

1-28-2013

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Reed Greenwood
University of Arkansas, Fayetteville

Gary W. Ritter
University of Arkansas, Fayetteville

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Citation

Greenwood, R., & Ritter, G. W. (2013). Academic Performance of Charter Schools in Arkansas: 2011-2012. *Policy Briefs*. Retrieved from <https://scholarworks.uark.edu/oepbrief/46>

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Academic Performance of Charter Schools in Arkansas: 2011-2012

Summary Points

- The OEP published a descriptive summary of charter school performance in Arkansas in 2012. This analysis improves upon that descriptive overview by employing student-level average scale scores (rather than simple proficiency percentages) to present results on overall attainment
- Moreover, we present the results of a careful value-added analysis that estimates the academic growth of students in charter schools as compared to the growth of students in nearby traditional public schools. There are a variety of ways to look at school performance, with the two most often cited are 'point-in-time' averages (from a given year, for example) – or growth over time.
- We find that charter schools have average year-end attainment scores that are lower than the state averages. Importantly, however, we find that the value-added scores for the majority of charter schools are positive.

The 2013 legislative session is underway, and there are a number of policy changes under consideration. One hotly-debated issue involves whether the state should allow for multiple authorizers for charter schools (currently, only the State Board of Education may authorize charter schools). Moreover, several charter schools will testify before the State Board of Education in spring 2013 seeking charter reauthorization. As the issue of charter schools again takes center stage, we present an extension of our [2012 policy brief focused on charter schools](#). While our previous brief presented descriptive data on state's open enrollment charter schools, this policy brief takes the analysis one step further by presenting "value-added" data for these schools.

Introduction and Methods

As policymakers again debate the plusses and minuses charter schools during the legislative session, it is worth considering recent academic performance of the charter sector in the state. Here, we present the results of an analysis of the academic performance of the independent public charter school sector in Arkansas in the 2011-12 school year. We examine two distinct and important dimensions of academic performance: average year-end academic scores and student learning gains from one year to the next. In each case, academic performance is based on the results of the ACTAAP Benchmark Standardized assessments in math and literacy administered to students in in grades 3 through 8 in all Arkansas public schools.

For **academic attainment**, or 2012 year-end academic performance, we compute the average

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scores for all students in each school based on the scale scores on the math and literacy benchmark exams. Because the meaning of the scale scores vary from grade to grade (e.g. a grade 3 student with a scale score of 700 is performing much differently than a grade 7 student with the same score!), we compute a normalized z-score for each student and average z-score for each school. These z-scores represent the student's score, relative to the average student in the state in the same grade. At the school level, these average z-scores are presented as *percentile ranks*.

Thus, academic attainment in this report is similar in concept to an overall proficiency score for a school. However, this measure is more informative than a simple "percent advanced and proficient" measure because it uses the entire spectrum of possible scale scores. Thus, the average student in the state will score at exactly the 50th percentile and the average school building in the state will score at roughly the same place.

The **academic growth** analysis uses longitudinal, student-level data from across the state of Arkansas to estimate student academic growth, using a sophisticated statistical model that estimates the average effect of each individual school on students test score growth in a way that allows for



apples-to-apples comparisons of school quality. Essentially, this value-added model *controls for prior scores of students* and adjusts for statistical measurement error while computing an overall school value-added z-score.

In this analysis, charter schools were compared to other schools in a local market, using value-added analyses. A “local market” is defined as the geographic location that contains the charter school and its surrounding districts. We select the local market as the sample for conducting the analyses because students living within a geographic region are likely to share many characteristics. Moreover, the traditional public schools in the local market represent the other schooling options for charter students.

Results

Table 1 presents the 2011-12 academic attainment results for elementary and middle independent charter schools with tested students in that year. Attainment results express the absolute level of student achievement at the end of the school year relative to the state average.

Table 2 displays the academic growth results from our value-added analyses. Recall that this analysis is based on comparisons of the value-added scores between the charter schools and the traditional public schools in the local market. All results are expressed in z-score units, where positive z-scores represent student performance that is better than predicted and negative z-scores represent the reverse. We can think about z-scores in terms of percentile changes. For example, a z-score of +0.20 would be equivalent to moving from the 50th percentile to the 58th percentile.

Table 1. Elementary and Middle School Independent Charter School Academic Attainment Expressed as Percentile Scores for the Average Student in the Schools, 2011-12

School Name (grades served)	Math: Scale Score Percentile of Average Student	Literacy: Scale Score Percentile of Average Student	Overall Percentile
The Delta			
Imboden Area Charter School (K-8)	30 th	27 th	29 th
KIPP: Blytheville College Prep (5-8)	47 th	48 th	47 th
KIPP: Delta College Prep School (5-8)	35 th	43 th	39 th
Pine Bluff Lighthouse Academy (K-4)	22 th	32 nd	27 th
Little Rock			
Academics Plus (K-6)	48 th	56 th	52 nd
Academics Plus (7-12)	41 st	58 th	49 th
Covenant Keepers Charter (6-8)	19 th	33 rd	25 th
Dreamland Academy (K-8)	7 th	19 th	12 th
ESTEM Elementary Charter (K-4)	57 th	54 th	56 th
ESTEM Middle School (5-8)	47 th	55 th	51 st
Flightline Upper Academy (5-8)	41 st	44 th	42 nd
Jacksonville Lighthouse Elementary (K-4)	56 th	49 th	52 th
Jacksonville Lighthouse Middle (5-8)	35 th	41 st	38 th
Lisa Academy (6-8)	67 th	66 th	66 th
LISA Academy North Elementary (K-5)	48 th	49 th	48 th
Lisa Academy North Middle (6-8)	57 th	60 th	58 th
Little Rock Prep Academy (5-8)	20 th	27 th	24 th
Northwest Arkansas			
Benton County School Of Arts (K-8)	54 th	60 th	57 th
Haas Hall Academy (8-12)	92 nd	82 nd	87 th
Virtual			
Arkansas Virtual Academy (K-6)	43 rd	45 th	44 th
Arkansas Virtual Academy Jr. (7-8)	48 th	61 st	54 th

