Restructuring Schools Not An Answer In Itself: An Exploratory Study of the Relationship between the Type of Charter School and Student Achievement

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Abstract

The No Child Left Behind Act has prescribed different restructuration plans for failing public schools that is not meeting Adequate Yearly Progress benchmarks. A major drawback of the plan is that it does not specify which type of charter schools would be more effective in increasing student achievement, and often times education management organizations have been called to step in and take over failing public schools. This study will explore the different types of charter schools and analyze which ones work and which ones don't. Data was pulled from the National Alliance of Public Charter Schools and the U.S. Department of Education and from the Education Management Organization Profiles at Arizona State University to analyze and look for trends in student achievement based on charter type composition in each charter-operating state. The results showed that freestanding charters have a positive relationship with increasing student achievement compared to for-profit or nonprofit charters, which showed a negative relationship. The study concludes that for charters to be successful, community involvement is vital, which is often amiss at the education management organizations and another major drawback with EMOs is their focus on standardized drill-and-practice curricula that require less experienced teachers.

Introduction

One of the strongest pillars of a participative democracy is public education, an institution bequeathed with the responsibility of cultivating an informed and knowledgeable populace for a nation. However, governments should not stop short at education provision but also comprehensively extend their role to ensure the education attainment of its people. In this never-ending quest came the No Child Left Behind Act of 2001, which is built on four core principles: accountability for results, more choices for parents, greater local control and flexibility, and an emphasis on doing what works based on scientific research (U.S Department of Education, 2009).

The focus of this study revolves around the accountability factor of the NCLB Act. In particular, schools failing to meet measurable standards set by the states' departments of education will have to restructure while staying within the framework of state law. They can either:

- 1. Reopen the school as a public charter school.
- 2. Replace "all or most of the school staff (which may include the principal) who are relevant to the failure to make adequate yearly progress."
- 3. Contract with "an outside entity, such as a private management company, with a demonstrated record of effectiveness, to operate the school."
- 4. Turn the "operation of the school over to the state educational agency, if permitted under State law and agreed to by the State."
- 5. Engage in another form of major restructuring that makes fundamental reforms, "such as significant changes in the school's staffing and governance, to improve student academic

achievement in the school and that has substantial promise of enabling the school to make adequate yearly progress" (No Child Left Behind Act, 2002).

The above prescribed restructuration plans all will bring major reform to the public schools concerned; however, change for the sake of change is meaningless if it's not accompanied with a corresponding amelioration in student achievement. Two of the five proposed remedies will be examined at length over the course of this study. Alternative 1: Replace the school as a public charter school and Alternative 3: Contract with "an outside entity, such as a private management company, with a demonstrated record of effectiveness, to operate the school." Alternative 1 will lead to the opening of what is commonly known as a freestanding charter school or a mom-and-pop charter school, and Alternative 3 will bring about an Education Management Organization, which can either be for-profit or nonprofit.

Operational Definitions

Freestanding Charter School

Charter schools are independent free public schools designed and operated by educators, parents and community leaders. They are sponsored by designated local or state educational organizations, who monitor their quality and effectiveness but allow them to operate outside of the traditional system of public schools (U.S Department of Education, 2009).

Freestanding charter schools, also known as mom-and-pop charter schools are independently operated and not managed by an outside for-profit or nonprofit firm. They are usually led by parents or teachers, who are involved and well-known in the community.

Education Management Organization (EMO) Charter School

An education management organization, or EMO, charter school is a school operated by an outside for-profit organization that uses public funds to run the schools. The terms to produce

measurable outcomes within a given time frame are specified in a contract between the EMO and the state or local organization overseeing the charter school (Molnar, Miron, & Urschel, 2008).

Other public and private schools also contract out a number of operations such payroll, benefits, accounting and transportation. Such relationships are not within the scope of this study, and a distinction is to be made between those types of vendor relationships and actual EMO-operated charter schools. EMOs differ considerably because they are for-profit companies that provide "whole-school operation" services to schools (Hentschke, Oschman, & Snell, 2002). They have executive authority that spans over curriculum, instruction, facilities and operations.

In theory, critics would argue that EMOs would make more sense in an entrepreneurial manner rather than in an academic sense. They operate according to a business model exploiting economies of scale, that is having larger schools, standardized curricula, inexperienced teaching staffs, and an underrepresentation of students who are "more expensive" to educate (Garcia, Barber & Molnar, 2009).

