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#### AN ASSESSMENT OF COLORADO'S CHARTER SCHOOLS: IMPLICATIONS FOR POLICY

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### Education and the Public Interest Center **EPIC**

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#### Introduction

The number of Colorado charter schools has grown from one in 1993, the year the legislature passed the Charter Schools Act. to ninety-six in 2004. Over this time period, Colorado's education policy has become increasingly favorable toward charter schools. Among the significant changes from the original charter school bill that have since been enacted are these: removing the original cap of 60 on the number that could be created; increasing the per pupil funding that local school districts are required to pass on to the charter school (from 80% to 95%); and requiring that local districts share virtually all forms of funding with charter schools, including capital construction and Amendment 23 dollars. The implementation of the state-level Charter School Institute in 2004, which provides new or existing charter schools with complete autonomy from local school districts, is the latest and most far-reaching It virtually abandons the legislation. principle of local control and is likely to further accelerate the pace of charter school growth in Colorado.

Little was known about how charter schools would perform when they were introduced into Colorado's public education system, so the idea of providing them with some latitude for a trial run made sense. The increasingly favorable treatment that charter schools subsequently received from the legislature, however, went considerably beyond providing charter schools with latitude. It has effectively exempted them from any critical scrutiny.

Without question, fine charter schools exist in Colorado, but fine traditional public schools exist as well. The crucial question that needs to be addressed in determining how successful charter schools have been as an educational reform is how well they perform in an *overall comparison* with traditional public schools. The accumulated evidence now points to the conclusion that Colorado's traditional public schools outperform its charter schools on the basis of such a comparison. This finding among others considered in the analysis to follow should prompt Colorado's citizenry and its policymakers to re-examine the direction the state's charter schools policy has been taking.

#### Evaluation Questions

In what follows, we address the following five evaluation questions regarding Colorado's charter schools.

- 1. Do charter schools exhibit increased innovation in educational programs compared to traditional public schools?
- 2. Do charter schools exhibit increased parental involvement and satisfaction compared to traditional public schools?
- 3. Do charter schools result in improved achievement, both overall and in terms of reducing the achievement gap, compared to traditional public schools?
- 4. Do charter schools serve a proportion of ethnic-racial minority, low-income, and special educations students that is equal to or higher than traditional public schools?
- 5. What impact do charter schools have on other public schools?

These questions are central to the evaluation of charter schools because they pertain to the goals charter schools set for themselves as an educational reform (questions 2-4), the means of achieving them (questions 1-2), and their effect on the health of other public schools (questions 4-5).

#### Sources of Information

We draw on a number of sources of information, but two are primary: (1) the most recent CDE-commissioned annual review of Colorado charter schools<sup>1</sup> (published in March 2003), and (2) a recent evaluation of U.S. charter schools by SRI International, commissioned by the U.S. Department of Education (DOE).<sup>2</sup>

The annual CDE evaluation reports provide the primary source of evaluative

information for the state board, and for the state in general. These reports respond to the requirement in the Colorado Charter Schools Act that charter schools be evaluated each vear. They include information on the performance of charter schools (intended for the state board to review), as well as information regarding the regulations and policies from which charter were released (intended schools to determine if the releases assisted or hindered the charter schools in meeting their stated goals and objectives).

The SRI study is one of two released in late 2004 by the U.S. Department of Education<sup>3</sup> that compares the performance of traditional public schools with the performance of charter schools.<sup>4</sup> The SRI study focuses on case studies of five states—Colorado, Illinois, Massachusetts, North Carolina, and Texas—each of which meet three requirements for methodologically sound inferences: (1) performance standards that applied to both charter and traditional public schools, (2) an adequate number of charter schools, and (3) adequate data on charter schools. [p. 54].

#### **Results**

1. Do charter schools exhibit increased innovation in educational programs?

During the 2001-2002 school year, 52 of Colorado's 86 charter schools (60%) implemented some form of national reform curriculum. Of those, 63% (38% of all charter schools) used the Core Knowledge program. Other reform models implemented were Montessori, Expeditionary Learning/ Outward Bound, the Edison Project, Paideia, Modern Red School House, the Coalition of Essential Schools, Mosaic, and William Glasser's Ouality School Network. Table 1 shows the number of schools in each of the national reform program models. The remaining 40% of Colorado's charter schools "offered educational programs that combined elements of various reform models and practices."5

With the exception of those associated with Educational Management Organizations such as Edison, the specified curriculum models (versus "combined" models) that have been implemented in Colorado's charter schools are pre-existing curricula that have been widely implemented in non-charter schools in Colorado and elsewhere. Core Knowledge is the most popular by far, and it fits the description "traditional" much better than the description "innovative." The 2003 CDE evaluation says nothing about whether "combined models" are innovative.

