvement (n=64)
Administration | 12.58 | 12.36 | 2.87 | 17.30 | 7.17 | 24.48
Building Operation | 19.20 | 18.61 | 3.03 | 14.43 | 12.17 | 26.60
Instruction | 54.74 | 54.71 | 3.75 | 16.02 | 46.90 | 62.92
Pupil Support | 9.93 | 9.75 | 2.33 | 13.12 | 5.22 | 18.34
Staff Support | 3.55 | 3.29 | 2.20 | 9.28 | .24 | 9.52

Academic Emergency/Academic Watch (n=9)
Administration | 12.63 | 12.54 | 2.79 | 9.28 | 8.78 | 18.06
Building Operation | 20.73 | 21.46 | 2.99 | 9.50 | 16.29 | 25.79
Instruction | 52.90 | 52.55 | 3.20 | 9.21 | 47.01 | 56.22
Pupil Support | 8.60 | 8.69 | 2.06 | 6.30 | 5.06 | 11.36
Staff Support | 5.15 | 5.13 | 1.99 | 6.60 | .82 | 7.42

Table 3  | Descriptive Statistics for Dependent Variable: Performance Index Score

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Index Score</td>
<td>97.14</td>
<td>97.40</td>
<td>6.17</td>
<td>38.10</td>
<td>72.40</td>
<td>110.50</td>
</tr>
</tbody>
</table>

also similar across the three groups, ranging from 12.20% to 12.63%. Interestingly, the highest achieving group had the lowest average percentage of administrative expenditures. The fourth factor was average percentage of expenditures on pupil support. There were notable differences across the three groups, with averages ranging from 8.60% in the lowest achieving group of districts to 9.95% in the highest group. The average expenditure of the continuous improvement group was very similar to that of the highest achieving group of districts at 9.93%. For the final category, staff support, average percentage of expenditures differed across groups. Perhaps surprisingly, the highest achieving group of districts spent, on average, the lowest percentage on staff support at 2.29%. Districts identified as “continuous improvement” spent on average 3.55%, and the lowest achievement group spent the highest average percentage at 5.15%. Table 3 contains the descriptive statistics for the dependent variable, Ohio school districts’ performance index scores for 2009-2010. Scores ranged from 72.4 to 110.5, on a scale of zero to 120 points, with a mean of 97.14.

Prior to undertaking the stepwise regression analyses, a bivariate correlation of the independent variable was conducted to test for collinearity. (See Table 4.) No strong inter-correlation was found. As a result, all variables were included in the regression analysis. Table 5 presents the stepwise regression analysis results for the population of Ohio school districts and for each of the three achievement groups. For all Ohio school districts (n=604), the independent variables predicted only 15.9% of the variation in student achievement. For the highest achieving group, the predictor variables accounted for even less, 8.2%. For the continuous improvement group, the predictor variables accounted for a substantially
Table 4 | Correlation Matrix of Independent Variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Administration</th>
<th>Building Operation</th>
<th>Instruction</th>
<th>Pupil Support</th>
<th>Staff Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>1.000</td>
<td>-0.079</td>
<td>-0.355*</td>
<td>-0.141*</td>
<td>-0.153*</td>
</tr>
<tr>
<td>Building Operation</td>
<td>-0.079</td>
<td>1.000</td>
<td>-0.610*</td>
<td>-0.283*</td>
<td>-0.113*</td>
</tr>
<tr>
<td>Instruction</td>
<td>-0.355*</td>
<td>-0.610*</td>
<td>1.000</td>
<td>-0.246*</td>
<td>-0.248*</td>
</tr>
<tr>
<td>Pupil Support</td>
<td>-0.141*</td>
<td>-0.283*</td>
<td>-0.246*</td>
<td>1.000</td>
<td>-0.041*</td>
</tr>
<tr>
<td>District Staff</td>
<td>-0.153*</td>
<td>-0.113*</td>
<td>-0.248*</td>
<td>-0.041</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*Correlation coefficient is statistically significant at the 0.01 level (2-tailed).

Table 5 | Regression Results*

<table>
<thead>
<tr>
<th>Predictor Variables and $R^2$</th>
<th>Beta</th>
<th>t-test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Districts (n=604)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Support</td>
<td>-0.342</td>
<td>-8.916</td>
<td>.000</td>
</tr>
<tr>
<td>Building Operation</td>
<td>-0.159</td>
<td>-4.003</td>
<td>.000</td>
</tr>
<tr>
<td>Administration</td>
<td>-0.171</td>
<td>-4.426</td>
<td>.000</td>
</tr>
<tr>
<td>Pupil Support</td>
<td>0.088</td>
<td>2.221</td>
<td>.027</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>39.127</td>
<td>.000</td>
</tr>
<tr>
<td>$R^2 = .159$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Emergency/Academic Watch (n=9)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction</td>
<td>0.747</td>
<td>2.973</td>
<td>.021</td>
</tr>
<tr>
<td>Constant</td>
<td>0.311</td>
<td></td>
<td>.765</td>
</tr>
<tr>
<td>$R^2 = .558$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Continuous Improvement (n=64)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Support</td>
<td>-0.365</td>
<td>-3.178</td>
<td>.002</td>
</tr>
<tr>
<td>Instruction</td>
<td>0.271</td>
<td>2.363</td>
<td>.021</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>7.740</td>
<td>.000</td>
</tr>
<tr>
<td>$R^2 = .265$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Effective/Excellent/Excellent with Distinction (n=534)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupil Support</td>
<td>0.262</td>
<td>6.082</td>
<td>.000</td>
</tr>
<tr>
<td>Instruction</td>
<td>0.204</td>
<td>4.735</td>
<td>.000</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>23.277</td>
<td>.000</td>
</tr>
<tr>
<td>$R^2 = .082$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Only predictor variables that were statistically significant in predicting student achievement level at $p \leq .05$ are reported here.
higher percentage of the variation at 26.5%; and, for the lowest achievement group, the predictor variables accounted for over half of the variation at 55.8%.\(^6\)

However, not all regression coefficients were statistically significant. For the population of Ohio school districts, the percentage of school district operating expenditure on instruction was not statistically significant. Only the percent expenditure on pupil support was positive and statistically significant, but the coefficient was small at .088. Coefficients for percent expenditure on staff support, building operation, and administration were statistically significant and larger, indicating a greater influence on student achievement, but they were negative.

For the highest achieving group of school districts (n=534), those referred to as "effective/excellent/excellent with distinction," only coefficients for pupil support and instruction were statistically significant at .262 and .204 respectively. For the next highest achieving group of school districts (n=64), those referred to as "continuous improvement," only coefficients for staff support and instruction were statistically significant at -.365 and .271 respectively. For the lowest achieving group of school districts (n=9), percent expenditure for instruction was the only statistically significant coefficient at .747.

To gain greater insight into the regression results, an analysis of the residuals was conducted.\(^7\) Table 6 and Table 7 present the results of the ten school districts with the highest positive residuals and the results of the ten school districts with the highest negative residuals, respectively. These districts are classified by their achievement level and by the Ohio Department of Education typology of school districts. (See Table 8 for a description of the typology.)