In line with an organized business model, the EMO-managed charter schools emphasize a traditional or back-to-basics curricular program (Hentschke et al.; Levin, 2002). It's also noteworthy to point out that because of this familiarity and ease of operation with basic standardized curricula, there is a disproportionate higher concentration of EMO-managed charter schools at the elementary level compared to higher grade levels. Achievement outcomes at the elementary level can be highly influenced by standardized curriculum using drill-and-practice-oriented instruction (Nichols, Glass, & Berliner, 2006), which could help explain the unusual high concentration of EMOs in that sector. But standardized curricula do come with its costs - basic skills can often be enhanced at the mercy of more complex thinking skills using the drill-and-practice standard instruction (Garcia, Barber & Molnar, 2009), and this will have a

detrimental effect on student achievement at higher grade levels because complex thinking skills have been underdeveloped during the elementary years.

Proponents for EMOs argue that it's an innovative management tool that school leaders can use to raise academic achievement and the realization of measurable performance outcomes has also been used as an argument in its favor (Hentschke, Oschman, & Snell, 2002). The purpose of this study will map out if the business-sense of for-profit EMOs translates to student achievement ultimately.

Charter Management Organization (CMO) Charter School

A charter management organization, or CMO, charter school is a school operated by an outside nonprofit organization that uses public funds to run the schools. The terms to produce measurable outcomes within a given time frame are specified in a contract between the CMO and the state or local organization overseeing the charter school (Miron, & Urschel, 2008).

Like for EMOs, there are some schools, which contract out part of their operations to outside nonprofit vendors. Such relationships are not within the scope of this study. Only total school management, ranging everything from academics to operations, is being investigated here.

Even though the profit motive is not prevalent under the CMO umbrella, there are still concerns about the private nonprofit governance of schools using public funds. The other distinction with EMOs is that CMOs don't necessarily adopt the business-like models, which prescribe the use of standardized drill-and-practice curricula. This study will examine the data to see if there are any differences in student achievement at CMOs and EMOs and if so by how much and between CMOs and freestanding charters.

The purpose of this exploratory research is to look for any trends between the type of

charter school and student achievement. As prescribed under NCLB, restructuration is mandated after 5 years of failed measurement outcomes. It's important to comprehend that schools are not changing for the sake of it, but rather because of proven results in student achievement as a result of restructuration.

Literature Review

Much of the literature on the subject matter being studied here will be presented throughout this paper rather than within this specific section. Education management outsourcing is relatively new, and this study will be using the limited previous research as building blocks within each section to illuminate its purpose and focus.

At the core of this study lies the question of which type of education management organization is most effective. Charter school authorizers should evaluate what type of contract would render the schools most performing: freestanding, EMO or CMO.

But the challenge is that contracting as an intervention strategy has been used so rarely that research-based measures of its effectiveness are limited (The Center for Comprehensive School Reform and Improvement, 2005).

Contracting in public service has been described as "a halfway point between public and private provision, allowing public sector control over a public activity while simultaneously introducing the potential for commercial discipline and efficiency" (Domberger & Rimmer, 1994).

In the case of No Child Left Behind, the public school district retains ultimate authority and control through its ability to set the terms of the contract and terminate the agreement if the terms are not met (The Center for Comprehensive School Reform and Improvement, 2005).

Under this arrangement, the power ultimately lies in the hands of the charter school authorizer;

hence, the authorizer should make sure to maximize its performing outcomes by carefully selecting the provider of the education management services. This study will hopefully help answer which type of provider can most effectively render such services.

Method

Data

Using multiple sources, raw data from the entire charter school population set across the 21 states where charter schools are authorized has been compiled making sure that the same variables are being measured across the board.

One of the major challenges in this study was the limited data for the higher level grades. It's noteworthy to point out that EMOs represent a large share of elementary (K–8) charter school students; 36% of all charter elementary school students are enrolled in EMO-managed charter schools (Molnar et al., 2006).