National Reform Program Model	Number of Charter Schools	Percent of all Charter Schools
Core Knowledge	33	38%
Montessori	5	6%
Expeditionary Learning/Outward Bound	5	6%
The Edison Project	3	3%
Paideia	2	2%
The Modern Red School House	2	2%
The Coalition of Essential Schools	1	1%
Mosaic	1	1%
William Glasser's Quality School Network	1	1%
Combined Models	34	40%

 Table 1

 National Reform Model Charter Schools in Colorado, 2001-2002<sup>6</sup>

The 2002 version is the most recent of the CDE evaluations to directly address the question of whether Colorado's charter schools are innovative by comparison to traditional public schools; it answers the question in this way: "[W]hether the educational programs offered by charter schools are innovative, or more innovative than those offered in conventional public dependent context. schools. is on Innovation is in the eye of the beholder."<sup>7</sup> Neither this appraisal nor any other offers any reason to believe that Colorado's charter schools are any more educationally innovative than its traditional public schools.

2. Do charter schools exhibit increased parental involvement and satisfaction?

The 2003 CDE evaluation suggests that Colorado's charter schools produce high parental participation and satisfaction rates. Unfortunately, it provides no bases of comparison to interpret whether, and to what degree, the participation rates should be considered high. In the case of parental satisfaction, it reports only the rate at which Colorado's charter schools collect parental satisfaction data, not what those data indicate. The shortcomings of the CDE evaluation aside, higher rates of parental participation and satisfaction are the national norm for charter schools;<sup>8</sup> and it safe to infer that Colorado's charter schools are no exception, a conclusion that is buttressed by the recent SRI study<sup>9</sup> and by a 2000 study of choice in the Boulder Valley School District.<sup>10</sup>

3. Do charter schools result in improved achievement, overall and in terms of reducing the achievement gap?

In today's education policy environment, improved achievement in terms of raising standardized achievement test scores is undoubtedly the most important criterion for evaluating the effectiveness of school reform efforts, including charter schools. And improving the achievement of lowminority income and students, in particular—and thereby closing the "achievement gap" between these groups and middle and upper income white students—has become especially significant with the passage and implementation of No Child Left Behind.

Table 2
Percentages of Charter v. Non-Charter Students at Proficient or Advanced in
<b>Reading (AY 2001-02)</b>

Grade	Charter Percentage – Non-Charter Percentag			
	<b>Proficient or Advanced</b>	<b>Proficient or Advanced</b>		
3	78.6% (n=2,139)*	72.5% (n=51,450)		
4	70.4% (n=2,120)*	62.0% (n=53,321)		
5	72.3% (n=1978)*	64.5% (n=54,334)		
6	78.1% (n=2,127)*	67.4% (n=53,411)		
7	70.7% (n=1912)*	61.6% (n=52,359)		
8	74.4% (n=1694)*	67.4% (n=51,621)		
9	63.6% (n=888)	70.1% (n=51,936)*		
10	64.9% (n=775)	68.0% (n=48,187)*		
*Percentage for type of school is significantly higher, p<.01.				

Colorado administers its standardsbased tests (CSAPs) in grades 3-10 in reading and writing, in grades 5-10 in mathematics, and in grade 8 in science. Results are reported in terms of the percent proficient or advanced. The 2003 annual Colorado Department of Education (CDE) evaluation (for AY 2001-02), reports that charter schools outperformed other public schools in reading, writing, and mathematics in grades 3-8, and performed worse in these subjects at grades 9-10 (see table 2 for reading; results were parallel for writing and Charter schools outpermathematics). formed other public schools at grade 8 in science.

These are very crude comparisons that must be interpreted with extreme caution<sup>11</sup> because they fail to control for differences in the composition of school enrollments. In particular, grades 9 and 10 include a disproportion of "alternative" high schools that serve a disproportionate number of "at risk" students. This biases the results against charter schools. Just the reverse is true for enrollment in grades 3-8, which biases the results in favor of charter schools.<sup>12</sup>

This problem of biased comparisons was anticipated in the Colorado Charter Schools Act. To help mitigate it, the Act requires the annual charter school evaluations to assess the performance of charter schools relative to other public schools in terms of "ethnically and economically comparable groups."<sup>13</sup> The 2003 evaluation employs a matching approach to satisfy this requirement. which in additional comparisons were made in terms of quintiles, ranging from 0-19.99% minority and 0-19.99% eligible for free/reduced-price lunch to 80-100% minority and 80-100% eligible for free/reduced-price lunch. The comparisons additional renders the differences based on the crude comparison In the first quintile (the 0equivocal.