### Table 6 | Ohio School Districts with Highest Positive Residual Values

<table>
<thead>
<tr>
<th>School District</th>
<th>Performance Index Score</th>
<th>Predicted Value</th>
<th>Residential</th>
<th>Academic Group</th>
<th>Typology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mason City</td>
<td>109.4</td>
<td>93.245</td>
<td>16.154</td>
<td>Highest</td>
<td>7</td>
</tr>
<tr>
<td>Cuyahoga Heights Local</td>
<td>106.1</td>
<td>91.766</td>
<td>14.334</td>
<td>Highest</td>
<td>6</td>
</tr>
<tr>
<td>Sycamore Community City</td>
<td>108.2</td>
<td>93.927</td>
<td>14.273</td>
<td>Highest</td>
<td>7</td>
</tr>
<tr>
<td>Chagrin Falls Exempted Village</td>
<td>108.1</td>
<td>93.968</td>
<td>14.132</td>
<td>Highest</td>
<td>7</td>
</tr>
<tr>
<td>Independent Local</td>
<td>106.1</td>
<td>93.539</td>
<td>12.561</td>
<td>Highest</td>
<td>6</td>
</tr>
<tr>
<td>Aurora City</td>
<td>108.1</td>
<td>95.547</td>
<td>12.553</td>
<td>Highest</td>
<td>7</td>
</tr>
<tr>
<td>Brecksville-Broadview Heights</td>
<td>107.8</td>
<td>95.677</td>
<td>12.123</td>
<td>Highest</td>
<td>7</td>
</tr>
<tr>
<td>Blanchester Local</td>
<td>101.9</td>
<td>89.802</td>
<td>12.098</td>
<td>Highest</td>
<td>7</td>
</tr>
<tr>
<td>Indian Hill Exempted Village</td>
<td>109.0</td>
<td>97.638</td>
<td>11.362</td>
<td>Highest</td>
<td>7</td>
</tr>
<tr>
<td>Hudson City</td>
<td>108.3</td>
<td>97.183</td>
<td>11.117</td>
<td>Highest</td>
<td>7</td>
</tr>
</tbody>
</table>

### Table 7 | Ohio School Districts with Highest Negative Residual Values

<table>
<thead>
<tr>
<th>School District</th>
<th>Performance Index Score</th>
<th>Predicted Value</th>
<th>Residential</th>
<th>Academic Group</th>
<th>Typology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngstown City</td>
<td>72.4</td>
<td>93.348</td>
<td>-20.948</td>
<td>Lowest</td>
<td>5</td>
</tr>
<tr>
<td>Euclid City</td>
<td>79.4</td>
<td>99.084</td>
<td>-19.684</td>
<td>Middle</td>
<td>5</td>
</tr>
<tr>
<td>Dayton City</td>
<td>72.6</td>
<td>90.537</td>
<td>-17.937</td>
<td>Lowest</td>
<td>5</td>
</tr>
<tr>
<td>Cleveland Municipal City</td>
<td>74.3</td>
<td>92.031</td>
<td>-17.731</td>
<td>Middle</td>
<td>5</td>
</tr>
<tr>
<td>Warren City</td>
<td>77.0</td>
<td>94.284</td>
<td>-17.284</td>
<td>Lowest</td>
<td>5</td>
</tr>
<tr>
<td>Mansfield City</td>
<td>77.3</td>
<td>94.352</td>
<td>-17.052</td>
<td>Lowest</td>
<td>4</td>
</tr>
<tr>
<td>Lorain City</td>
<td>78.1</td>
<td>94.776</td>
<td>-16.676</td>
<td>Lowest</td>
<td>5</td>
</tr>
<tr>
<td>East Cleveland City</td>
<td>72.5</td>
<td>88.771</td>
<td>-16.271</td>
<td>Lowest</td>
<td>5</td>
</tr>
<tr>
<td>Jefferson Township Local</td>
<td>75.7</td>
<td>91.601</td>
<td>-15.901</td>
<td>Lowest</td>
<td>2</td>
</tr>
<tr>
<td>Toledo City</td>
<td>82.6</td>
<td>97.528</td>
<td>-14.928</td>
<td>Middle</td>
<td>5</td>
</tr>
</tbody>
</table>
Educational Considerations

Table 8  |  Typology of Ohio School Districts, 2009-2010

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rural: High poverty, low median income</td>
</tr>
<tr>
<td>2</td>
<td>Rural: Low poverty, low to moderate median income, small student population</td>
</tr>
<tr>
<td>3</td>
<td>Rural/small town: Moderate to high median income</td>
</tr>
<tr>
<td>4</td>
<td>Urban: Low median income, high poverty</td>
</tr>
<tr>
<td>5</td>
<td>Major urban: Very high poverty</td>
</tr>
<tr>
<td>6</td>
<td>Urban/suburban: High median income</td>
</tr>
<tr>
<td>7</td>
<td>Urban/suburban: Very high median income, very low poverty</td>
</tr>
</tbody>
</table>


The performance index scores for the ten districts with the highest positive residual values ranged from 106.1 to 109.4. The difference between the observed and predicted scores ranged from 11.117 to 16.154 points higher than the model predicted. All of these districts were in the highest performance category used in this study (Effective/Excellent/Excellent with Distinction), and all were classified as low poverty by the Ohio Department of Education typology. Specifically, nine of the ten districts are defined by the typology as urban/suburban with high to very high median income. The remaining district is defined as low to moderate median income with a small student population.

For the ten districts with the highest negative residual values, performance index scores ranged from 72.4 to 82.6. The difference between the observed and predicted scores ranged from -14.928 to -20.9485. Seven of the ten school districts were in the lowest category of academic achievement (academic emergency/academic watch) used in the study, with the remaining three classified as “continuous improvement.” Nine of the ten districts are defined by the typology as urban and high poverty. The remaining district is defined as rural and low poverty, with low to moderate income.

Conclusions and Implications

The central premise of the 65% solution is that school districts can raise student achievement, regardless of their current expenditure level, by allocating at least 65% of their operating budget to classroom instruction. Little research exists to confirm this hypothesis. Even in the broader body of research that attempts to establish a systematic relationship between expenditure and student achievement, the results have been mixed. In this article, an analysis of Ohio school districts for the 2009-2010 academic year by achievement level (high, continuous improvement, low) found that these groups spent on average nine to twelve percentage points below the 65% benchmark. Even the most academically successful group of school districts spent, on average, only 56% of their operating budget on instruction. Further, regression results indicated that attempts to predict student achievement based upon the percent of school district expenditure on instruction as compared to other categories in the operating budget yielded weak and inconclusive results. Finally, a supplemental analysis of residuals raised concerns that income levels of district residents may play a more substantial role in student achievement than the percent of the school district operating budget allocated to classroom instruction.

Today one hears little about the “65 percent solution.” The web site created by Mooney and Byrne (firstclasseducation.org) to promote their solution no longer exists. It appears that the concept George Will (2005) referred to as “politically delicious” was more accurately characterized by Frederick Hess (2006) as simply a “new fad.” Still, researchers continue to be fascinated by the question, does money matter? However, as this study indicated, along with many that have preceded it, there are rarely simple answers to complex questions.

Endnotes

1 According to Will at the time of this opinion piece, 61.5% of funds were spent on the classroom nationally.
2 Mooney helped form a group called First Class Education, designed to promote the practice of the 65 percent solution. According to Standard & Poor’s (2005, 1): “The organization’s goal was for all 50 states and the District of Columbia by the end of 2008 to pass a law requiring each school district ‘to spend at least 65% of its operating budget on classroom instruction.’”
3 Interestingly, Wenglinsky (1998) found that only central office and instructional expenditures were related to student achievement.

