Evaluation of the Delaware Charter School Reform

Final Report

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Executive Summary

In 2003, The Evaluation Center at Western Michigan University was awarded a contract by the Delaware State Board of Education and Delaware Department of Education to evaluate the charter schools and the charter school reform in Delaware over the period 2003-2006. The major objective of the evaluative study was to determine the effectiveness, progress, and impact of the charter schools in Delaware. Further, the evaluation was intended to provide objective, unbiased feedback to the schools; the Delaware Board of Education and Delaware Department of Education; and other stakeholders about the operation and oversight of the schools and the charter school reform. This final report summarizes findings across the three-year evaluation.

In this report, we address the following tasks/issues that are central to the evaluation within the context, mission, and goals of each charter school and under the overriding goals of the study.

- ❏ Collection and synthesis of critical legislative and oversight issues raised by key stakeholders.
- ❏ Collection and analysis of teacher survey data that included teacher background characteristics, levels of satisfaction, perceptions of quality, and areas for improvement.
- ❏ Review and synthesis of evidence regarding the accomplishment of the mission found in the charter school annual reports.
- ❏ Comparison of revenues and expenditures for charter schools and traditional public schools.
- ❏ Descriptive analysis and comparison of charter school-level demographic data relative to surrounding district schools.
- ❏ Longitudinal analysis of student-level test data on the Delaware Student Testing Program (DSTP) comparing charter school students and matched noncharter school students.
- ❏ Longitudinal analysis of school-level data for the state assessment (DSTP) for charter schools and demographically and geographically similar noncharter public schools.
- ❏ Description and discussion of key policy issues relevant to the performance and oversight of charter schools.

Delaware Charter School Law and Comparative Review

The legislative intent of the Delaware charter school reform is to

- ❏ improve student learning
- ❏ encourage the use of different and innovative or proven school environments and teaching and learning methods
- ❏ provide parents and students with improved measures of school performance and greater opportunities to choose public schools within and outside their school districts
- ❏ provide for a well-educated community

To fully understand Delaware's charter school law, we looked at a few comparative research studies that rated and ranked charter school laws based on their perceived strength. Delaware's charter school law is generally viewed as permissive in that it allows multiple authorizers, has no cap on the number of schools, and a wide range of groups are permitted to apply for a charter school.

Three different ranking systems of charter school laws (CER, 2006; Miron, 2005; Chi & Welner 2007) indicated that Delaware had a strong charter school law.

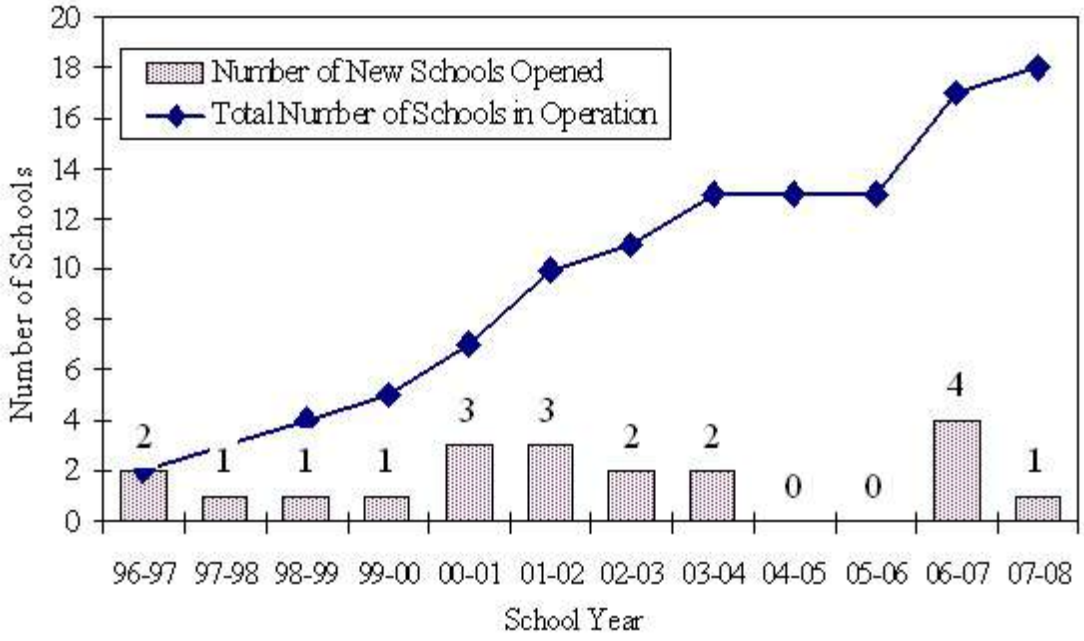
We also looked at a number of reviews that rated and ranked states by the quality and strength of their authorizers and oversight of charter schools. Here, Delaware was typically placed in the middle of the rankings (Bierlein Palmer & Gau, 2003; Lake, 2006; Hassel & Batdorff, 2006).

A number of charter school administrators indicated that the rigorous regulations and oversight hinder them from being innovative, adaptive to local conditions, and effective in pursuing their unique missions. While some complaints were leveled at the Department of Education for its rigid interpretation and enforcement of legislation and regulations, charter school administrators also were quick to acknowledge that the support and guidance provided by DOE were constructive and helpful.

During the course of this three-year evaluation, efforts by the Department of Education and the State Board of Education have simplified and streamlined many oversight activities. For example, the process for making minor modifications to charters now is easier and less restrictive. Communication has also improved, with regular meetings and events scheduled between state agencies and the charter schools.

Delaware Schools and Their Students

The Delaware charter school reform has continued to grow since the first 2 charter schools in the state opened in September 1996. Currently, 17 charter schools are operating with—thus far— 1 more planned to open in September 2007. In the previous school year, 13 charter schools were operating. They enrolled 6,566 students, which accounts for approximately 5.4 percent of all public school students in Delaware. Two charter schools have closed, both after 1 year or less of operation due to financial problems and other difficulties.



To gain a better understanding of the impact of charter schools in Delaware, an in-depth analysis of student enrollment patterns was conducted. We looked at enrollment patterns for 2005-06 as well as five-year trends for charter schools. Overall, enrollment levels at charter schools are steady and comparable to previous years. There are, however, some noteworthy findings:

- ❏ The aggregate of charter schools does not differ greatly from the traditional public schools in the state. However, when we look at the data by schools, we find substantial differences in student demographics. Some charter schools who primarily serve minority students, and others cater primarily to white students.
- ❏ This pattern of segregated charter schools based on race is also repeated in segregation by class and ability. Some charter schools serve a high proportion of students that qualify for free or reduced lunches, and other schools have few of these students. At one charter school nearly half the students have been identified as needing special education services, while at most other schools the number of students with special education needs is surprisingly low.
- ❏ On the whole, traditional public schools have higher percentages of low income students, students with special education needs, and students who have limited English proficiency.

Some reasons that explain why the charter schools have become so segregated include the following:

- ❏ The school may be located in a highly segregated housing market.
- ❏ Parents choose these highly segregated environments for their child(ren) because of their desire for a homogeneous learning environment.
- ❏ Targeted marketing and recruitment efforts by charter schools. For example, particular cultural profiles may attract a particular ethnic group; and specific offerings such as full day kindergarten

may be more attractive to low-income families.

Because individual charter schools enroll students that differ greatly from sending districts, one can argue that many of the charter schools may be accelerating the resegregation of public schools by leaving them more fragmented based on race, class, and ability. However, one also must recognize that other school choice programs (such as interdistrict choice and the neighborhood schools program) are promoting the acceleration of the resegregation of schools within the state. This is a complicated policy issue that we raise for discussion, but it is also an issue that must be understood in the broader context and history of the state.

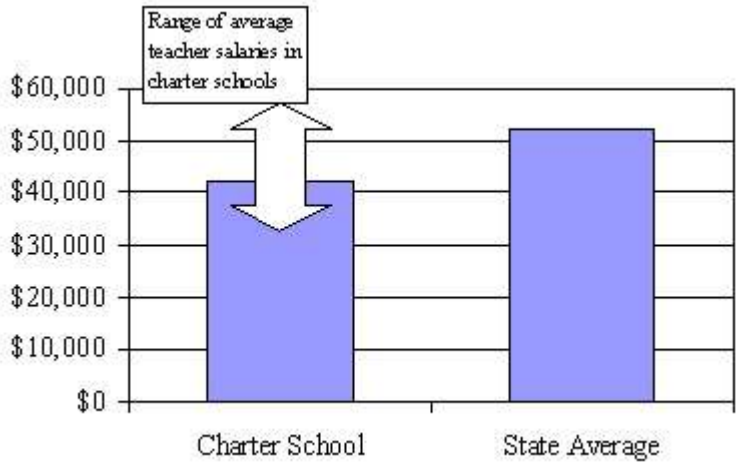
Delaware Charter School Teachers

Some teachers in charter schools have credentials and qualifications (i.e., formal education, certification status, years' experience, etc.) that are lower than teachers in traditional public schools. Extensive differences exist, however, among the charter schools, with some schools having a high proportion of teachers with master's or doctoral degrees and other schools with few teachers completing any graduate degrees. Over time, we have seen the level of qualifications of the teachers in most charter schools have been improving continuously.

On the whole, charter school staff were satisfied with their schools and with the working conditions they face. "Safety at school" was cited as the most important factor for working at school; other important factors were opportunities to work with like-minded educators, committed parents, and the academic reputation (high standards) of the school.

The working conditions for charter school teachers differ dramatically depending on the school in which they work. From our site visits, we saw some schools with extremely modern facilities and well-equipped offices and laboratories and others that had crowded and run-down facilities.

Teachers' salaries also varied extensively, with a few schools having mean salaries noticeably higher than the state average and several schools with salaries far below the state average. The Delaware charter schools' average teacher salary in 2005-06 was $42,281, which is noticeably lower than the state average of $52,486. In recent years, the difference between the average salary for charter school teachers and traditional public school teachers has been growing smaller. The difference in average teacher salaries can be explained to a great extent by the large difference in educational background and years of experience of the teachers employed. Another factor that explains differences in teachers' salaries are decisions made by charter schools regarding the amount of pay and bonuses they provide their teachers. Charter schools have considerable autonomy in determining teacher



salaries.

Given the vast differences in working conditions across the charter schools, it was no surprise to find that teacher attrition also varied extensively by school. The schools have experienced gradually decreasing rates of attrition over the past four years, ranging from 33 percent to 12 percent. Attrition is still a serious problem in some schools.

In summing up the findings regarding charter school teachers and their working conditions, it is fair to say that—overall—improvements are being made each year. Nevertheless, the disparity among the charter schools in terms of their teachers and the working conditions they face need to be recognized and addressed.

Comparison of Finance Data

The financing of charter schools is a highly contentious area. In our analyses, we sought to provide a fair and balanced description of charter school finance in Delaware. Care was given to spell out limitations in the data, and the text is riddled with cautions regarding how the findings should be interpreted and might be misinterpreted.

Due to the complexity of school finance data, we are not able to identify all the determinants of disparities (or lack thereof) in funding between traditional public schools and charter schools. Instead, we present a comparative analysis of the source and scope of revenues and the size and pattern of expenditures for both groups of schools. We also discuss some of the contextual issues surrounding charter school financing.

The funding formula for public school districts and charter schools in Delaware is complicated. The same funding formula is applied for both district schools and charter schools. However, this does not mean they get the exact same revenues. Instead, the formula is designed to provide the same revenues for similar students being taught by teachers with similar qualifications. In chapter 5 of the report we provide a more detailed explanation of the funding formula and how it affects charter schools. While some may argue that charter schools receive too much funding, others claim that charter schools are underfunded. Below, we include a list of reasons or factors that suggest that charter schools have cost advantages or disadvantages relative to traditional public schools.

Cost Advantages

- ❏ Increased autonomy permits the flexibility needed to be more responsive and more efficient.
- ❏ Charter schools are community-based and are better able to solicit in-kind contributions from families, community partners, businesses, and private organizations.
- ❏ Charter schools can apply for additional federal funding for start-up, implementation of the school, and the dissemination of ideas.
- ❏ Charter school teachers typically receive lower salaries than traditional public schools, which is a substantial cost savings for these schools. While some point out that this is a result of insufficient funds, it is fair to say that this is a result of the lower level of qualifications of the teachers that are recruited or that seek employment in charter schools.
- ❏ Charter schools can limit enrollments to ensure an efficient match with existing facilities and instructors.

Cost Disadvantages

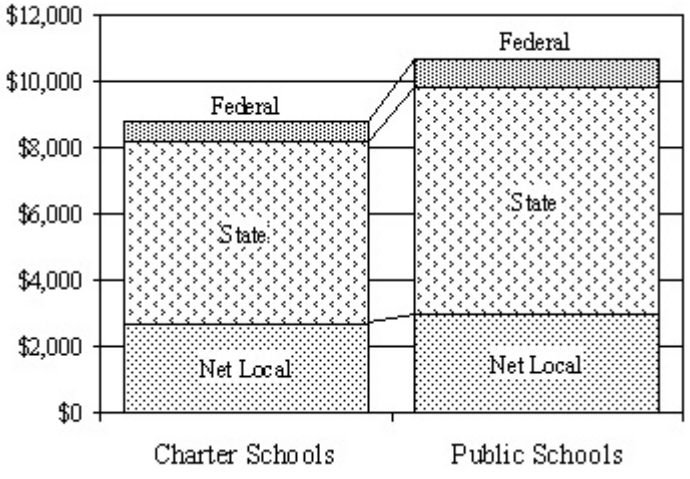
- ❑ Most charter schools are start-up schools that require a lot of initial funding—particularly for facilities—and federal start-up grants are insufficient, especially when the renovation or purchase of a facility is involved.
- ❑ Charter schools tend to be small and lack economies of scale that districts have.
- ❑ While Delaware charter schools are required to have specialized staff, such as a certified administrator or a school nurse, the net cost for such staff is distributed over a small number of students.

Our analyses covered three consecutive years of finance data covering 2002-03, 2003-04, and 2004-05. The 2004-05 finance data, which were released in January 2007, represent the most recent data that are available. Although our attention is on the most recent year of available data, we compared trends from the previous two years where appropriate.

Critical for understanding and verifying our findings is our specification of the schools included in the analysis. We compared charter schools with traditional public schools to determine and understand differences and patterns in the data. All 13 charter schools that were operating in 2004 were included in our analysis. Our comparison group was comprised of the 16 public school districts that cover the state. The county vocational-technical schools and the Dover Air base schools were excluded from the comparison group since they were viewed as outliers in terms of revenue and expenditure patterns. Also, the separate special education schools and 2 intensive learning centers that have separate facilities were excluded from the group because these schools had extraordinarily high revenues, which are required to provide services to the students with disabilities they serve. Even after these special schools were removed from the comparison group, the proportion of special education students was far greater for remaining traditional public schools (12.7%) than for the schools (6.4%). This large difference in the type of students served is a key factor in explaining the differences in revenues that are outlined below.

Revenues

The average per-pupil revenue reported for charter schools in 2004-05 was $8,821, while the per-pupil revenue for comparison district schools was approximately $10,649. On average, district schools receive noticeably higher revenues than charter schools. It is important to note that these differences in funding levels are in large part explained by differences in teacher qualifications and the types of students served. Below, we summarize the other key findings regarding charter school revenue:



- ❑ In absolute terms, traditional public

schools reported higher revenues from all three general funding sources: federal, state, and local.

- ❏ Differences in revenue between charter schools and traditional public schools is partially explained by the differences in the experience and qualifications of the teachers they hire and the students they serve. For example, greater experience and formal education for teachers translates into higher revenues to cover higher teacher salaries. Also, schools with special needs students receive additional revenues required to provide an adequate education for students with disabilities.
- ❏ A number of private funding sources are available to charter schools (e.g., foundations, nonprofit organizations, and private companies). Private sources of funding are not included in our financial analysis, because the exact sources and scope of private funding is unknown. Private sources of funding may help bridge the gap between charter and traditional public schools in terms of funding, and it may explain why some charter schools have such large year-end balances that are far larger than traditional public schools.

Expenditures

Expenditures were divided into three broad categories: instructional, noninstructional, and school services. Just as charter school revenues are lower than those of traditional public schools, so too are expenditures. In 2004-05, the average net expenditure per pupil in charter schools was $7,604, while the average net current expenditure per pupil in public schools was $10,088. One of the key patterns that we identified was that charter schools were spending a lower proportion of their resources on instruction. This can be explained by a number of factors including lower teacher salaries in charter schools and the need for charter schools to shift more of their resources to cover the costs of purchasing or renovating facilities. Differences in expenditures can also be attributed to differences in the type of student served.

Capital Funding and Facilities

Capital funding and facilities finance have been increasingly debated topics, both in Delaware and in the nation as a whole. During interviews with charter school administrators, it was commonly reported that it was difficult, if not impossible, to secure funding for facilities. Hearing their stories, however, was confusing since at the time we were sitting in their newly constructed or renovated school buildings. Not all charter schools have satisfactory facilities, but many of them have buildings that are of a similar or higher standard than the buildings available to the surrounding traditional public schools. Through private funding and partnerships, a number of charter schools were able to acquire facilities at a heavily discounted price.

Fiscal Balance

Comparing gross income and expenditure amounts for public and charter schools is not possible because of vast differences in structure: namely, public schools are much larger, offer different services and support, and have a wider array of functions. However, analyzing year-end balances and changes in year-end balances is one of the best means of studying the relative viability of charter schools. In our study, we analyzed year-end balances for the 2002-03, 2003-04, and 2004-05 school years. The analysis revealed substantial fluctuations both between charter and traditional public

schools and within the same schools over time. Although there were large differences among both charter schools and districts, it was interesting to find that the standard deviation was relatively similar for the two groups. While charter schools had, on average, a per-pupil year-end balance of $1,341, the traditional school districts had an average year-end balance of $3,006. Over time, the year-end balance for districts remains relatively unchanged, while the charter school year-end balance continues to improve.

Charter schools were introduced with the hope that market competition would spur creativity and generate a more efficient type of school. At face value it would appear that charter schools receive less funding than public schools. Other indicators from our surveys of teachers, interviews with administrators, and analysis of year-end balances suggest that some charter schools are rather advantaged in terms of finance. However, as is clear from our discussion in this chapter, a number of factors need to be taken into consideration when comparing charter and traditional public school finance. Differences in funding levels may result from a combination of teacher experience and qualifications, the types of students that charter school serve, and the size of charter schools. Although we have not been able to draw conclusions, it is our hope that the detailed analysis of existing evidence can facilitate informed discussion on this very charged issue.

Accomplishment of Mission

Our evaluation team explored how well each charter school in our study is reporting on its goals and objectives in annual reports. We examined each school's mission, goals, objectives, and relevant benchmarks to measure progress. First, we looked at each school's mission statement and found all of them to be educationally relevant. We then analyzed the objectives articulated in the annual reports that covered the range of goals set out in the mission statements. The objectives fell into four areas: (i) academic performance of students, (ii) student behavior, (iii) market accountability, and (iv) mission-related accountability. Below, we highlight some of the key findings regarding our review:

- ❏ Most objectives were defined for the academic performance area.
- ❏ There was great variability in the number of measurable objectives and the general quality of the contracts and annual reports from each school.
- ❏ The actual number of academic objectives set by each school varied greatly.
- ❏ The quality of objectives varied significantly as well. Several schools mixed process and outcome objectives; even more schools listed objectives that were difficult to measure.
- ❏ Although the standard objectives included in performance agreements are beneficial in determining accomplishment of objectives across schools, individually tailored objectives are key to determining if a school has met the objectives it set for itself.
- ❏ Considerably fewer behavioral objectives than academic objectives were listed, but there were considerable variations among the schools and the number of objectives identified. For the most part, the objectives were limited to attendance and the number of reportable behavioral offenses.
- ❏ The annual reports explored several indicators of market accountability: level of enrollment, attrition throughout the year, and year-to-year attrition.

- ❑ The schools that created market accountability objectives did a fairly good job at developing them.
- ❑ Some exemplary annual reports were prepared by a few charter schools and should be shared as a model for other schools to follow.

It is important to have a clear, well laid out report. As part of the charter schools' "autonomy in exchange for accountability" agreement, the schools must effectively demonstrate progress toward accomplishing these unique missions. Charter schools can focus their efforts in regard to improving the overall quality and evaluation of their objectives in four areas: (i) developing appropriate objectives, (ii) incorporating benchmarks into objectives, (iii) collecting and sharing evidence for all objectives, and (iv) developing mission-specific objectives. More work needs to be done on the annual reports if they are to be a viable tool for accountability.

Student Performance on the Delaware Student Testing Program

Charter school performance can be measured in two principal ways. The first is the extent to which a school can achieve the measurable objectives that reflect its mission. The second is the performance of charter school students on standardized tests to determine value added over time of enrollment in a charter school. Two distinct and separate methodological approaches were used to examine gains on standardized tests by charter schools relative to traditional public schools. First we used a quasi-experimental design to measure change in student performance over time. Second, we relied on school-level, rather than student-level, data to examine differences in predicted and actual scores on the DSTP.

Quasi-Experimental Design With Cross-Year Analysis

In addition to its extensive warehousing of school-level data, the Delaware Department of Education has an advanced performance data system that yields and tracks data for all students in the state. This data set was provided to us by the Department of Education with test data going back to the late 1990s. We ended up analyzing only data from 1999-00 to 2003-04 in our year 1 report. For the year 2 report, we added an additional year of data (i.e., from 1999-00 to 2004-05). For this third and final report, we added an additional year (i.e., 2005-06) to our data set as well as the results from the off-grade assessment. The complete data set includes students in charter schools and students in traditional public schools. Identifying information was removed and replaced with unique identifier codes that allowed us to link students from year to year.

We used a matched student quasi-experimental design in which students in the experimental group (i.e., charter schools) were demographically matched on four characteristics—gender, ethnicity, Title I status, and free and reduced lunch status—to students in the control group (i.e., traditional public schools). Using this design, three randomly drawn comparison groups were constructed from the pool of all noncharter students. The presence of the off-grade assessment data enabled a more direct approach to examining longitudinal changes. Starting with 2002 data we constructed nonoverlapping (independent) two-year panel groups (referred to as cohorts) at the 4th/5th grade, 7th/8th grade, and at the 9th/10th grade levels for all charter school students. The selection of these grades was purposeful in that the two grades were contained within a school; that

is, students were not transferring from one—e.g., elementary—school to another—e.g., middle—school. Three matched noncharter comparison groups were created.

The Delaware Student Testing Program (DSTP) is used to measure how well students are prepared relative to the Delaware content standards in English language arts, mathematics, science, and social studies. Using the student-level data, we analyzed only the math and reading results where scale scores were available.

To address the central reform question—is there a difference in achievement (reading and math) between students attending charter schools vs. students attending noncharter schools—an analysis of covariance (ANCOVA) was conducted on the last DSTP assessment with the previous DSTP assessment score as the covariate in a 4 x 4 factorial ANCOVA with school (charter, noncharter1, noncharter2, and noncharter3) and cohort (2002-03, 2003-04, 2004-05, 2005-06) as the two independent variables and math or reading scale score as the dependent variable.

In the year 1 and 2 reports, separate ANCOVA analyses were examined for DSTP scaled score and SAT-9 NCE for the reading and math assessments. No offgrade results were included in these analyses.

Year 1 and 2 Results

The results indicate that charter school students often perform better than matched traditional public school students in upper grades. There were small differences between the charter school students and comparison students between grades 3 and 5. Only four differences were statistically significant; two of these favored traditional public schools, and the other two favored charter schools. At grade 8, the reading results for both panels favored charter schools and were statistically significant. The largest differences between charter school students and matched students in traditional public schools were at grade 10. Here all of the comparisons favored charter schools and were statistically significant. In other words, the charter school students included in the panels were gaining more on the DSTP between grade 8 and grade 10 than traditional public school students were gaining.

A comparison of the covariate means at grade 4 illustrates that charter school students and demographically similar students in the control group have similar pretest performance levels. At grade 8, the charter schools are clearly attracting and enrolling higher performing students. This difference is further exacerbated in grade 10, where charter school students have substantially higher pretest scores than their demographically similar peers. These comparisons suggest that while the charter schools on the whole are not "creaming" or attracting the best performing students in lower elementary grades, they clearly are doing so in the lower and upper secondary levels.

The data are aggregated across all the schools, which masks large differences among the schools, both in terms of the students they enroll and in terms of the growth in test scores they can achieve. The year 2 evaluation report includes a breakout and discussion of the data by school, which uncovers the fact that the types of students attracted to the schools (in terms of academic performance) differ greatly just as the overall impact of individual schools differs.

In our year 2 analyses, we also examined time effects to see if charter schools' relative performance was improving over time. In these analyses, pooled data for each cohort (i.e., 2004 and 2005) were coded for endpoint. From these findings, we could not clearly discern improvements or declines in performance over time in either reading or math.

Year 3 Results

Our analyses from year 3 revisit this question of whether the charter schools' relative performance is improving or worsening over time.

Grade 5 math. Results indicated that the 5th grade mean math scale score for charter school students was significantly lower than the mean results for matched noncharter students. There is some indication of a slight improvement in math scaled score since 2002-03, although these gains were made by students in both charter and noncharter schools.

Results of the group by trend contrast confirmed significant differences in the linear response trajectory between the charter and the pooled noncharter groups. Charter school students in grade 5 tend to lag behind their matched peers in reading scaled score and are showing less growth over time than their matched peers.

Grade 5 reading. The results suggest that, overall, charter school students are not performing at levels comparable to their noncharter peers on the DSTP in reading; and the gap appears to be widening. However, they have closed the difference between them and their noncharter peers in math.

Grade 8 math. Students in charter schools generally showed comparable levels of achievement on math scale scores until the 2005-06 cohort, when charter school stduents pulled ahead of the matched noncharter school students.

Results of the eighth grade group by trend contrast confirmed significant differences in the linear response trajectory between the charter and pooled noncharter groups such that the charter students showed a sharper rate of change relative to the noncharter students.

Grade 8 reading. The results for charter schools were similar to their matched peers in 2002-03 and 2003-04, but appeared to outpace their matched peers in the subsequent two years. The reason for this accelerated growth in 2004-05 and 2005-06 largely can be explained by the addition of new charter schools and not necessarily the improved performance of existing charter schools over time (note that the number of students in each cohort grew close to 30 percent between 2003-04 and 2004-05).

Grade 10 math. For grade 10 the school type by cohort analysis clearly depicted little overall performance change in math scale scores in both charter and noncharter school cohorts. Charter school students consistently outperformed noncharter school students.

One year stands out as significantly better for 10th grade charter school students (2003-04), but the gains made in that cohort group regressed back to previous levels in the next year.

Grade 10 reading. Charter school students evidenced significantly higher reading scale scores than their matched noncharter peers regardless of cohort.

The grade 10 charter school students consistently outperformed their matched peers in noncharter schools in both math and reading. Surprisingly, there are no advantages (or disadvantages) for students attending charter schools in the 5th grade analyses. Moreover, only three charter schools showed an advantage for their students (Sussex, MOT, and Thomas Edison) in the 8th grade analysis, but one school evidenced a disadvantage (Campus Community). In our 10th grade analysis, only students from Charter School of Wilmington showed a distinct pattern of superior performance.