19.99% interval), charter schools tended to outperform other public schools in all subjects in grades 3-8, and to be outperformed by other public schools in grades 9-10. However, in the remaining four quintiles that have higher proportions of minority and low-income students, only scattered statistically significant differences were found. Whether more comprehensive and systematic differences in fact exist cannot be determined by CDE's matched comparisons. These comparisons lack statistical power because so few charter schools fall into the quintiles with appreciable numbers of minority and lowincome students<sup>14</sup> (see Table 3).

Although certainly an advance over no controls at all, CDE's matched approach remains a crude form of analysis that fails to take full advantage of the information available. The SRI study's second two levels of analysis (described below) are far superior in this regard.

The SRI study compares the performance of Colorado's charter school and other public schools (also using data from AY 2001-02) using three levels of analysis. In the first, it compares Colorado's charter schools and other public schools in terms of what proportion of each were meeting the state standard (i.e., performing above the "unsatisfactory" level, the level at which public schools are subject to disciplinary action, including being forcefully converted to a charter school). Traditional public schools performed considerably better in this comparison: 98% (1,421 of 1,446)) to 90% (76 of 84) for charters schools (p<.01). But as indicated previously, uncontrolled comparisons such as these are misleading. The fact that SRI's conclusion is opposite that of CDE is a rather stark illustration of how worthless such superficial comparisons truly are.

 Table 3

 Charters Versus Other Public School Distributions

 of Minority and Low-Income Students Taking State Reading Tests

Grade	Quintile – Percent minority and Free or Reduced Lunch	Charter schools – Number of students and proportion of all charter students falling into each quintile	Other public schools – Number of students and proportion of all non-charter students falling into each quintile
	0-19.99%	Number of students: 1112; Proportion of students: 89%	Number of students: 15334; Proportion of students: 51%
	20-39.99%	Number of students: 23; Proportion of students: 2%	Number of students: 5936; Proportion of students: 20%
3	40-59.9%	Number of students: 41; Proportion of students: 3%	Number of students: 3429; Proportion of students: 11%
	60-79.9%	Number of students: 33; Proportion of students: 3%	Number of students: 2696; Proportion of students: 9%
	80-100%	Number of students: 42; Proportion of students: 3%	Number of students: 2539; Proportion of students: 8%
	0-19.99%	Number of students: 1157; Proportion of students: 87%	Number of students: 17149; Proportion of students: 54%
	20-39.99%	Number of students: 30; Proportion of students: 2%	Number of students: 5631; Proportion of students: 18%
6	40-59.9%	Number of students: 37; Proportion of students: 3%	Number of students: 3925; Proportion of students: 12%
	60-79.9%	Number of students: 54; Proportion of students: 4%	Number of students: 2597; Proportion of students: 8%
	80-100%	Number of students: 0; Proportion of students: 0%	Number of students: 2364; Proportion of students: 7%
	0-19.99%	Number of students: 369; Proportion of students: 87%	Number of students: 22992; Proportion of students: 81%
	20-39.99%	Number of students: 16; Proportion of students: 4%	Number of students: 4079; Proportion of students: 14%
9	40-59.9%	Number of students: 4; Proportion of students: 1%	Number of students: 858; Proportion of students: 3%
	60-79.9%	Number of students: 3; Proportion of students: 1%	Number of students: 89; Proportion of students: 0%
	80-100%	Number of students: 36; Proportion of students: 8%	Number of students: 320; Proportion of students: 1%

In the second level of analysis, the SRI study controlled for minority and economic status separately, once again using as the evaluative criterion the question of whether the school has met the state standard. It first divided all public schools into those above and below the state median of low-income enrollment and then compared charter and traditional public schools in these two income categories. There were no significant differences between charter and traditional public schools in the higher income group, but traditional public schools were significantly better (p<.01) in the lower income group (see Table 4).