4 For a full description of Ohio’s education accountability system, see Guide to Understanding Ohio’s Accountability System, 2009-2010 (Columbus, OH: Ohio Department of Education, n.d.).
5 Because the mean (average) and median values for the predictor variables were similar, only the mean values are discussed here.
6 It is important to note that the lowest achieving group included only nine districts, a number some consider low for multiple regression analysis. Given this potential limitation, the regression results for this group should be viewed with caution.
7 In regression analysis, the residual is the difference between the observed value of the coefficient and the predicted value. A positive residual means that the identified district’s academic performance was above the prediction based on the independent variables used in the analysis. Conversely, a negative residual means that the identified district’s academic performance was below the prediction.
References


The Role of Expenditures in Predicting Adequate Yearly Progress for Ohio K-12 Students with Special Needs

Korrin M. Ziswiler, Barbara De Luca, and Luke J. Stedrak

Perhaps no challenge in American schooling is as perplexing and under-examined as special education, particularly its costs, its benefits, and the relationship between them.¹ (Chester E. Finn, Jr., and Michael J. Petrilli)

Although there exists a large body of research concerning the relationship between expenditure and student achievement,² a lack of research exists analyzing this relationship as it pertains specifically to students with disabilities. At the same time, students receiving special education services represented 13.1% of K-12 students in the United States in 2008-2009,³ and hence a significant portion of school district student populations and budgets. In Ohio, the percentage of special education students was even higher, at 14.6% of K-12 enrollment. Further, between 2001 and 2009, the percentage of Ohio's student population identified in need of special education services grew by 11.6%, nearly triple that of the national average of 3%.

Because federal law mandates that all students with disabilities receive an education in the least restrictive environment,⁴ but provides only a small portion of the necessary funding, states and local school districts are left to fund the bulk of the costs associated with special education while at the same time meeting federal requirements for student achievement, referred to as “adequate yearly progress” (AYP), under the No Child Left Behind Act of 2001. Given the increasing fiscal and academic pressures districts face to allocate resources efficiently, the purpose of this exploratory study was to predict which categories of district level special education expenditures best predicted Ohio special education students’ meeting AYP criteria in reading and mathematics for the 2008-2009 school year.

Research Methods

The data source for this study was Special Education Weighted Funds Fiscal Accountability Report, Fiscal Year 2009.⁵ In Ohio, special education expenditures are divided into six...
categories: speech allowance, special education transportation, catastrophic costs, support services for special education, instruction for special education, and required-versus-spent expenditure variance.\textsuperscript{6} Catastrophic cost represents state aid that was created by the state to supplement district expenditures for students with extreme needs, defined as exceeding $25,000 per year. Support services consist of activities such as occupational therapy, physical therapy, and other indirect activities that contribute to a student’s educational progress. Because speech services are technically a support function for students with disabilities, this expenditure was combined with the support services category in this study to create a total support expenditure variable. Each category of expenditure was divided by the number of special education students in each district to determine a per-pupil expenditure.

Five independent variables were included in the study: Per-pupil expenditures on special education transportation, catastrophic costs, support services for special education, and special education instruction; and percentage of students in poverty. Students in poverty were defined as those whose families receive Ohio Works First assistance.\textsuperscript{7,8} Poverty represents a factor that complicates the analysis of relationships between expenditures and student achievement. A number of researchers have argued that gaps in educational attainment exist due to family income level.\textsuperscript{9} Reardon asserted that “...family income is now nearly as strong as parental education in predicting children’s achievement.”\textsuperscript{10}

This study included 594 of Ohio’s 611 school districts, and the school district was the unit of analysis. Due to missing data, 17 school districts were eliminated from the analysis. Descriptive statistics were calculated to create a profile of special education expenditures and the percent of students in poverty in Ohio for the 2008-2009 school year. Binary logistic regression analysis was conducted to determine the relationship of categories of special education expenditures and percentage of students in poverty to the academic performance of special education students where academic performance of special education students was defined as achieving adequate yearly progress (AYP) in mathematics and reading as measured by the Ohio achievement assessment.\textsuperscript{11}

The use of binary logistic regression was appropriate because preliminary analysis indicated that the data were not normally distributed, and the dependent variable, AYP, was dichotomous; that is, if AYP was met, the dependent variable was coded 1, and if AYP was not met, the dependent variable was coded zero. According to Menard, a stepwise method is the most appropriate method when using a logistic regression analysis for exploratory studies where theory is not well established.\textsuperscript{12} As a result, this study employed the forward likelihood ratio (Forward LR) stepwise loading method to load the independent expenditure variables into the predictor model.\textsuperscript{13} In preparation for the regression analysis, data were analyzed for collinearity and outlier cases. A correlation analysis revealed that no strong relationship existed between independent variables. (See Table 1.) Even though statistical outliers existed in the data set, they were included in the analysis because eliminating them would have excluded districts with high levels of poverty and special education expenditures.

### Results

Descriptive statistics provide a profile of per-pupil special education expenditures and the percentage of students in poverty by district for the school year 2008-2009. (See Table 2.) On average, school districts spent $3,019 per pupil on instruction followed by $2,513 on instructional support. Catastrophic costs averaged $87 per pupil while transportation was $28. Support services and instruction expenditures per pupil showed the widest range of the four categories of special education expenditures. Instruction expenditures ranged from $328 to $16,306 per pupil while support services expenditures ranged from $355 to $11,839 per pupil. Overall, 92% of districts spent less than $4,000 per student on special education instruction. The percent of students in poverty in Ohio school districts ranged from zero to 22.87%, with a mean poverty rate of 3.17%. Nearly 95% of districts had poverty levels below 9.9% while nine districts have poverty levels between 15% and 25%.

In terms of academic performance, special education students in Ohio performed better on the Ohio accountability achievement test in reading than they did in mathematics. In 2009, over half (58.8%) of school districts met AYP targets for special education students. In contrast, only a little more than one-third (36.7%) met AYP targets for mathematics.

Stepwise regression results indicated that only the model including per-pupil catastrophic and the percentage of students in poverty as independent variables was statistically

### Table 1 | Pearson Correlation Matrix of Independent Variables

<table>
<thead>
<tr>
<th>Aid Per Pupil</th>
<th>Transportation</th>
<th>Catastrophic</th>
<th>Speech</th>
<th>Instruction</th>
<th>Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>1.000</td>
<td>.265*</td>
<td>.538*</td>
<td>.349*</td>
<td>.261*</td>
</tr>
<tr>
<td>Catastrophic</td>
<td>.265*</td>
<td>1.000</td>
<td>.528*</td>
<td>.029</td>
<td>-.066</td>
</tr>
<tr>
<td>Speech</td>
<td>.538*</td>
<td>.528*</td>
<td>1.000</td>
<td>.233*</td>
<td>.055</td>
</tr>
<tr>
<td>Instruction</td>
<td>.349*</td>
<td>.029</td>
<td>.233*</td>
<td>1.000</td>
<td>.378*</td>
</tr>
<tr>
<td>Poverty</td>
<td>.261*</td>
<td>-.066</td>
<td>.055</td>
<td>.378*</td>
<td>1.000</td>
</tr>
</tbody>
</table>

N=594

* Correlation coefficient is significant at the 0.01 level (2-tailed).
### Table 2 | Descriptive Statistics for Categories of Per-Pupil Special Education Expenditures and Student Poverty by School District