Stayer/Leaver Results

In our most recent analyses using off grade test results, we examined charter school students from the perspective of stayers (students continuously enrolled in the same charter school in 2006 and who progressed a year), leavers (students who progressed a grade level in 2006 but are not in the same charter school), and newcomers (students who were not in the charter school the first year but entered in the second). In just over 71 percent of the 4th to 5th grade cohorts, leavers outperformed stayers, suggesting that the higher ability students are fleeing the elementary level charter schools. In the middle school grades, leavers showed no particular tendency to have either higher or lower mean math scaled scores. At the high school level, the stayers had overwhelmingly higher test results than the leavers, indicating that the low ability students were fleeing from the charter high schools. This is just the opposite of what we found in the elementary schools.

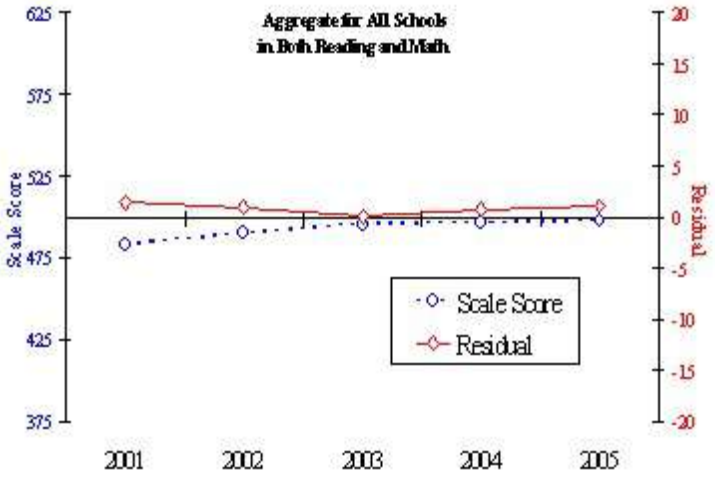
Newcomers tended to be similar to stayers in elementary and high school, but have lower scores than stayers in middle school. In a related analysis we examined the performance of students from the feeder schools on math scaled score for a limited number of charter schools from which we could capture data from distinct feeder schools (i.e., Charter School of Wilmington and Delaware Military Academy, both at the 9th to 10th grade levels, and Positive Outcomes Charter School at the 7th to 8th grade level). Our results provide strong evidence that the Charter School of Wilmington was attracting (creaming) high ability students relative to the mean performance level of the students who did not leave their feeder school to enroll at this school.

Residual Gains Analysis

We utilized one of the strongest designs and methodological approaches suitable for group or school-level data. It should be clear that analyses based on changes of individual students is far more rigorous and desirable than analyses based on school aggregate data. The results from our residual gains analysis were intended to provide a comprehensive look at the current performance and trends in performance of the charter schools.

Design and measures. The data used for these analyses are school-level DSTP results (i.e., average scale scores for reading, math, science, and social studies, and raw scores for writing) for students at five grade levels: 3rd, 5th, 6th, 7th, and 9th. To estimate the pattern of growth or change, it was necessary to track school-level performance across time; the period of time used was 2001 through 2005.

To estimate patterns of student achievement and growth or decline, we fit regression models to each subject and each grade level (3rd, 5th, 8th, 10th, and 11th) for each year (2001, 2002, 2003, 2004, 2005) using noncharter public schools as the reference in the models. By using noncharter public schools as a point of reference, it is possible to determine whether or not the charter schools perform similarly to, above, or below



other schools throughout the state. Variables controlled for in the models included percentage of students in special education, percentage of low income students (i.e., receiving free or reduced lunch), and percentage of minority students.

From these regression models, three estimates were produced: (1) actual, or observed, scale scores; (2) predicted, or expected, scale scores; and (3) residual, or difference in, scale scores. Residual scale scores are the difference between actual and predicted DSTP scale scores for a given grade in a given year. These residuals, or differences, indicate that the school in question is either performing at, above, or below other demographically similar schools (i.e., a residual of 0 indicates that the school performs at the average of all other similar schools); a negative residual means the charter school is performing worse than predicted, and a positive number indicates it is performing better than predicted.

Results. By grade, charter schools perform rather poorly at grades 3 and 5. Here most of the residual scores are negative. Over time, however, the fifth grade residual scores are improving or becoming less negative (note that the average annual change for residuals at grade five is +1.84). At grade 3, students in charter schools are losing ground to demographically similar traditional public schools; the average annual change in residuals is -0.82.

We saw the most improvements over time at grade 8. Initially, the residual scores were negative, but by 2003 they were consistently positive. At grade 10, we saw the highest actual scores and the highest residual scores. Over time, however, the average change in residuals decreased (i.e., the average annual change is -5.89), but the performance of charter school students at grade 10 remains far above the predicted scores.

As one might imagine, the DSTP results varied extensively by school. The appendices in the full report contain a complete set of results from the residual gains analysis that are broken out by school, grade, and subject.

The results from our analysis using a quasi-experimental design based on individual student data are rather identical to our less rigorous residual gains analysis. Although the residual gains methodology is recognizably limited, the findings from our analyses give credence to its use in evaluating the impact of reforms and new programs on student achievement, particularly when individual student data are not available. The residual gains analysis allows us to compare schools with other demographically similar schools and to examine relative change or growth over time. These two aspects make this approach far superior to simple cross-sectional analyses or studies that compare relative school performance with the state average rather than with demographically similar schools. Delaware is further ahead than most other states in terms of capturing and storing individual student data and then using the resulting data sets for evaluations and research. Because many other states do not warehouse student-level data or because they cannot make student-level data available for research or evaluation, the residual gains approach can serve as a suitable alternative in other states when individual student data are not available.

Impact of Charter Schools on Surrounding Public Schools

Charter schools potentially can have a variety of impacts—both positive and negative—on surrounding public schools. Commonly cited areas of impact include loss of students and funding, causing shifts in student demographics within the sending schools/districts. Charter schools also can

promote positive change in traditional public schools either through competition or by example. For example, the presence of charter schools or other choice options means that traditional public schools must compete to retain their students. Theoretically, this competition can force the traditional public schools to work harder to serve and educate their students. Similarly, the presence of innovative schools can be a source of learning or inspiration for traditional public schools.

Administrators from charter schools and local districts had somewhat mixed perceptions on the issue of whether or not charter schools were causing resegregation, an issue that has received a fair amount of publicity across the state. Our evaluation did track shifts in the demographic composition of school districts. Gradual changes are apparent, but it is not possible to link the presence of charter schools to changing demographics within the traditional public schools. The charter school enrollment patterns in the urban areas suggest that the charter schools recruiting largely minority students from surrounding district schools is being offset by other charter schools recruiting largely white students. In this way, the overall impact on the district schools by the presence of charter schools is believed to be minimal. In instances where charter schools are recruiting the highest performing students, however, it is likely that the sending schools are likely being negatively affected by the departure of exceptional students with resource-rich families. Charter schools are not the only form of school choice in the state, so sorting out the impact of charter schools on surrounding districts from the impact of other choice reforms (e.g., interdistrict choice programs and neighborhood schools initiative) is nearly impossible.

Officials from both charter schools and traditional public school districts agreed that the initiation of charter schools introduced competition into the education arena: competition for students, for funding, and for staff and resources. Philosophically, most agreed that competition was a healthy component and one that should drive improvements and innovation in public education for the common good of all students. However, several administrators pointed to the fact that few specific changes and improvements have been made in the traditional public schools in response to good charter school examples. In addition, some administrators professed concern that competition for students and the funding that follows were driving the wrong behaviors and overshadowing the potential benefits of sharing ideas for changes and improvements.

Dilemmas and Issues Related to Successful Charter School Reform

This report contains a summary of the relevant findings and a discussion of issues related to oversight of Delaware charter schools. Important questions are addressed such as, What factors or conditions facilitate rigorous oversight? What are the advantages and disadvantages of rigorous oversight?

Advantages and disadvantages of rigorous oversight. Many issues need to be considered and balanced when it comes to rigorous oversight of charter schools. Below is a brief list of some of the primary advantages and disadvantages of rigorous oversight, such as that pursued by the Delaware Department of Education. The main advantages include the following:

- More likely that only sound applications for charters are approved and charter boards are prepared to run a school

- ❏ More likely that poor-performing charter schools will close
- ❏ Less likely that management companies with high cost structures will remain
- ❏ Less likely that children and communities are negatively affected by poor-performing charter schools or untimely closure of charter schools

Disadvantages of rigorous oversight include these:

- ❏ Charter schools are less free to innovate.
- ❏ Charter schools have less autonomy and flexibility that may be necessary to ensure a more efficient and effective use of limited resources.
- ❏ Human and financial resources of the Delaware State Board of Education and Delaware Department of Education are disproportionately directed to charter schools that serve a small portion of the states' public school students.

Factors or conditions that facilitate rigorous oversight. The Delaware Department of Education is able and willing to monitor the performance and viability of the charter schools closely and hold them accountable to regulations and their specific performance agreements. The capacity for this type of oversight can be attributed to a number of factors including (i) small size of the state and scale of the reform, (ii) detailed and centralized accountability system, (iii) devoted and effective DOE staff, and (iv) timely and well-targeted technical assistance.

Conclusion

On the whole, our findings indicate that the charter school reform in Delaware is rather successful. The design and pace of expansion of the reform has allowed the State Board of Education and the Department of Education to learn over time and modify and improve regulations and oversight. The comparative studies we examined portrayed Delaware's charter school reform as a success relative to other states.

A number of negative or unanticipated outcomes need to be watched and considered carefully. These include accelerating the resegregation of public schools by race, class, and ability and the disproportionate diversion of district and state resources (both financial and human resources) from districts to the more recently established charter schools. Finally, attention must be given to those charter schools that are serving minority and low-income students, since a majority of them are lagging behind in performance and show signs that they are less stable and viable.

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Acknowledgments

The process of conducting this evaluation and preparing the year 3 report has been a team effort by numerous staff at The Evaluation Center. The work has benefitted from information and data provided by staff at the Delaware Department of Education and the 17 charter schools that comprise Delaware's charter school reform. Here, on this page of acknowledgments, I wish to recognize the many people who collaborated in the conduct of the evaluation or contributed to the preparation of the final report.

First and foremost, I want to recognize the assistance and collaboration of the charter school directors, teachers, and other staff at the charter schools who made time for us during our site visits, who completed surveys, and who shared documentation with the evaluation team. Representatives from several local school districts also made time to share information and insights with us. Representatives from the Charter School Network and from the Innovative Schools Development Corporation also made time to provide input to the study and to share information and insights regarding the finance of charter schools and the implementation of the reform.

Extensive support and assistance were provided to the evaluation team by staff at the Delaware Department of Education and the members of the charter school accountability committee. We benefitted from receiving very well-organized and comprehensive data from the Delaware Department of Education, whose staff were readily available to provide answers to our numerous questions. While DOE staff who provided assistance are too many to mention, particular recognition needs to be given to Ms. Babs Sutton, who headed the charter school office in 2006. During the planning phase and during data collection, input and information were provided by the Secretary of Education, Ms. Valerie Woodruff; the Deputy Secretary of Education, Dr. Nancy Wilson; and the Associate Secretaries of Education, Ms. Dorcell Spence and Ms. Robin Taylor. In the assessment office, guidance and feedback were provided by Dr. Wendy Roberts. Mr. Jerry Gallagher and Ms. Leah Jenkins supplied us with financial data and gave us valuable insight into education funding. These and other persons at the Department of Education also reviewed and provided comments on the report before it was finalized.

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The evaluation was commissioned and funded by both the Delaware State Board of Education and the Department of Education. Their decision to commission an external evaluation of the charter school reform reflects their genuine interest in improving the implementation and operation of the reform as well as the performance of the charter schools.

Gary Miron
Project Director

January 2007

Chapter One
Purpose and Conduct of the Evaluation

This report summarizes findings across the three-year evaluation of the Delaware charter school reform. This evaluation has been commissioned and financed by the Delaware State Board of Education (SBOE) and the Delaware Department of Education (DOE). The project was initiated in November 2003. Initial site visits were conducted in spring 2004, and the last round of data was collected in the autumn of 2006. Two earlier reports were prepared for this evaluation, a Year 1 report, which was prepared in December 2004, and a year 2 report that was completed in February 2006. This final report will include and build on results from the two previous years. Besides expanding upon and updating earlier findings, this final report also addresses new topics such as such as charter school finance. The scope and duration of this evaluation makes this one of the most comprehensive evaluations of charter school reform to date. The extensive data made available to us and the methods we developed and utilized for analyzing student achievement also makes this one of the most rigorous examinations of the impact of charter schools to date.

In this first chapter of the report, we review information regarding the purpose and conduct of the evaluation. The objectives or main evaluation tasks are addressed in the next section, followed by a description of data sources and methods for data collection. Limitations of the study and an overview of the structure of the report are contained at the end of this chapter.

1.1 Evaluation Questions

In the *first year*, the following tasks/topics were covered:

- ❏ Analysis of Delaware's charter law and regulations relative to other states that highlighted areas of strengths and weaknesses for the charter school applicants, charter holders, and the charter authorizers.
- ❏ Review of the time, effort, and expense devoted to compliance and oversight issues for applicants and authorizers and their impact on the charter schools as well as public education as a whole.
- ❏ Collection and analysis of teacher survey data that included teacher background characteristics, levels of satisfaction, and perceptions of quality and areas for improvement.
- ❏ Review and synthesis of evidence regarding the accomplishment of the mission found in the original charters, charter school annual reports, and other school level documentation for those schools in operation prior to the 2002-03 school year.

- ❑ A comparison of charters granted by individual school districts, and by state agencies or other central authorities to determine if there is any evidence that "chartering" closer to the community is more effective.
- ❑ Analysis of longitudinal data on students who remain in a charter school for more than one DSTP tested grade.

During the *second year* of the evaluation, the following tasks were addressed:

- ❑ Synthesis and descriptive analysis of charter school-level demographic data and comparisons with similar noncharter public schools.
- ❑ Collection and analysis of teacher survey data that included teacher background characteristics, levels of satisfaction, perceptions of quality, areas for improvement, and the extent of — and reasons for—teacher attrition.
- ❑ Review and synthesis of evidence regarding the accomplishment of the mission found in the charter school annual reports for those schools in operation during the 2004-05 school year.
- ❑ Longitudinal analysis of student-level test data on the state assessment (DSTP) comparing charter school students and matched noncharter school students.

During the *third and final year*, the following tasks/topics were covered:

- ❑ Collection and synthesis of critical legislative and oversight issues raised by key stakeholders in charter schools and district offices.
- ❑ Collection and analysis of teacher survey data that included teacher background characteristics, levels of satisfaction, and perceptions of quality and areas for improvement.
- ❑ Review and synthesis of evidence regarding the accomplishment of the mission found in the charter school annual reports prepared for the 2005-06 school year.
- ❑ Comparison of revenues and expenditures for charter schools and traditional public schools.
- ❑ Synthesis and descriptive analysis of charter school-level demographic data and comparisons with similar noncharter public schools.
- ❑ Analysis of gain scores on the Delaware Student Testing Program (DSTP) for charter schools and demographically and geographically similar noncharter public schools (based on school-level results).
- ❑ Longitudinal analysis of student-level test data on the state assessment (DSTP) comparing charter school students and matched noncharter school students.
- ❑ Description and discussion of key policy issues relevant to the performance and oversight of charter schools.

1.2 Methods of Data Collection

The Request for Proposals for this evaluation indicated that each charter school was to receive at least one site visit annually by the evaluation team for the purpose of interviewing the principals/directors and a sample of teachers to gather input for the evaluation questions. Checklists to guide the review of facilities and relevant documentation were also to be used. Interviews with representatives of local school districts and stakeholder groups would be conducted as needed to identify issues of concern and/or support. Based on these guidelines and reflecting the data needs expressed by the evaluation tasks, we used the following methods for collecting information during each of the three years of the evaluation:

1. Site visits to all 13 schools during the spring of 2004 and again in the spring of 2005. The third and final round of site visits was conducted in September 2006, instead of the spring 2006. This allowed us to visit the 4 new charter schools that had just opened in connection with site visits to the original 13 charter schools. During these site visits, we conducted interviews with charter school directors or principals at each school. When possible we also interviewed other administrators, teachers, and board members. We were sometimes informally able to talk with parents and students. In addition to interviews, the site visits provided the opportunity to collect relevant documents, and included brief observations of school activities and classroom lessons as well as a tour of the school facilities.

2. Interviews were also conducted with key informants and stakeholders outside of the charter schools such as (i) state-level policymakers, (ii) staff from the Department of Education, (iii) representatives of the charter school association and a charter school support and resource organization, and (iv) representatives of the school districts in which the charter schools reside.

3. Surveying of teachers and staff at 13 charter schools plus optional surveys of students and parents in a few of the schools. This was done using charter school questionnaires developed by The Evaluation Center staff, which include both closed- and open-ended questions.[1]

4. Review of documentation from the schools, the district, state-level organizations, the media, and the larger body of literature and research on charter schools.

5. Analysis of test data and available demographic data for the charter schools and relative comparison groups.

Efforts were made to help ensure that the charter schools were disrupted as little as possible by the data collection. We are aware that charter schools are of considerable public interest and that they are bombarded with requests for information that can drain the resources of their relatively small staffs. Therefore, we made efforts to use existing data that may be required for other reports. Also, in the course of our data collection we focused only on those issues that are important and necessary for this study and selected respondents who were considered to be knowledgeable about the issue(s) being addressed and who could contribute to the quality of the information/data that we collected.

Information for answering the key evaluation questions often included a variety of sources and a combination of qualitative and quantitative data/information. For example, we examined the level

[1] Separate school-level reports were prepared for each school based on the survey data we collected. The results were shared both in hard copy and electronically.

of satisfaction with the charter schools from the vantage point of teachers and administrators from our own data collection and—when available—we then reviewed satisfaction data collected from parents by the schools themselves. We also used a combination of qualitative (e.g., interviews) and quantitative (e.g., surveys) data to look at particular issues. We considered evidence of academic achievement from test scores as well as from self-reported accomplishments included in the schools' annual reports. Additionally, we asked stakeholders at each school about their school's success in fulfilling its mission and meeting its goals.

Details on the specific methods used in the study are elaborated throughout the report and are presented with their corresponding research findings. Some of the more technical methodological details, particularly as this relates to the analysis of student achievement data, are contained in the appendices.

1.3 Limitations to the Evaluation

A number of limitations to this study need to be weighed and considered when interpreting the findings. Below we describe the major limitations and—where appropriate—we discuss how we have addressed or compensated for the limitations.

Lack of Time on Site

Only one site visit per school was called for in the study and supported by the budget. This posed an important limitation in terms of firsthand knowledge of the schools. To compensate for this, we relied more heavily on the extensive school-level documentation and information we collected from both charter schools and from the Department of Education.

Sampling

While the overall response rate for the teacher/staff surveys was high when compared with other similar studies (i.e., between 76 and 79 percent of the teachers and staff returned a completed questionnaire each year), it is important to point out that the response rate was low in a few of the schools.

In the report, we sometimes refer to aggregate demographic or background data that is based on the teacher/staff surveys we administered. When doing so, we have been careful to explain the source of data since self-reported results from a sample of teachers typically yield different numbers than the official state teacher databases, which include audited data from all teachers, rather than a sample of data.

We did not survey students or parents directly, although a few schools used our questionnaires for these groups; we also had access to the results from parent surveys administered by the schools in the first year of the evaluation. We have made some references to data from these other surveys in our report, although these results were played down and were typically used to supplement findings based on our own data collection.

Informant Bias

Because of vested interests, there is the possibility of misleading information being provided by those we interviewed. Wherever possible, we tried to double-check information; or when references to financial issues or testing results were made, we attempted to confirm such information using the

data obtained from the Delaware Department of Education. Over the course of the three-year evaluation, it became clear that communication and networking among the charter schools had increased. This was apparent, for example, from the increasingly common responses we received from charter school directors regarding legislative and oversight issues.

Age of the Reform and the Schools

While two of the charter schools now have been operating for close to ten years, nearly half the schools have operated for less than four years. Thus, Delaware's charter school reform is one of the oldest in the nation, although a large portion of the charter schools are still relatively young. Because some of the schools have been in operation for a relatively short period of time, one must be careful in considering the evidence collected regarding their impact and effectiveness. Throughout the report, we have made an effort to break out findings by school which facilitates the examination of the schools by age. With each additional year of data, we obtain an increasingly complete picture of these schools and their ability to produce outcomes according to the goals they have set.

1.4 Structure and Overview of the Report

This report follows a logical structure with the descriptive chapters in the beginning followed by chapters that consider performance and impact. Among the descriptive chapters, we examine the charter school reform and how this compares with other states (chapter 2), the charter schools and the students they serve (chapter 3), teachers and staff that work in charter schools (chapter 4), and the relative revenues and expenditures for charter schools (chapter 5).

Among the chapters that examine performance and impact, we include chapter 6, which examines the extent to which charter schools are fulfilling their mission; chapters 7 and 8 that examine student achievement; and chapter 9 that looks at the impact of charter schools on surrounding districts.

The last chapter of the report covers conclusions and policy implications of the charter school reform in Delaware. Specifically, chapter 10 examines dilemmas and issues related to overseeing a successful charter school reform.

Chapter Two
Description and Comparative Review of the Delaware Charter School Reform

Charter schools are semiautonomous public schools founded by educators, parents, community groups, or private organizations that operate under a written contract with a state, district, or other entity. This contract, or charter, details how the school will be organized and managed, what students will be taught and expected to achieve, and how success will be measured. Many charter schools enjoy freedom from rules and regulations affecting other public schools as long as they continue to meet the terms of their charters. Charter schools can be closed for failing to satisfy these terms.

As of September 2006, 40 states, the District of Columbia, and Puerto Rico had enacted charter school legislation; and more than 3,600 charter schools were serving more than 1 million students across the country (approximately 2 percent of all students attending public schools). Charter school laws vary extensively from state to state and differ on several important factors, including who is allowed to sponsor charter schools, how much money charter schools receive for operational and facilities expenses, and whether the teachers in a charter school have to be certified.

Charter schools in Delaware are authorized by Del. C., Title 14, Chapter 5, which was enacted in 1995. The creation of the charter school legislation was intended to (i) improve student learning, (ii) encourage the use of different and innovative or proven school environments and teaching and learning methods, (iii) provide parents and students with improved measures of school performance and greater opportunities to choose public schools within and outside their school districts, and (iv) provide for a well-educated community. In 2002, the Department of Education recommended and the State Board of Education approved Regulation 275 to provide rules to govern the implementation of the charter school law. The Delaware charter school law was further revised in 2004.

An analysis of Delaware's charter school law and regulations relative to other states was conducted in order to determine its areas of strengths and weaknesses for charter school applicants, charter holders, and charter authorizers. Delaware's charter school law was compared with those of neighboring states including the District of Columbia, Maryland, Connecticut, Pennsylvania, New Jersey, and North Carolina. Among the resources used for the analysis were the state laws and regulations and secondary analyses conducted by organizations including the Center for Education Reform (CER, 2006) and the Education Commission of the States (ECS, 2006).

2.1 Basic Policy and Procedural Areas of Charter School Law

Although the contents of charter school laws vary from state to state, several basic policy and legal areas are addressed by most state charter laws. Below, we list 6 common areas in which we will compare charter school laws:

1. Charter school development and start-up
2. School status
3. Fiscal issues
4. Students
5. Staffing and labor relations
6. Accountability

Charter School Development and Start-Up

Among the topics generally covered in the area of charter development are (a) the number of schools allowed to be chartered; (b) eligible chartering authorities; (c) the appeals process, if any; (d) eligible applicants; (e) whether or not formal evidence of local support is required; (f) the recipient of the charter; and (g) the length of the initial charter.

Number of schools allowed. Delaware charter school law does not have a cap on the number of charter schools allowed. Like Delaware, Maryland, New Jersey, and Pennsylvania place no cap on the number of charter schools. Twenty-five states and D.C. have some type of cap on charter school growth. The District of Columbia has a yearly cap of 20 new schools. Connecticut has a limit of 24 schools, and North Carolina has a limit of 100 charter schools. The absence of a cap on the number of charter schools in Delaware is seen by charter school supporters as an advantage.

Eligible chartering authorities. Delaware charter school law allows the State Board of Education (SBOE) and local school boards to authorize or approve new charter schools. The other states in the comparison group, with the exception of New Jersey, also allow for multiple charter school authorizers. In Connecticut local charter schools must be approved by the local or regional board of education and the state board of education. State charter schools must be approved by the state board of education. The District of Columbia (DC) Board of Education and the Public Charter School Board (also in DC) may approve charter school applications. In Pennsylvania, only local school boards may approve charter applications. This is same law for Maryland, but the state board of education may step in and authorize charter schools under limited circumstances involving the conversion of "restructured schools." North Carolina permits local school boards, the University of North Carolina, or the state board of education to approve charter applications. Only in New Jersey is there a single authorizer—in this case, the state commissioner of education. The eligibility of multiple authorizers in Delaware can be seen as an area of strength for charter school applicants.

Appeals process. Delaware charter school legislation states that if an application for a charter school is made to the SBOE or a local school board and the charter application is not approved, such decision shall be final and not subject to judicial review. Like Delaware, Connecticut has no appeals process in place for charter applicants. Four states in the comparison group—Maryland, New Jersey, North Carolina, and Pennsylvania—have an appeal process. The District of Columbia has no stated appeals process, but decisions can be subject to judicial review. In North Carolina and New Jersey, denied applications may be appealed to the state board of education. In Pennsylvania applications denied by a local school board may be appealed to the state charter appeals board.

While the absence of an appeals process in Delaware may be considered a weakness from the point of view of a charter applicant, it may be seen as a strength from the point of view of a chartering authority that might have to spend time and resources assessing the same application more than once. Of course, applicants are permitted to resubmit their application the following year.

Eligible applicants. Delaware legislation is intended to encourage any person, university, college, or nonreligious, non-home-based, nonsectarian entity that can meet the necessary requirements to form a charter school. No private or religion-affiliated school may apply to become a charter school. Existing public schools also may be converted to charter schools. All the states in the sample allow existing public schools to be converted to charter schools.

The legislation for all of the states in the sample specifies who may apply to open a charter school. Like Delaware, a wide variety of applicants are eligible to open charter schools in the other states. Maryland's legislation specifies that the staff of an existing board, a parent or guardian, a nonprofit organization, a nonsectarian institution of higher education, or any combination of the above may apply for a charter. Pennsylvania's legislation is similar to Maryland's but also includes individuals, teachers, museums, corporations, associations, or any combination thereof as eligible to apply for a charter. In New Jersey teachers and/or parents and colleges, universities, and private entities in conjunction with teachers and/or parents are eligible to apply. In North Carolina a person, group of persons, and nonprofit corporation may apply. In Connecticut any person, association, corporation, organization or other entity, public or independent institution of higher education, local or regional board of education, two or more boards of education jointly, and regional educational service center may apply to start a charter school. Previously, the District of Columbia did not specify who may apply to open a charter, but it now states that eligible applicants include a person, group, organization, and postsecondary institution, including public, private, or quasi-private entities. As is apparent, all states in the sample allow a wide range of groups to be eligible to apply for a charter, which illustrates the strength of these states' charter school laws.

Evidence of local support. Evidence of local support usually is needed only for conversions of public and private schools, and not all state legislation addresses this issue. Delaware charter school legislation stipulates that a public school may be converted to a charter school only by approval of the board of the school district in which it is located and only if the charter application received the approval of more than 50 percent of the teachers and more than 50 percent of the parents with a child or children under the age of 18 years residing in the school's attendance area. The vote by eligible parents is for those that attend a public meeting held for the specific purpose of voting on the proposed conversion.