The first part of this study compares the different type of charter schools, that is their percentage concentration in each state where charter schools operate, and juxtapose those values to achievement in Math for Grade 4 and 8 in year 2009. The percentage concentration of the different types of charter for academic year 2008-2009 was obtained from the 2009 Dashboard of the National Alliance for Public Charter Schools, which gathered such data from the annual profiles of education management organizations reports jointly released by the Education and Public Interest Center (EPIC) at the University of Colorado and Boulder and the Education Policy Research Unit (EPRU) at Arizona State University (see Appendix 1).

After the data for percentage concentration of each type of charter in each charteroperating state has been tabulated, an independent benchmark, National Assessment of Educational Progress (NAEP), composite Math scores were tabulated for charter schools in corresponding states (see Appendix 2 and 3). NAEP is the only nationally representative and continuing assessment of what American students know and can do in various subject areas. Since 1969, The National Center for Education Statistics has conducted NAEP assessments in reading, mathematics, science, writing, U.S. history, geography, civics, and the arts (U.S Department of Education, 2009).

Math scores were selected because they were the only available scores for year 2009 at this time. And Grade 4 and Grade 8 data were the only available ones as well. At this time, no data is available for Grade 12 for Math. Given the exploratory nature of this study, this data is deemed robust enough to provide an overview if there is actually a general trend in score affectation based on percentage concentration of the type of charter school. Furthermore, it's to be pointed out that charter schools are in higher concentrations in lower grade levels, therefore comparing Grade 4 and Grade 8 would provide a close enough approximation of any purported trends.

Caution

For more precise results, the exact number of charter schools in Grade 4 and in Grade 8 should be used to measure concentrations of charter types in the different states rather than measuring all 3 types across all grades. However, picking out all the grades also brings a certain longitudinal value to the study, which might actually depict a more comprehensive picture of the study. Grade 4 and Grade 8 are high stakes grades and therefore provides a rough gauge of overall effectiveness of the charter schools across all grades.

Another word of caution is total scores of Math does not necessarily give a picture of a holistic educational attainment. The reporting and analysis of subtest scores should be considered as well in later studies in order to safeguard against the possibility of appreciating an increase in

student achievement on the more basic skills items, which in turn can boost total scores, at the expense of complex-thinking skills (Garcia, Barber & Molnar, 2009).

Analysis I

There is a positive trend for the higher the concentration of freestanding charter schools in a state, the higher the composite score in Math in both Grade 4 and Grade 8 charter schools in that state. The coefficient of determination ($R^2 = 0.55$) for Grade 4 is quite high, implying that 55 percent of the variation in Math score in Grade 4 charter schools can be explained by the concentration of freestanding charter schools in that state.

The coefficient of determination ($R^2 = 0.33$) for Grade 8 is not as high as Grade 4 but still significant, implying that 33 percent of the variation in Math score in Grade 8 charter schools can be explained by the concentration of freestanding charter schools in that state.

An opposite trend is observed for the concentration of EMOs and CMOs in the state and corresponding Math Scores in both Grade 4 and 8. For EMOs, the coefficient of determination $(R^2 = 0.27)$ is significant, explaining that 27 percent of the decline in Math scores in Grade 4 can be attributed to the concentration of EMO charters in that state. $R^2 = 0.23$ for Grade 8 explaining that 23 percent of the decline in Math Score in Grade 8 can be attributed to the concentration of EMO charters in that state.

A surprisingly steeper trend is observed for CMOs compared to EMOs. R^2 = 0.32 for Grade 4 implying 32 percent of the decline in Math scores can be attributed to the concentration of CMOs in that state. Similarly R^2 = 0.12 explains the milder association between the concentration of CMOs and Math scores in Grade 8.

Analysis II

Under No Child Left Behind's accountability system each state sets academic standards

for what every child should know. Every state measures yearly progress toward achieving their academic standards. "Adequate Yearly Progress is defined as minimum level of improvement that states, school districts and schools must achieve each year" (U.S Department of Education, 2009).

To compile the data for this analysis, the type of charter for each state was manually counted from the 2007-2008 profiles of education management organizations reports (both for EMO and CMO) jointly released by the Education and Public Interest Center (EPIC) at the University of Colorado and Boulder and the Education Policy Research Unit (EPRU) at Arizona State University.