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation ($)</td>
<td>27.79</td>
<td>22.57</td>
<td>27.20</td>
<td>0.00</td>
<td>270.01</td>
<td>270.01</td>
</tr>
<tr>
<td>Catastrophic Costs ($)</td>
<td>87.08</td>
<td>27.79</td>
<td>181.87</td>
<td>0.00</td>
<td>2,035.21</td>
<td>2,035.21</td>
</tr>
<tr>
<td>Support Services ($)</td>
<td>2,513.32</td>
<td>2,312.82</td>
<td>980.95</td>
<td>355.16</td>
<td>11,839.82</td>
<td>11,484.66</td>
</tr>
<tr>
<td>Instruction ($)</td>
<td>3,019.14</td>
<td>2,889.17</td>
<td>1,161.93</td>
<td>327.67</td>
<td>16,306.18</td>
<td>15,978.51</td>
</tr>
<tr>
<td>Student Poverty ($)</td>
<td>3.17</td>
<td>2.03</td>
<td>3.28</td>
<td>0.00</td>
<td>22.87</td>
<td>22.87</td>
</tr>
</tbody>
</table>

n=594

### Table 3 | Classification Table for Adequate Yearly Progress in Reading

<table>
<thead>
<tr>
<th>Model</th>
<th>Observed</th>
<th>Predicted</th>
<th>Percentage</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reading AYP</td>
<td>Not Met</td>
<td>Met</td>
<td>Overall Percentage</td>
</tr>
<tr>
<td>Constant</td>
<td>Reading AYP</td>
<td>349</td>
<td>0</td>
<td>100.00</td>
</tr>
<tr>
<td></td>
<td>Not Met</td>
<td>245</td>
<td>0</td>
<td>58.8</td>
</tr>
<tr>
<td></td>
<td>Met</td>
<td>245</td>
<td>0</td>
<td>58.8</td>
</tr>
<tr>
<td>Step 2</td>
<td>Reading AYP</td>
<td>278</td>
<td>71</td>
<td>79.7</td>
</tr>
<tr>
<td></td>
<td>Not Met</td>
<td>114</td>
<td>131</td>
<td>53.5</td>
</tr>
<tr>
<td></td>
<td>Met</td>
<td>114</td>
<td>131</td>
<td>53.5</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td></td>
<td></td>
<td>68.9</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td></td>
<td></td>
<td>68.9</td>
</tr>
</tbody>
</table>

Note: Met=1.00  Not Met=0.00

### Table 4 | Regression Coefficients for Adequate Yearly Progress in Reading

<table>
<thead>
<tr>
<th></th>
<th>$R^2$</th>
<th>$B$</th>
<th>$Wald$</th>
<th>$df$</th>
<th>$p$</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cox &amp; Snell</td>
<td>.118</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nagelkerke</td>
<td>.159</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Poverty</td>
<td></td>
<td>-.231</td>
<td>26.14</td>
<td>1</td>
<td>.000</td>
<td>.793</td>
</tr>
<tr>
<td>Catastrophic Expenditure</td>
<td>.001</td>
<td>4.389</td>
<td>1</td>
<td>.036</td>
<td></td>
<td>1.001</td>
</tr>
<tr>
<td>Constant</td>
<td>.330</td>
<td>5.21</td>
<td>1</td>
<td>.022</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
significant in predicting the probability of special education students’ meeting AYP criteria for reading (-2 log likelihood = 730.36, $\chi^2(2) = 74.80$, p<0.001). Of the regression steps, this model correctly categorized the highest percent of reading AYP cases, 68.9%, while the constant model accurately classified 58.8%. (See Table 3.) Goodness of fit measures, the Omnibus test and Hosmer-Lemeshow, indicated that the performance of this model was not a significant improvement over the constant model (p < .00). Only 11.8% to 15.9% of the variability in reading AYP was explained by the district percent of students in poverty and catastrophic expenditures per pupil. (See Table 4.) Table 4 also displays the regression coefficients. Odds ratios suggested that when a district experienced a one percentage point increase in the percentage of students in poverty, the probability of special education students’ meeting AYP criteria for reading decreased by 23.1%. For every one dollar increase in catastrophic expenditures per pupil, a district was only 0.1 times more likely to meet reading AYP category.

In the case of mathematics AYP, the regression results indicated that only the percentage of students in poverty in a district was statistically significant in predicting the probability of special education students’ meeting AYP criteria for mathematics (-2 log likelihood = 693.00, $\chi^2(1) = 26.50$, p<0.001). Of the regression steps, this model correctly categorized the highest percent of mathematics AYP cases, 69.5%, while the constant model accurately classified 63.3%. (See Table 5.) As with reading AYP, goodness of fit tests signaled that the fit of this model was also questionable as both the Omnibus test (p<.00) and Hosmer Lemeshow (p<.01) were statistically significant. Furthermore, the model accounted for only 13.8% to 18.8% of the variation in mathematics AYP. (See Table 6.) Table 6 also displays the regression coefficients for this model. Similar to the results of the reading AYP regression model, odds ratios indicated that if the district percent of students in poverty increased by 1%, the probability of special education students’ meeting AYP criteria for mathematics decreased by 28.5%.

**Summary and Conclusion**

The purpose of this exploratory study was to predict which categories of district level special education expenditures best predicted Ohio special education students’ meeting the criteria for adequate yearly progress (AYP) in reading and mathematics for the 2008-2009 school year. As such, this study

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**Table 5 | Classification Table for Adequate Yearly Progress in Mathematics**

<table>
<thead>
<tr>
<th>Model</th>
<th>Observed</th>
<th>Predicted</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reading AYP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Met</td>
<td>Met</td>
</tr>
<tr>
<td>Constant</td>
<td>Math AYP</td>
<td>Not Met</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Met</td>
<td>0</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td>63.3</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td>Math AYP</td>
<td>Not Met</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Met</td>
<td>38</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td>69.5</td>
<td></td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td>69.5</td>
<td></td>
</tr>
</tbody>
</table>

Note: Met=1.00 Not Met=0.00

**Table 6 | Regression Coefficients for Adequate Yearly Progress in Mathematics**

<table>
<thead>
<tr>
<th>R^2</th>
<th>B</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cox &amp; Snell</td>
<td>.138</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nagelkerke</td>
<td>.188</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Poverty</td>
<td>-.285</td>
<td>30.27</td>
<td>1</td>
<td>.000</td>
<td>.752</td>
</tr>
<tr>
<td>Constant</td>
<td>1.45</td>
<td>104.20</td>
<td>1</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>
represented an effort to begin to address a gap in the research literature regarding the relationship between special education expenditure and student achievement, a type of analysis more generally referred to as production function research. Four categories of special education expenditures were included—transportation, catastrophic costs, support services, instruction—as independent variables as well as the percentage of students in poverty. Binary logistic regression was chosen for the statistical analysis given the dichotomous nature of the dependent variables—whether or not special education students met or did not meet adequate yearly progress (AYP) goals; and a stepwise approach was selected given the exploratory and predictive nature of the study.

Aside from the very small positive contribution that catastrophic expenditures made to prediction of special education students meeting AYP in reading, no other category of special education expenditure was statistically significantly. However, in both equations, student poverty was statistically significant and negative, further supporting the relationship between poverty and student performance found in the research literature. More importantly, goodness of fit test results were not encouraging, and regression results indicated the model had low predictive power. These results generally indicate misspecification of the model, i.e., missing variables and/or inclusion of nonrelevant variables, which is not uncommon in the atheoretical approach that characterizes much production function research.