Evidence of local support is not specified in Maryland law, but is specified in district charter schools' policies. New Jersey and the District of Columbia, like Delaware, require formal evidence of local support for conversions. In New Jersey, 51 percent of teachers and 51 percent of parents must support conversions. In the District of Columbia, 51 percent of teachers, two-thirds of parents of minor students, and two-thirds of adult students must support conversions.

In Pennsylvania a majority of teachers and parents must support conversions. In addition, all charter applications must demonstrate local support. Similarly, North Carolina requires a majority of teacher and uncertified staff at the school and a significant number of parents to support conversions. Then, districts must provide and sponsors must consider impact statements. Connecticut's legislation is more stringent. Connecticut requires that a public hearing and survey be conducted to determine local interest prior to approval by the local school board for a "local charter

school." For state charter school applications, the legislation requires a public hearing in the affected district and solicitation of comments from the local school board and contiguous school boards.

The requirement of local support prior to approval of existing school conversions, while time-consuming and costly, ensures that local support in Delaware may be seen as a strength. Since it provides a safeguard and early warning for district schools and students, this is also beneficial for charter school applicants and authorizers who need to predict potential enrollment and public support and also to protect the interests of existing school students and their parents.

Charter recipient. Delaware legislation defines the recipient of the charter as the charter school board of directors. The legislation of the other states in the comparison group contains similar language. Only a few states allow private or for-profit entities to directly apply for and hold the charter. Delaware is not unique in this respect, and the restriction on who can hold a charter protects the public interest and vests power in the charter school governing boards.

Length of the initial charter. With the passing of Senate Bill No. 330 in 2004, Delaware charters are now granted for an initial period of 4 years of operation and are renewable every 5 years thereafter. Previously, the initial charters were for 3 years in Delaware. Maryland is the only state that leaves the term of the initial charter to the local board's discretion. The other states in the comparison group have longer terms of the initial charter except for New Jersey, which is also 4 years. North Carolina and Pennsylvania provide initial charter contracts for up to 5 years, and Connecticut's initial charter contract is for 5 years with renewals up to 10 years. The District of Columbia's is more lenient and grants an initial charter contract for 15 years with at least 1 review every 5 years. Delaware's 4-year initial charter term might be seen as a weakness for charter holders and charter authorizers because of the need for relatively frequent reauthorization efforts including application and review. However, having a shorter initial charter makes it easier for authorizers to stop a school that clearly is not going to survive. A longer initial charter term, with periodic review, might be more cost-effective, although a careful study of the experience of states with longer initial terms would be informative.

School Status

Among the topics generally covered in the area of school status are how charter schools are *legally defined*, whether or not they receive *automatic waivers from laws*, the extent of their *legal autonomy*, the structure and manner in which they are *governed*, whether or not they are subject to *open meeting laws*, and—finally—the extent to which they receive *technical assistance*.

Legal status. Each of the seven states in the sample have different legal status when it comes to owning property, suing and being sued, incur debt, control budget and personnel, and contract for services. Delaware charter schools have limited legal autonomy. The Delaware Department of Education has authority to disseminate rules and regulations regarding operations and procedures. New Jersey charter schools also have limited legal autonomy. Connecticut and Maryland charter schools have no legal autonomy, whereas the District of Columbia charter schools do have legal autonomy. In Pennsylvania, the charter schools have legal autonomy, but it depends on the district in which they are located. North Carolina charter schools have legal autonomy, but state and local officials have the authority to exercise additional oversight.

Automatic waivers from most education laws, regulations, and policies. According to the text of the law, Delaware charter schools are "free of most state and school district rules and regulations

governing public education" (Title 14, Chap 5, § 501). Paragraph 505 of the law, which addresses exemptions from rules and regulations, states the following:

> (a) Except as otherwise specified in this chapter and title, a charter school is exempt from all provisions of this title except the provisions of Chapter 31, and all regulations of any board of education of a reorganized school district, although a charter school may elect to comply with 1 or more such provisions.
>
> (b) The Department of Education shall have the authority to promulgate rules and regulations that would further define the application, approval criteria and processes.

Therefore, while Delaware charter schools have an automatic waiver of most laws and regulations for traditional public schools, the Department of Education has authority to establish rules and regulations regarding operations and procedures as they relate to charter schools. Charter schools in the District of Columbia and Pennsylvania similarly are exempt from most state and district education laws, regulations, and policies. North Carolina charter schools are exempt except for the local district-sponsored charters that must negotiate for waivers from district rules. In New Jersey exemptions from particular laws, regulations, and policies may be requested in charter applications; and in Connecticut and Maryland, charter schools, like other public schools, may seek waivers from the state board of education on a case-by-case basis. Automatic waivers in Delaware can be considered a strength from the point of view of charter applicants and holders because it provides flexibility and expedites the approval process. On the other hand, the extensive rules and regulations promulgated by the Delaware Department of Education can be seen as overly restrictive.

Governance. The board of directors of a Delaware charter school shall be deemed public agents authorized to control the school. The charter school boards are required to have both parents and teachers represented. Further, no person shall serve as a member of a Delaware charter school board of directors who is an elected member of a local school board of education. The board of trustees is the governing agent of charter schools in New Jersey, Pennsylvania, and the District of Columbia. Pennsylvania charter school law requires that the board of trustees be established according to the terms in the charter and that no member of a local school board may serve on the board. In New Jersey, if the charter school is established by a private entity, its representatives may not constitute a majority of the board. The board of trustees for District of Columbia charter schools must have an odd number of members, not to exceed seven, and must include at least two parents of enrolled children. The majority of board members must be District of Columbia residents. Governance of charter schools in Maryland, North Carolina, and Connecticut is specified in the charter agreement. Teachers and parents of students must be represented in the governing body of Connecticut charter schools. Delaware's arrangement regarding governance is a strength in that parents and teachers are involved.

Open meetings. Boards of directors in Delaware charter schools are subject to open meeting laws, as are all but one state in the sample. District of Columbia charter school law legislation does not address this issue. Legislation subjecting charter school governing bodies to open meeting laws seems to be a strength for Delaware charter school parents and teachers because it provides broad access to the governance decision-making process.

Technical assistance. Technical assistance may be provided to Delaware charter schools by the department of education upon request, as stipulated in legislation. Connecticut and Maryland has the

same state policy. North Carolina charter school legislation stipulates that technical assistance be provided by the department of education as well as by nongovernment entities upon request. Legislation in the remaining states in the sample does not address technical assistance, but technical assistance typically is provided by the department of education and by nongovernment entities upon request. Technical assistance from the department of education is a strength for charter school applicants, charter holders, and charter authorizers. Technical assistance strengthens the capacity of applicants and charter holders to meet their obligations and provide adequate services to students and their parents. Nonetheless, a conflict of interest may be seen when the same entity (i.e., DOE) is expected to provide technical assistance to charter schools at the same time it oversees these schools. Some states, such as Pennsylvania, have shared the burden of technical assistance between the state department of education and charter school resource centers.

Fiscal Issues

Fiscal issues for charter schools include (a) the level of funding, (b) types of funding provided, and (c) the amount of fiscal independence and autonomy allowed each charter school.

Level of funding. The level of funding provided to charter schools varies widely. Delaware, District of Columbia, and North Carolina charter schools receive 100 percent of computed state funding based on the state unit funding formula and 100 percent of local funding based on the previous year's per-pupil expenditure (in the student's district of residence), which follows the student.

In Connecticut, funding for local charter schools is specified in the charter. For state charters, 110 percent of state and district operations funding follows students, based on average district per-pupil revenue. However, charter school funding is directly dependent on the state's annual appropriation, which fixes available funds at lower levels. In New Jersey, charter schools receive 90 percent of the lesser of (a) state and district operations funding based on average district per-pupil revenue or (b) state-mandated minimum per-pupil spending. The district also pays categorical aid.

Pennsylvania funding for charter schools follows students, based on the average district per-pupil budgeted expenditure of the previous year. Depending on the district, charter school funding will be 70-82 percent of the district's per-pupil revenue. For regional charters and nonresident students, funds come from the district of the student's residence. Charters receive additional funding for special needs students or may request the intermediate unit to assist in providing special needs services at the same cost level as provided to district schools.

Maryland's legislation does not necessarily guarantee full funding for students. The legislation maintains that the county board shall fund students enrolled in a charter school at a rate "commensurate" with other local public schools, resulting in an arbitrary funding mechanism district by district.

Delaware legislation providing charter schools with 100 percent of computed state and local funding is a strength for charter school applicants and for existing charter schools because it provides the schools and students with resources equal to those of other public schools. Students and parents are not penalized for choosing charter schools.

Transportation funding. Delaware charter schools are eligible to receive support or assistance for student transportation. Charter schools may request the local district to provide transportation for their students residing within the local district's boundaries on the same basis offered to students

attending schools operated by the district. Charter schools receive 80 percent of the county vocational-technical school district rate. This funding rate is actually higher than the regular pupil transportation for the k-12 districts.

In most cases charter school students are eligible for transportation assistance with the exception of Maryland and North Carolina. Maryland's legislation does not address transportation. North Carolina charter schools must provide the same transportation services as other district public schools, but charter schools do not receive reimbursement from the district for that service. Transportation is provided by the district to charter schools in New Jersey and Pennsylvania (with some limitations). In Connecticut, transportation is provided by the district for students residing in the district in which the charter is located unless other arrangements are specified in the charter. Districts, at their discretion, may provide transportation for resident students attending a charter school outside their district and will be reimbursed by the state for reasonable costs for such services. In the District of Columbia, charter school students, like regular public school students, are eligible for reduced public transportation fares. Delaware legislation regarding transportation assistance is a strength for charter school students and parents because it provides reasonable funding and removes possible barriers to charter school attendance.

Facilities funding. Delaware districts must make unused buildings available for charter schools. This is potentially a strength, although there is no abundance of unused buildings to share. In terms of facilities, the District of Columbia and North Carolina charter schools receive some assistance with facilities acquisition. District of Columbia charter schools have preference over other applicants for vacant district buildings. In North Carolina the school district may lease or provide free-of-charge facilities for charter schools. State facility leasing funds are available to charter schools. Maryland, New Jersey, and Pennsylvania do not provide facilities assistance. Connecticut does not provide facilities assistance, but when a state charter school is renewed, it is eligible for a one-time grant of $500,000 to assist it in financing school building projects, general improvements in its school building, and repayment of debt incurred for prior school building projects. In addition, charter schools may apply for low-interest loans from the Connecticut Health and Educational Facilities Authority.

The Delaware requirement that districts make unused buildings available to charter schools is a strength for charter school applicants. The cost involved with securing a building is a challenge for most charter applicants. Having an unused building available to rent may make it easier for a group to start the charter process. In addition, the legislation may also improve the revenue stream for districts with unused buildings. A survey of all the states with charter school legislation reveals that little more than half (55%) of them provide facilities funds or other facilities assistance.

Start-up funding. Although Delaware charter schools may apply for federal start-up funds, no state funding is available specifically for the renovation or construction of facilities. Like Delaware, none of the states in the sample provide start-up finds, although charter applicants are eligible for federal start-up grants in all the states. The failure to supply additional state start-up funds may be seen as a weakness, because charter school applicants are required to use a large part of their funding before state or district funding is available. Across the U.S. 24 percent of the states with charter school legislation provide start-up and/or planning grants to charter schools. Four other states provide loans. The lack of start-up funding is a serious obstacle for charter applicants.

Fiscal autonomy. Delaware charter school legislation allows the charter schools fiscal autonomy as does legislation enacted by all the states in the sample with the exception of Maryland, which has

limited fiscal autonomy. Delaware charter schools, however, must operate within the state finance and purchase system as do other public entities. In Connecticut, although charter schools have fiscal autonomy, state officials still maintain some control over funding, as specified in the school charter.

Student Enrollment

Student issues include how schools are to address eligibility and preference for enrollment. Delaware legislation mandates that all students in the state are eligible to attend charter schools. Preference may be given to these students:

- ❑ siblings of enrolled students
- ❑ students attending an existing public school converting to charter status
- ❑ students residing within a 5-mile radius of a new charter school
- ❑ students residing within the regular school district of a new charter school
- ❑ students who have a specific interest in a new charter school's teaching methods, philosophy, or educational focus
- ❑ students who are at risk of academic failure
- ❑ children of founders and employees

The other states in the sample, with the exception of Maryland,indicate that all students in the state are eligible to attend charter schools; and each state allows charter schools to give preference for enrollment to one or more categories of students. Maryland's legislation does not provide enrollment requirements or preferences. The most common categories for preference are listed below:

- ❑ siblings of enrolled students
- ❑ students attending an existing school converting to charter status
- ❑ students residing within the school district or within attendance boundaries
- ❑ children of employees, founders, and board members

Connecticut is also rather unique in that it places caps on school size; charter schools are not reimbursed for more than 250 students unless a special exemption has been arranged. In Connecticut, all charter schools are expected to have recruitment strategies that seek to reduce racial and socioeconomic isolation. When it comes to admitting students, however, Connecticut follows federal guidelines that indicate that charter schools must conduct a lottery if oversubscribed and may not give preference by race or family income. North Carolina requires that after one year, charter schools must reasonably reflect racial balance of the district or, if serving a special population, must resemble the balance of that population in the district.

Education Commission of the States (ECS) reports that 85.4 percent of the states with charter legislation specify the categories of students that may be given preference for enrollment. Legislation that defines categories of students who are to be given preference for enrollment can be seen as a strength for charter school parents and parents of children in schools applying for a conversion. This legislation protects the interests of students and parents who may decide to enroll in a converted

school and those of parents with children already enrolled in charter schools who wish to enroll additional children.

Staffing and Labor Relations

Staffing and labor relation topics include (a) proportion of teachers that must be certified, (b) which labor relations laws apply, and (c) other staff rights and privileges.

Teacher certification. Delaware charter school legislation states that unless otherwise provided in Section 507, teachers working in charter schools shall hold an appropriate teaching certificate and license. Some leeway on teachers certification for early grades is permitted.

With the exception of the District of Columbia where teachers in charter schools do not have to be certified, the states in the sample require that teachers be certified, although the percentage of uncertified teachers allowed varies. In Connecticut at least 50 percent of a charter school's teachers must have standard certification, and up to 50 percent of teachers may have alternative certification or temporary certification and be working toward standard certification. In Pennsylvania up to 25 percent of teachers may be uncertified. North Carolina allows up to 25 percent of teachers in grades K-5 and up to 50 percent of teachers in grades 6-12 to be uncertified.

Only four states in the United States do not require teachers in charter schools to be certified: the District of Columbia, Arizona, Georgia, and Texas. Delaware's legislation appears to be consistent with that of comparable states. This provision grants some flexibility to charter seekers and charter holders while still ensuring competent instruction for students.

Collective bargaining. Delaware charter school legislation allows employees of charter schools to have the same right to organize and bargain collectively as employees of other public schools. Although no conversion charter schools exist in Delaware, if they did, the employees of a school would not be allowed to be part of any collective bargaining unit that represented employees of the school before it was converted to a charter school.

Similarly, the legislation in Pennsylvania and the District of Columbia states that a charter school's teachers are not covered by school district collective bargaining agreements but may negotiate as a separate unit. Charter school teachers in Connecticut, Maryland, New Jersey, and North Carolina are covered by the school district's collective bargaining agreement, although variations exist. In Connecticut and Maryland a local charter school's teachers would be covered by the school district's collective bargaining agreement, but such agreement may be modified by a majority of charter school teachers and the charter school governing council. A state charter school's teachers may negotiate as a separate unit with the charter school governing council or work independently. In New Jersey, teachers in converted public schools are covered by the school district's collective bargaining agreement. Teachers in start-up schools may remain covered by the school district's collective bargaining agreement, negotiate as a separate unit with the charter school's governing board, or work independently.

In the U.S., the majority of states with charter school legislation (58%) exempt charter schools from school district collective bargaining agreements. Legislation freeing charter schools from the district's collective bargaining agreement and allowing school employees to form their own collective bargaining unit can be perceived as a strength of the legislation because charter holders and employees have the flexibility to negotiate their own working conditions.

Staff rights and privileges. Delaware charter school legislation allows teachers in traditional public schools to have a one year leave of absence to work in charter schools that are still in their first year of operation, unless specified otherwise in the collective bargaining agreement. The other states in the sample with the exception of Maryland similarly allow teachers a leave of absence to teach in charter schools, although the length of the leave varies. Maryland does not specify leaves of absences from the district in its legislation. North Carolina teachers may have a leave up to six years. New Jersey teachers may have a leave of absence up to three years, Connecticut and the District of Columbia up to four years, and Pennsylvania teachers up to five years. Delaware legislation may be seen as a weakness in this area because of the relatively short leave of absence allowed. A longer leave of absence might be seen as a greater strength to permit teachers more flexibility and help ensure that more experienced teachers seek employment in charter schools. As it stands, we have not learned of any teachers who have taken advantage of this opportunity to take a leave of absence to work at a charter school.

Delaware's charter schools may choose to be covered by the state retirement system or choose another retirement system. In Connecticut, New Jersey, and Pennsylvania, charter school teachers are required to participate in the state retirement system. The District of Columbia allows a charter school to establish a retirement system for its employees, and North Carolina's charter school teachers have the option to participate in the state system. School boards also decide whether or not to participate in the state system. The Delaware legislation can be seen as a strength because it gives prospective charter school teachers access to an attractive and well-established retirement system.

Accountability

Accountability issues include (a) whether or not charter schools are held accountable to the state's standards and assessments, (b) reporting requirements, and (c) charter renewal and revocation issues.

Application of state standards and assessments to charter schools. Delaware charter school legislation requires charter schools to set goals for student performance and utilize satisfactory indicators to determine whether its students meet or exceed such goals and the academic standards set by the state. The indicators shall include the assessments required for students in other public schools, although the charter school may adopt additional performance standards or assessment requirements.

Similarly for the states in the comparison group, state standards and assessments are applicable to charter schools. In the case of the District of Columbia, districtwide standards and assessments are applicable to charter schools. This aspect of Delaware legislation can be seen as a strength because it holds charter schools accountable for the same level of evidence of student learning as other public schools in the state.

Reporting requirements. Delaware charter school legislation requires charter schools to prepare annual reports and undergo annual financial audits. The annual report is to be submitted to the approving authority, the department of education, and the state board of education. In turn, the legislation requires the state department of education to prepare an annual report for the governor and legislature. Other charter schools in the sample must prepare annual reports and are subject to financial audits. All states in the sample, with the exception of the District of Columbia, require the state education agency to report to the legislature on the effectiveness of the charter schools. Maryland also requires that the annual report be submitted to the parents/guardians of the students.

Pennsylvania law requires that the secretary of education commission an evaluation by an independent consultant. The consultant is to make recommendations to the governor, secretary, and general assembly on whether or not the program should continue, be modified, expanded, or terminated. Requiring annual reports and financial audits can be viewed as strengths of the legislation because it provides a basis for charter school accountability.

Charter renewal and revocation. Four years after a Delaware charter school has commenced its instructional program and not later than every five years thereafter, the approving authority shall, upon notice to the charter school, review the performance of the charter school to determine its compliance with its charter. The charter school legislation lists grounds for terminating a school's charter. Similarly, the other states in the sample define the renewal process and list the grounds for terminating the charter. This process appears standard and can be seen as a strength because it protects taxpayers and the students and families involved from fraud or substandard operation.

2.2 Summary of Research that Rates and Ranks Charter School Laws

In this section, we summarize the findings from other studies that have rated and ranked charter school laws based on their perceived strength. Particular attention is given to the rating framework established by the Center for Education Reform (CER). The CER is an advocacy group for charter schools that is convinced that the best charter school laws are those that grant the most autonomy to the schools and ensure that no limitations are placed on the growth and expansion of charter schools. Each year, CER updates and revises its ratings and rankings of state charter school laws. Its ratings are based on the text of the law and not the manner or degree to which the laws are applied or enforced in each state.

CER assigns grades to each charter school state and region (i.e., District of Columbia and Puerto Rico) on the basis of the strength of its charter school laws. Each state or region receives a grade of A through F. Laws with a grade of A are deemed to be very permissive or least restrictive, and laws with an F are deemed to be very restrictive. The strength of a charter school law is defined by how restrictive it is based on 10 different factors such as the number of schools allowed, waivers from regulations, autonomy, and funding. On each factor, the state's charter school law is graded on a scale of 1 through 5; a maximum of 50 points can be earned. Delaware, the District of Columbia, Pennsylvania, and North Carolina were determined by CER to have strong to medium strength laws (Grades of A and B). Connecticut, Maryland, and New Jersey were determined to have weak laws.

Delaware scored a total of 44.5 points out of 50 possible points, giving it an A and a ranking of third as compared to all states and regions in 2006 (see Table 2:1). In 2002, Delaware's charter school law ranked fourth. In the sample of comparison states or charter school laws, only the District of Columbia has stronger charter school legislation.

Table 2:1 Grading and Ranking of Charter School Laws by the Center for Education Reform

State/Region	Grade in 2002	Rank in 2002	Grade in 2006	Total Points in 2006	Rank in 2006
Delaware	A	4	A	44.5	3
Connecticut	C	28	C	23.0	31
District of Columbia	A	3	A	46.5	1
Maryland	D	36	D	13.5	36
New Jersey	B	17	C	30.0	20
North Carolina	B	12	B	35.5	15
Pennsylvania	B	13	B	37.25	11

Delaware received the highest possible scores by CER in the following six areas in 2002: (i) number of schools allowed—states that permit an unlimited or substantial number of charter schools score high; (ii) eligible charter applicants—states that permit a variety of individuals and groups to start charter schools score high; (iii) automatic waiver from state and district laws; (iv) guaranteed full per-pupil funding—states that guarantee 100 percent of per-pupil funding score high; (v) fiscal autonomy—states that give charter schools full control over their own budgets score high; and (vi) exemption from collective bargaining agreement/district work rules—states that give charter schools complete control over personnel decisions score high. In 2006, CER also gave Delaware a 5 for providing automatic blanket waiver from most or all state and district education laws, regulation, and policies. CER asserts that this waiver encourages more activity by the charter schools. Table 2:2 contains scores and ratings by specified criteria.

Delaware received 4 of 5 points in two areas, (i) number of new starts—states that permit new schools to score higher than states that permit only conversions; and (ii) schools may be started without evidence of local support—states that permit new charter schools to apply without proving local support score high.

Delaware received 3.5 of 5 points for allowing multiple chartering authorities—states that permit a number of authorizing entities score high. The rating for legal/operation autonomy dropped from a 4.0 to a 3.0. The definition for this rating is that the state allows charter schools to be independent legal entities that can own property, sue and be sued, incur debt, control budget and personnel, and contract services. CER asserts that states with higher ratings are encouraging charter schools to have more control and conduct more activity, including controlling their own enrollment numbers.

These high scores indicate that Delaware's charter school law is strong from the point of view of charter school applicants and charter school holders. To support new charter applicants, the Delaware charter school law has no cap on the total number of schools, allows conversions as well as new starts, and provides for multiple chartering authorities. To support the autonomy of charter holders, the Delaware charter school law guarantees full per-pupil funding; allows for a high level of fiscal, legal, and operational autonomy; provides waivers from state and district laws; and permits exemption from collective bargaining agreements and district work rules.

Table 2:2 Ranking Scorecard Adapted from the Center for Education Reform, 2006

Criteria	*DE*	*CT*	*DC*	*MD*	*NJ*	*NC*	*PA*
Number of schools allowed	5.0	1.0	5.0	1.0	5.0	2.0	5.0
Multiple chartering authorities	3.5	1.0	4.0	1.5	3.0	3.0	1.5
Eligible charter applicants	5.0	4.0	5.0	4.0	4.0	5.0	5.0
New starts allowed	4.0	4.0	4.5	4.0	4.0	4.5	4.5
New school may be started without evidence of local support	4.0	1.0	4.0	1.0	3.0	3.0	3.0
Automatic waiver from state and district laws	5.0	1.0	5.0	0.0	1.0	4.0	4.0
Legal/operational autonomy	3.0	1.0	4.5	0.0	2.0	3.0	3.0
Guaranteed full per-pupil funding	5.0	3.0	4.5	1.0	2.0	4.0	3.0
Fiscal autonomy	5.0	3.0	5.0	1.0	3.0	4.0	3.0
Exempt from collective bargaining agreement/district work rules	5.0	3.0	5.0	0.0	3.0	3.0	5.0
Total	44.5	22.0	46.5	13.5	30.0	35.5	37.0

As noted earlier, only the District of Columbia had a higher score than Delaware among the comparison groups of states we used. The remaining states in the sample—Maryland, North Carolina, Pennsylvania, New Jersey, and Connecticut—all scored lower than Delaware on the CER scorecard. Connecticut scored considerably lower than the other ranked states in the sample. There was a high level of agreement between the states in the sample in four areas:

1. Number of schools allowed (DC, DE, PA, and NJ all scored either 4.5 or 5)
2. Eligible charter applicants (DC, DE, NC, and PA all scored 5)
3. New starts allowed (all six states scored either 4.5 or 4)
4. School may be started without evidence of local support (DC and DE scored 4)[1]

There was a lower level of agreement between the ranked states in six areas:

1. Multiple chartering authorities (DC scored 4; others ranged from 3.5 to 1)
2. Automatic waivers from state and district laws (scores ranged from 5 to 1. DC and DE scored 5, and NC and PA scored 4)
3. Legal/operational autonomy (DC scored a 4.5. DE, NC, and PA scored 3.)
4. Guaranteed full per-pupil funding (scores ranged from 5 to 2. DE scored 5.)
5. Fiscal autonomy (scores ranged from 5 to 2. DE and DC scored 5.)

[1] Delaware requires community support for public conversions but not for new start-ups.

6. Exempt from collective bargaining agreement/district work rules (scores ranged from 5 to 3. DE, DC, and PA scored 5)

Although the CER rankings imply that strength in a state's charter school law is a positive quality, others disagree. For example, it can be argued that excessive permissiveness in charter school laws may lead to a lack of accountability, potential for discrimination, fiscal irresponsibility, and the proliferation of poorly performing charter schools (Miron & Nelson, 2002). A synthesis of 17 studies of student achievement in charter schools (Miron & Nelson, 2004) revealed that there was no relationship between CER's ratings on the "strength" of charter school laws and their impact on the performance of students on standardized tests.

While the CER ranking is most commonly cited, there are other ranking or rating systems, including the American Federation of Teachers (1996), Miron (2005), Scott and Barber (2002), and Chi and Welner (in press) which have also evaluated charter school laws through criteria that crossed over or differed from CER. Chi and Welner (in press) assert that there is an arbitrariness of any given ranking system; therefore, the reader needs to have a complete understanding of the ranking criteria in order to make good use of any of the evaluation approaches. They note that CER emphasizes autonomy and growth of charter schools, Miron focuses on the empirically derived criteria of effectiveness of charter schools, AFT emphasizes the broad benefits to public education by charter schools, and Scott and Barber focus on competing values of charter schools.

The ranking systems prepared by Miron (2005), CER (2006), and Chi and Welner (in press) all include Delaware. Even though they use differing criteria to rate charter school laws, these three alternative rating systems all agreed that Delaware's law is "strong." While we have described the CER criteria above, we shall now provide a short description of the other two ranking systems that include Delaware.