Low	v-Income elow Stat	Percentage: e Median		Low A	v-Incom bove Sta	e Percentage ate Median	2:
	Met	Did Not	Total		Met	Did Not	Total
	Std.	Meet Std.			Std.	Meet Std.	
Trad. Pub.	697	6	703	Trad. Pub.	734	19	743
Schools	(99%)	(1%)	(92%)	Schools	(97%)	(3%)	(97%)
Charter	59	2	61	Charter	17	6	23
Schools	(97%)	(3%)	(8%)	Schools	(74%)	(26%)	(3%)
Total	756	8	764	Total	741	25	766
	(99%)	(1%)	(100%)		(97%)	(3%)	100%

 Table 4

 Analysis of School Type Performance, Controlling for Proportion of Low-Income Students, 2001-02<sup>15</sup>

A parallel procedure was followed with respect to minority enrollments; the results were also parallel, i.e., there were no significant differences between charter and traditional public schools in the low minority enrollment group, but traditional public schools were significantly better (p<.01) in the high minority enrollment group (see Table 5).

In its third level of analysis, the SRI study controls for the proportions of both minority and low-income simultaneously (as well as school size<sup>16</sup>) by employing a logistic regression model. Again using meeting the state standard as the evaluative

779

(99%)

4

(1%)

Total

criterion, the general finding was summarized as follows: "being a charter school was associated with not meeting the standard, controlling for low-income, minority students, and student enrollment [p<.01]" (SRI, p. 114).

In summary, there is no evidence that Colorado's charter schools boost student achievement compared to traditional public schools, particularly with respect to lowincome and racial/ethnic minority students. Colorado's charter schools, on the whole, are more likely increasing rather than decreasing the achievement gap.

Minority Students, 2001-02 <sup>17</sup>							
Minority Percentage: Below State Median		Minority Percentage: Above State Median					
	Met	Did Not	Total		Met	Did Not	Total
	Std.	Meet Std.			Std.	Meet Std.	
Trad. Pub.	725	3	728	Trad. Pub.	696	22	718
Schools	(100%)	(0%)	(93%)	Schools	(97%)	(3%)	(96%)
Charter	54	1	55	Charter	22	7	29
Schools	(98%)	(2%)	(7%)	Schools	(76%)	(24%)	(4%)

Total

718

(96%)

29

(4%)

747

(100%)

 
 Table 5

 Analysis of School Type Performance, Controlling for Proportion of Minority Students, 2001-02<sup>17</sup>

783

(100%)

4. Do charter schools serve a proportion of ethnic-racial minority, low-income, and special education students that is equal to or higher than traditional public schools?

Overall, Colorado's charter schools enroll substantially fewer low-income, minority, and special education students than its traditional public schools (see Table 6).

Although informative, relying on the overall state means understates the true magnitude of income and racial/ethnic stratification associated with charter schools within local Colorado districts. Table 7 illustrates the disproportionately small number of charter schools serving at least 10% more of their district's average of racial/ethnic minorities and low-income students compared to those serving 10% fewer.

And even Table 7 somewhat understates the degree to which the typical Colorado

charter school under-serves racial/ethnic minorities and low-income students. Α disproportionate number of the charter schools serving at least 10% more of their district's average of minorities and lowincome students are small, alternative schools that serve at-risk students. Denver, which has the highest racial/ethnic minority and low-income enrollments in the state, at 78% and 60%, respectively, has four such schools. These four schools alone comprise one-fourth (24%) of the Colorado's charter schools serving at least 10% more lowincome students than their district and onefifth (21%) of those serving at least 10% more minority students. The clear trend across the state, then, appears to favor charter schools serving a demographic that is substantially more white and more wealthy than the general student population in their home school districts.

# Table 6 Percentage of Enrollments of Low-Income, Minority and Special Education Students in the Colorado K-12 School System (2001-2002)<sup>18</sup>

	Tradition Public Schools (n=1,546)	Charter Schools (n=84)		
Percent low-income*	Mean=33 S.D.=25	Mean=19 S.D.=26		
Percent minority*	Mean=32 S.D.=26	Mean=23 S.D.=25		
Percent special education**	Mean=10	Mean=6.4		

\*p<.01; \*\*Data not readily amenable to statistical testing.