Within the scope of this study, an important limitation should be acknowledged; that is, the use of alternate assessments may have had an effect on districts’ AYP outcomes. In Ohio, each school district has the option of using alternate assessments and of excluding these scores for accountability measures for one percent of the district’s average daily membership (ADM). Because of this, it is possible that not every student with a disability was included in a district’s AYP measures.

Future research in this area is necessary to better understand the relationship between special education expenditures and student achievement. These studies might take a more nuanced approach by analyzing incremental gains made by districts that failed to meet percent proficienttargets in order to determine if a relationship exists between expenditures and incremental increases in student achievement. For example, it is possible for a school district to realize academic improvements in disability subpopulations which are masked by reporting only the overall percentage of special education students meeting proficiency goals. In addition, future research that is longitudinal in nature will capture these sorts of gains over time, and by doing so, contribute to a more complete picture of special education student expenditure and achievement. Finally, the use of a conceptual or theoretical framework to select independent variables will minimize specification errors.

**Endnotes**


6. The variable, expenditures required vs. spent variance, represents the difference between what a district spent and the minimum required special education expenditure level set by the legislature. After consultation with an Ohio Department of Education fiscal reporting specialist, the authors decided to eliminate this variable from the analysis because of the extent of district reporting errors (Personal communication with Londa Schwierking, September 2012).

7. Ohio Department of Education, “FY2009 District Profile Report” (Columbus, OH: last modified July 17, 2012),
Ohio Works First is an assistance program for needy families who meet the state's income criteria. See, “Fact Sheet: Ohio Works First” (Columbus, OH: Ohio Department of Job and Family Services, December 2011), http://jfs.ohio.gov/factsheets/owf.pdf.


The Ohio achievement assessment is administered annually in reading and mathematics to students in the third through eighth grades. A composite of test results is calculated for each school district by the Ohio Department of Education to determine AYP in reading and AYP in mathematics.


With this method, a single predictor variable is entered into the model and tested for statistical significance. In each additional step another independent variables is added to the model and tested for statistical significance; statistically insignificant variables are then removed. See, T.N. Srivastava and Shailaja Rego, Business Research Methodology (Nagar, New Delhi: Tata McGraw Hill, 2010), 14.55.
State Challenges to *Plyler v. Doe*: Undocumented Immigrant Students and Public School Access

Lenford C. Sutton and Tricia J. Stewart

This article presents a review and an analysis of selected state laws and initiatives that have attempted to restrict public school access for undocumented immigrant children in the wake of the landmark U.S. Supreme Court decision of *Plyler v. Doe*. We begin with an overview of the Court’s ruling in *Plyler*. This is followed by examples of state-based challenges to *Plyler* in California and Arizona where the former began as a ballot initiative and the latter as a legislative bill. Subsequently, both laws were successfully challenged in the courts. The fourth and final section provides a discussion and conclusions.

**Overview of Plyler v. Doe**

In 1982, *Plyler v. Doe* extended education rights to undocumented immigrant children. In striking down a Texas statute that would have charged these children tuition to attend public schools, the U.S. Supreme Court ruled that public schools must provide access to children regardless of immigration status based upon the Equal Protection Clause of the Fourteenth Amendment of the U.S. Constitution which prohibits a state from denying any person within its borders the equal protection of the laws. Under Fourteenth Amendment jurisprudence, the application of strict scrutiny by the courts is traditionally applied when the action of a state negatively affects a “suspect class” or violates a fundamental right. Accordingly, state actions related to education must be narrowly tailored to serve a compelling interest of the state.

**California’s Proposition 187**

In addition to the more familiar method of enacting new state laws through elected legislators, twenty-one states permit ballot initiatives that, if passed by a majority of state voters, become law. Of these, eleven states, including California, use a “direct” approach. Under this approach, an individual citizen crafts a proposition and obtains at least the state-mandated minimum number of registered voter signatures in support, after which the proposition is placed on the ballot.
Such was the case in California in 1994. Frustrated with the specter of overcrowded schools, dwindling social services, and a growing prison population, all related to illegal immigration, voters in California passed Proposition 187 during the midterm elections of 1994. Proposition 187 and the subsequent law, although never enforced due to judicial intervention, sought to declare illegal immigrants ineligible to receive state-funded social services and to attend public schools, as follows:

No public elementary of secondary school shall admit, or permit the attendance of, any child who is not a citizen of the United State, an alien unlawfully admitted as a permanent resident, or persons who are otherwise authorized to be present in the United States…In order to carry out the intention of the People of California that, excepting emergency medical care are required by federal law, only citizens of the United States and aliens lawfully admitted to the United States may receive the benefits of publicly funded health care.8

Under the law, if implemented, California school districts and social service providers would have been required to: “(a) verify the immigration status of persons seeking services; (b) notify the Immigration and Naturalization Service (INS), a federal agency, about anyone who was determined or reasonably suspected to be in violation of immigration laws; and (c) inform the parents of undocumented children about their illegal status.”9 In addition, the law stipulated that changes would be permitted only through voter referendum or a supermajority vote in both the state senate and house of representatives.

In League of United Latin American Citizens (LULAC) v. Wilson, plaintiffs successfully challenged the law that emanated from Proposition 187 in federal court.10 Although Governor Wilson, the defendant, appealed the ninth circuit court’s decision, his term ended before the case was heard before the U.S. Appellate Courts. In 1999, a settlement was approved by Governor Davis, and the district court decision was adopted as law.

Alabama House Bill 56

In 2011, the Alabama legislature passed House Bill (H.B.) 56, which was subsequently signed into law by Governor Robert Bentley on June 9, 2011, as The Beason-Hammon Alabama Taxpayer and Citizen Protection Act whose stated purpose was to address the “economic hardship and lawlessness” allegedly caused by “illegal immigration,” and to discourage it by requiring all state agencies to cooperate with federal authorities in the enforcement of federal immigration laws.11

The text of the law asserted that one of the primary sources of economic hardship was the cost of providing a public education to undocumented immigrant children, as follows:

Because the costs incurred by school districts for the public elementary and secondary education of children who are aliens not lawfully present in the United States can adversely affect the availability of public education resources to students who are United States citizens or are aliens lawfully present in the United States, the State of Alabama determines that there is a compelling need for the State Board of Education to accurately measure and assess the population of students who are aliens not lawfully present in the United States, in order to forecast and plan for any impact that the presence such population may have on publicly funded education in this state.12

To that end, the law required all public schools to determine if newly enrolled students were “born outside the jurisdiction of the United States” or if they were children of an undocumented immigrant by examining the student’s original birth certificate or a certified copy.13 If the child was born outside the United States, if the child’s parent is an undocumented immigrant, or if a birth certificate is not available, the parent was required to notify the school of their child’s citizenship or immigration status within 30 days either by providing the documentation described above or by signing a declaration.14

Under the law, if the parent did not comply within the time period, school officials were required to report the student as “...an alien unlawfully present in the United States.”15

The law also required Alabama school districts to submit an annual report to the State Board of Education.16 In turn, the board would be required to produce a report from this data for the legislature to include the citizen and immigration status of students by school as well as student participation in ESL programs by school and status.17 The annual report would also be required to “itemize” and analyze the cost of providing a public education to undocumented students, including ESL classes, and the potential impact on the quality of education that might be provided to students if those costs were not present.18