Miron (2005) argued that state charter school laws should be judged by their outcomes and not by the amount of autonomy granted or the structural conditions present that lead to increased numbers of charter schools. Findings from six state charter schools' evaluations were examined to identify and explain the key features of strong charter school laws and key state factors that are related to strong laws. Among the six states, Delaware and Connecticut were found to be highly selective in approving applications for charters. These two states have only two authorizers. In addition, both states have maintained a small number of charter schools. In analyzing rigor of oversight, Delaware and Connecticut again were established as having high rigor of oversight, meaning that these two states require systematic collection of data (i.e., annual reports) and that they have the ability and willingness to act on these data. Lastly, Miron found Delaware's funding formula for students to be good because the charter schools received relatively similar levels of revenues as did the traditional schools.

Miron (2005) found that states with extensive involvement by for-profit management companies have poorer results in terms of performance and accountability. Chi and Welner (in press) agree with Miron's findings and thus rewarded states that had legislative provisions prohibiting for-profit organizations from applying for charter schools. From the criteria chosen by Chi and Welner, which were based on their perspectives and values, they found that the charter school laws in Nevada and New Jersey best reflected the original goals of charter school policies. Based on these criteria, Chi and Welner (in press) gave Delaware an overall grade of A in their study. New Jersey was ranked number two among the 41 states, while Delaware was ranked number nine. New Jersey received a

B and the District of Columbia received an A in the CER study. However, the District of Columbia received a D-/F+ in the Chi and Welner study. Chi and Welner also assigned a C to Connecticut and C-/D+ to Pennsylvania.

Summary of Strengths and Weaknesses

Delaware's charter school legislation has many areas of strength for charter school applicants, charter holders, charter authorizers, students, and their parents. A comparison of Delaware legislation with comparable states and an analysis conducted by the Center for Education Reform revealed these areas of strength:

- ❑ no cap on the number of charter schools
- ❑ multiple charter authorizers
- ❑ wide range of eligible charter applicants
- ❑ legal autonomy
- ❑ no requirement of evidence for local support for new start-up charter schools
- ❑ waivers from most education laws, regulations, and policies
- ❑ full funding
- ❑ teacher certification requirements
- ❑ collective bargaining exemption
- ❑ teacher access to state retirement system
- ❑ teacher leave of absence, although only for 1 year
- ❑ application of state standards and assessments
- ❑ reporting requirements

While the examination of existing legislation did not reveal any serious weaknesses, a few areas might be looked at more closely for possible revision: (i) longer term of the initial charter; this was extended to 4 years in the summer of 2004, but most states have an initial contract for 5 years, and (ii) additional start-up funds and financial support for facilities

2.3 Thoughts From Charter School Administrators Regarding the Delaware Charter School Legislation and Regulations[2]

The Delaware charter school administrators who were interviewed in 2006 presented a lot of thoughts, perceptions, and recommendations about charter school legislation and how the legislation is implemented by the Department of Education (DOE). We found that the perspectives varied depending on how long the charter school had been in operation. The "older" or more established charter schools perceive that the charter school legislation and regulations are bureaucratic and filled with too much accountability, whereas the newer charter schools appeared more tolerant of the legislation. Many senior administrators at the charter schools stated that the key concern is not with the legislation but the manner in which it is interpreted by the current legislature and DOE. The issues brought up by the newer charter schools deal with how the legislature has determined the different types of funding formulas.

[2] The data for this section are based on interviews with charter school administrators and staff, as well as with representatives of the charter school advocacy or support groups.

Three general areas were identified as being of particular concern for the charter schools: (i) revisions to the legislation, (ii) oversight, and (iii) teachers. Some of these areas also were pointed out by DOE officials and representatives of local districts as being problematic. The funding issues that were brought up by the administrators will not be addressed in this chapter because they are covered in Chapter 5.

Revisions to the Legislation

Delaware enacted its charter school law in 1995 (Delaware Code Title 14, Chapter 5). The code was revised in 2004. Charter school administrators, especially from the established charter schools, assert that the Department of Education (DOE) and legislature need to review and revise the initial charter school laws and roll back much of the regulations that have been put in place. One administrator stated that the regulations "have come a long way versus 10 years ago. The law is sufficient. The oversight by DOE for charter schools has improved. However, there is a difference in opinion [between charter schools and DOE] regarding freedom. Charter schools need more freedom. Without the freedom, charter schools would turn into traditional public schools. The law needs to be revisited as it is 10 years old and needs to be updated." Another administrator added that the current legislation is "Poor. Eleven years ago it was excellent, but they haven't made any changes to initial legislation even though there have been many changes." One administrator stated, "The original law and its intent are excellent. However, it has been undermined by people who think they are doing what's best for Delaware." Therefore, the issue for most charter school administrators is how the law is interpreted by DOE and the Delaware legislature.

Looking beyond Delaware's legislation and regulations, an administrator brought up the fact that the federal government has implemented the new regulations based on NCLB, which has affected state regulations. This administrator stated that "the charter law is good. It is designed to expand school choice. But the regulations thwart the goal of charter schools based on federal and state regulations. The regulations are designing all schools to be the same."

Oversight

As mentioned earlier, some administrators stated that the legislation was not the problem; it was how the laws were interpreted by DOE. Most charter school administrators, especially from the established schools, reported that the DOE's oversight is somewhat overbearing or oppressive due to frequent visits and requests for information. As highlighted through the different comments, the administrators have different perceptions about oversight than the state Department of Education or Board of Education. Generally, the views of the charter school administrators are not very different from the first year of the evaluation.

One administrator thinks that DOE is the barrier to innovation because DOE wants charter schools to do everything their way. "Every time we try to do something, DOE makes us conform to their practices. DOE still hasn't figured out how to improve." This administrator does not want to play their games or dance through their hoops, resulting in not being able to improve the quality of his school. Another administrator stated that "There is a great attempt at educating everybody, but the government wants to fit all kids in one mold. Their hand is too close to the school."

Another administrator put it this way, "DOE is a bureaucracy, the largest in the state, and they treat everyone the same. They need to streamline their processes because they are not efficient. And each charter is different, but there is the same oversight by DOE for new and old charter schools. If the school is doing well, financially and academically, why audit?" He used Christiana School District as an example. The district had a 14 million dollar shortfall, but there was no oversight by DOE and the state legislature bailed the district out with money to cover the shortfall. But, as he stated, if that happened to a charter school, the school would be shut down.

Most of the school administrators say that the DOE requests are reasonable, but that there is redundancy in the paperwork requests for information. The responses to this question ranged from "very reasonable" to "60-70 percent of our time is spent on requests, which is way too much time." These responses varied even among the charter schools that had been operating for several years. The amount and type of visits by DOE also varied from "1-2 times a year and it is mostly for protocol," or "a few times and it is because they are curious" to "way too much. They are really into everyone doing the same thing, even instruction. Everyone comes in and monitors."

Another administrator raised the issue of DOE oversight on the school's instruction or curriculum and addressed how he thought it was inhibiting the innovation of the school in pursuing its mission. This administrator addressed the fact that the charter schools were given a binder with the mandated curriculum so the school's students can meet the state standards through state assessment testing. The public schools have to use the curriculum, and the charter schools are exempt; but during their renewal audits, they have to show that the teachers know about the curriculum and that the students are meeting state standards. An administrator put it this way, "The law allows charter schools to be innovative and creative, but DOE is trying a one size fits all curriculum". . . When the school is exceeding and meeting the state standards, why so much accountability?"

The new administrators did not talk about DOE requests or oversight, but addressed DOE's responsiveness and helpfulness to their new school administrations. One new administrator stated that DOE is very helpful and supportive. Another new administrator stated that DOE are "the consummate professionals. They are a wealth of knowledge, and they are aggressively involved in what charter schools can and cannot do." But, this administrator did say that DOE should be more helpful when a group is setting up a new charter school. This individual wished that DOE would educate these groups (individuals and foundations) about what services they can provide and that "there are no dumb questions." As with some other charter schools, this group hired ISDC to work with them on writing the charter and preparing to open the school. He stated that ISDC has been of great help but he was under the impression that he could not ask DOE for help because he thought that it would be perceived as a dumb question or that that was not what DOE did.

Another new administrator stated that "If you make an appointment, treat them like professionals and conduct your homework or research beforehand, then it will go smoothly." This new administrator is 125 percent satisfied with DOE. He says that after receiving his school's charter, there is a trust by DOE. DOE staff think that because a school went through the tough process of writing and receiving the charter, their administrators should know how to run a school.

Teachers

Both charter school and school district administrators brought up the issue of finding certified and qualified teachers and paying equitable wages. This was an issue that was raised in all 3 years of the evaluation. The administrators indicated that they were not given the autonomy to hire noncertified teachers, and that the standards set in the legislation regarding teacher qualifications were too difficult to meet.

As one administrator stated, "The bigger issue is better funding in the state so all kids have a right to good education. We have to deal with equitable issues with rich kids. Cape Heplopen School District is having budgetary problems. They are having to look at taking money out of savings to pay for teacher salaries. Paying 22 teachers cuts into local funds and, as a result, they are going to be drawing their reserve fund down to 2 million. And to think, this is the richest district in the state … This is an inequality that needs to be addressed. The good teacher in the classroom makes the difference. If salaries in Delaware are low, you don't have the best teachers." Another administrator also highlighted teacher availability as an issue for their school in pursuing and fulfilling its mission. He also said that the salaries for Delaware public school teachers are less than those in surrounding states and that he thinks the teachers coming out of the Delaware higher education institutions are less qualified. Thus, they recruit teachers from outside of Delaware.

Qualifications and certification of teachers was brought up several times in our interviews and will likely remain an unresolved issue in the years to come, especially since the mandate for "highly qualified teachers" is coming from federal regulations connected to the No Child Left Behind Act.

Conclusion

Even though Delaware receives an "A" for its charter school laws when compared with other states that have legislated charter schools, areas in the legislation and regulations need to be addressed. The current opinion of many of the charter school staff is that the regulations and oversight, along with other issues such as teacher qualifications and pay, hinder the school from pursuing its mission. The charter school staff also think that strict regulations inhibit their ability to be innovative and adaptive to local conditions.

A number of the charter school administrators indicate that they believe that the rigorous regulations and oversight hinder them from being innovative, adaptive to local conditions, and effective in pursuing their unique missions. While some complaints were leveled at the Department of Education for its rigid interpretation and enforcement of legislation and regulations, charter school administrators also were quick to acknowledge that the support and guidance provided by DOE were constructive and very helpful.

During the course of this three year evaluation, efforts by the Department of Education and the State Board of Education have simplified and streamlined many of the oversight activities. For example, the process for making minor modifications to charter now is easier and less restrictive. Communication has also improved, with regular meetings and events scheduled between state agencies and the charter schools.

Chapter Three
Description of the Schools and Their Students

In this chapter, we provide a general description of the Delaware charter schools and their students. The first section discusses the growth and development of charter schools in Delaware. Section 3.2 discusses the management and governance of charter schools and includes information on relevant legislation, types of authorizing agencies, and education management organizations. Section 3.3 describes the unique missions and innovative aspects of Delaware charter schools,. The final section examines school enrollment patterns for 13 charter schools.

Most of the data used in this chapter were derived from databases maintained by the Delaware Department of Education (DOE). The DOE has an outstanding Web site with a wealth of informational resources and enrollment data available across a number of years. We encourage readers of this report to check out the site's many features including annual school profile data and GIS maps showing charter schools and student enrollment patterns.

3.1 Growth and Development of the Schools

The Delaware charter school reform has continued to grow since the first 2 charter schools in the state opened in September 1996. During the 2005-06 school year, 13 charter schools were operating with a total enrollment of 6,566 students. Approximately 5.4 percent of Delaware public school students attend charter schools.[1] Figure 3:1 shows the growth rate of total student enrollment for all Delaware charter schools from 1996-2006.

Four additional charter schools opened in September 2006: Family Foundations Academy, Maurice J. Moyer Academy, Odyssey Charter School, and Pencader Business and Finance Charter High School. The discussion in this chapter does not include these four schools due to their newness and subsequent absence of data. An additional charter school, KIPP Wilmington, is scheduled to open in August 2007. At the time that this report was being prepared, this is the only new charter school we were aware of this year. Thus far, two charter schools have closed after one year or less of operation due to financial problems and other difficulties (i.e., Richard Milburn Academy closed in summer 2000 and Georgetown Charter School closed in March 2002). Figure 3:2 shows the number of new charter schools opened annually and the total number of charter schools in operation from 1996-2007. Also note that Appendix A contains a map depicting the location of the charter schools.

[1] Charter school enrollment figures are from DOE (2005) which is a report entitled "Charter School and Across District Choice Statistics and Maps from the September 30th 2005 Unit Count." Retrieved 1/8/2007 from http://www.doe.k12.de.us/files/pdf/dedoe_unitctstatsmaps2005.pdf.

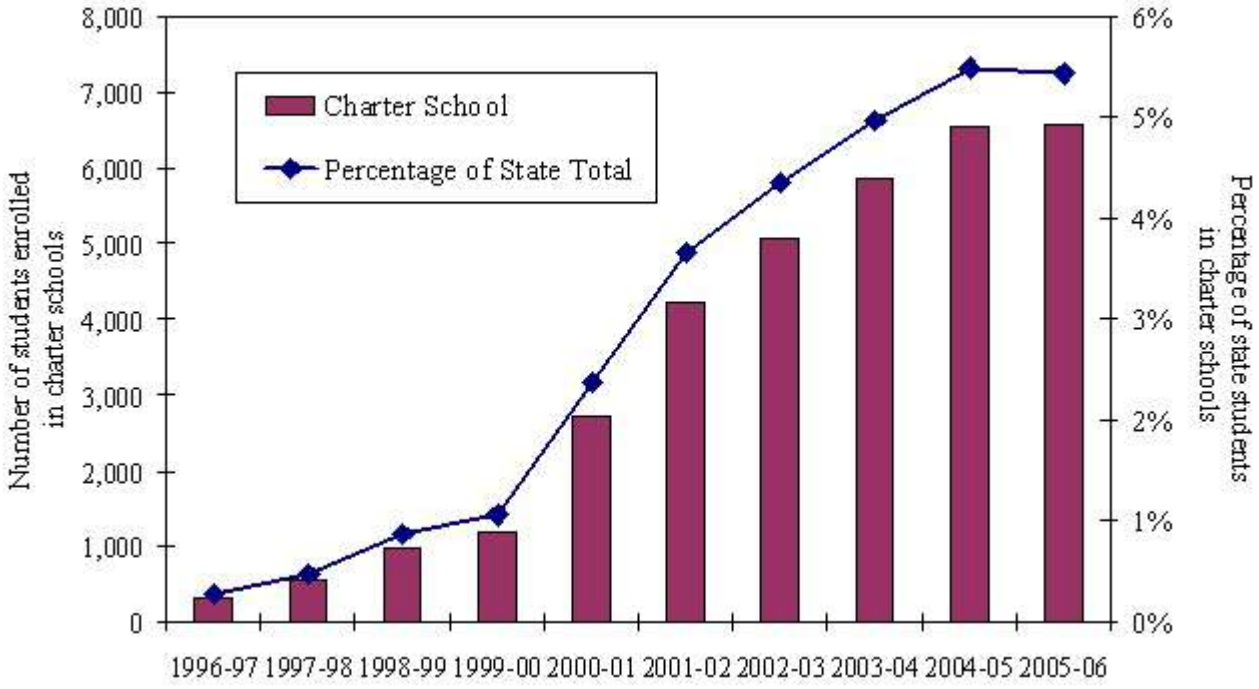

Figure 3:1 The Growth of Charter Schools in Total Enrollment and as Proportion of All Public Students

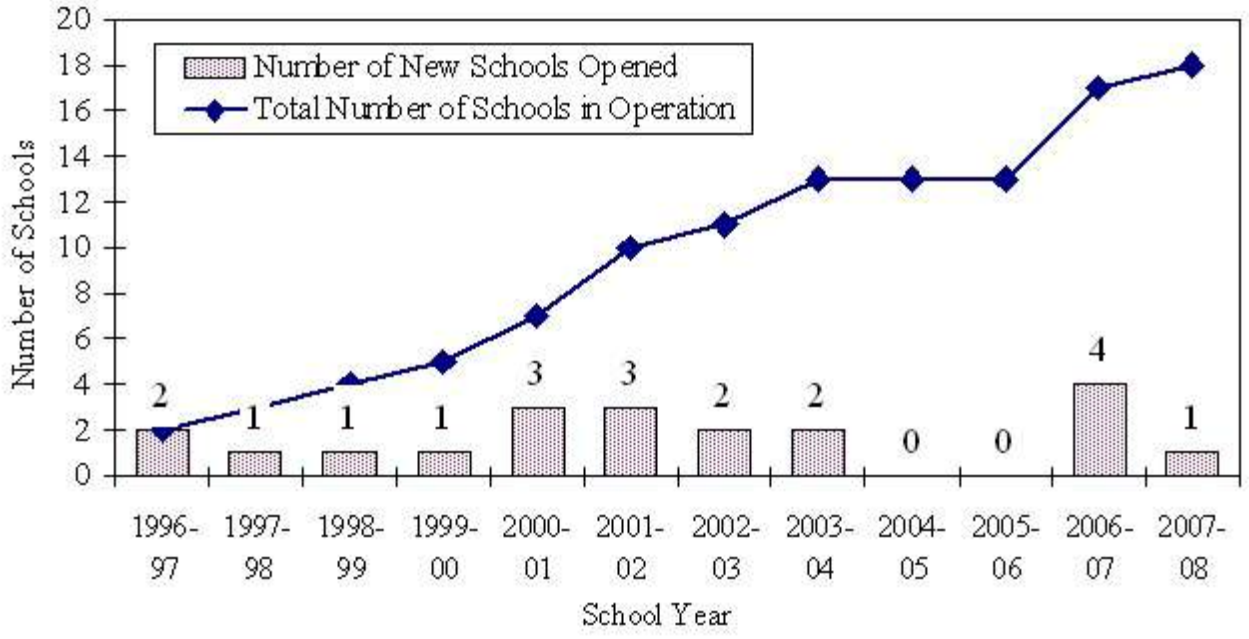

Figure 3:2 Growth of Delaware Charter Schools

As of 2005-06, no Delaware charter school has a complete K-12 curriculum. Instead, the 13 charter schools provide instruction across an average of 7 grades. Figure 3:3 shows the enrollment of Delaware charter school students broken out by grade level.[2] As one can see, the aggregate enrollments are fairly evenly divided across the grades except for 4th, 11th, and 12th grades.

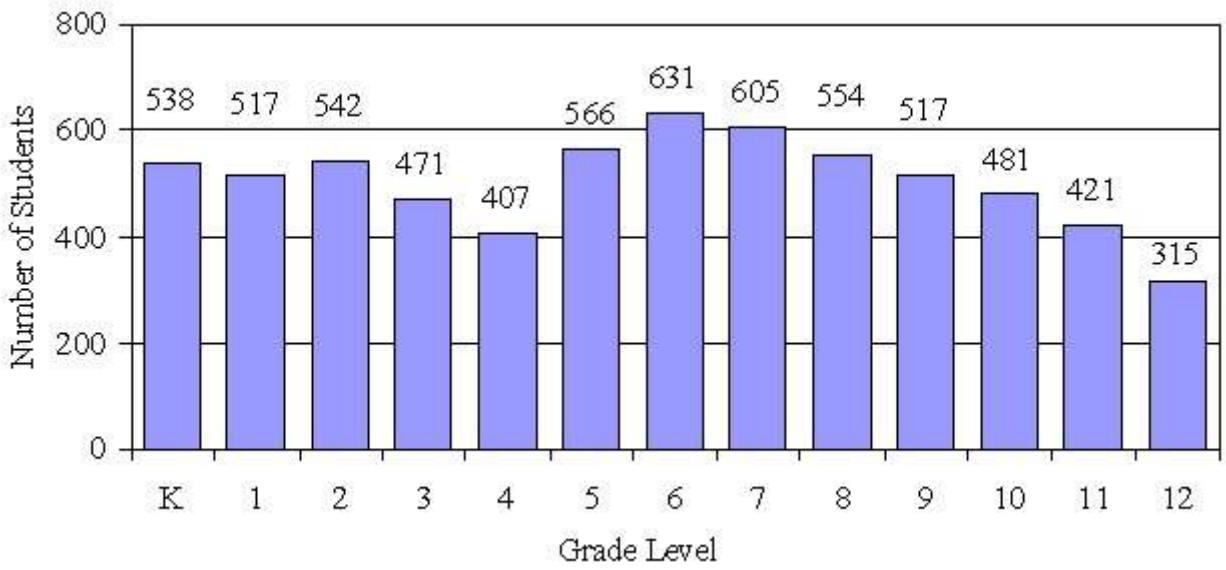

Figure 3:3 Charter School Enrollment by Grade, 2005-06

The size, or enrollment, of charter schools ranges from 114 students to 935 students. More than 60 percent (8 out of 13) of the charter schools and 69.3 percent of the state's charter school enrollment are located in New Castle County. The 4 new charter schools opened in September 2006 also are located in this region. Kent County in the middle of the state is home to 4 charter schools and 25.8 percent of all charter school students. Sussex County in the more rural southern portion of the state had 1 charter school in 2005-06 that accounted for 5 percent of the total statewide charter school student enrollment.

3.2 Management and Governance of Charter Schools

Delaware Code, Title 14, Chapter 5 was enacted in 1995 and provides the framework for charter schools operating in the state. Section 503 of the code defines the legal status of charter schools and specifies that the approving authority (or the "authorizer") can be a public school district or the State Department of Education (with the concurrence of the State Board of Education). The charter is granted for an initial period of four years of operation and renewable every five school years thereafter by the authorizer. The authorizer that grants the charter for the school is responsible for the oversight and renewal of the school's charter. The charter school is governed and managed by a board of directors, which operates independently of any school board (State of Delaware, 2004, §503).

[2] Grade level numbers are from *DOE 2005-06 School Profiles. Fall Enrollment.*

Eleven of 13 Delaware school charters along with 3 of the new charter schools that opened in September 2006 were approved by the Delaware Department of Education after recommendation by the State Board of Education. Two school charters (The Charter School of Wilmington and Delaware Military Academy) and 1 new charter (Odyssey Charter School) were approved by the Red Clay Consolidated School District Board of Education.

Each charter school's governing board of directors is made up of parents, teachers, and community members. Many boards also include founding members of the charter school, key businesspeople, and professionals such as lawyers and accountants. A few school boards have representatives from universities, colleges, public agencies, and political offices. According to charter school annual reports, charter school boards range in size from 6 to 22 people. The board of directors' responsibilities may include determining policy and procedures, approving academic programs, employee hiring, and communicating with the DOE and other appropriate agencies.

Currently, no charter schools are run by for-profit education management organizations (EMOs). At least five charter schools in the state have terminated contracts with management companies (Providence Creek Academy Charter School, MOT Charter School, Marion T. Academy, Academy of Dover Charter School, and Thomas A. Edison Charter School). Another for-profit company, Richard Milburn Academies, opened a charter school in Delaware but the school closed after its first year of operation. At least three principals/directors stated they were strongly opposed to EMOs running their school. One director said he would consider contracting out certain services when it is cost efficient, but he "would rather close than [be run by a] management company."

On the whole, the Delaware charter reform has not been a particularly fertile ground for education management organizations. One reason for this is the requirement that all schools use the state's purchasing system, which is transparent and uniform for all schools. Many EMOs have their own budgeting and purchasing systems that they prefer to use across sites. Another reason is that some EMOs attempt to protect their investment in a school by exercising authority on the governing board. This is not permitted and actually led to one EMO leaving the state before its school could be started. Finally, the overall rigor of oversight in Delaware has produced an environment that the EMOs find less hospitable. In fact, the states in which EMOs are most common are states with very permissive charter school laws, such as Arizona, Florida, Michigan, and Ohio.

3.3 Unique Missions and Innovative Aspects of the Charter Schools

When asked about innovations at his charter school, one director stated, "The innovations are site-based management and market accountability. We are always looking to improve everything we're doing." Other directors also stated "site management" as being innovative to their school versus standard district "bureaucracy."

Charter school governance varies in terms of board of director makeup. Each school has different levels of support groups that fit into its overarching governance structure. These groups include some active and strong Parent Teacher Organizations (PTOs); foundation and fund-raising boards; and subcommittees that focus on specific issues such as advisory duties, development, and curriculum.

During interviews with charter school administrators, many said that too much of their time is spent on reporting and regulation requirements versus site management. One frustrated director said

she spent two-and-a-half weeks a month responding to DOE requests. Some administrators thought the statewide student testing and performance requirements did not allow time for innovative curriculums to be fully implemented. These topics and related items are discussed in more detail in Chapters 5 and 6.

General Innovations by School

Innovations in Delaware charter schools include focus on a particular curriculum, additional college credit (AP) classes, serving at-risk student populations, parent involvement, community volunteer activities, and emphasis on world cultures. Several charter schools offer a special curriculum package or framework. Many schools incorporate the curriculum model's core principles into the goals and mission of the school. Specific innovations for each operating charter school are listed below. This information is based on charter school administrator interviews, DOE student profile information, and Web-based information.

Academy of Dover Charter School, Dover, DE

Opened: 2003

Grades: K-6. Total Enrollment: 385

This charter school is no longer run by the EMO Mosaica, Inc. Academy of Dover uses a Houghton-Mifflin curriculum for social science. The school also uses the A+ system for math. The school has a longer academic year (200 days) and a one-hour longer school day (8:00am-3:30pm).

Mission: *It is our belief that every child can be successful when in a nurturing, positive, and focused environment. Therefore, we are committed to being encouraging, setting high standards, and providing a rigorous curriculum for all of our students.*

Campus Community School, Dover, DE

Opened: 1998

Grades: 1-12. Total Enrollment: 589

The school uses a constructivism approach based on the philosophy of Dr. William Glasser, author of *The Quality School: Managing Students Without Coercion.* The curriculum involves hands-on learning with no textbooks. Schools are part of a "Quality School" network, and students and staff are taught to use Choice Theory in their lives and in their work. The goals and objectives of these theories are related to the charter school's mission. The administration is site-based and involves a management team. The first senior class graduated from CCS in June 2005.

Mission: Campus Community School seeks to promote growth in knowledge, skills, and habits of mind in children in grades 1-12 as well as prepare learners to direct their own learning, view learning as a lifelong endeavor, and view themselves as capable, productive, proactive members of society.

The Charter School of Wilmington, Wilmington, DE

Opened: 1996

Grades: 9-12. Total Enrollment: 935

This is a rather selective school with a rigorous academic profile. The curriculum emphasizes the development of math, science, and technology skills. The director stated, "It's not what we do; it's how we do it." The school is adding five college courses on site from the University of Delaware so students will graduate with college credits. It has an extensive AP program. The director also stated that morale is important; to illustrate an example of this, he said they use positive reinforcement such as sending parentgrams with good news about students.

Mission: To prepare a diverse student population for success in an ever-changing and highly demanding technological world by setting high expectations for academic achievement, maintaining an environment conducive to learning and character development, and emphasizing the development of analytical and quantitative skills through a concentration on math and science.

Delaware Military Academy, Wilmington, DE

Opened: 2003

Grades: 9-12. Total Enrollment: 520

The school is the first all-Navy Jr. Reserve Officer Training Corps (JROTC) charter school in the U.S. The school day is an hour longer so students earn 26 credits, rather than 22, to accommodate the military science courses. It offers modified block scheduling (every other day) and college preparatory classes. The school has developed the capacity to offer AP courses.