After manually counting the number of EMOs and CMOs in each state from the EPIC and EPRU profiles, the total number of charter schools was obtained from the 2007-2008 Common Core of Data on Numbers and Types of Public Elementary and Secondary School (National Center for Education Statistics, 2009). The number of freestanding charter schools was calculated by subtracting number of EMOs and CMOs from the total. Corresponding percentages were then tabulated on Microsoft Excel.

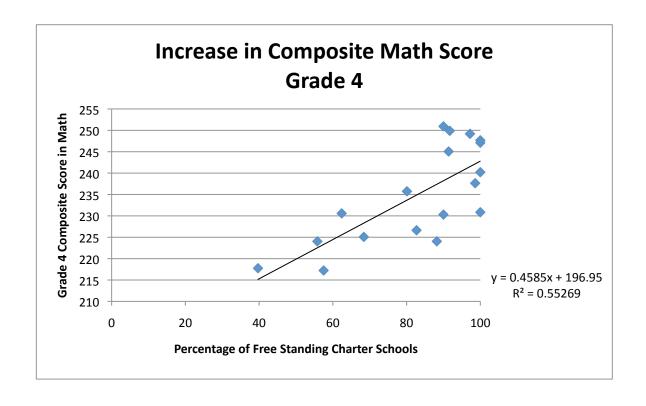
The data for the Adequate Yearly Progress, which was available from the Dashboard of the National Alliance for Public Charter Schools Web site for 2008 (See Appendix 4), was then juxtaposed to the charter type percentage concentration data (see Table 2).

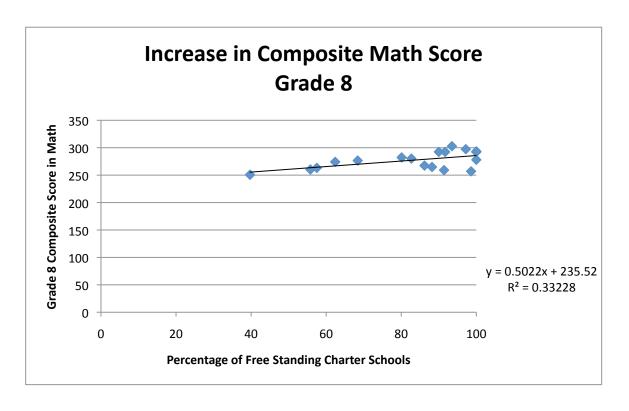
The data and results unfortunately do not reveal much of a variation between AYP and concentration of freestanding, EMO and CMO even though freestanding stay in positive ($R^2 = 0.03$), EMO being quasi-neutral ($R^2 = 0.00$) and CMO being slightly negative ($R^2 = 0.04$). Given the variations are so small, no inferences will be made from these results.

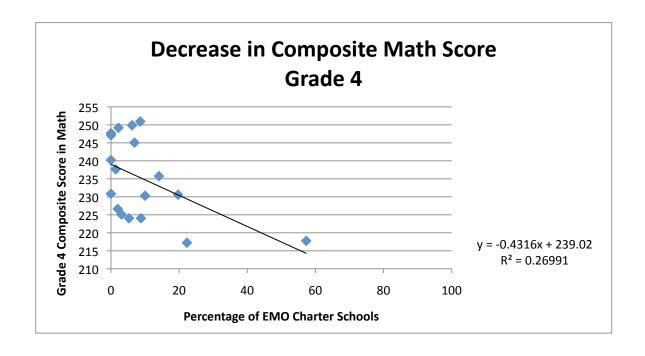
Findings

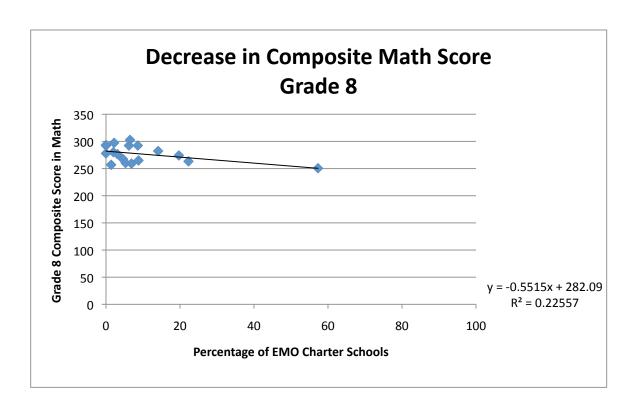
Table 1. Charter School Type in 2008-2009 and 2009 NAEP Composite Math Score for Grade 4 and Grade 8 $\,$