Table 2. Academic Growth Results for Independent Public Charter Schools Compared to their Local Market Using Value-Added Analyses

School Name	Growth Model Math (Local)	Growth Model Literacy (Local)	Growth Model (Local)
The Delta			
Imboden Area Charter School (K-8)	-0.08	-0.09	-0.09
KIPP: Blytheville College Prep (5-8)	0.02	0.19	0.10
KIPP: Delta College Prep School (5-8)	0.01	-0.09	-0.04
Pine Bluff Lighthouse Academy (K-4)	-0.19	-0.02	-0.11
Little Rock			
Academics Plus (K-6)	-0.08	0.17	0.05
Academics Plus (7-12)	0.04	0.10	0.07
Covenant Keepers Charter (6-8)	0.08	0.06	0.07
Dreamland Academy (K-8)	-0.10	0.36	0.13
ESTEM Elementary Charter (K-4)	0.12	0.14	0.13
ESTEM Middle School (5-8)	0.04	0.02	0.03
Flightline Upper Academy (5-8)	-0.05	-0.03	-0.04
Jacksonville Lighthouse Elementary (K-4)	0.03	-0.17	-0.07
Jacksonville Lighthouse Middle (5-8)	-0.16	0.12	-0.02
Lisa Academy (6-8)	0.10	0.01	0.05
LISA Academy North Elementary (K-5)	0.06	0.17	0.12
Lisa Academy North Middle (6-8)	0.03	0.14	0.09
Little Rock Prep Academy (5-8)	0.00	0.05	0.03
Northwest Arkansas			
Benton County School Of Arts (K-8)	0.16	-0.01	0.07
Haas Hall Academy (8-12)	0.06	-0.02	0.02
Virtual			
Arkansas Virtual Academy (K-6)	-0.10	0.08	-0.01
Arkansas Virtual Academy Jr. (7-8)	0.10	0.14	0.12

Summary of Findings

With respect to the average student attainment based on spring 2012 test scores, most charter schools in Arkansas serving students in grades 3-8 has results below the state average overall (Table 1). Seven of the 21 charter schools had overall (combined math and literacy) scores below the 40th percentile in the state while 5 charter schools had overall scores between the 40th and 50th percentiles. The highest overall school was earned by Haas Hall, in which the average student scored at the 87th percentile; the lowest score by Dreamland, in which the average student scored at the 12th percentile.

Nevertheless, in large part, just as with any absolute performance figure, these single-year attainment figures are strongly related to the socioeconomic characteristics of the students enrolled (for example, several of the charter schools in Little Rock and the Delta have enrollments in which more than 90% of the students are eligible for free or reduced lunches).

Indeed, in many ways, the question of educational quality is context dependent. Thus, an important question, particularly in the context of studying charters and school choice, revolves around whether a student is likely to make better academic growth each year in the charter sector or the local traditional public school option.

On this front, the charter schools in the state fare more positively (Table 2). In fact, the value-added results indicate that to-thirds (14 out of 21) of independent public charter schools in Arkansas had higher average student academic growth scores than the average of other local schools (as represented by positive overall z-scores in value-added). Only one-third of the charters had lower average academic growth scores.

Because several of the value-added z-scores for the charters were very near to zero, we might also want to consider the number of schools with more strongly positive or more strongly negative scores. We might consider a z-score of +/- 0.05 as a useful benchmark of a difference that is educationally meaningful (related to standards of the US Department of Education's What Works Clearinghouse). Considering the results through this lens, we find that 52% of charter schools significantly outperformed their local market average; 33% performed the same as the local market average, and 14% performed lower than their local market average.

Conclusion and Implications

These results indicate that the majority of Arkansas independent public charter schools are performing at lower absolute levels, but at the same time, the majority of these charter schools are adding academic value and helping students catch up. Those who support charter will likely be pleased to see that the overall value-added scores for charter schools are modestly positive.

However, it is unclear how such a finding might influence the discussion over whether to introduce multiple charter authorizers in the state. Charter school proponents may well see these results as a sign that charters are effective and the state would benefit from more of them. On the other hand, charter opponents may well claim that that state has indeed authorized effective charters via the current authorization mechanism, and there is no need to make a change.

For More Information
about this Policy Brief
and other education
issues in Arkansas
contact us:

Office for Education Policy
211 Grad Ed Building
Fayetteville, AR 72701
Phone: (479) 575-3773
Fax: (479) 575-3196
oep@uark.edu

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www.officeforeducationpolicy.com

OEP DIRECTOR:

Gary W. Ritter, PhD

FACULTY FELLOW:

Reed Greenwood, PhD

RESEARCH ASSISTANTS:

Caleb P. Rose

Charlene Reid

Jennifer W. Ash

Michael L. Crouch

Sarah M. Burks