Mission: The mission of the Delaware Military Academy is to prepare young men and women for their next level of education and to provide them with a foundation that leads to good citizenship. In addition, we will furnish them with a healthy mental and physical environment with military training as a prerequisite for a better understanding of the obligations of citizenship and self-discipline, and to afford them opportunities for proper social activities and exposure to moral ideals.

East Side Charter School, Wilmington, DE

Opened: 1997

Grades K-8. Total Enrollment: 202

The charter school offers an 11-month schedule, extended day program (after school hours from 3:30-6:00 p.m.), small class size (16 students per class), breakfast and lunch, and uniforms for all grades. They want to remain small with no more than 16 students in a class. All the students receive free and reduced price lunches. All the students are "at-risk" children. Parents sign a commitment to volunteer 4 hours a month. Parents do many things including making repairs, maintaining the grounds, cleaning classrooms, before and after school care, kitchen work, recess duty, and aide duty. The director is thinking of starting volunteer hours for students.

Mission: The mission of East Side Charter School is to educate children in a safe, caring, and nurturing environment so that they will excel academically and socially. In order to accomplish our mission we have created an atmosphere where the students see success as the only option.

Family Foundations Academy, New Castle, DE

Opened: 2006

Grades: 1-4. Total Enrollment: 360

Family Foundations Academy was established to prepare students for academic success. The school offers small class sizes, homework and individual family support services, and family forums and workshops. Third graders are also taught conflict resolution. School hours are from 8:00 a.m. through 4:30 p.m.

Mission: The mission of Family Foundations is to acknowledge the learning differences of each individual child and nurture the uniqueness of each family structure.

Kuumba Academy Charter School, Wilmington, DE

Opened: 2001

Grades K-5. Total Enrollment: 253

The curriculum is based in part on the work of Dr. Howard Gardner and the Project Zero education research group at the Graduate School of Education at Harvard University. The curriculum uses arts as a tool for learning, multiple modes of intelligence, respecting individual learning differences, and other principles. The director stated that the difference between this charter school and other schools is the school culture. Innovative practices are used, such as Spanish instruction; parent presence and involvement; character education and citizenship through principles of Kwanza; building a sense of self-worth and confidence; focusing on learning about world cultures; and using the arts to enhance learning.

Mission: *Kuumba Academy is an innovative learning environment focused on the whole child in grades kindergarten through fifth grade. Kuumba Academy directors, staff, and parents share a core belief that parents are the primary educators of their children. Parents in partnership with teachers and administrators believe that every child can maximize their learning potential given the opportunity to do so.*

Marion T. Academy, Wilmington, DE

Opened: 2000

Grades: K-8. Total Enrollment: 536

Marion T. Academy Charter School was established in the city of Wilmington to provide a unique educational environment. The school has gone through a number of changes over the years including changes in physical location, increases in enrollment, changes in management structure, and changes

to the curriculum. Among the most notable change is the fact that the school is no longer run by EMO Mosaica, Inc.

Mission: *The Marion T. Academy is committed to providing a safe, nurturing and challenging learning environment with the aim of producing responsible and productive citizens. MTA will accomplish this mission by ensuring that all students, at a minimum, demonstrate mastery of the basics of reading, writing and mathematics and are capable of applying acquired skills to all other content areas and life experiences.*

Maurice J. Moyer Academy, Wilmington, DE

Opened: 2006

Grades: 6-9. Total Enrollment: 267

Maurice Moyer provides a small-school environment for high school students through the use of Small Learning Communities. Grades 6-8 use the core knowledge curriculum. The curriculum is supplemented with a personal development component that helps students set and achieve goals, write and speak clearly and effectively, and work well in a team setting."In 2007-08 the school will have grades 6-10 and will add 11th and 12th in subsequent years. Moyer's focus is Health Science and Technology Career Paths."

Mission: *The mission of the Maurice Moyer Academy is to provide an educational experience that inspires students to achieve their highest academic and personal goals, and to enable students to reach their full potential through a rigorous curriculum that provides traditional and pre-college options, in an environment that promotes integrity and self-awareness, and an enrichment program that features career experience and effective life skills.*

MOT Charter School, Middletown, DE

Opened: 2002

Grades: K-8. Total Enrollment: 675

MOT Charter School's primary goal is to prepare students to be creative, intuitive, and analytical thinkers as well as informed and responsible citizens. The curriculum emphasizes hands-on science and technology learning and develops critical thinking skills cultivated through comparative, interdisciplinary study. The curriculum also emphasizes core values and fundamentals of learning.

Mission: MOT Charter School is committed to providing a challenging, innovative curriculum and safe, nurturing environment where all children learn and flourish. Utilizing diverse teaching techniques and exposing our students to a wide variety of educational experiences encourage each child not only to truly enjoy school, but to understand and enjoy the process of learning. Parental inclusion in each child's education is the foundation of our school, and our approach to education is collaborative between Students, Parents, Staff, and the Board of Directors. We believe that a strong school community enables every child to reach his academic and creative potential, while encouraging responsible social values and a shared sense of belonging.

Newark Charter School, Newark, DE

Opened: 2001

Grades 5-8. Total Enrollment: 648

The school sets rigorous academic standards for students. In relation to how the charter school was different from traditional public schools, the director stated, "The whole program—parent involvement, behavior and standards of decorum, core knowledge curriculum, achievement grouping, dress code, teacher bonuses and teacher accountability. There's a big difference in the way we operate and hire teachers." The curriculum of Newark Charter School is a combination of the Core Knowledge curriculum and the state of Delaware's content standards developed by Delaware teachers and the Department of Education. The Core Knowledge curriculum framework identifies specific content to be studied and is a logical complement to the state content standards.

Mission: *The mission of Newark Charter School is to provide a rigorous academic curriculum that promotes high levels of student effort and achievement while fostering self-esteem through stimulating academic challenges and meaningful academic accomplishment in a community of educators, families, and students who value scholarship, good citizenship, and creativity*

Odyssey Charter School, Wilmington, DE

Opened: 2006 Total Enrollment: 127

Grades: K-2; every year they expect to add a new grade

The Odyssey Charter School was established to prepare kindergarten through grade 5 students for a lifelong enthusiasm for learning, a keen awareness of world citizenship, and an ability to think independently and creatively through participation in a focused foreign language immersion program. At Odyssey, children are taught a critical subject, math, in both English and a classic language, Greek, for a portion of the day, which reinforces the learning as taught in English. This focused language immersion instruction method builds key reasoning techniques, language arts skills, and significantly strengthens the mathematical comprehension and performance of our students. The school is approved to enroll 131 students in grades K-2 and expand to 290 students in grades K-5 by its fourth year of operation. Odyssey's charter was approved by the Red Clay Consolidated School District Board of Education.

Mission: *The Odyssey Charter School's mission is to prepare students for a lifelong enthusiasm for learning, a keen awareness of world citizenship, and an ability to think independently and creatively through participation in a focused foreign language immersion program. The curriculum integrates the learning of a second language, along with the English language, to teach a rigorous curriculum of reading, writing, math, science, and social studies.*

Pencader Business and Finance Charter High School, New Castle, DE

Opened: 2006 Total Enrollment: 325

Grades: 9-10

Pencader Business and Finance Charter High School was established to provide educational opportunities for students wishing to pursue a high school education with a business and finance concentration. Its primary goal is to deliver instruction to students that will enable them to be successful in the business and finance industry immediately following high school graduation and/or to prepare students seeking a postsecondary education in business and finance. Another goal is to have students meet or exceed the performance standards set for the DSTP and to be able to receive the highest diploma.

Mission: *The Pencader Business & Finance Charter High School is committed to providing students in grades 9-12 an innovative and challenging academic atmosphere. Our school curriculum is a unique combination of academia and character education, as well as business and finance courses that will enable students to meet or exceed the Delaware performance requirements for graduation. Upon graduation, students will be equipped with the skills needed for employment in the business and finance industry and/or to pursue studies at a postsecondary level. Business courses will focus on current and accepted business practices and modalities. They are designed to equip students with an awareness of the rapidly changing and increasingly interconnected world economy.*

Positive Outcomes Charter School, Camden, DE

Opened: 1996

Grades 7-12. Total Enrollment: 114

The charter school provides educational opportunities for students at risk. Each student works toward graduation and employability, which helps develop an increased self-esteem. Individuality is valued, and individual needs are addressed. The school seeks a cooperative working relationship with the traditional and vocational school districts and is committed to serving students who have been unsuccessful at other schools.

Mission: *The mission of Positive Outcomes Charter School is to provide an opportunity for children to learn in a safe, caring, respectful environment, where their individuality is valued and their individual needs are addressed.*

Providence Creek Academy Charter School, Clayton, DE

Opened: 2002

Grades K-8. Total Enrollment: 605

The curriculum at this school emphasizes project-based learning, differentiated instruction, and a strong emphasis on literacy. The school has an open-door policy for parents. The school offers an outdoor learning experience with access to a watershed estuary and nature trails. There are also many optional courses to choose from such as music, art, library, Spanish, and Latin.

Mission: *The mission of the Providence Creek Academy Charter School is to provide a dynamic educational experience for children to realize success in academics, athletics, and the arts. Academics at PCA are hands-on, child centered, and aligned with the state of Delaware standards as a minimum educational requirement. Parents enjoy an active and collaborative role in the effort*

to integrate foundational skills with a broad scope of diverse and global knowledge. Our students are given the tools to promote lifelong learning and growth.

Sussex Academy of Arts & Sciences, Georgetown, DE

Opened: 2000

Grades: 6-8. Total Enrollment: 322

The *Expeditionary Learning Outward Bound* (ELOB) curriculum framework is used and involves multiage grouping, a focus on civility, collaborative learning, a service component, and both team and school expeditions. *Expeditionary Learning* "emphasizes learning by doing with a particular focus on character growth, teamwork, literacy, adventure and service . . ." The charter school emphasizes "conceptualization, coping, and communication."

Mission: *The mission of the Sussex Academy of Arts and Sciences is to prepare middle school students for the new millennium by providing excellence in education within a small school environment. Sussex Academy is committed to the development of a program that ensures all students will be productive in school work, will become self-motivated, lifelong learners and will become caring and ethical individuals capable of managing a healthy lifestyle.*

Thomas A. Edison Charter School, Wilmington, DE

Opened: 2000

Grades K-8. Total Enrollment: 840

The school offers a progressive learning environment. Originally, the school was managed by Edison management company. However, in 2006, the contract with Edison was terminated. Edison Charter School is still using Success for All reading and Everyday Math but is transitioning from Edison's benchmarking system to Pearson's benchmarking system.

Mission: *Our mission is to provide the best possible education to all of the students who choose to attend our school. We believe that every child should be given exciting educational opportunities and that every child has a tremendous capacity for learning. We also believe that great schools are places that nurture the creative spirit and inculcate a love of learning. What we do is guided by the fundamental assumption that we have a responsibility to ensure that ALL students succeed.*

Innovative Practices and Unique Features

Administrators thought the growth and demand of charter schools had a positive competitive effect on traditional public schools. Some referenced specific school districts that are now examining their curriculums and making changes as a result of innovations at charter schools. Most innovations discussed by charter school administrators were in the categories of scheduling, curriculum, and parent involvement. Quotes from charter school administrators about these innovations are included below.

Scheduling

- "Two schools [at another district] are going to year-round scheduling next year. No schools in our district have made changes. One or two schools are starting full-day kindergarten."
- "The pressure for all-day kindergarten comes from charters and advocacy."
- "The biggest change has been full-day kindergarten; the other districts had to offer full-day kindergarten because parents left for the charters. Parents needed it."

Curriculum

- "The surrounding districts are rising to the competition and recruiting. They now offer strands for gifted children and offer more extracurricular activities. There's a spirit of competition, of reexamining themselves, and creating new courses."
- "The nonpublics and [a nearby public school district] have started to define a school focus . . . they are redefining themselves."
- [The charter school] "has pushed the public schools to increase the math and science requirements for graduation. [Another school district] is proposing concentrations such as a school of math and science and a performing arts school. . . . There's a technology, math, and science competition. [Another] district is looking at our curriculum."
- "Public schools are now using more arts programming."
- "Other schools outside the state have shown interest in ROTC high schools including Nevada, Maryland, Pennsylvania, and Florida."

Parental involvement

- "For the first time we have hundreds of parents who are reading the literature, are getting involved in decision making. Other schools are following the trends, treating kids and parents as customers."
- "Districts complain about loss of students, but they don't think of why students leave. Regular schools are not responsive to parents."

Accountability

From surveys and interviews we learned of a number of practices related to accountability that teachers and administrators thought were innovative, including the following:

- Our school profiles (report cards) include rubric scores for "Habits of Mind," measuring a student's persistence, reflection, self-direction. This helps students focus on the important aspects of being a good student and learner. It's not all about the grades; we also work on how kids think, organize their time, apply effort, etc.
- We use our discipline referral data to not only put in place interventions for students, but also to identify teachers in need of support and professional development.

- ❑ Our school promotes an instructional support team that assesses and follows struggling learners in the regular education classroom setting. The school also has a leadership team devised of a representative from each grade level that makes key decisions for the staff as a whole.
- ❑ Our school promotes an instructional support team that assesses and follows struggling learners in the regular education classroom setting. The school also has a leadership team devised of a representative from each grade level that makes key decisions for the staff as a whole.

3.4 Students Enrolled in Delaware Charter Schools

This section examines the following demographic characteristics of students enrolled in the charter schools: race and ethnicity, limited English proficiency (LEP), low income (measured by qualification for free and reduced price lunch), and special education. Enrollment information is based on data from DOE 2005-06 School Profiles and DOE Enrollment Reports.[3]

Race and Ethnicity

Figure 3:4 shows the student race/ethnicity percentages for each charter school. Table 3:1 provides a list of the percentages of enrollment at each school by race. As a group, charter schools enroll a slightly higher percentage of minority students than do traditional public school districts. As illustrated in Figure 3:4, individual charter schools vary greatly in minority enrollment. The schools

Table 3:1 Charter School Race/Ethnicity of Total Student Enrollment (2005-06)

Charter School District	*White*	*African American*	*Hispanic*	*Asian American*	*American Indian*
Sussex Academy of Arts & Sciences	88.5%	5.0%	3.4%	1.9%	1.2%
MOT Charter School	87.7%	9.7%	1.2%	1.5%	0.0%
Delaware Military Academy	81.5%	12.8%	4.9%	0.8%	0.0%
Providence Creek Academy CS	79.0%	17.0%	1.8%	1.0%	1.2%
Positive Outcomes CS	76.3%	21.1%	2.6%	0.0%	0.0%
Newark Charter School	75.3%	13.6%	2.9%	7.7%	0.5%
The Charter School of Wilmington	71.4%	7.4%	1.9%	18.9%	0.3%
Campus Community School	64.0%	29.7%	3.4%	2.5%	0.3%
Academy of Dover CS	4.9%	90.9%	2.6%	0.5%	1.0%
Thomas A Edison CS	1.7%	93.9%	3.2%	0.6%	0.6%
Marion T. Academy	0.4%	97.2%	2.2%	0.2%	0.0%
Kuumba Academy CS	0.0%	97.5%	2.5%	0.0%	0.0%
East Side Charter School	0.0%	98.5%	1.5%	0.0%	0.0%
Total for all Charter Schools**	52.1%	40.6%	2.6%	4.2%	0.4%

Data retrieved from http://profiles.doe.k12.de.us/EntitySearch.ASPx

** Data retrieved from http://www.doe.k12.de.us/files/pdf/dedoe_unitctstatsmaps2005.pdf

[3] 2005-06 numbers from DOE DE School Profiles, retrieved 1/8/2007 from http://profiles.doe.k12.de.us/EntitySearch.ASPx.

range from 10.1 percent to 100 percent minority enrollment. Four charter schools have a predominantly minority enrollment, and 9 schools have a predominantly white enrollment. Interesting, only 1 school has somewhat even levels of minority/nonminority enrollment. Campus Community School has two-thirds nonminority and one-third minority enrollment. Another interesting phenomenon relates to percentage of Asian American enrollment. While overall charter school enrollment for Asian-American students is less than 4 percent, The Charter School of Wilmington has almost 20 percent Asian-American enrollment. Racial and ethnic enrollment has remained fairly constant over time.

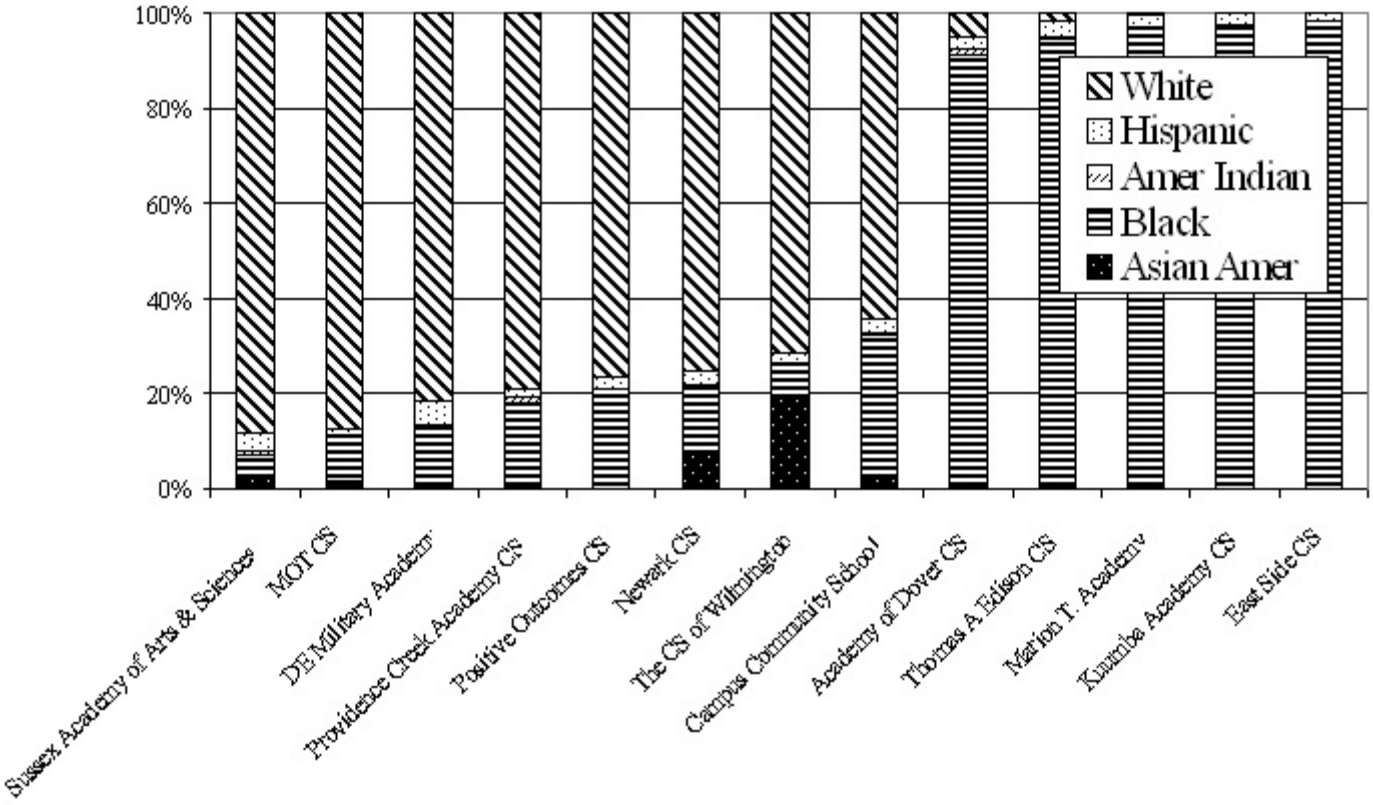

Figure 3:4 Delaware Charter School Student Race/Ethnicity (2005)

Other Student Characteristics: LEP, Low Income, Special Education

Table 3:2 contains data on the proportion of charter schools that are classified as limited English proficiency (LEP), low income, and special education. Overall, total charter school enrollment is comprised of 33.6 percent low income students, 6.6 percent special education students, and fewer than 1 percent of LEP students. As with racial composition, the percentages of LEP, low income, and special education have remained constant over the years.

When we break these data out by school, large differences appear, indicating that while some charter schools enroll few low income students, others enroll nearly all low income students. One school reported zero percent low income students, while three schools reported more than 75 percent low income students.

Table 3:2 Charter School LEP, Low Income, Special Education Percentages (2005-06)

Charter Schools	*LEP*	*Low Income*	*Special Education*	*Total Enrollment*
Academy of Dover CS	0.8%	71.7%	2.3%	385
Campus Community School	0.3%	22.9%	10.7%	589
The Charter School of Wilmington	0.1%	2.8%	0.1%	935
Delaware Military Academy	0.0%	0.0%	3.5%	509
East Side Charter School	0.0%	77.2%	3.0%	202
Kuumba Academy CS	0.8%	71.2%	1.2%	243
Marion T. Academy	0.4%	76.1%	5.4%	502
MOT Charter School	0.0%	8.2%	11.3%	673
Newark Charter School	0.0%	5.7%	6.0%	647
Positive Outcomes CS	0.0%	39.5%	51.8%	114
Providence Creek Academy CS	0.0%	27.9%	10.2%	605
Sussex Academy of Arts & Sciences	0.0%	14.0%	5.3%	322
T. A. Edison CS	0.7%	84.0%	6.7%	840
Total All Charter Schools	0.2%	33.6%	6.6%	6,566

While the proportion of limited English proficiency students does not rise above 1 percent in any of the charter schools, the proportion of students qualifying for special education is extremely high in one school (i.e., Positive Outcomes Charter School has just over half of its students classified for special education services), extremely low in most other charter schools, and nearly nonexistent in one school (i.e., The Charter School of Wilmington often has no students classified for special education, but in 2005-06, 0.1 percent of its students had an individualized education plan ([IEP]).

3.5 Summary and Discussion

In this chapter, we described in detail Delaware's charter schools and their students. We also illustrated overall enrollment and growth patterns for charter schools. Overall, we found relatively slow fluctuations from year to year. Twenty charters have been approved. Two schools have closed, and 1 school is yet to open, which leaves a total of 17 school operating during the 2006-07 school year.

On the whole, the aggregate charter schools do not differ greatly from the traditional public schools in the state. However, when we look at the data by schools, we find substantial differences, with some charter schools serving largely minority students and other catering largely to white students. This pattern of more highly segregated charter schools based on race is also repeated when we look at segregation by class and ability. Some charter schools serve a high proportion of students that qualify for free or reduced lunches, and other schools have few of these students. At one charter school nearly half the students have identified special education needs, while at most other schools the number of students with special education needs is surprisingly low. When we look at individual schools, we see a pattern where charter schools are serving rather homogeneous populations of students. These figures suggest a similar picture as was apparent with enrollment patterns by race/ethnicity: namely, ***the charter schools in Delaware are very segregated by race, class, and ability***. In chapter 9, we look at the impact of charter schools and how they have impacted the composition and diversity within the traditional public schools.

Chapter Four
Description of Charter School Staff and Their Working Conditions

Charter schools are schools of choice for teachers as well as for families. The charter schools in Delaware provide a number of interesting and unique opportunities for teachers whether they are new to the profession or whether they are looking to try something new. While teachers have the freedom to choose new employment opportunities in charter schools, these schools also have been given more autonomy and freedom to hire and fire teachers. This freedom to remove teachers who are not performing well or who do not fit with the mission of the school, allows the charter schools to structure and build their focused learning communities.

Some have argued that the working conditions faced by teachers in charter schools will lead to higher levels of dissatisfaction and attrition. Others have argued that charter schools will be able to create attractive working environments that will help them recruit and retain highly effective teachers. Questions related to these issues will be the focus of this chapter:

- ❑ What are the characteristics of teachers and staff employed in the charter schools?
- ❑ What is the range of circumstances under which charter school teachers work?
- ❑ How satisfied are charter school teachers with their working conditions?
- ❑ How do the qualifications and working conditions of charter school teachers compare with other public school teachers?
- ❑ What are the levels of teacher attrition in the charter schools, and what are the likely reasons for attrition?

In this chapter we take a close look at the most recently available data regarding the current status of teachers in charter schools. Given that this is the third and final year of the evaluation, we also will look at trends from the data regarding teachers we have collected over the past three years.

4.1 Description of Charter School Teachers and Staff

There are three main sources of data for the findings reported in this section. One is from the questionnaires we collected from teachers and staff in the spring 2004, 2005, and 2006 (the full set of results from the 2005-06 school year survey are included in Appendix B). This survey contained both closed-ended items as well as open-ended items that were carefully sorted and analyzed. A second source of data was the official certification and teacher data collected and reported by the Delaware Department of Education. The third source of data was from interviews with

administrators and other key stakeholders that were conducted during the site visits over the past two years.

Survey Sampling of Teachers and Staff

In sampling teachers and staff, we included all staff involved with instruction as well as key administrators at each charter school. Table 4:1 depicts the figures for the target population, achieved sample, and response rate for each of the three years of the evaluation. As can be seen, the response rates ranged from 75 percent to 79 percent, which are relatively high response rates. While several schools had response rates above 90 percent, each year we had 1 or 2 charter schools in which only half or fewer of the teachers and staff completed and returned surveys. Given that all charter schools were sampled and given the large number of surveys we collected each year and the overall exceptionally high response rate, we think the sample provides a representative picture of the teachers and staff at the charter schools in Delaware.

Table 4:1 Sample Size and Response Rates for Teacher/Staff Surveys

	Target Pop.	Achieved Sample	Response Rate
2003-04	478	373	78.0%
2004-05	453	358	79.0%
2005-06	499	377	75.6%

Gender

In terms of gender differences, 72 percent of the charter school teachers, staff, and administrators were female and 28 percent were male. Female teachers are still the majority in charter schools, just as they are in other public schools. Among charter school classroom teachers alone, 71.6 percent were female, which changed from 73 percent female in 2004 and 70.5 percent in 2005. Interestingly, charter schools appear to be better able to recruit and employ male teachers than the traditional public schools where approximately 75 percent of the classroom teachers are female and 25 percent are male.

Race/Ethnicity

When we aggregate the data across all charter schools, we find that the ethnic composition of teachers in charter schools is not very different from the aggregate of public schools across the state. This, of course, masks large differences that exist among the charter schools and among all public schools. From the charter school survey data we collected (N=282 classroom teachers responded to this question in 2006), we determined that 82.3 percent of teachers were white, compared with 86.9 percent from all of the public schools in the state.[1] There were 13.5 percent African-American teachers reported at charter schools, while the state reported 11.1 percent. During the last 3 years, the charter schools on the whole have experienced only very small changes in the demographic composition of their classroom teachers. The aggregate figures mask large differences by school.

[1] The 2005-06 ethnicity and gender data for Delaware public school full-time classroom teachers are from the *Delaware Educational Personnel Report*, Table 1: Profile of Full-Time Classroom Teachers. Retrieved January 19, 2007, from http://www.doe.state.de.us/files/dedoe_staff.xls

Four charter schools had more than 45 percent minority teachers, and 4 charter schools had fewer than 5 percent minority teachers (see Figure 4:1). While these figures are based on sampled teachers, it appears that the number of minority teachers has been shrinking in the predominantly white schools over the past 3 years. These findings illustrate that the charter schools are rather segregated by ethnic background (see chapters 2 and 9 where this issue is explored further).