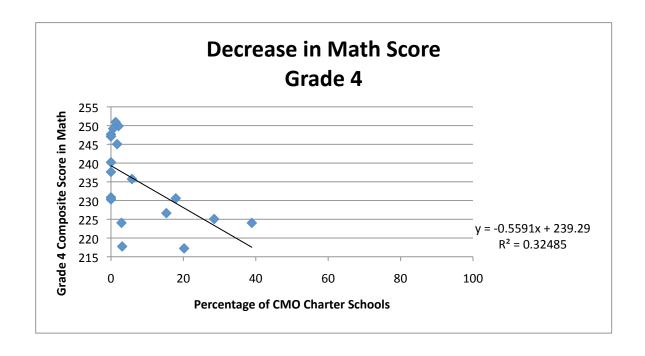
| States | Freestanding% | EMO% | CMO% | Math Grade 4 | Math Grade 8 |
|----------------|---------------|------|------|--------------|--------------|
| Alaska | 100 | 0 | 0 | 247 | |
| Arizona | 62.4 | 19.7 | 17.9 | 231 | 274 |
| California | 82.7 | 2 | 15.3 | 227 | 280 |
| Colorado | 90 | 8.6 | 1.3 | 251 | 292 |
| Delaware | 100 | 0 | 0 | 240 | 293 |
| Florida | 80.1 | 14.1 | 5.8 | 236 | 282 |
| Georgia | 91.4 | 6.9 | 1.7 | 245 | 259 |
| Hawaii | 100 | 0 | 0 | | 278 |
| Idaho | 93.5 | 6.5 | 0 | | 303 |
| Illinois | 55.8 | 5.3 | 38.9 | 224 | 260 |
| Louisiana | 86.2 | 4.6 | 9.2 | | 267 |
| Maryland | 88.2 | 8.8 | 2.9 | 224 | 265 |
| Michigan | 39.7 | 57.3 | 3.1 | 218 | 251 |
| Minnesota | 97.2 | 2.2 | 0.6 | 249 | 297 |
| Nevada | 90 | 10 | 0 | 230 | |
| North Carolina | 91.7 | 6.2 | 2.1 | 250 | 292 |
| Ohio | 57.5 | 22.3 | 20.2 | 217 | 263 |
| Rhode Island | 100 | 0 | 0 | 231 | |
| Texas | 68.4 | 3.1 | 28.5 | 225 | 277 |
| Utah | 100 | 0 | 0 | 248 | 292 |
| Wisconsin | 98.6 | 1.4 | 0 | 238 | 257 |