On August 1, 2011, the U.S. Department of Justice along with other defendants challenged several provisions of H.B. 56.19 In her decision, federal judge Sharon Lovelace Blackburn upheld the section of that required public schools to determine immigration status when enrolling new students. The judge also dismissed claims that the Clergy and the Hispanic Interest Coalition of America plaintiffs had no standing to challenge section 28 of the statute that concerned the enrollment of students in Alabama’s public schools.20

Mixed rulings were also handed down by a three-judge panel in the Eleventh Circuit Court of Appeals, which included Justices Ed Carnes, nominated by Republican President George H.W. Bush, and Frank M. Hull and Rosemary Barkett, both nominated by Democratic President Bill Clinton. The court enjoined the state of Alabama from enforcement of the section which required public schools to determine the legal status of newly enrolled students.21

Discussion and Conclusions

California’s 1994 voter-initiated ballot initiative, Proposition 187, and Alabama’s law of 2010, based upon H.B. 56, are stark examples of how two states have attempted to challenge access to public schools for undocumented immigrant children, a right that was clearly articulated in Plyler over 30 years ago. Proposition 187 directly challenged Plyler by declaring undocumented children ineligible to attend public schools while the approach of H.B. 56 was more subtle. Its mandate for school districts to collect information on students’ immigration status
Educational Considerations

Educational Considerations would not directly result in denial of a public education. However, this section of the law exerted a potentially chilling effect in that parents, especially if undocumented, might fear disclosing their child’s immigration status would place the family in danger of deportation.

Judicial intervention was necessary and successful. The law based upon Proposition 187 was struck down in its entirety while a number of sections of the law based upon H.B. 56, including reporting student immigration status, were invalidated by the courts. As a result, the legacy of the Plyler v. Doe remains intact.

Endnotes

2 Ibid.
3 However, skeptics have noted Justice Burger’s dissent at page 244 of the decision where he stated, “The Court acknowledges that, except in those cases when state classifications disadvantage a ‘suspect class’ or impinge upon a ‘fundamental right,’ the Equal Protection Clause permits a state "substantial latitude" in distinguishing between different groups of persons. Ante at 216-217. Moreover, the Court expressly– and correctly–rejects any suggestion that illegal aliens are a suspect class, ante at 219, n. 19, or that education is a fundamental right, ante at 221, 223. Yet by patching together bits and pieces of what might be termed quasi-suspect-class and quasi-fundamental-rights analysis, the Court spins out a theory custom-tailored to the facts of these cases. In the end, we are told little more than that the level of scrutiny employed to strike down the Texas law applies only when illegal alien children are deprived of a public education, see ante at 223-224. If ever a court was guilty of an unabashedly result-oriented approach, this case is a prime example.”
5 Ibid.
12 Ibid.
14 Ibid., (a)(3); (b)(4).
15 Ibid., (5).
16 Ibid., (5)(c).
17 Ibid., (d)(1-2).
18 Ibid., (d)(3-5).
20 Ibid.
21 Ibid. Hispanic Interest Coalition of Alabama et al., v. Governor Robert Bentley et. al, (11th Cir. 2011).
Transparency and Accountability: What If the Federal Gainful Employment—Debt Measures Regulations Applied to Law Schools?

Kari Ann Mattox

Introduction

The purpose of this analysis is to compare current guidelines of the American Bar Association (ABA) for law schools to those of the U.S. Department of Education’s Gainful Employment—Debt Measures regulations in order to assess their transparency and accountability. This analysis is relevant in a time of increasing tuition costs and record levels of student debt, particularly for those attending law school. According to the American Bar Association, the average debt for law school graduates in 2011 was $125,000 for private institutions and $75,700 for public institutions, representing increases of 17.6% and 10%, respectively, over the previous year. At the same time, graduates are facing increased challenges finding employment.

Background

The final version of the U.S. Department of Education’s Gainful Employment—Debt Measures regulations were published in the Federal Register on June 13, 2011, with the following summary:

The Secretary [of the U.S. Department of Education] amends the Student Assistance General Provisions regulations to improve disclosure of relevant information and to establish minimal measures for determining whether certain postsecondary educational programs lead to gainful employment in recognized occupations, and the conditions under which these educational programs remain eligible for the student financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended (HEA).

Secretary Duncan developed these regulations under the auspices of Presidential Executive Order 13563, Section 4, as follows:

Flexible Approaches. Where relevant, feasible, and consistent with regulatory objectives, and to the extent permitted by law, each agency shall identify and consider regulatory approaches that reduce burdens...
and maintain flexibility and freedom of choice for the public. These approaches include warnings, appropriate default rules, and disclosure requirements as well as provision of information to the public in a form that is clear and intelligible.4

Undoubtedly, the primary target of these new regulations was two-year, for-profit postsecondary institutions that offer vocational programs whose students have relatively high student loan debt and high default rates. A June 2, 2011, press release issued by the U.S. Department of Education drove home this point, stating:

Students at for-profit institutions represent 12 percent of all higher education students, 26 percent of all student loans and 46 percent of all student loan dollars in default. The median Federal student loan debt carried by students earning associate degrees at for-profit institutions was $14,000, while the majority of students at community colleges do not borrow. More than a quarter of for-profit institutions receive 80 percent of their revenues from taxpayer-financed Federal student aid.5

Further, the press release bluntly attributed “wide-spread evidence of waste, fraud” to these types of institutions.6

Nonetheless, the provisions found under this set of federal regulations also apply to public and nonprofit institutions of higher education that offer non-degree certificate programs designed to lead to “gainful employment in a recognized occupation.”7 One of the major goals of these regulations is to provide prospective students with the kinds of information they need to make informed decisions about attending a particular institution’s program, for example, by requiring the institution to make available the number and percent of graduates who are successful in finding jobs in their chosen field. This requirement also allows prospective students to “comparison shop” among similar programs at other institutions in order to select the program with the highest success rate.8 A second major goal is accountability; that is, holding higher education institutions accountable for providing the public with timely and accurate data. In addition, the “Debt Measures” regulations hold institutions accountable for student loan repayment rates. The ability to pay back student loans, an important predictor of default, is a concern not only for students, but also for U.S. taxpayers who fund federal student aid programs.9

The provisions found under the Debt Measures regulations are somewhat complex in nature, but overall they are designed to monitor the student loan repayment rates of an individual institution in general, and specifically with regard to students’ debt-to-earnings ratios “...where a program is now considered to lead to gainful employment if it has a repayment rate of at least 35 percent or its annual loan payment under the debt-to-earnings ratios is 12 percent or less of annual earnings or 30 percent or less of discretionary income.”10

According to these regulations, institutions that do not meet these benchmarks for transparency and accountability will be given opportunities for improvement by the U.S. Department of Education, but ultimately they risk losing eligibility for federal financial aid under Title IV of the Higher Education Act if they do not improve.11

It should be noted that the Gainful Employment-Debt Measures regulations do not apply to degree-based undergraduate or graduate programs even if they might be considered career-oriented.12 This returns us to the opening of the section where it was noted that these regulations were designed primarily to address concerns related to for-profit post-secondary institutions. One might ask why not apply these principles of transparency and accountability to career-oriented degree programs? In the next section, I look more closely at how these concerns are being addressed by the American Bar Association, a major accreditor of law schools in the United States.