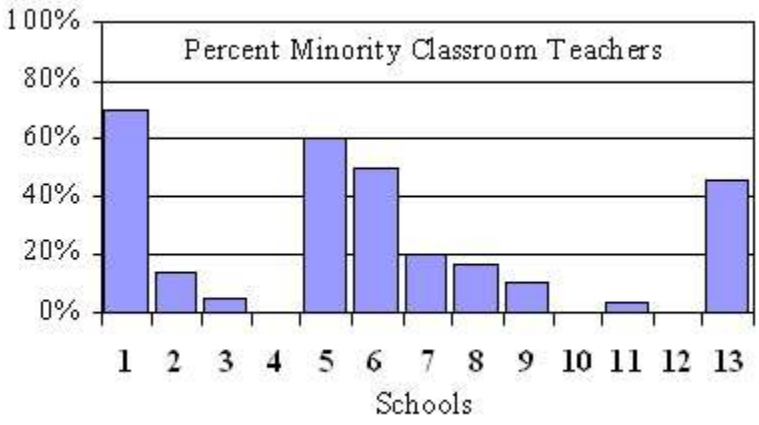

Figure 4:1 Percent Minority Classroom Teachers by Charter School, 2006

Another comparison of teacher and staff ethnicity can be made from the Delaware school profile data for 2005-06 and the total public school figures stated above that are for full-time teachers only. While the charter school data in the preceding paragraph are based on survey data broken out by teacher-only data, the 2005-06 school profile data contain race/ethnicity data for all instructional staff (which is comprised of approximately 93 percent teachers and 7 percent pupil support staff). The compilation of teacher characteristics data from the school profiles can be found in Appendix C. The race/ethnic background for the 13 charter schools combined shows that 25 percent of the instructional staff were African American and 71 percent were white. The table in Appendix C also shows that 5 charter schools had 50 to 70 percent African-American instructional staff, and 6 charter schools had 93 to 100 percent white instructional staff.

Age

The data for charter school teachers' age comes from a survey administered by the evaluation team. From these data, we can see that the age distribution among the Delaware charter school teachers indicates that they are younger than teachers in traditional public schools. Among classroom teachers in 2005-06, 28 percent were in their 20s, 31 percent were in their 30s, 18 percent were in their 40s, and 23 percent were 50 or older. Across the 13 charter schools there also were large differences with 2 charter schools having more than half of their teachers in their 20s, and 3 charter schools having less than 15 percent of their teachers in their 20s.

The state of Delaware reported that the typical public school teacher is 41 years of age with 13 years' experience. The typical administrator is 48 years of age with 21 years of educational experience. The profile of the typical public school teacher and administrator indicates that charter school teachers are significantly younger and less experienced than teachers at the regular public schools in the state. It was hard to find comparison data for traditional public school teachers that matches the age groups designated in our survey, but comparisons with national data indicate that the Delaware charter school teachers are younger than their regular public school counterparts (see Table 4:2).

Table 4:2 Age Distribution of Charter School Teachers Compared With National Distribution

Age Group	*Delaware Charter School Teachers (based on survey data)*			*National Public School Teachers*	*Age Group*	*Delaware Public School Teachers*
	2003-04	*2004-05*	*2005-06*	*1996-97 (NCES, 2000)*		*2005-06*[2]
20-29	36.3%	35.9%	27.7%	11.0%	*< 25*	6.6%
30-49	44.7%	44.5%	49.3%	64.2%	*25-44*	53.1%
50 or older	19.0%	19.6%	23.0%	24.8%	*44-54*	26.2%
					55 or older	14.1%

The classroom teachers were the youngest among the various groups of staff. Teaching assistants that complete the staff survey indicated that they were, on the whole, older than classroom teachers in the charter schools. Not surprisingly, the charter school principals/directors were noticeably older than classroom teachers and the other employees at the school.

Role and Proportion of Staff Devoted to Instruction

Among the 377 teachers and staff sampled in 2005-06, 72.5 percent indicated that they were regular classroom teachers, 4.8 percent were special education teachers, and 3.5 percent were teaching assistants. A total of 6.4 percent of the staff indicated that they were directors, principals, or other key administrators; and over 15 percent indicated that they had some other title or position at the school. These figures were rather unchanged across the 3 years of the evaluation.

Distribution of Teachers and Staff by Grade Level

Teachers and staff were asked to indicate which grade they work with most. Teachers appear to vary in distribution by school level (i.e., elementary, middle, or high school), but even larger differences exist by particular grade levels. Other staff members are concentrated in grades K-2 (this is driven by a high number of teaching assistants in these grades). Figure 4:2 illustrates the distribution of all teachers and staff by grade level as well as the distribution of teachers only across the various grade levels.

[2] This information is based on DOE *Delaware Educational Personnel Report*, Table 1: Profile of Full-Time Classroom Teachers, 1999-00 through 2005-06.

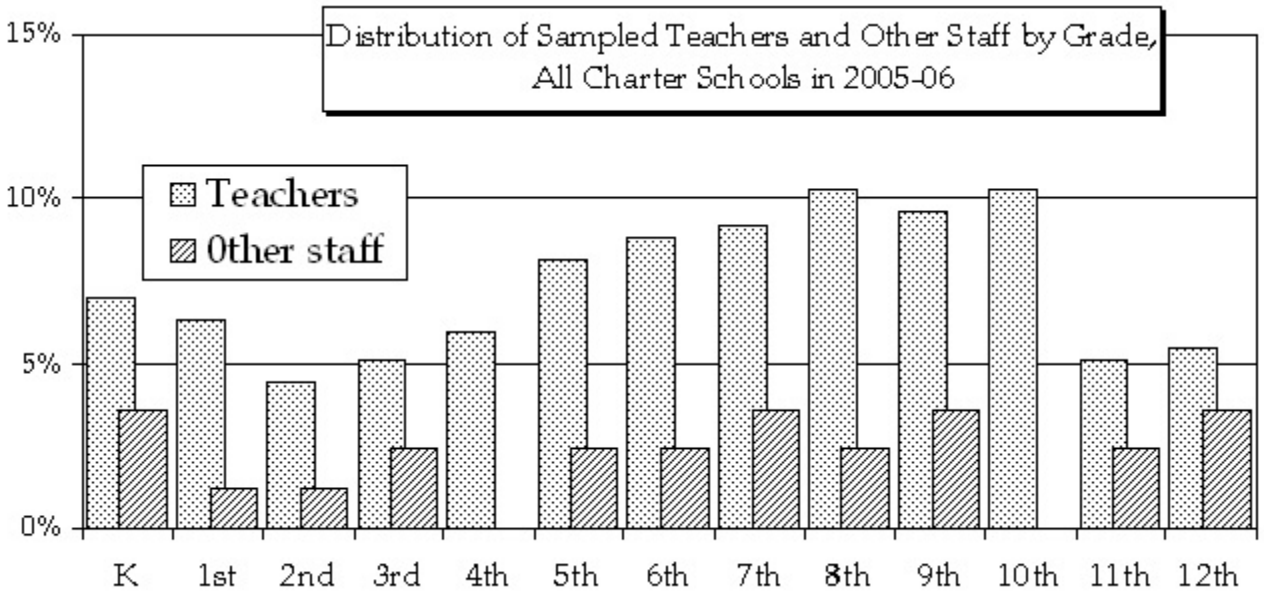

Figure 4:2 Distribution of Sampled Teachers and Other Staff by Grade, 2005-06
Note. 12 teachers and 59 other staff indicated that grade level was not applicable for their positions.

4.2 Educational Background and Years of Experience of Delaware Charter School Teachers and Staff

In this section, details regarding teacher background characteristics as well as years of experience are covered. Data presented are based on our survey of charter school staff. Appendix C contains tables with teacher data based on figures from the Delaware Department of Education.

Certification of Teachers

Of the 255 staff who indicated they were classroom teachers in the 2005-06 sample, 90.1 percent reported that they are currently certified to teach in Delaware. This is a large improvement from the previous year when 85 percent of the classroom teachers reported that they were certified and the year before that when only 77 percent of the teachers who responded to the survey indicated that they were certified. Figure 4:3 illustrates the self–reported certification status of sampled charter school teachers over three years. These are not official data; instead, these data are self-reported by the classroom teachers that completed and returned surveys. What is important to note here is that the proportion of certified teachers is increasingly annually. Simultaneously, the proportion of teachers that are certified in other states or who are working toward certification has decreased annually. This information should be considered indicative and not conclusive. For example, among the 30 teachers who reported that they are working to obtain certification, many may be working for a second certification.

Most teachers reported that they were teaching in a subject area in which they are certified to teach, although approximately 7 percent of the teachers indicated they were not certified in the subjects they taught (this is also an improvement from last year when 8.8 percent of the teachers that completed our survey indicated that they were not certified in the subject they taught). Just under 8 percent of the teachers stated that certification in subject area was not applicable to them.

Educational Background of Charter School Staff

In terms of formal education, the charter school staff appear to be well qualified (see Tables 4:3 and 4:4). Among those respondents who had completed a university degree, 55 percent had a B.A. as their highest college degree (this is down from 58 percent for the previous year), 43 percent had an M.A., and 0.3 percent had a 5-6 year certificate. Three percent had a doctorate. (These figures are very similar to the results from the previous year.) Of 351 teachers, staff, and administrators, more than 29.6 percent were working toward another degree (this is down from 36.5 percent in the previous year; and 81 percent of those working toward another degree were going for an M.A.

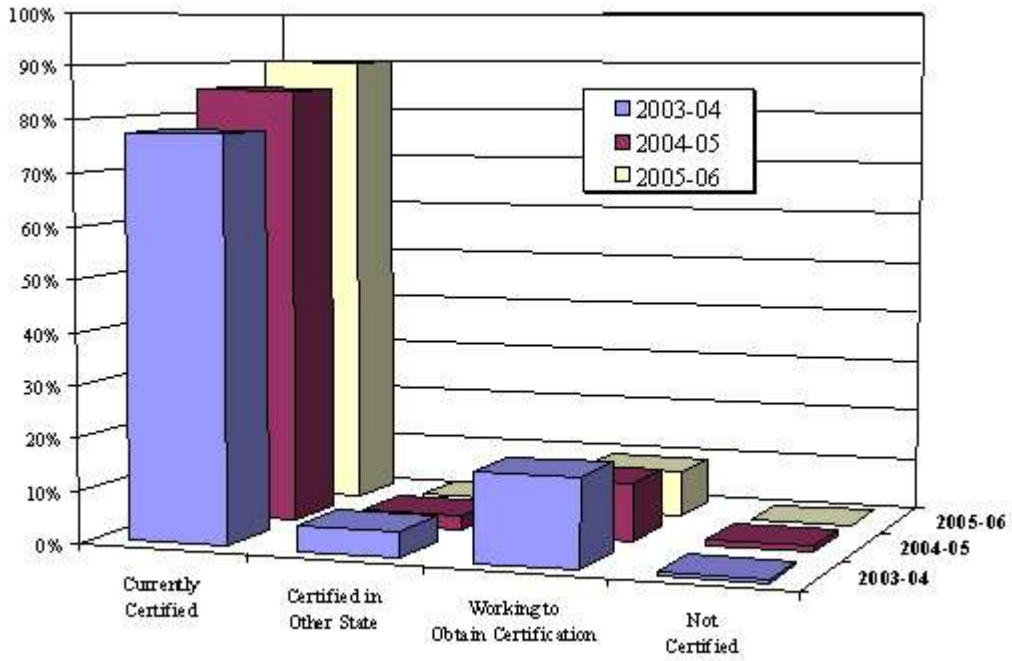

Figure 4:3 Self-Reported Certification Status of Charter School Teachers

Table 4:3 Role and Amount of Formal Education for Charter School Staff, 2004-05

Role	*Did not complete high school*	*Completed high school*	*Less than 4 years of college*	*College graduate BA/BS*	*Graduate courses, no degree*	*Graduate/ professional degree*
Teacher	0.0%	0.8%	1.2%	28.3%	29.1%	40.7%
Special ed. teacher	0.0%	0.0%	0.0%	30.0%	0.0%	70.0%
Teaching assistant	0.0%	25.0%	58.3%	8.3%	8.3%	0.0%
Key administrator	0.0%	4.2%	0.0%	8.3%	12.5%	75.0%
Other	0.0%	18.2%	27.3%	15.9%	0.0%	38.6%
Total (N=348)	0.0%	4.0%	6.3%	24.7%	22.7%	42.2%

Note. Figures based upon data from teacher surveys.

As with the previous year's data, there were large differences among schools in terms of formal education background and degrees received. In one school, 70 percent of the teachers had an M.A., and in 4 other schools more than 40 percent of the teachers had an M.A.. At the other end of the spectrum, 4 schools had fewer than 16 percent of their teachers with an M.A. degree; in 1 school none of the teachers had more than a B.A. degree.

Table 4:4 Role and Highest Academic Degree for Charter School Staff, 2005-06

Role	*Bachelor's*	*Master's*	*5- or 6-year cert.*	*Doctorate*
Teacher	59.3%	38.3%	0.0%	2.4%
Special ed. teacher	100.0%	0.0%	0.0%	0.0%
Teaching assistant	36.4%	63.6%	0.0%	0.0%
Principal	21.7%	65.2%	0.0%	13.0%
Other	29.2%	66.7%	4.2%	0.0%
Total (N=313)	53.7%	43.1%	0.3%	2.9%

Note. Figures based upon data from teacher surveys.

The Department of Education's statistics regarding full-time classroom teachers in 2005-06 indicated that 28.3 percent of the public school teachers had a B.A., 21.1 percent had an M.A. degree, 29.4 percent had an M.A. plus additional graduate work, and 1 percent had a doctorate. While the charter schools had slightly more teachers with a doctorate, the teachers in traditional public schools were much more likely to have a graduate degree.

Years of Experience

Most of the previous experience for charter school staff was accrued in public schools. Table 4:5 contains the results by role and school type. On average, the charter school teachers had close to seven and a half years of experience as educators. Overall, the levels of formal education and

amount of working experience of the charter school staff is similar to charter school teachers in other states we have studied. The principals and key administrators have, on average, spent more years at their charter schools than the regular education teachers and special education teachers have.

When comparing the charter school teachers to teachers in traditional public schools, we find that teachers in traditional public schools have nearly twice as much experience as measured by years of teaching. This can be explained partially by the fact that the charter schools are relatively new, and new organizations are more likely to be staffed by newly certified teachers looking for their first position. Large differences also exist among the charter schools when it comes to the mean years of teaching experience their teachers have had. For example, the classroom teachers in schools such as the Sussex Academy of Arts & Sciences, The Charter School of Wilmington, and Newark Charter School had more than 10 year of experience on average, while teachers in the Academy of Dover Charter School had 3.4 years of experience and the teachers in MOT Charter School, Marion T. Academy, Thomas A. Edison Charter School, and Kuumba Academy Charter School all had an average of 5 years of experience.

Over the past two years, the mean years of experience went up for teachers, from 6.4 years in 2003-04 to 7.6 years in 2004-05. Likewise, the mean years of teaching experience also showed gradual increases for the other categories except for special education teachers, for whom the mean years of experience actually decreased from 7.4 years to 4.5 years. This decrease likely is due to the attrition and replacement of special education teachers, or it could be explained partially by the addition of new special education teachers in the charter schools.

Table 4:5 Mean Years of Experience by Role and in Various Types of School, 2004-05

	Private School	*Parochial School*	*Charter School*	*Public School*	*Total Yrs. of Experience**	*Years at Current School*
Teacher	0.55	1.03	2.83	3.21	7.61	2.81
Special education teacher	0.27	0.12	2.15	2.00	4.54	2.15
Teaching assistant	0.30	0.30	2.37	4.00	6.96	2.37
Key administrator	0.60	3.85	3.96	6.92	15.34	3.87
Other staff	0.03	0.56	3.37	3.29	7.26	3.31

* Total years of experience as an educator in the school types/roles listed in the table

In terms of the mean number of years at the current school, we would expect the mean number of years to increase 1 year from the previous year if all the teachers who responded to the survey returned the next year. In any case, we found a small increase in the mean number of years at the current school for regular classroom teachers (i.e., it increased from 2.5 years in 2003-04 to 2.8 years in 2004-05). While the mean years at current school decreased for special education teachers (from 2.3 years in 2003-04 to 2.1 years in 2004-05), the other categories of staff also showed gradual increases from .2 to .7 years.

4.3 Reasons to Seek Employment at a Charter School

In our teacher survey forms, a number of possible reasons for teachers and staff to seek employment at a charter school were listed, and the staff were asked to rate each reason on a 5-point scale according to how relevant each reason was in influencing their decision to seek employment at the charter school. Table 4:6 includes the descriptive statistics for the results on these items. The items in the table are rank ordered from top to bottom with the most important reasons for seeking employment in a charter school listed at the top.

The most important factor was "safety at school." Given the concern of violence in schools, it makes sense that teachers place value on have a safe work environment. Other important factors influencing employment at charter schools were opportunities to work with like-minded educators, committed parents, and the academic reputation (high standards) of the school. The least important factor in seeking employment at the respective schools was "difficulty in finding other positions," with approximately 12 percent of the teachers agreeing or strongly agreeing that this was a factor.

Table 4:6 Reasons for Seeking Employment at This School (Rank Ordered According to Means), 2005-06

	Not important				*Very important*		
	1	*2*	*3*	*45*		*Mean*	*STD*
Safety at school	2.4%	4.8%	19.6%	30.6%	42.6%	4.06	1.02
Opportunity to work with like-minded educators	3.0%	2.4%	19.5%	38.6%	36.5%	4.03	0.96
Academic reputation (high standards) of this school	5.6%	5.6%	16.4%	29.8%	42.5%	3.98	1.15
Parents are committed	4.3%	4.8%	18.7%	34.2%	38.0%	3.97	1.07
My interest in being involved in an education reform effort	6.4%	8.3%	26.3%	32.4%	26.5%	3.64	1.15
More emphasis on academics	5.9%	7.8%	28.2%	34.3%	23.9%	3.62	1.11
This school has small class sizes	10.7%	7.5%	30.8%	26.5%	24.4%	3.46	1.24
Promises made by charter school's spokespersons	13.2%	10.5%	23.2%	29.2%	23.8%	3.40	1.31
Convenient location	15.2%	14.2%	32.4%	19.8%	18.4%	3.12	1.30
Difficult to find other positions	47.1%	15.5%	24.8%	6.5%	6.0%	2.09	1.23

When comparing the results on these items over the three years of the evaluation, we found relatively few changes in order and distribution of responses on these items. Any differences we found were not statistically significant.

While the responses varied greatly among schools, respondents from nearly all of the schools mentioned the following reasons for choosing their charter school: dedicated staff, a strong sense of community, good students, and creativity in programs. In three of the schools (based on 2005 survey data), more than 75 percent of respondents reported that the quality of the teaching staff was the

driving force behind their decision to teach at their school. In the words of one teacher, "They have a lot of really great teachers with positive attitudes and excellent teaching techniques." Another attribute that received praise from many teachers was collaboration between community members, i.e., parents, students, teachers, and administrators. Specifically, teachers praised "the symbiotic and productive academic atmosphere created by faculty and students": a "strong desire of all three key components: students, parents, and the sense of community in times of adversity." In the words of one content teacher at one of the high performing college prep charter schools, "*It seems to me that the greatest difference between the schools I previously taught in and this school is that most students in this school are eager to learn and are willing to rise to the challenges placed before them. It also amazes me that our students are so well rounded; they take academically challenging courses, are active in extracurricular clubs, music, and sports. The students are generous and willing to help their peers. We also receive far more parent support than I have seen in most of other schools in which I worked*."

The chance to teach using unconventional or nontraditional methods was a motivating factor for some teachers in choosing to work at a charter school. In the words of one classroom teacher: "The charter school provides me with professional freedom to develop academics that best meet student needs and personal interests/style."

In the few charter schools that cater to students with special needs or students at risk of failing, it was more common to hear teachers note that they sought their position because it gave them the opportunity to work with students in need of extra help.

Although the majority of responses in the open-ended portion of the survey were positive in nature, some comments suggested that there was room for improvement. Again, there was variation among schools. For example, in one school, 64 percent of respondents indicated that discipline/behavior issues were a major concern. In two schools, 70 percent of respondents reported inadequate physical facilities was the greatest weakness or problem at their school. Other schools reported that student motivation, the school administration, or the turnover of teachers and staff was their greatest concern.

4.4 Working Conditions for Teachers and Staff and Levels of Satisfaction

The general working conditions for teachers and staff varied extensively among the charter schools. When referring to working conditions, we have relied on data from the teacher/staff surveys and interviews that covered facilities and resources for instruction, as well as satisfaction with salary and benefits.

On the whole the teachers and staff were mixed in terms of satisfaction with facilities and financial resources. There were considerable differences by school, with staff in 7 of the 13 schools indicating that they were quite satisfied with facilities, while at 2 schools staff were very dissatisfied (see chapter 5 for more thorough discussion of facilities and satisfaction with facilities).

Interestingly, the open-ended portion of the survey revealed that staff in one-third of the schools believed that inadequate facilities was a major constraint. One respondent wrote, "The greatest weakness of our school lies in the fact that we are teaching in very crowded conditions in a rented

section of another school. Rooms have been cut in half to accommodate the maximum number of students, still we have a large pool of students that we cannot accept because of our size. (What remains amazing is that in spite of this, we are doing a great job!)" Another teacher reported that his/her school's greatest weakness was, "The horrendous facilities— no improvements are made. We need our own building!" Still another teacher reported, "The rental building situation limits us in so many ways. We have no (or very little) control over the physical structure and the athletic fields. Everything is in deplorable, crumbling condition and no money is spent for the upgrades that are LONG over due. We also have no control over the custodial and maintenance staff. So even daily routine upkeep is often not done. We also need much more inside and outside space!" Appendix B contains further detailed findings regarding the levels of satisfaction among the charter school staff with regard to facilities and resources available for instruction.

Roughly 45 percent of the teachers and staff agreed or strongly agreed that the physical resources available for instruction were good, while the rest were either not satisfied with the resources or were uncertain. This is a big drop from the previous year when 57 percent of the teachers reported that they were thought the physical resources for instruction were good. In one school, 100 percent of respondents reported that insufficient financial resources were the greatest weaknesses of their school. One teacher said, "Staff salaries are too low, this makes retaining dedicated, hardworking staff and teachers difficult." Similarly, another teacher reported that "low teacher salaries attract mainly entry-level teachers with no or minimal experience." Some teachers reported that their school's charter school status was contributing to its financial problems. As with the previous year, a large number of the responses in the open-ended section of the survey identified school funding and resources as one of the greatest weaknesses of their school

Just over 60 percent of staff disagreed that class sizes at their schools were too large to meet individual student's needs, which is nearly identical to the results from the previous year. Student discipline was cited by many respondents as being essential to providing quality education. Unfortunately, for two schools, lack of discipline was cited as the principal weakness of the school. Teachers in these schools reported that classroom disruptions and disrespectful students were serious hindrances. Conversely, in those schools where discipline was not a problem, teachers reported that students learned more and that their (the teachers) job was easier as a result.

Teacher Autonomy and Opportunities for Developing Innovative Practices

The teacher survey asked teachers about their initial expectations and to compare these with what they are currently experiencing in their schools. They were asked whether their schools support/are supporting innovative practices and whether they will be/are autonomous and creative in their classrooms. As indicated in Table 4:7, there is a 9 percent discrepancy between expectation and current experience in the area of innovations (this difference was 16 percentage points in the previous year) and a 6 percent discrepancy between their expectation and current experience in the areas of autonomy and creativity (this difference was 10 percent in the previous year). Between year 1 and 2 of the evaluation, the gap between what was expected and what was experienced was largely unchanged. However, in year 3, the findings indicate that since the previous year, the gap between what teachers initially expected and what they current experience had decreased considerably. This is a very positive finding that suggests that teachers are increasingly satisfied with their working conditions and the ability of their schools to deliver what they initially expected.

Table 4:7 Teacher Expectations and Current Experience With Regard to Innovative Practices and Autonomy

	Initial Expectation					*Current Experience*				
	False	*Partly True*	*True*	*Mean*	*SD*	*False*	*Partly True*	*True*	*Mean*	*SD*
The school will support/is supporting innovative practices	0.9%	16.5%	82.7%	2.82	0.41	4.0%	22.7%	73.4%	2.69	0.54
Teachers will be/are autonomous and creative in their classrooms	0.6%	16.7%	82.7%	2.82	0.40	1.1%	22.2%	76.7%	2.76	0.46

From the surveys we administered over the three years of the evaluation, we learned that many teachers reported that they highly valued the creativity that working in a charter school made possible. Several teachers were emphatic in their belief that this creativity facilitated greater learning. At the other extreme a number of teachers also described how the support from administrators and general working conditions posed serious constraints. For example, one teacher wrote that "*the administration fails to communicate expectations regarding outside activities (i.e., meetings and events after hours. We are expected to attend, participate sometimes at a days notice.)"* Another teacher pointed out that "there is not enough support for the high number of new teachers to be successful and grow in their careers." While these critical comments point out some of perceived problems that exist, it is important to recall that the majority of respondents expressed satisfaction with their charter school.

Satisfaction With Salaries and Working Conditions

Salary and benefits comprise two of the main issues that come to mind when one talks about working conditions. Other aspects of working conditions include facilities, availability of resources, administrative leadership, and supervision, etc. From state data, we were able to secure information on teachers' salaries. From our survey of teachers and staff, we were able to obtain data on teachers' relative satisfaction with the various components of working conditions (see Table 4:8). Before we examine satisfaction levels, we provide an overview of teacher salary data.

The Delaware charter schools' average teacher salary in 2005-06 was $42,281, which is noticeably lower than the state average of $52,486. In recent years, the difference between the average salary for charter school teachers and traditional public school teachers had been growing smaller. Two years earlier the difference was around $10,500; and during 2004-05 this difference decreased to just over $8,000. However, during 2005-06, this difference increased again to $10,206. It is interesting, of course, to note the large differences in teachers' salaries among the charter schools where Academy of Dover Charter School has the lowest average salary at $32,436 and Newark Charter School had the high average teacher salary at $56,337. Aside from Newark Charter School, only 1 other charter school can boast salaries that are higher than the state average: The Charter School of Wilmington, which had average salaries of $52,559. Appendix C has a complete list of mean salaries for each of the schools.

The difference in average teacher salaries can be explained to a great extent by the large difference in educational background and years of experience of the teachers employed. As noted earlier, teachers in traditional public schools are more likely to have more credentials, higher levels of formal education, and more years of experience. Similarly, the charter schools with higher teacher salaries also tend to have teachers with more credentials and more experience than the charter schools with lower average teacher salaries.

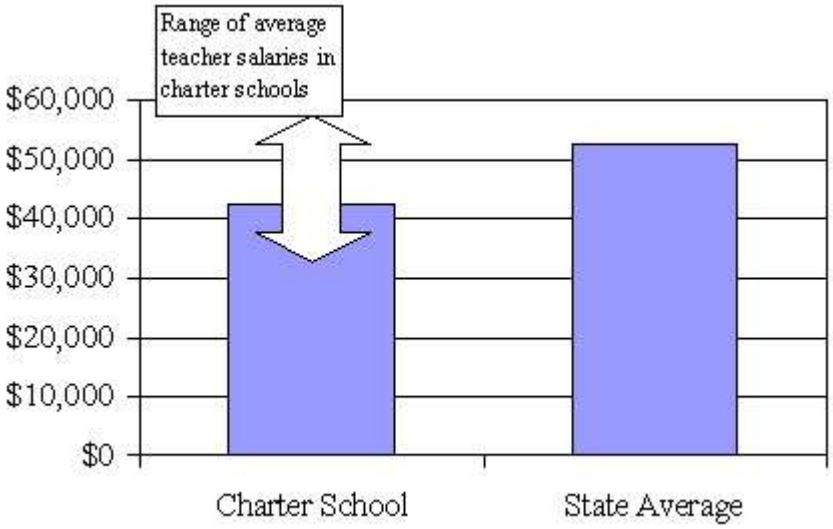

Figure 4:4 Comparison of Teachers' Salaries in Charter Schools and Across the State

The difference in average teacher salaries can be explained to a great extent by the large difference in educational background and years of experience of the teachers employed. As noted earlier, teachers in traditional public schools are more likely to have more credentials, higher levels of formal education, and more years of experience. Similarly, the charter schools with higher teacher salaries also tend to have teachers with more credentials and more experience than the charter schools with lower average teacher salaries.