# Table 7<sup>19</sup> Low-income and Racial/ethnic Minority Enrollments in Charter Schools Compared to Districts in which Located

	Charter Enrollment Percentages			
	Greater than district by at least 10%	Less than district by at least 10%		
Low-Income	22%	68%		
Minority	25%	61%		

### 5. What impact do charter schools have on other public schools?

This pattern of under-serving racial/ ethnic, low-income, and special education students exhibited by Colorado's charter schools represents one kind of impact on Colorado's other public schools. As charter schools "skim" higher income students, who typically score higher on achievement tests, and also "crop" special education students, they increase the burden on the other public schools to educate the students they leave behind. At the same time, they gain an advantage in their ability to produce highermean CSAP scores and higher SAR ratings.<sup>20</sup>

Another harmful impact to Colorado's traditional public schools is financial. Although no study has determined the statewide financial impact of Colorado's charter schools, a study of six Colorado districts<sup>21</sup> concluded that charter schools accounted for a per pupil reduction of funding for students in other public schools ranging from \$85 (or \$1,720 for a class of 22) to \$405 (or \$8,910 for a class of 22).<sup>22</sup>

According to a DOE commissioned report, "Challenge and Opportunity: The Impact of Charter Schools on School Districts,"<sup>23</sup>nearly half of district leaders perceived that schools had negatively charter affected their budget and explained this impact by pointing to the reduced revenue from students who had transferred from districts schools to charter schools.

As this DOE report goes on to point out, the financial impact that charter schools have on other public schools depends on the context. In rapidly growing districts, charter schools may actually provide temporary help in providing the needed additional seats with no financial harm whatsoever to the district. On the other hand, it is virtually axiomatic that transferring per pupil funding from traditional public schools to charter schools will harm the former where district enrollment is stagnant or shrinking. Under these circumstances, it is impossible for school districts to make reductions in fixedcosts—buildings, classrooms, utilities, teachers, buses, etc.—proportional to the loss in per pupil revenues. And these are the circumstances in which many Colorado school districts find themselves.

#### Conclusions and Recommendations

Colorado's charter schools fare well on only one of five central evaluation criteria considered here: parental satisfaction and participation. They have come up short on each of the others: improving achievement and closing the achievement gap; serving at least as high a proportion of racial/ethnic minority, low-income, and special education students as other public schools; having a positive impact or no impact on other public schools; and introducing more innovative educational programs into the public school system.

Of course, the state had no experience with charter schools eleven years ago, and it would be unreasonable to expect no problems to have arisen in the process of their development. However, the evidence discussed in this analysis has been accumulating for some time and has increasingly been pointing to the conclusions set forth here. In our estimation, resistance to recognition of the shortcomings of Colorado's charter school reform have largely resulted from excessive exuberance for this reform. Policy makers have paid insufficient heed to the cautionary data and unwisely eliminated the safeguards built into the original Charter Schools Act.

One of the themes of our analysis -- and a point that turns up again and again in various research studies and government reports -- is the importance of local context in determining the effects that charter schools can be expected to have. In light of this, Colorado's policy continues to move in exactly the wrong direction, away from local control, culminating in the formation of the state-level Charter School Institute. Accordingly, our first recommendation is to consider abolishing the Institute or, short of this, capping the number of new charter schools that may be created under its auspices and subjecting them to rigorous

evaluation. Such an evaluation should hold the charter schools accountable for achieving positive outcomes as well avoiding negative ones, including for the local districts in which they are located. We also recommend the following for consideration (the first two of which interact with the Charter Institute recommendation):

- Reinstate a cap on the number of charter schools, perhaps tied to school districts rather than the state overall;
- Reinstate and strengthen the authority of local school districts to determine whether to deny charters

on the grounds that granting them (1) harms the district (e.g., financially or by exacerbating stratification) or (2) fails to provide an option that differs significantly from those already provided by district schools; and

• Require that the annual CDE evaluations of Colorado's charter schools be reviewed relative to the kind of criteria employed in this analysis by a nonpartisan committee that includes experts in educational research and evaluation.

<sup>&</sup>lt;sup>1</sup> Colorado Department of Education (2003). *The State of Charter Schools in Colorado* 2001-2002. Available at: <u>http://www.cde.state.co.us/cdechart/charsurv.htm</u>.

<sup>&</sup>lt;sup>2</sup> SRI International (2004). *Evaluation of the Public Charter Schools Program: Final Report*. U.S. Department of Education. Available at: http://www.ed.gov/rschstat/eval/choice/pcsp-final/index.html.

<sup>&</sup>lt;sup>3</sup> The other, released in December 2004, was *America's Charter Schools: Results From the NAEP* 2003 Pilot. Available at: <u>http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005456</u>. Like the SRI study, it found that traditional public schools have outperformed charter schools.