American Bar Association Standards for Law Schools

On March 14, 2011, approximately three months prior to the release of the final U.S. Department of Education rules and regulations referred to as “Gainful Employment—Debt Measures,” the American Bar Association (ABA) released a memorandum from the Subcommittee on Standard 509 (Consumer Information) to the Standards Review Committee proposing a revised standard for employment data published by law schools.13 The subcommittee prefaced this change, as follows: “Over the past few years, there has been a great deal of criticism directed at law schools for their public presentation of employment information. Much of this criticism is warranted. Too much information is presented in a potentially misleading fashion.”14 Specifically, the memorandum outlined changes to standard 509(b) which would “provide more meaningful and consistent employment information to prospective students” and “assist prospective students in making informed decisions about whether to go to law school or which school to attend.”15 To that end, the subcommittee proposed that employment rate of graduates be based on the entire graduating class, not just those who respond to the law school’s survey. The latter approach, according to the subcommittee, likely inflates the employment rate given that nonrespondents are likely not employed. Second, the subcommittee proposed that law schools disaggregate employment data by the various categories of jobs graduates hold. Third, the subcommittee proposed that the reporting of salary data include the number of respondents and the percentage of graduates they represent. In addition, the subcommittee developed a sample spreadsheet for law schools that captured all of the above data elements.16 The changes described in this paragraph, which represented a radical change from previous reporting requirements referred to in Standard 509 as “basic consumer information,”17 were approved December 3, 2011.18

Approval of the revisions came after consultation with and suggestions from the National Association for Law Placement (NALP), whose leadership provided for its graduate placement survey to be equivalent to that of the ABA. With the changes, law schools are now required to report their placement data for each graduate directly to the ABA. Prior to this, law schools reported the information to NALP, which then summarized the information and reported it back to law schools which then used the information to answer the ABA...
annual questionnaire.\textsuperscript{15} In addition to this change, the Section on Legal Education also accelerated the collection and reporting of the data so that the employment data would be available approximately one year after a class graduated instead of two years.\textsuperscript{20} With these changes, the Section was hopeful that applicants would be better informed about their opportunities of employment.

By March of 2012, the Section’s Council voted unanimously to recommend changes to Accreditation Standard 509. The Council also suggested stronger penalties for noncompliance.\textsuperscript{21} The changes proposed would require that law schools publish their graduate employment data in a uniform chart that was provided by the Council, in agreement with instructions and definitions that the Council approved.\textsuperscript{22} Furthermore, the Council proposed that the information must be gathered and published by March 31 of each year for the most recent graduating class, thus, providing current and prospective law students a more detailed outlook on the employment information.\textsuperscript{23}

Finally, at its meeting in August of 2012, the ABA House of Delegates agreed to changes proposed by the Council of the Section to Standard 509 and Rule 16 of the ABA Standards and Rules of Procedure for Approval of Law Schools, which became effective immediately.\textsuperscript{24} The changes made the obligations of law schools clearer in regard to the reporting and publication of consumer information mandated by Standard 509, and the changes also strengthened the range of sanctions through Rule 16 of the Rules of Procedure of Law Schools that could be enforced for violations of the Standard.\textsuperscript{25}

\textbf{Conclusion}

The major goals of the Gainful Employment—Debt Measures regulations are transparency and accountability, particularly as they relate to the practices and performance of for-profit institution’s vocational programs, in order to protect students and taxpayers. At first glance, it may seem that law schools have nothing in common with these types of institutions, but upon closer examination, there emerge common concerns around student debt and the ability of students to find employment commensurate with their education. Because the source of federal financial aid is taxpayer revenues, participating higher education institutions, both private and public, need to be transparent with regard to gathering and reporting data relevant to the outcomes of their career-oriented programs. They also need to be held accountable for high student failure rates with regard to on-time completion of education programs and high student loan default rates because, at the most basic level, these represent the misuse of taxpayer money, not to mention the squandering of the human capital of students who seek to better themselves through higher education. When law schools are examined through the lens of transparency and accountability, the application of the principles embodied in the Gainful Employment—Debt Measures regulations seem relevant, and the recent actions of the ABA to require ABA-accredited law schools to make obvious employment rates is a step in the right direction.

However, recent events call into question whether or not these federal regulations will ever be implemented. According to the final rules as published in the June 13, 2011, Federal Register, the provisions of the Gainful Employment—Debt Measures regulations were scheduled to go into effect July, 2012. On June 30, 2012, the U.S. Department of Education suffered a set-back when a core element was vacated by the U.S. District Court for the District of Columbia.\textsuperscript{26} Judge Rudolph Contreras held that the debt-repayment benchmark of 35% of a program’s graduates be repaying their student loans was “arbitrary and capricious.”\textsuperscript{27} Under this provision, a program’s failure to meet this benchmark could eventually result in loss of federal financial aid. Judge Contreras held that the Department did not provide evidence to support this as a “meaningful performance standard,” stating: “The Department does not identify any expert studies or industry practices indicating that a repayment rate of 35 percent would be a ‘meaningful performance standard;’ but rather emphasizes that the number was chosen because approximately one quarter of gainful employment programs would fail a test set at that level.”\textsuperscript{28} A subsequent appeal by the Department was unsuccessful.\textsuperscript{29} However, Judge Contreras had confirmed the Department’s authority to regulate and provide funding to schools that “prepare students for gainful employment in a recognized occupation.” So, at this point, it remains unclear as to whether the Department will attempt to revise this portion of the Gainful Employment—Debt Measure’s regulations so that it can enforce the entire measure.

\textbf{Endnotes}

Ibid.
8 Ibid., 34387. This requirement builds upon an earlier regulation from October 2010 that required institutions “...to disclose key performance information about each program on their Web site and in promotional materials to prospective students. The required elements include the program cost, ontime completion rate, placement rate, median loan debt, and other information for programs that prepare students for gainful employment in recognized occupations.”
9 Ibid.
10 Ibid., 34388.
11 Ibid.
12 Ibid., 34389.
14 Ibid., 1.
15 Ibid.
20 Ibid.
21 Ibid.
22 Ibid. Suggested changes to Rule 16, provided for sanctions for violation of Standard 509 if law schools provided incomplete, inaccurate or misleading employment data (consumer information). Among the sanctions included were monetary penalties, public censure, and loss of accreditation.
23 Ibid.
25 The revised Standard 509 requires consumer information that a law school reports, publicizes or distributes must be complete, accurate and not misleading to a “reasonable” law school student or applicant, and that violations could result in sanctions under Rule 16 which provides for possible probation and removal from the list of approved law schools.
27 Ibid., 1.
28 Ibid., 29.
Online Education and Contingent Faculty: An Exploratory Analysis of Issues and Challenges for Higher Education Administrators

Justin C. Ortagus and Luke J. Stedrak

**Introduction**

With the growth of the popularity and accessibility of online courses, higher education administrators are under tremendous pressure to keep pace with rapidly evolving conditions related to online learning. This exploratory analysis addresses the growth of online education and the use of contingent faculty in relationship to tenured and tenure-track faculty. It then describes inhibitors to online teaching for tenured and tenure-track faculty and offers potential administrative strategies to increase their participation.