Table 4:8 Levels of Teacher and Staff Satisfaction with Working Conditions

	Not very satisfied				*Very satisfied*	*Mean*	*SD*
	1	*2*	*3*	*4*	*5*		
Salary level	9.0%	17.7%	29.3%	25.8%	18.2%	3.27	1.21
Fringe benefits	4.8%	13.5%	29.8%	30.1%	21.9%	3.51	1.12
School buildings and facilities	15.2%	12.2%	20.9%	24.5%	27.2%	3.36	1.39
Resources available for instruction	3.9%	13.9%	26.5%	30.9%	24.8%	3.59	1.12
Availability of computers and other technology	8.2%	12.3%	21.3%	25.4%	32.8%	3.62	1.28
School governance	5.3%	9.5%	26.7%	30.6%	27.9%	3.66	1.14
Administrative leadership of school	6.8%	9.8%	23.9%	23.6%	35.9%	3.72	1.24
Evaluation or assessment of your performance	3.9%	7.5%	22.9%	31.8%	34.0%	3.85	1.09

Another factor that explains differences in teachers' salaries are decisions made by charter schools regarding the amount of pay and bonuses it provides their teachers. The charter schools have considerable autonomy in determining teacher salaries. It is important to remember that charter school revenues are partially dependent on the qualifications of their teachers. However, a teacher's qualifications do not necessarily dictate the salary; that is determined by the charter school. For example, a charter school may hire a teacher with entry level qualifications but decide to pay them far above the relative pay scale of the surrounding districts. The funding formula, however, restricts the funding to the school to that of a typical entry level teacher. At the other extreme, a charter school can solicit extra state funding by recruiting a highly qualified teacher and, by paying the teacher less than the typical pay scale, can generate extra resources that can be used for other purposes. As it turns out, charter school salaries are typically lower on average than those in traditional public schools. Also, the relative pay scales at the charter schools were reported by several—but not all—charter school directors to be 10-15 percent lower than the pay scales in the surrounding districts.

The teachers displayed varying levels of satisfaction with their salaries and benefits. Around 44 percent of the teachers and staff were satisfied or very satisfied with the salaries they received, while 27 percent were either dissatisfied or very dissatisfied with their salaries. Nearly one-third of the staff (29.3 percent) indicated that they were neither satisfied nor dissatisfied with their salaries. Fifty-two percent were satisfied or very satisfied with their benefits, while 18.3 percent were dissatisfied or very dissatisfied with their benefits. Interestingly, all indicators in Table 4:8, except for availability of computers and technology, actually worsened between 2003-04 and 2004-05 (i.e., year 1 and year 2 of the evaluation). Between years 2 and 3 of the evaluation, most indicators stayed the same; in the case of salaries and benefits, there was a modest improvement in terms of satisfaction. When looking across all 3 years, we found no statistical differences in the relative levels of satisfaction. These aggregate results, no doubt, mask improvements that may be occurring within individual schools.

4.5 Initial Expectations and Current Experiences of Teachers and Staff

A number of identical items were used in the surveys to examine and compare the charter school staffs' "initial expectations" as opposed to "current experience" (See Appendix B, Teacher/Staff Results, Question 16). As was the case in each of the three years we collected data, we found that teachers and other staff were generally content with their schools and satisfied with the services they provide. It is interesting to note, however, that there were statistically significant differences on all variables that compared what was initially expected and what the educators were currently experiencing. What the staff were reporting as "current experience" was significantly less positive than their "initial expectations."[3]

[3] Because these questions are actually nonparametric in nature and the variables are ordinal, the marginal homogeneity test was used to compare the paired distribution of responses. This also found significant reductions in expectations on all items ($p = .001$) except the item "parents will be able to influence the direction of the school."

The biggest differences between initial expectations and current experience were on the following items which are rank-ordered from the biggest differences (i.e., greatest disparity between what teachers expected and what they were experiencing) at the top of the list.

1. The school will have/*has* effective leadership and administration.
2. There will be/*are* new professional opportunities for teachers.
3. Students will be/*are* eager and motivated to learn.
4. Teachers will be/*are* able to influence the steering and direction of the school.
5. Support services (i.e., counseling, health care, etc.) will be/*are* available to students.
6. Students will have/*have* access to computers and other new technologies.
7. Students will/*are* receiving appropriate special education services, if necessary.
8. Students will receive/*receive* sufficient individual attention.

This does not imply that teachers and staff were not satisfied with these aspects of their school. Rather, it infers that they had high expectations in these areas that did not correspond with what they were currently experiencing.

As noted in earlier reports, it is important to consider the educational significance of these findings. Likewise, it is important to consider likely explanations for these findings. Given the feedback we received from teachers and staff, in a number of cases the teachers simply expected too much. A large portion of the teachers were seeking jobs at schools that were relatively new or were not yet in operation. Given such a situation, expectations are understandably high. Unfortunately, we do not have comparable data from regular public schools.

Although there are differences between teachers'/staff's initial expectations and current experience, teachers/staff generally are still positive about their schools. Nonetheless, the gap between teachers' expectations and their current experiences is a warning sign for charter schools. And, as we shall see in the findings in the next section, teachers' levels of satisfaction are closely linked to teacher attrition.

4.6 Scope and Reasons for Attrition of Teachers and Staff

In this final section of the chapter, we examine the extent of attrition among teachers and other charter school staff. First of all we examine the scope of attrition by school and category of staff, then we examine and compare the background characteristics of those teachers that stay in the charter schools with teachers who leave. This provides insight into whether or not attrition is affecting the most qualified teachers and also suggests likely reasons for attrition.

We were able to calculate attrition rates over 4 years from 2002-03 to 2005-06 (see Table 4:9) from documentation and data files provided to us by the Delaware Department of Education. One surprising finding from the first year of the evaluation was the very high level of attrition among teachers and staff. We were pleased to find that in year 2, the level of attrition—especially for certified teachers—dropped considerably (i.e., from 32% to 20.6%). In the two subsequent years, attrition among certified teacher rose again to 33 percent

Table 4:9 Attrition Rates Among Charter School Staff from 2002-03 to 2005-06

	Certified Teachers				*Noncertified Teachers*				*Administrators*				*All Staff*			
	Percent Attrition from 02-03	*Percent Attrition from 03-04*	*Percent Attrition from 04-05*	*Percent Attrition from 05-06*	*Percent Attrition from 02-03*	*Percent Attrition from 03-04*	*Percent Attrition from 04-05*	*Percent Attrition from 05-06*	*Percent Attrition from 02-03*	*Percent Attrition from 03-04*	*Percent Attrition from 04-05*	*Percent Attrition from 05-06*	*Percent Attrition from 02-03*	*Percent Attrition from 03-04*	*Percent Attrition from 04-05*	*Percent Attrition from 05-06*
Campus Community School	14.3%	13.5%	33.3%	21.1%	71.4%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	23.4%	16.0%	32.6%	18.4%
The CS of Wilmington	13.3%	2.6%	12.2%	6.8%	—	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.7%	12.7%	12.1%	4.6%
East Side CS	33.3%	57.1%	16.7%	11.8%	—	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	33.3%	41.2%	7.1%	12.5%
Kuumba Academy CS	12.5%	13.3%	61.5%	25.0%	40%	0.0%	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	14.3%	9.1%	42.1%	23.1%
Marion T. Academy	72.0%	47.4%	54.2%	20.0%	—	0.0%	50.0%	14.3%	50.0%	33.3%	0.0%	0.0%	66.7%	40.9%	39.1%	14.8%
MOT Charter School	40.0%	51.6%	30.3%	6.9%	—	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	59.0%	39.6%	28.0%	5.0%
Newark CS	15.0%	24.2%	27.6%	4.8%	42.9%	0.0%	66.7%	0.0%	50.0%	0.0%	0.0%	0.0%	22.2%	22.0%	26.3%	4.8%
Positive Outcomes CS	20.0%	37.5%	42.9%	0.0%	33.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.7%	20.0%	20.0%	0.0%
Providence Creek CS	60.7%	26.3%	58.1%	5.7%	—	0.0%	50.0%	50.0%	100%	25.0%	50.0%	0.0%	61.8%	28.6%	50.0%	5.6%
Sussex Academy of Arts & Sciences	20.0%	15.8%	11.1%	11.8%	—	—	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.9%	13.0%	9.5%	9.5%
Thomas A. Edison CS	34.3%	16.2%	45.2%	5.7%	46.7%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	34.7%	17.5%	35.8%	4.4%
Del Military Acad.	—	6.3%	11.8%	4.5%	—	—	0.0%	0.0%	—	0.0%	0.0%	0.0%	—	4.8%	8.3%	3.3%
Academy of Dover CS	—	17.7%	22.2%	50.0%	—	0.0%	49.2%	0.0%	—	0.0%	0.0%	0.0%	—	23.1%	22.9%	39.3%
Total	31.9%	20.6%	33.3%	12.0%	48.6%	0.0%	31.0%	17.1%	23.1%	8.1%	3.0%	0.0%	35.7%	22.7%	27.8%	10.5%

Notes. Teachers whose certification was pending or under review were included as noncertified. The “all staff” category in the right-hand column includes teachers, administrators, clerical, paraprofessionals, and classroom aides.

and then drop to a low of 12 percent. While this is a big improvement, it is important to note that attrition rates remain high at a number of the schools (i.e., Academy of Dover Charter School with 50%, Kuumba Academy Charter School with 25%, Campus Community School with 21%, and Marion T. Academy with 20% attrition of certified teachers). High levels of attrition can undermine the success of charter schools as they continue to develop and implement their unique visions and plans.

While one-third of all charter school personnel (i.e., the teachers, aides, clerical/-administrative/custodial staff, and administrators) left during or immediately following the 2002-03 school year, this figure dropped to 22.7 percent in 2003-04, rose to 27.8 percent in 2004-05, and then dropped once again in 2005-06. See Table 4:9 that outlines the attrition results for several categories of staff.

Classroom teachers are considered the most important staff members in providing instruction, so attrition within this group is very critical. Our analysis separated certified and noncertified teachers. Following the 2002-03 school year, 48 percent of noncertified teachers did not return to the school at which they taught. In subsequent years, the number of noncertified teachers has dropped substantially (we reviewed data on this earlier in the chapter). Even as the numbers of noncertified teachers have decreased, the attrition rates among teachers in this category remain rather high.

The attrition among key administrators dropped dramatically from 23 percent in 2002-03 to 8 percent in 2003-04, 3 percent in 2004-05, and 0 percent in 2005-06. Unfortunately, the little attrition that exists among administrators remains concentrated in a few schools that were already affected by earlier turnover of administrators.

Our data also included information on other school staff. Besides teachers and administrators, there were data for three other categories of staff: clerical, paraprofessionals, and classroom aides. The average attrition rate for staff not including teachers and administrators has typically ranged between 30 and 40 percent annually.

Teacher attrition in charter schools is expected to be higher because the teachers are on one-year contracts and are not part of collective bargaining units. The principal is most often responsible for hiring and firing, with the board of directors' agreement. Teachers that do not match the mission of the school or teachers that are deemed less effective can be removed easily. In cases such as this, the attrition is what we would refer to as "functional attrition." The high rates of attrition, however, suggest that the schools likely also are losing effective or promising teachers due to dissatisfaction with working conditions, salary, or other reasons. Other factors that may affect attrition rates include the urbanicity of a school's location, the racial and economic makeup of the district, and the relative years of experience of the teachers.

The charter schools with the highest staff turnover rates in the initial years of the evaluation were those run by EMOs. All of the schools have now terminated their management agreements with the out-of-state companies they had originally contracted to manage the schools.

Reasons for Teacher Attrition

After noting which teachers left each year, we recoded the survey data to distinguish the survey records from teachers who remained at the school and those who left the school during the subsequent year. We then reanalyzed the teacher survey data and compared the responses from

teachers that remained at the schools with teachers that left. We also relied on information garnered in interviews with school administrators and teachers to ascertain reasons for attrition. Not surprisingly, we found that classroom teachers that left charter schools were dissatisfied with various aspects of the school. Large differences in survey responses could be measured between classroom teachers who stayed compared with those who left. All of the items listed below were found to be statistically significant ($p \leq 0.01$).

School mission and school quality

Teachers who left were more likely to be dissatisfied with the following:
- ❏ School mission and the ability of the school to fulfill its mission
- ❏ Innovation in the charter school
- ❏ Curriculum used at the school
- ❏ School's ability to meet students' needs

Teachers who left were more likely to have the following perceptions:
- ❏ The quality of instruction not high
- ❏ Teachers and staff are not committed to the school mission
- ❏ Too many changes are going on at the school
- ❏ Lack of student discipline
- ❏ The school does not maintain high standards and expectations for students

Governance/leadership

Teachers who left were more likely to be dissatisfied with the following:
- ❏ Leadership of the school
- ❏ Governance at the school
- ❏ Communication between school and students' homes
- ❏ Support services for students
- ❏ Ability to influence direction of the school

Working conditions

Teachers that left the school were dissatisfied with the following:
- ❏ Salary
- ❏ Resources available for instruction
- ❏ Perceived safety for students at the school
- ❏ Too many noninstructional duties
- ❏ Perceived job security for teachers
- ❏ Evaluation and assessment of their performance

Background characteristics of teachers. Not surprisingly, we did find some noticeable differences in the qualifications, particularly in terms of years of experience and the amount of formal education teachers had received (i.e., teachers that left were less experienced and had less formal education).

Tables 4:10 and 4:11 outline the relationship between teacher attrition, ethnic background, and certification status.

Table 4:10 Teacher Attrition by Race/Ethnicity

	White		*Black*		*Hispanic*		*Asian or Pacific Islander*		*Native American Indian*		*Total*	
	Count	*%*	*Count*	*%*	*Count*	*%*	*Count*	*%*	*Count*	*%*	*Count*	*%*
Returned	554	82.1%	87	75.7%	17	81.0%	5	62.5%	5	100%	668	81.1%
Left School	121	17.9%	28	24.3%	4	19.0%	3	37.5%	0	0.0%	156	18.9%
Total	675	100%	115	100%	21	100%	8	100%	5	100%	824	100%

Note: This data represents the aggregate results from the previous 3 years.

As one can see, attrition levels were higher for minority teachers, particularly African-American and Asian/Pacific Islander teachers. Also, teacher attrition was only slightly higher for noncertified teachers than for certified teachers (see Table 4:11). These aggregate results mask the large school level differences that exist.

Table 4:11 Teacher Attrition by Certification Status

	Certified to Teach in Delaware		*Certified to Teach in Other State*		*Working to Obtain Certification*		*Not Certified & Not Working to Obtain Certificate*		*Total*	
	Count	*%*	*Count*	*%*	*Count*	*%*	*Count*	*%*	*Count*	*%*
Returned	575	81.4%	19	76.0%	82	79.6%	4	80.0%	680	81.0%
Left School	131	18.6%	6	24.0%	21	20.4%	1	20.0%	159	19.0%
Total	706	100%	25	100%	103	100%	5	100%	839	100%

Note: This data represents the aggregate results from the previous 3 years.

Regardless of the reasons for turnover, it is clear that high turnover can be problematic to morale and to student achievement. High turnover impacts a great number of staff, parents, and especially students. On the other hand, it is important to keep in mind that not all attrition is bad. Because charter schools are much freer to remove teachers that do not perform well or who do not match the mission of the school, they should be able to build more focused learning communities. While we have been able to identify the scope and likely reasons for attrition, further study is needed to examine the factors behind teacher attrition as well as the impact of this attrition on the charter schools.

4.7 Summary of Findings Regarding Teachers and Their Working Conditions

This chapter contains detailed information that highlights the extensive differences that exist between charter schools and traditional public schools, but more importantly, between and among the charter schools themselves. On the whole, teachers in charter schools have credentials and qualifications (i.e., formal education, certification status, years' experience, etc.) that are lower than teachers in traditional public schools. Extensive differences exist, however, among the charter schools, with some schools having a very high proportion of teachers with master's or doctoral degrees and other schools with few teachers completing any graduate degrees.

Over time, the qualifications of the teachers in charter school have been improving. There are also signs that the teaching force in most schools is stabilizing and attrition has decreased to a modest level.

On the whole, the charter school staff were satisfied with their schools and with the working conditions they face. The working conditions for charter school teachers differ dramatically depending on the school in which they work. From our site visits, we saw some schools with extremely modern facilities and well-equipped offices and laboratories and others that had crowded and run-down facilities. Teachers' salaries also varied extensively, with a few schools having mean salaries noticeably higher than the state average and several schools with salaries far below the state average. Given these vast differences in working conditions that charter school teachers faced, it was no surprise to find that teacher attrition also varied extensively by school.

In summing up the findings regarding charter school teachers and their working conditions, it is fair to say that—overall—improvement are being made each year. Nevertheless, the disparity among the charter schools it terms of their teachers and the working conditions they face needs to be recognized and addressed.

Chapter Five
Comparison of Finance Data for Charter Schools and Traditional Public Schools

The financing of charter schools is a highly contentious area. Adequate funding is critical for the survival of charter schools. This issues remains controversial and difficult to resolve due to a number of reasons, including the following:

- ❏ Funding formulas for public schools and charter schools alike tend to be very complex and rely on many factors and variables.
- ❏ Funding formulas for charter schools vary extensively from state to state. Reasonable arguments regarding inequity of funding in one state cannot be transferred to other states.
- ❏ Multiple types and sources of revenues are not easily captured and reported.
  - ❏ In addition to general operating funds for schools, additional revenues can be obtained for specific supplemental services (e.g., transportation, vocational-technical programs, school health programs) or for capital investments.
  - ❏ Besides public sources of funding from local, state, or federal sources, many charter schools are effective in securing private sources of funding. Much of this funding can be outside the purview of analysts since private funds are not incorporated in state purchasing and accounting systems or because the private funds are held and spent on behalf of the charter school by a trust or foundation set up to serve the school or to secure a facility.
- ❏ With each passing year, new analyses and position papers on charter school finance are released. Many of these further complicate the understanding of charter school finance because they present select data or partial evidence that supports their position.

In this chapter, we seek to provide a fair and balanced description of charter school finance in Delaware. Care is given to spell out limitations in the data, and the text is riddled with cautions regarding how the findings should be interpreted and might be misinterpreted. Our evaluation sought to examine a number of questions related to finance. Rather than attempting to propel a particular agenda, we have simply attempted to document and compare financial data for charter and traditional public schools in Delaware. The key questions we address include the following:

- ❑ How much do charter schools receive in revenues, and from what sources do they obtain funding?
- ❑ How do the amount and sources of revenues for charter schools differ from traditional public schools?
- ❑ How do the patterns of expenditure for charter schools compare with those of traditional public schools?
- ❑ What evidence have we collected or obtained that suggests charter schools are underfunded or overfunded?

It is important to note that due to the complexity of school finance data, we do not intend to identify all the determinants of disparities (or lack thereof) in funding between traditional public schools and charter schools. Instead, we present a comparative analysis of the source and scope of revenues and the size and pattern of expenditures for both groups of schools. Furthermore, we discuss some of the contextual issues surrounding charter school financing.

5.1 Overview of Charter School Funding

In Delaware, all public schools (i.e., charter and traditional) receive funding based on enrollment from the same three primary sources: local, federal, and state. Since charter schools are publicly funded, they may not charge tuition. However, if the charter schools offer special services (e.g., after school care) or programs, they are allowed to charge for such services. Since charter schools were introduced to spur market accountability in the public education sector, funding follows the student. Therefore, charter schools are motivated to recruit and retain their students. If a school is unable to do so, neither their students nor their funding will remain and the school will not be fiscally viable.

The funding formula for public school districts and charter schools in Delaware is very complicated (Appendix D contains the text from the charter school law regarding the financing charter schools). To summarize the rules for funding, we should point out that funding is divided into several tiers. The first layer includes the state's portion of costs for salaries, benefits, and training for teachers and staff. Actual funds at this layer are dependent on student head counts and the staff units required to provide services to the enrolled students. The funding formula takes into account how many students can typically be taught by a teacher based on specific needs and the particular school level.

The next layer or tier of the funding formula covers operating costs for running a school, including materials, supplies, maintenance, minor capital improvements, and utilities. This funding also is based on the annual student count. The third and last layer of funding is an equalizing formula for districts and charter schools that are located in areas that cannot raise adequate education funding through the local tax base. These funds can be used for any purpose as determined by the district or school. This part of the funding formula, like the others, is based on student counts. Other allocations outside these 3 layers include such areas as transportation or capital contributions. Currently, charter schools receive transportation funding that covers 80 percent of the average cost per pupil for transporting students within the county vocational district in which the charter is located.

The same funding formula is applied for both district schools and charter schools. However, this does not mean they get the exact same revenues. Instead the formula is designed to provide the same revenues for similar students being taught by teachers with similar qualifications. Teacher qualifications, type of students served, and the size of school populations all influence the amount of funding a school receives. As will be seen in the subsequent sections, there are large differences in actual revenues for charter schools and district schools. In a few cases, charter school revenues exceed average state funding; but in the rest of the cases, charter school revenues were lower than state averages.

Cost Advantages and Disadvantages for Charter Schools

While many have argued that charter schools receive too much funding, an equally large number claim charter schools are underfunded. Below, we include a list of reasons or factors that suggest that charter schools have cost advantages or disadvantages relative to traditional public schools.

Cost advantages:

- ❏ Increased autonomy permits the flexibility needed to be more responsive and more efficient.
- ❏ Charter schools are community-based and are better able to solicit in-kind contributions from families, community partners, businesses, and private organizations.
- ❏ Charter schools are able to apply for additional federal funding for start-up, implementation of the school, and the dissemination of ideas.
- ❏ Charter school teachers typically receive lower salaries than traditional public schools, which is a substantial cost savings for these schools. While some point out that this is a result of insufficient funds, it is fair to say that this is a result of the lower level of qualifications of the teachers that are recruited or that seek employment in charter schools. Charter schools can limit enrollments to ensure an efficient match with existing facilities and instructors. For example, a charter school with 4 teachers can choose to admit only 88 students to ensure that each class will have 22 students. A public school with 4 teachers may end up with 70 students or 95 students. Adjustments can be made and more staff hired, but the teacher- student ratio in traditional public schools will often not be the most cost-efficient.

Cost disadvantages:

- ❏ Most charter schools are start-up schools that require a lot of initial funding—particularly for facilities—and federal start-up grants are insufficient, especially when the renovation or purchase of a facility is involved.
- ❏ Charter schools tend to be small and lack economies of scale that districts have.
- ❏ While Delaware charter schools are required to have specialized staff such as a certified administrator or a school nurse, the net cost for such staff is distributed over a small number of students.

The Delaware Charter Schools Network, a charter school advocacy and support organization, claims that as a result of funding inequities, it is difficult for some charter schools to maintain the quality of education offered to students. The following is a list of some of the inequities identified by the Charter School Network:

- Although charter schools have the same funding formula as technical schools, this is not true in the case of transportation. Recent cuts in transportation funding have resulted in some charter schools hiring fewer teachers to cover the difference.
- Charter school funding from local districts is calculated based on what the local district spends not what it collects in a given year. However, some local districts do not spend all of their funds in a given year and thus are paying less to charter schools.
- Charter schools receive none of the tax monies paid by charter school parents for capital, maintenance, and energy expenses, as compared with public districts, which do.
- Charter schools may not use state money to maintain their school and district buildings (as public schools can), but rather must use operating or grant money to do so.[1]

The excerpts presented above underscore the extent of the disinformation confounding charter school finance. For example, in the second bullet point it states that the money received by charter schools is based on what the local districts spend rather than what they collect. However, traditional public schools are required to carry reserve balances from year to year. Because districts go to referendum every three or four years, they need to have reserve funds to provide for employee raises in the intervening period. In our interviews with charter school administrators, it was clear that there is a great deal of misconceptions surrounding how charter schools are funded. Many of the perceived inequities cited by charter school administrators were not substantiated by the data or the legislature authorizing charter schools. It is clear that in order for any serious discussion on charter school finance, many of the existing misconceptions will have to be addressed.

5.2 Methods Used For Our Analysis of Finance Data

Developing a clear understanding of how charter schools are funded can be challenging. Indeed, a nationwide study of charter schools finance sponsored by the U.S. Department of Education revealed that no rigorous analysis of state charter funding systems existed at the time (Nelson, 2000). It should be noted that data inconsistencies are not unique to Delaware, as evidenced by the authors of a recent Fordham Foundation report on charter schools in 17. The following quote encapsulates the state of school finance data and illustrates the constraints of studies of this sort.

> This analysis revealed beyond our wildest fears how uneven, incommensurable, and in many cases plain shoddy and gap-filled are state and local school-finance data. It's hard enough to figure out how much money flows into the coffers of district-operated schools in a given year, whence it comes, and what formulas govern the amount and shape the channels through which it flows. To find these things out for charter schools in any fashion that can begin to be compared with district (or state) data verges on impossible (Finn, 2005).

In a report from the National Charter School Research Center, the difficulty of "apple to apple" comparisons of costs and expenditures for different schools is discussed (Roza, 2004). The author

[1] The source of these arguments is an undated memo from the Charter School Network that we received in the spring of 2005.

notes that given their inherent differences, it is difficult to ensure the correct, appropriate, and accurate comparison of charter and traditional public schools. Indeed, charter school's very existence results from their differences from public schools. Roza asserted that in order to make appropriate comparisons, the playing field must first be leveled. Our analyses in the following sections seek to do just that: compare financing of charter and traditional public schools by analyzing both revenues and expenditures, comparing schools that offer similar services (i.e., excluding schools that only serve students with severe disabilities and schools that provide only vocational or technical training). We also took care to calculate per-pupil values, so that we could compare relative costs among schools and districts that vary extensively in size. Another effective method we utilized is what Roza calls "layers of details," wherein we broke out revenues and expenditures to provide detailed information on specific and comparable categories of revenues and expenditures. This allows for a more thorough analysis of expenditures.

The data that were analyzed in this study were taken from the school and district audited financial statements that are submitted to the Delaware Department of Education each year. In determining the differences in funding levels for charter and public schools, it was necessary to analyze those schools that offer similar services. Traditional public schools are much larger and offer more diverse programs and services to their students than do charter schools. Indeed, many charter schools' competitive advantage is their specialization at relatively lower per-student cost (Miron 2002). For example, charter schools typically serve fewer numbers of special education students. Similarly, charter schools often do not offer vocational and technical programs to their students. By providing these programs, public schools receive noticeable increased funding from local, state, and federal sources.[2] It is clear that an analysis of the financial data of charter and public schools would not reveal an accurate representation of how the two are funded. Therefore, in analyzing the data for the district public schools, the county vocational and technical schools, as well as schools for students with moderate and severe disabilities, were excluded from the analysis, along with Dover Air Base School. However, even after these special schools were removed, the amount of special education students was far greater for traditional public schools than for charter schools. Indeed, the percentage of special education students for the traditional public school districts was 12.7 percent while the charter school average was only 6.4 percent. Overall, 14 public schools were omitted from this study. In addition, the charter school totals and state board of education figures were also omitted. Unless otherwise stated, all calculations in this study are done on a per pupil basis.