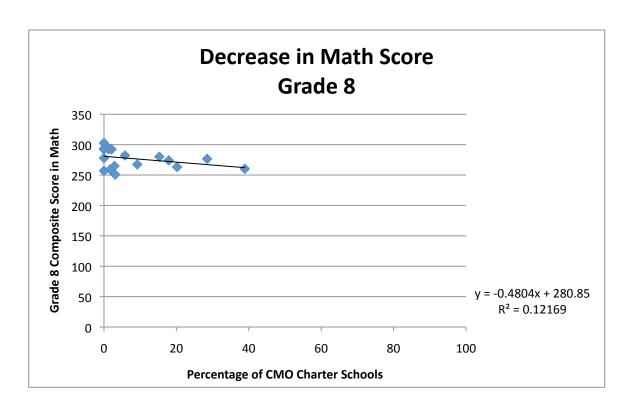
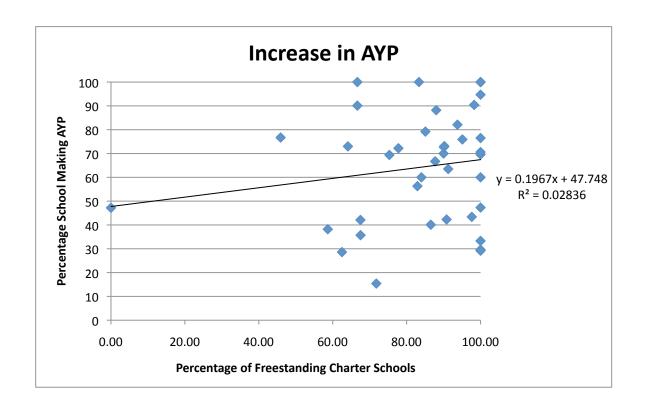
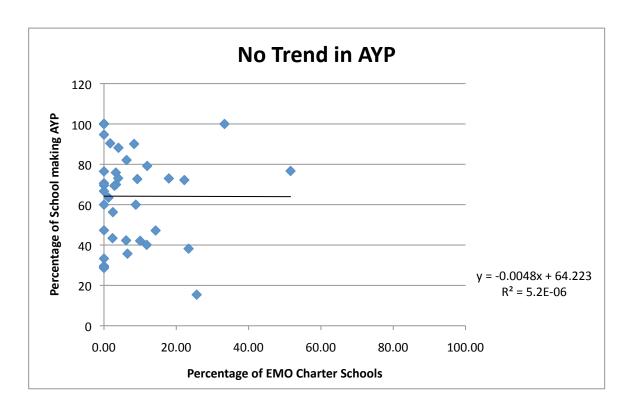
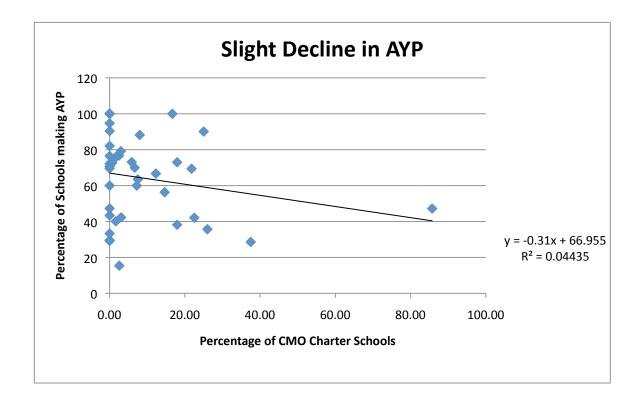


Table 2. Charter School Type in 2007-2008 and percentage of charters making $\boldsymbol{A}\boldsymbol{Y}\boldsymbol{P}$

| States | Freestanding% | EMO% | CMO% | % Making AYP |
|----------------|---------------|-------|--------|--------------|
| Alaska | 0.00 | 0.00 | 100.00 | 69.6 |
| Arizona | 17.94 | 17.94 | 64.11 | 73 |
| Arkansas | 4.00 | 8.00 | 88.00 | 88.2 |
| California | 2.46 | 14.62 | 82.92 | 56.3 |
| Colorado | 9.22 | 0.71 | 90.07 | 72.7 |
| Connect | 0.00 | 37.50 | 62.50 | 28.6 |
| Delaware | 0.00 | 0.00 | 100.00 | 70.6 |
| DC | 6.49 | 25.97 | 67.53 | 35.7 |
| Florida | 11.81 | 1.65 | 86.54 | 40.1 |
| Georgia | 11.94 | 2.99 | 85.07 | 79.2 |
| Hawaii | 0.00 | 0.00 | 100.00 | 29.6 |
| Idaho | 6.25 | 0.00 | 93.75 | 82.1 |
| Illinois | 14.29 | 85.71 | 0.00 | 47.2 |
| Indiana | 10.00 | 22.50 | 67.50 | 42.1 |
| Kansas | 0.00 | 0.00 | 100.00 | 76.5 |
| Louisiana | 3.92 | 5.88 | 90.20 | 73.1 |
| Maryland | 3.33 | 6.67 | 90.00 | 70 |
| Massachusetts | 3.28 | 1.64 | 95.08 | 75.9 |
| Michigan | 51.60 | 2.49 | 45.91 | 76.7 |
| Minnesota | 2.37 | 0.00 | 97.63 | 43.4 |
| Mississippi | 0.00 | 0.00 | 100.00 | 100 |
| Missouri | 25.64 | 2.56 | 71.79 | 15.4 |
| Nevada | 22.22 | 0.00 | 77.78 | 72.2 |
| New | 0.00 | 0.00 | 100.00 | 100 |
| Hampshire | | | | |
| New Jersey | 0.00 | 12.28 | 87.72 | 66.7 |
| New Mexico | 0.00 | 0.00 | 100.00 | 47.3 |
| New York | 8.33 | 25.00 | 66.67 | 90.1 |
| North Carolina | 6.12 | 3.06 | 90.82 | 42.3 |
| Ohio | 23.40 | 17.93 | 58.66 | 38.2 |
| Oregon | 1.25 | 7.50 | 91.25 | 63.5 |
| Pennsylvania | 8.80 | 7.20 | 84.00 | 60 |
| Rhode Island | 0.00 | 0.00 | 100.00 | 60 |
| South Carolina | 0.00 | 0.00 | 100.00 | 29.2 |
| Tennessee | 0.00 | 16.67 | 83.33 | 100 |
| Texas | 2.89 | 21.78 | 75.33 | 69.4 |
| Utah | 0.00 | 0.00 | 100.00 | 94.7 |
| Virginia | 33.33 | 0.00 | 66.67 | 100 |
| Wisconsin | 1.72 | 0.00 | 98.28 | 90.4 |
| Wyoming | 0.00 | 0.00 | 100.00 | 33.3 |