<sup>&</sup>lt;sup>4</sup> Previous to these and other recent studies, the most warranted conclusion was that no real differences in the performance of charter versus traditional public schools existed (e.g., Gill, et al. (2001). *Rhetoric versus reality What we know and what we need to know about vouchers and charter schools*. Santa Monica, CA: RAND.)

<sup>&</sup>lt;sup>5</sup> This is from Colorado Department of Education (2002). *The State of Charter Schools in Colorado* 2000-2001. Available at: <u>http://www.cde.state.co.us/cdechart/charsurv.htm</u>. The 2003 version did not explicitly speak to the issue.

<sup>&</sup>lt;sup>6</sup> Colorado Department of Education (2003). *The State of Charter Schools in Colorado* 2001-2002, pp. 18-19.

<sup>&</sup>lt;sup>7</sup> Colorado Department of Education (2003). *The State of Charter Schools in Colorado* 2001-2002, p. 23.

<sup>&</sup>lt;sup>8</sup> See Gill, B. et al. (2001). *Rhetoric versus reality What we know and what we need to know about vouchers and charter schools* and 2001; Bulkley, K. & Fischer, J. (April, 2002). A decade of charter schools: From Theory to Practice. *CPRE Policy Briefs*. Available at: <a href="http://www.cpre.org/Publications/rb35.pdf">http://www.cpre.org/Publications/rb35.pdf</a>.

<sup>9</sup> The SRI International (2004), *Evaluation of the Public Charter Schools Program: Final Report,* U.S. Department of Education, found charter school parental participation higher in five states it studied, one of which was Colorado.

<sup>10</sup> Howe, K. & Eisenhart, M. (2000), *A study of Boulder Valley School District's open enrollment system* (Available at: <u>http://education.colorado.edu/epic/coloradostudiesandreports.htm</u>) found parents were more satisfied with charter schools than traditional public schools.

<sup>11</sup> The potential for abuse and misunderstanding probably outweighs any potential benefits of such crude comparisons, such that they probably should not be reported at all.

<sup>12</sup> These kinds of comparisons—which are *always* biased and misleading—are precisely the ones that are reported in newspapers and that high scoring schools like to tout, providing the basis on which Colorado's schools are rated from "unsatisfactory" to "excellent" on School Accountability Reports (report cards).

<sup>13</sup> Colorado Department of Education (2003). *The State of Charter Schools in Colorado* 2001-2002, p. 26.

<sup>14</sup> This was exacerbated by the conjunctive nature of the quintiles (i.e., groups were formed in terms of an interval, e.g., 0-19.99%, that was applied to both minority enrollment and eligibility for free/reduced lunch, eliminating nearly half of the cases). For example, 2,139 charter school third graders took the reading CSAP but only 1,251 (58%) fell into one of the quintiles.

<sup>15</sup> Adapted from SRI International (2004), *Evaluation of the Public Charter Schools Program: Final Report*, p. 112.

<sup>16</sup> In an analysis of school size parallel to the separate analyses of the low-income and minority enrollments described above, larger charter schools and traditional public schools did not differ; smaller traditional public schools outperformed smaller charter schools.

<sup>17</sup> Adapted SRI International (2004), *Evaluation of the Public Charter Schools Program: Final Report*, p. 113.

<sup>18</sup> Low-income and minority rows from SRI International (2004), *Evaluation of the Public Charter Schools Program: Final Report*; special education row from Colorado Department of Education (2003). *The State of Charter Schools in Colorado* 2001-2002.

<sup>19</sup> Adapted from Colorado Department of Education (2002). *The State of Charter Schools in Colorado* 2000-2001, p. 49.

<sup>20</sup> See Howe, K., Betebenner, D. & Foster, S. (April, 2003). "Mixing Choice and Accountability: A Witches' Brew?" Paper presented at the American Educational Research Association, Chicago. The findings reported in this paragraph applied to choice schools in general, including but not limited to charter schools.

<sup>21</sup> This study, "The Fiscal Impact of Charter Schools," was conducted by Augenblick and Myers. The study was never publicly released but nevertheless generated heated attacks from charter school advocates.

<sup>22</sup>According to our estimate, the level or per pupil funding for charter schools that is most likely to have a neutral effect on other public schools is the 80% level stipulated in an earlier version of Colorado's charter school law.

<sup>23</sup> RPP International (2001). *Challenge and Opportunity: The Impact of Charter Schools on School Districts*. Available at: <u>http://www.teachersfirst.com/district\_impact.pdf</u>