**Background**

Between fall 2002 and fall 2010, student enrollment in online courses nearly quadrupled from approximately 1.6 million to 6.1 million in degree-granting postsecondary institutions in the U.S.\(^1\) (See Table 1.) Over the same time period, the percentage of college and university students who took at least one online course more than tripled, from 9.6% to 31.3%. By 2011, nearly three-quarters (74.5%) of all four-year institutions reported an increase in the demand for online courses and programs.\(^2\) Online education is growing faster than higher education as a whole. For example, Allen and Seaman’s 2011 survey reported a 10% growth rate for online enrollments compared to less than one percent growth for the higher education student population between 2009 and 2010.\(^3\)

Student demand for online courses and programs is substantial. Allen and Seaman also found 66% of higher education institutions reported increased demand for new online courses and programs while 73% saw an increased demand for existing online courses and programs.\(^4\)

To meet this demand, higher education administrators may be tempted to turn to contingent faculty, particularly when insufficient numbers of tenured or tenure-track faculty express interest in teaching online courses.\(^5\) However, even before the popularity of online education, concern has existed about higher educational institutions’ increasing reliance...
on contingent faculty. In 2005, the American Association of University Professors (AAUP) identified the increasing number of contingent faculty members as “...the single most significant development in higher education in the last two decades.” In 2009, more than 1.3 million (75.5%) of 1.8 million of faculty members and instructors were classified as non-tenure track. Undoubtedly, the use of contingent faculty may be particularly attractive to university administrators in recent lean fiscal years because they offer greater flexibility in staffing and lower personnel costs.

Faculty inhibitors related to online teaching cannot be overlooked. A fundamental barrier is faculty workload. In research-oriented colleges and universities, faculty may fear that time spent on online course development and maintenance detracts from time available for research. The next section explores this tension more fully.

### The Academic Ratchet

The propensity of tenured and tenure-track faculty to give precedence to research and research-related activities in their academic discipline can be explained through the concept of the “academic ratchet.” Particularly, but not exclusively, in research-oriented colleges and universities, the autonomy afforded faculty to pursue their scholarly interests allows their work to be loosely coupled with the institution and its mission, even when such institutions profess teaching to be central to their mission. Professional incentives connected to achievements within their respective academic disciplines may serve to draw faculty attention away from institutional goals related to teaching productivity. Faculty autonomy in this sense may even serve to circumvent institutional teaching goals.

Even before the advent of online education, contingent faculty served as a cog in the academic ratchet. For example, increased use of contingent faculty is associated with a higher level of total external research expenditures, a portion of which is likely used to provide faculty who have secured research grants reduced teaching loads. In a second example, the institution may prefer a tenured or tenure-track faculty member teach a general undergraduate course, which as a required course often has a substantial enrollment and hence generates significant tuition revenues, but the faculty member may prefer to teach an upper level or graduate seminar in his or her area of research expertise, usually with a much smaller enrollment. Although the workings of the academic ratchet may appear to conflict with institutional goals related to the primacy of teaching and encourage the increased use of contingent faculty, it is important to note that faculty are usually responding to the institution's existing reward structures, i.e., tenure, promotion, and salary increases.

### Discussion, Conclusions, and Recommendations

Online education has proven itself to be an integral medium for postsecondary instruction, and, as a result, higher education administrators will continue to incorporate it into their immediate and long-term growth strategies. In addition to its popularity with students, online education represents a cost-cutting tool for higher education administrators responding to state budget cuts. In particular, the lower personnel costs and greater scheduling flexibility associated with contingent faculty are attractive to administrators. At the same time, tenured and tenure-track faculty in research-oriented universities may be reluctant to teach online courses because they view the investment of time required for online course development maintenance competing with time for pursuing research. However, tenured and tenure-track faculty might be more willing to teach online courses if they were provided with greater administrative support and compensation. Not surprisingly, Rockwell and colleagues found that the most commonly referenced faculty support issue related to online instruction in their case study was administrative recognition in the form of tenure or promotion.
issue was monetary in nature. According to Maguire's 2005 review of the research literature, stipends or increased salaries might motivate faculty to teach online courses at four-year colleges and universities.17

With the rapid growth of online enrollments in higher education have come concerns about student retention rates. Online learners have higher attrition rates than traditional, face-to-face students.18 According to Yukseltruk and Inan, multiple factors can influence online student retention in the higher education environment.19 For example, online learners may misinterpret or misunderstand expectations regarding the time and effort involved in online coursework; in addition, students may have limited technological or academic experience.20 However, we do not know if some of the same factors that affect student retention in face-to-face courses also play a role in online education, such as exposure to part-time or contingent faculty,21 or lack of academic and social interaction.22 Further research is needed in these areas.

The academic ratchet reveals the institutional inconsistencies between stated university goals and the structure of the faculty reward system. In order to offer students a full range of coursework online, participation of tenured and tenure-track faculty is critical. Given the current incentives associated with faculty’s academic disciplines and research pursuits, higher education administrators might want to consider online learning as pedagogical and professional development activities that count toward tenure, promotion, and salary increases. In addition, instructional design and development support, including release time, might incentivize faculty who feel they do not have the time to develop and maintain online courses without taking time away from scholarship.23

Endnotes
2 Ibid.
3 Ibid., 4.
4 Ibid.
8 According to Holub, in “Contract Faculty in Higher Education,” the benefits associated with using contingent faculty include more flexible staffing models, higher integration of practitioner expertise, less cost to educate students (36% less), and flexibility to address insecure funding allocations.
14 Allen and Seaman, “Going the Distance.” Specifically, they found that 65.5% of chief academic officers agreed that online education was critical to the long-term growth strategies of colleges and universities.
16 Rockwell et al., “Incentives and Obstacles.”
17 Loréal L. Maguire, “Literature Review—Faculty Participation in Online Distance Education: Barriers and Motivators,” Online Journal of Distance Learning Administration 8, no. 1 (Spring 2005), http://www.westga.edu/%7Edistance/ojdla/spring81/maguire81.htm.
18 Ibid.
19 Retention here refers to the number of online students who progress through the online program, assuming the successful completion of the course to allow for progression to the next course in the corresponding sequence. See, Margaret Martinez, “High Attrition Rates in E-learning: Challenges, Predictors, and Solutions,” The eLearning Developers’ Journal, July 14, 2003, http://www.elearningguild.com/pdf/2/071403MGT-L.pdf.
21 Audrey J. Jaeger, and Derik Hinz, “The Effects of Part-Time Faculty on First Semester Freshmen Retention: A Predictive Model Using Logistic Regression,” Journal of College Student Retention 10 3(2008-2009): 265-286. Specifically, they found that students were 37% less likely to be retained into the second year due to an increase in exposure to part-time or contingent faculty. In contrast, full-time, tenured, or tenure-track faculty had a positive effect on student retention.

22 Vincent Tinto, Leaving College: Rethinking the Causes and Cures of Student Attrition (Chicago, IL: University of Chicago Press, 1994), 1.

23 Kim E. Dooley and Theresa Pesl Murphrey, “How the Perspectives of Administrators, Faculty and Support Units Impact the Rate of Distance Education Adoption,” Online Journal of Distance Learning Administration 3 4(Winter 2000), http://www.westga.edu/~distance/ojdla/winter34/dooley34.html; and Kristen Betts, “An Institutional Overview: Factors Influencing Faculty Participation in Distance Education in Post-secondary Education in the United States: An Institutional Study,” Online Journal of Distance Learning Administration 1, no. 3 (Fall 1998), http://www.westga.edu/~distance/betts13.html.
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