Discussion

The major finding of this research shows the higher the concentration of freestanding charter schools in a state, the higher student achievement as demonstrated by higher scores in Math in both Grade 4 and 8. These results corroborate with previous study (Hentschke, Oschman, & Snell, 2002), which stated that:

School districts and charter schools bring a level of deep knowledge of the children, parents, and other members of a community—their backgrounds, cultures, and aspirations—that EMOs (especially multischool EMOs) can never hope to fully match. Because senior officers of school districts and charter schools reflect these local entities, they are in a position to understand and to reflect local aspirations for schooling.

The second important finding of this study shows no great difference between the concentration of EMOs and CMOs and student achievement. they both show declines compared to freestanding charters, which shows an increase in student achievement. Therefore, the results proposes that effectiveness of charters does not necessarily depend on for profit status. Such finding is in agreement with prior research, Sass (2006) who found that profit status had no statistically significant effect on academic achievement, leading to the conclusion that "charters managed by for-profit firms perform the same as those operated by nonprofit entities."

This study also tells a very important story, which could be of great significance to policy makers – freestanding charters seem to increase student achievement while education management organizations, whether for-profit or nonprofit, seem to have the opposite effect.

One of the reasons behind this could be the fact that EMOs tend to use standard curricula, which require less experienced staff to conduct the drill-and-practice methods of teaching. Furthermore,

such methods do have the detrimental effect of focusing on the cultivation of basic skills at the expense of complex skills.

Conclusion

This exploratory study provides groundbreaking information on the effectiveness of the different type of charter schools. NCLB dictates that restructuration is required for public schools failing to meet Adequate Yearly Progress for five consecutive years. An important point left amiss in the restructuration plans is the what type of restructuration actually work? The Act leaves it quite open to the states to figure out which type of charter school to adopt and even to some point encourage the contracting out to Education Management Organizations. This study clearly shows there is a difference in the effectiveness of these different types of charter schools.

A key ingredient in the success of a charter school is community involvement and community belonging – freestanding charters experience much higher positive rates of success for that very reason of being integral of the communities they serve compared to EMOs or CMOs who don't have the inherent community knowledge required to succeed in school reform. EMOs and CMOs do have their merits in terms of their business-like approach to school operations. Operating on economies of scale can also lead to greater efficiencies, but the key ingredients to academic success is not sound fiscal operation – it's community network and involvement and high-levels of teaching rather than drill-and-practice standardized curricula.

The best way to possibly approach a method that could benefit all types of charters would be to adopt some sort of cross-sectoral partnership, whereby the for-profit EMO would take care of the fiscal operations, the freestanding charters would participate in integrating the school reform projects with community participation and the CMO would work toward professional and innovative teaching methods. This is a relatively new area of study but comes with important baggage because change is heralded across the nation for the sake of change rather than for the

sake of increased effectiveness. Future research has to be done in the area to see what other variables are affecting student achievement – teacher salary, teacher compensation methods, innovative learning approaches. In order for education reform to be successful, the focus should never escape student achievement. While exploring the efficiencies of good fiscal operations or practice-and-drill methods to tackle standardized tests, the answer to real academic success is simple: a holistic student-centered education with active community participation.

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