Finally, in January 2006, Aspire Consulting released a study that analyzed Delaware district and charter school revenues. Prepared for the National Alliance for Public Charter Schools, the study's findings have been cited by a variety of institutions, including the Delaware legislature.[3] Due to the visibility of the Aspire report, we thought it necessary to highlight the differences in methodological approach:

- Aspire Consulting uses 2002-03 finance data, while we used 2004-05 data.

[2] For example, Howard T. Ennis, a school specializing in special education, receives $40,439 per pupil, John G. Leach, a school for the severely disabled, receives $46,669 per pupil, and Margaret S. Sterck, a school for the deaf, receives $60,159 in revenue per pupil.

[3] See, for example, http://www.legis.state.de.us/LIS/LIS143.nsf/vwLegislation/HB+422?Opendocument

- ❑ The Aspire study included vocational and technical schools as well as schools serving students with moderate and severe disabilities in the comparison group of traditional public schools. These schools receive substantially more funding as a result of the special services they offer. In our study, we removed such schools in order to compare charter schools with those traditional public schools offering similar services and programs.
- ❑ Included in the Aspire study were revenue data from Delaware Military Academy and Academy of Dover Charter School. These two schools did not begin full operation until September 2003 and only received initial start-up funding in 2002-03. Our analysis was able to report full revenues for these schools.
- ❑ While the Aspire study relied solely on state data, we supplemented our analyses of state data with information from interviews and surveys.

Description of Data and the Schools Included in Study

Our analyses covered three consecutive years of finance data covering 2002-03, 2003-04, and 2004-05. Finance data usually take a year longer than other school data to be released because extensive audits of data is are required. During the auditing period, the data are constantly updated and made more complete. The 2004-05 finance data, which were just released in January 2007, represent the most recent year of data that are available. Although our attention is on the most recent year of available data, we made comparisons regarding trends from the previous 2 years where appropriate.

Critical for understanding and verifying our findings is our specification of the schools included in the analysis. We compared charter schools with traditional public schools in order to determine and understand differences and patterns in the data. All 13 charter schools that were operating in 2004 were included in our analysis. While all of the schools were authorized by the same law (Del. C., Title 14, Chapter 5), they differ greatly in terms of size, mission, and programs offered. For example, in 2004-05 the Academy of Dover Charter School had approximately 425 students from kindergarten to fifth grade and total revenue of $3,287,584. The Charter School of Wilmington specializes in mathematics and science, serves 9-12th graders, had an enrollment of 936 students for the 2004-05 school year, and reported total revenues of $6,835,446.

Our comparison group was comprised of the 16 public school districts that cover the state. Enrollment for these districts ranged from 462 to 18,253, and total revenues ranged from $3,550,105 to $158,467,381. In order to make fair comparisons, some adjustments were made for the districts. Specifically, we deducted the data for the county vocational technical schools, segregated schools for children with severe disabilities, and the schools on the Dover Air Force Base from the revenue and expenditures. These schools represent real outliers with per-pupil revenues that far exceeded the state average. However, even after these schools were removed from As the data are presented in the following sections, a number of notes will specify cases and rationales for excluding particular charter schools from the analysis. The one main exception is with the Charter School of Wilmington because much of its revenues and expenditures are sorted out internally with the sponsoring district that owns and operates the facility; thus, a large portion of its finance data are not captured by the state system.

Limitations

The finance data for charter schools contain some apparent inconsistencies and missing information, which makes it impossible to draw definitive conclusions. On the bright side, charter schools in Delaware are making significant strides in improving financial transparency and consistencies. It is often the case that while new schools initially have difficulty with financial reporting, over time schools become more efficient and skilled in these efforts.

While many charter schools receive extensive funding from private sources, most often we were not able to document and include these revenues streams in the analyses. In our interviews with school directors, we received rough estimates of private funding. However, these figures were not sufficiently accurate or complete as to be included in our analyses. Consequently, the disparity between average charter and traditional public school revenue is likely to appear much larger than is the case.

While these limitations make it difficult to draw strong conclusions, we have identified a number of trends and patterns in the data that are worth sharing.

5.3 Revenues

Revenues for the charter and public schools are described in Table 5:1 and illustrated graphically in Figure 5:1. The average per-pupil revenue reported for charter schools in 2004-05 was $8,821, while the per-pupil revenue for comparison district schools was approximately $10,560 (see Table 5:1). On average, district schools receive noticeably higher revenues than charter schools. There are exceptions, however, since the Delaware Military Academy receives $599 more per pupil than the average for district schools. Also, Positive Outcomes Charter School has per-pupil revenues that are slightly higher than the district average since it receives extra funding for its high proportion of students with mild or moderate disabilities.

Total per-pupil revenue ranged from $7,069 to $12,052 among the charter schools analyzed in this study and from $8,943 to $12,564 among public schools. In other words, the public school with the lowest level of funding received $1,874 more than its charter school counterpart. Similarly, the public school with the highest level of funding received $512 more than its charter school counterpart. Some of these funding differences can be explained by the differences in services offered and the concentrations of low income students.

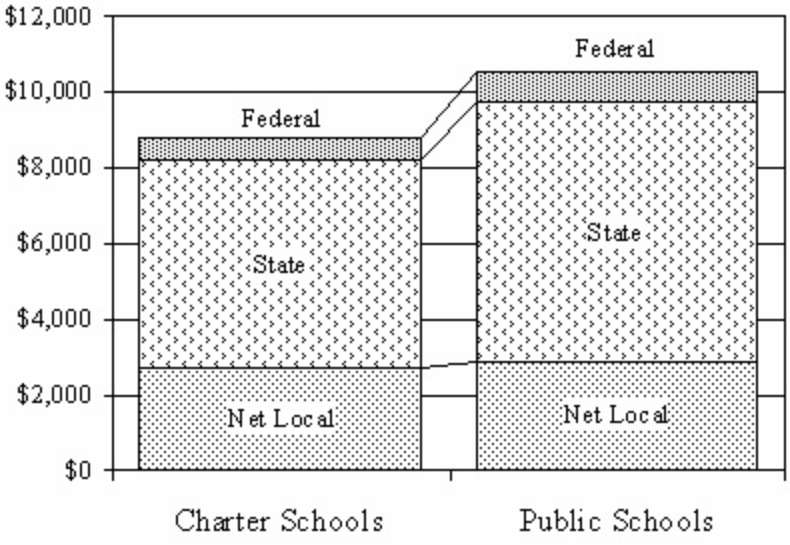

Figure 5:1 Comparison of Reported Revenues for Charter Schools and Traditional Public Schools

Although The Charter School of Wilmington's revenue is included in the list, it was not included in the charter school average because it does not report the financial support from the Red Clay Consolidated School District for facility and maintenance costs. The facility is owned by the district, so instead of charging rent, the district deducts this amount from the revenues it should deliver to the charter school.

Table 5:1 Comparison of Per-Pupil Revenues by Source for Charter Schools and Traditional Public Schools, 2004-05

	Enroll-ment	State		Federal		Net Local		Total
Charter School of Wilmington*	936	$4,858	67%	$27	0%	$2,418	33%	$7,303
Positive Outcomes	120	$9,509	79%	$591	5%	$1,952	16%	$12,052
East Side CS	140	$4,676	43%	$1,529	14%	$4,711	43%	$10,916
Campus Community	592	$6,236	79%	$398	5%	$1,268	16%	$7,902
Thomas A. Edison	786	$4,541	58%	$777	10%	$2,490	32%	$7,808
Sussex Academy	318	$5,961	73%	$429	5%	$1,727	21%	$8,117
Delaware Military	414	$5,343	48%	$319	3%	$5,497	49%	$11,159
Kuumba Academy	242	$4,574	51%	$784	9%	$3,677	41%	$9,034
Marion T. Academy	632	$4,518	54%	$698	8%	$3,212	38%	$8,428
Providence Creek	621	$5,545	78%	$288	4%	$1,257	18%	$7,089
MOT Charter Sch.	675	$5,217	74%	$249	4%	$1,603	23%	$7,069
Newark Charter Sch.	648	$5,249	61%	$324	4%	$2,970	35%	$8,543
Academy of Dover	425	$4,970	64%	$768	10%	$1,997	26%	$7,735
Charter School Average*	(n=6,549)	$5,528	63%	$585	7%	$2,680	30%	$ 8,821
Public School Average**	(n=103,764)	$6,878	65%	$810	8%	$2,872	27%	$10,560

Source: School Districts' Annual Financial Statement to DOE Finance Section
Note that the percentages are rounded to nearest whole number.
* The figures for the charter school average do not include The Charter School of Wilmington, since it does not report the financial support from the district for its school facility and maintenance.
** Public school average per pupil is based on 18 public school districts. Average excludes county vocational/technical schools, separate special education schools, charter schools, state board of education, and Dover Air Base School.

Charter schools receive most of their revenues from state sources. State funding for charter schools ranged from 43 to 79 percent. The second highest contributor to revenue receipts came from local revenue sources (i.e., local sending districts). Federal funds provided the smallest contribution to total revenue receipts for these schools. Private sources of funding are supposed to be reported under "local revenues." In most cases, the charter schools insisted they have little or no private

sources of funding. This is a topic we will revisit later in the chapter. In terms of the amounts and sources of revenues the differences among the charter schools varies extensively.

Sixteen traditional public school districts were analyzed in this study. Seven districts were from New Castle County, 5 were from Kent County and 6 were from Sussex County. For traditional public schools, state funding represented the highest contributor to total revenue receipts, followed by local and federal sources. The highest state funding received was 82 percent and the lowest was 58 percent. The proportion of state funding for public schools was approximately 2 percent higher than the proportion received by charter schools. The highest proportion of local revenue received by public schools was 35 percent, while the lowest proportion was 13 percent. All school districts received less than 15 percent of their total revenue from federal funds.

In the next section, we discuss issues that need to be considered when analyzing traditional public and charter school revenues. These issues include the qualifications of teachers, capital funding, transportation, and private sources of funding. In section 5.5, we address capital funding and expenditures on facilities. The other topics are described and discussed below.

Qualifications of Teachers

Differences in revenue between charter schools and traditional public schools is partially explained by the differences in the experience and qualifications of the teachers they hire. In simple terms, greater experience and education translates into higher salaries for teachers as seen in the first layer of the Delaware funding formula that includes the state's portion of costs for salaries for teachers and staff, benefits, and training. However, administrators are not included in the this part of the formula. If charter schools hire teachers with lower levels of qualifications, it is expected that they would have lower salaries, so the schools receive fewer revenues from the state to cover salaries.

Another possible explanation relates to the grades served by the charter schools. High school teachers tend to have higher degrees than elementary school teachers; and 100 percent of secondary teachers are expected to be certified and, consequently, command higher salaries. The fact that only 3 of the 13 charter schools were high schools partially explains why charter school revenue is lower overall than that of traditional public schools.

The charter schools are increasingly aware of how the funding formula based on teachers' qualifications can increase or limit their funding. Charter school administrators think their schools are at a disadvantage when it comes to teacher funding. As one administrator stated, "We have excellent teachers and our staff is awesome. We are gaining stability, but if we had equitable funding, it would mean that we could maintain teachers at the school. Right now the teachers can just go across the street and make $3,000 to $8,000 more a year." Another administrator stated that the teacher salaries at his school are well below the district pay scale and that their teachers work 20 more days per year and an hour more each day. This school doesn't have an established pay scale for teachers, but they are averaging $4,000 to $7,000 less than public district school teachers. The principal stated that the revenues are based on teacher experience; however, "this is not good, especially when we're looking to get the best teachers in the classroom and not necessarily the best teachers in terms of years of experience or qualification."

Administrators from both charter and traditional public schools agreed that teachers' salaries were low in Delaware when compared with the surrounding states. "This is an inequity that needs to be addressed. Good teachers in the classroom make the difference. If salaries in Delaware are low,

you don't have the best teachers. At a teacher recruiting fair, I sat across from recruiters from Baltimore. Guess what? High salaries. Guess where people were going? Baltimore! Adequate pay is key. Research shows that Delaware doesn't get top teachers coming out of college."

Transportation

The majority of charter schools provide bus transportation, but some have financial difficulties offering enough buses to insure that their students are picked up or dropped off at a decent hour or so the parents do not have to drive too far to drop off their child at a bus hub. The majority of charter schools reported that they had contracted with local busing companies. Only one owns its own bus company, which it has to supplement itself ($75-$100,000/year). Charter school administrators highlight that their schools receive only 80 percent of the transportation funding that traditional public schools receive. It is important to note that comments such as this are very misleading. As mentioned previously, charter schools receive 80 percent of the county vocational-technical school district rate. This funding rate is actually higher than the regular pupil transportation for the k-12 districts.

One of the inner city charter schools has contracted with a local bus company, and the company is paid what the state provides the school for the students they have enrolled. But the school administrators realize that the bus funding is not equitable for charter schools because the charter school has students coming in from places located outside its district. The administrator stated that the bus formula is "flawed"— the school has contracted for 7 buses and the first students load the bus at 6 a.m. and arrive just before 8 a.m. for the start of school. At another elementary charter school, the day begins for the students at 8 a.m. and does not end until 4:15 because of issues with traffic; the school is located between a couple of local traditional public schools. Because of the funding formula, the school cannot afford to contract for more buses. Therefore, some students do not arrive home until approximately 6 p.m.

The charter schools that have students bused from outside their school districts rely on hubs, or central meeting locations where the buses pick up the students. Thus, the parents have to drive the students or the students have to walk to the hub. One "senior" administrator stated that "Financing is equitable on everything except transportation." But, then she stated that she doesn't want door-to-door busing because that is what makes her school unique. "There is nothing wrong with hub busing."

Private Sources of Funding

A number of private funding sources are available to charter schools. These sources include foundations, nonprofit organizations, and private companies that provide loans and grants to charter schools. Interestingly, private sources of funding are not included in the charter schools' financial statements, nor is it included in the schools' audit reports. However, interviews revealed that some charter schools receive considerable sums of money from private sources. For example, one school reported receiving private funding for furnishings, lab equipment, and laptops. Another charter school indicated that it was able to go from being housed in a trailer to substantially nicer permanent facilities because of private revenues. Indeed, revenue earned from fund-raising was cited by many charter schools as being instrumental in allowing schools to remain operational.

There was considerable variation out among charter schools in the amount of private funding raised or sought. Who the administrators sought funding from depended on who they knew in the community, or the connections they had, or their expertise in writing and obtaining grants from corporations and foundations. The private fund-raising also varied by whether or not the charter school utilized ISDC to help it in its initial start-up or management of the school and how active the school's parent association is. Currently, some schools have or are working on capital or fund-raising campaigns.

Ultimately, because the exact levels of private funding of charter schools are unknown, they were not included in this study. The site visits revealed that the amount of funding from private sources can be significant; this is an area that deserves further investigation. In order to correctly determine the cost-effectiveness of charter schools, knowing total revenue amounts is imperative.

Trends in Revenue for Charter Schools

Pupil revenue increased 8.5 percent for traditional public schools between 2002-03 and 2003-04. Conversely, per-pupil revenue decreased 2 percent for charter schools during the same period. However, 2004-05 brought substantial increases for charter schools; per-pupil revenue increased 16.7 percent. State funding levels for traditional public schools experienced a steady decline between 2002-03 to 2004-05, dropping from 67 percent to 65 percent. During the same period, state funding levels for charter schools has increased 1 percentage point. Federal funding levels stayed the same for both charter and traditional public schools for the same period.

Findings Regarding Revenues

In absolute terms, public schools receive more revenue from all three general funding sources: federal, state, and local. Although this research has shed light on the differences in funding between charter schools and traditional public schools, there is still confusion as to why these differences exist. The big unknown is the nature and scope of private donations, which likely increase revenue levels at a few charter schools up to the net level of traditional public schools. This conclusion comes even after removing costly vocational, technical, and separate special education schools from the mix of traditional public schools. It is clear that further investigation is needed to determine the exact amount of revenue for charter schools.

5.4 Expenditures

Expenditures for charter schools and traditional public schools are listed in Table 5:2 and illustrated graphically in Figure 5:2. As mentioned previously, expenditures were divided into 3 broad categories: instructional, non-instructional, and school services. Just as charter school revenues are lower than those of the traditional public schools, so too are expenditures. In 2004-05, the average net expenditure per pupil for charter schools was $7,604, while the average net current expenditure per pupil for public schools was $9,998. Equally important is the total amount of expenditures per pupil, which is the proportion of its funds spent on instruction versus other functions. Charter schools, on average, spent approximately $4,324 (57 percent) of their total budget on net instruction.

On the other hand, traditional public schools spent, on average, $6,388 (64 percent) of their budget on net instruction.

Table 5:2 Comparison of Per-Pupil Net Current Expenditures: Charter Schools Versus Traditional Public Schools, 2004-05

Types of Expenses	*Charter Schools*		*Public Schools*	
Net Instruction	$4,324	57%	$6,388	64%
Student*	$355	5%	$433	4%
Instructional Staff*	$124	2%	$134	1%
General Administration*	$170	2%	$116	1%
School Administration*	$283	4%	$588	6%
Operation and Maintenance*	$1,027	14%	$1,016	10%
Student Transportation*	$803	11%	$574	6%
Other Support*	$465	6%	$664	7%
Food Service	$52	1%	$86	1%
Net Current Expenditure	$7,604	100%	9,998	100%

Note.* indicates Support Services

Instructional. Included within this category are net instruction, student support services (guidance, attendance, health, psychological services, social work, and teacher consultants), and instructional staff support (libraries, audiovisual equipment, computer-assisted instruction, and staff development). There was a fair amount of variation in expenditures on net instruction among the 13 charter school schools analyzed in this study. Per-pupil expenditures for net instruction ranged from 49 to 69 percent of total expenditures. The charter schools spent, on average, $4,300 per pupil on net instruction. MOT Charter School spent the least amount on net instruction ($2,883), and Positive Outcomes Charter School spent the most ($6,537). On the other hand, the traditional public school districts spent, on average, $6,440 per pupil on net instruction. Public school district expenditures ranged from $5,342 to $7,762. In addition to spending more in absolute terms, public schools spent a larger proportion on net instruction than did charter schools, 64 and 57 percent, respectively.

With respect to student support services and instructional staff support, in absolute terms expenditures were more consistent between public and charter schools. Further, there was far less variation among the schools (both charter and public) in the proportion of their expenditures on support services and instructional support staff.

Noninstructional. Included within this category are general administration, school administration, student transportation, and operation and maintenance. While the average per-pupil expenditure for charter schools was $170, there was quite a bit of variation in the amount spent among the charter schools included in this study. Thomas A. Edison Charter School spent just $6 per pupil while Positive Outcomes Charter School spent as much as $1,449 per pupil. This difference can be understood easily, however, as Thomas A. Edison Charter School has approximately 786

students offering a "strong educational program to a diverse student population" while Positive Outcomes Charter School serves 120 at-risk students. Clearly, Thomas A. Edison Charter School suffers from diseconomies of scale and Positive Outcomes Charter School benefits from extra funding for a targeted population. The average per-pupil expenditure for general administration by public schools was $115, and the highest amount was $382. One explanation for this variation in expenditures might be related to whether or not the charter school uses a management company. Independent charter schools, or those not using management companies, might have lower administration costs.

Interestingly, average public school per-pupil expenditures on school administration were more than twice than those of charter schools, $283 and $588, respectively. However, the proportion of how much of the budget was spent on school administration expenditures was fairly consistent between charter and public schools, 4 and 6 percent, respectively. Expenditures for operation and maintenance were far more variable than the others included in this category. Average per-pupil expenditures for operations and maintenance were 4 percent higher for charter schools than public schools. These expenditures were fewer than 1 percent for The Charter School of Wilmington and 25 percent for Delaware Military Academy. Student transportation was another category for which per-pupil expenditures varied greatly, from 0 to 18 percent for Positive Outcomes Charter School and Newark Charter School, respectively. Finally, expenditures for transportation were fairly consistent for public and charter schools.

Site visits revealed that transportation was among the more contentious issues for charter school administrators. A few charter school administrators think that the funding they receive for transportation is significantly below what it should be. Moreover, a small number of charter schools reported that they had to forgo other services in order to cover transportation costs not covered by districts.

School services. Included within this category are food services, athletics, and "other" (e.g. community service). The charter schools examined in this study spent an average of $465 (6 percent of their total expenditures) on "other" school services expenditures with a range of $188 to $1,048. Public schools spent, on average, $664 with a range of $205 to $1286. Two schools spent significantly more on "other" school services. If the two outliers are removed, the public school average is further reduced to $441. Per-pupil expenditures on food services were relatively low for both charter and public schools. Although public schools spent a slightly greater amount ($86 as compared with $52), they both spent the same proportion of their total budget on food services (1 percent).

Trends in Expenditures for Charter Schools

During the period 2002-03 to 2003-04, public school per-pupil expenditures increased from $8,920 to $9,426 (5.7%). In 2004-05 public school per-pupil expenditures increased to $9,998 (6.1%). Charter school per-pupil expenditure increased from $6,588 to $6,783 (3.0%) from 2002-03 to 2003-04 and further increased to $7,604 (12.1%) in 2004-05. While public school expenditures for support services remained constant, charter schools made some noteworthy changes in spending. Per-pupil spending on net instruction for charter schools has maintained a decline from 2002-03 through 2004-05. Conversely, expenditures on student transportation increased during the same period.

Findings Regarding Expenditures

The preceding analysis raises some interesting questions. First, why do public schools spend a greater proportion of their budgets on net instruction? One possible explanation is that newly established charter schools have significantly higher start-up fees. Renting or renovating facilities can bear substantial costs that reduce the amount of money that is spent on instruction. Since public schools tend to have been in operation for longer periods of time, they might not have the same type of costs. Quite simply, these numbers might indicate that charter schools are paying higher one-time fixed costs, costs that public schools have already paid. Unfortunately, there isn't sufficient data to be able to test this explanation. To be certain that this explanation is valid, long-term trend analysis must be conducted. It is important to note that the alternative to this question has bleak implications for charter schools, namely, that they are more inefficient or wasteful than public schools. Findings seem to indicate that public schools are benefiting from economies of scale whereby they are able to spread their fixed costs over a larger number of students.

The second question raised from this study: Why is there such variation in expenditures among charter schools? Again, due to data scarcity it is difficult to conduct an appropriate analysis. However, it would seem that depending on how long the charter school has been in operation and what sort of services it offers would determine its costs. For example, if a charter school has been established recently, it would have more start-up costs that a charter school that is already in operation.

5.5 Capital Investments and Expenditures on Facilities

Capital funding and facilities finance has been an increasingly debated topic, both in Delaware and in the nation as a whole. During our site visits in 2006, most charter school administrators and a number of district administrators volunteered opinions on capital funding even before we raised specific questions on the topic in our interviews. Even among charter schools, there clearly was not agreement about the importance of capital funding or the preferred guidelines for allocating capital funds to charter schools. Given the contentious nature of this topic, we decided to devote a whole section of the chapter to revenues and expenditures related to charter school facilities. We will supplement our findings with results from surveys as well as from our observations during site visits.

Unlike traditional public schools, charter schools do not receive capital funding from the state. for the construction of new buildings[4] Perhaps not surprisingly, most charter school administrators stressed that capital funding—or a lack of—is a major problem for their school. The administrator at one of the original charter schools stated, "Give capital funding to every charter school that is renewed and that has proven its worth." Several schools reportedly use some of their operating budgets for their leases or rents, which takes away from resources for teachers, administrators, and

[4] In 2006, an amendment was proposed that would increase state operating aid to charter schools by $750 per pupil. These funds were designed to be used by charter schools for capital costs, salaries, supplies, utilities, and other instruction-related expenses. Representative Deborah Hudson, who introduced the legislation (House Bill 422), said that the "extra state aid would help close what [charter school advocates] contend is a gap between what the state pays to educate a student in a charter school and payments for such a student in traditional public schools." Ultimately, however, House Bill 422 did not make it out of the committee. (See http://www.delawareonline.com/apps/pbcs.dll/article?AID=/20060616/NEWS/606160351/-1/NEWS01)

other areas. According to one charter school director, the original charter school legislation did not include capital funding; but now that charter schools have been in operation for up to 10 years, legislation needs to changed to include capital funding.

Another charter school administrator stated that capital funding is not equitable: "I understand the point of view of the district administrators when they say, 'Let's look at the need' for capital for charter schools. I also understand why the brakes are put on because in the public schools there is a referendum to vote on to build a new school," and the taxpayers vote on it. For charter schools, there is no protocol for how to determine whether or not a new school is needed.

It should be noted, however, that not all charter school administrators reported that capital funding was necessary. Through private funding and partnerships, certain charter schools were able to acquire facilities at a heavily discounted price. These administrators reported that through creativity and perseverance, they were able to secure more than ample accommodations for their schools. Indeed, some of the charter school facilities are very large, modern, and state of the art.

Capital funding is complicated and raises many issues. Facilities funding for district schools, as explained by charter school supporters, is oversimplified and misses some important points. First of all, districts do not have all their facilities fully funded by the state. While it is true that districts get access to low interest bonds, they must pay this back over the course of years. In the end, paying for district school facilities is largely done from recurrent revenues that are based on enrollments and not from one time capital outlays.

Ownership is another factor that complicates the picture. Many charter schools have facilities that are privately owned. While public resources can be recouped from a traditional public school, this is not the case for privately owned facilities. Representatives from charter schools that are requesting capital funding are not requesting funds to build a publicly owned facility. They are requesting funding to offset their payments to private owners or to nonprofit trusts that were established to assist charter school acquire facilities.

To gain further insights into the issue of capital investments, we sought to examine the existing data on expenditures for facilities. Analysis of facilities expenditures for 2004-05 revealed quite interesting findings. The most noteworthy of these is the fact that 7 of the charter schools analyzed did not report any expenditure on facilities or construction services. Further, 11 charter schools reported they did not have any expenditures for debt services. On the other hand, there was not a single public school without facilities or debt service expenses. Unfortunately, the causes for this disparity are unknown. While the differences could be explained by significant cost efficiency on the part of charter schools, it is more likely that differences in how charter schools and traditional school districts report their financial activities are the cause. Understanding the missing or underreported facility expenditures for charter schools raises a number of questions, including these: Do charter schools that did not report facilities expenditures really not have any such expenses? Are facilitities being paid for by a private donor, grant, or trust that was established to finance the school? If so, where are these contributions reported in the financial ledger? If they are not included, then why not?

During interviews with charter school administrators, it was commonly reported that it was difficult, if not impossible, to secure funding for facilities. Hearing these stories from charter school administrators, however, was even more confusing since at times we were sitting in their newly constructed or renovated facilities. Not all the charter schools have new or recently renovated

facilities, but the facilities that we toured during the site visits on the whole were very comparable to what we saw in traditional public schools.

From our surveys of teachers and administrators, we found an even split in the responses concerning the quality of their school's facilities. Approximately 52 percent of the staff were satisfied or very satisfied with the school buildings and facilities (this figure has decreased each year instead of improving, as one might have expected). On a related survey question, we found that close to 30 percent of the teachers and staff agreed or strongly agreed that their school has sufficient financial resources, which is a slight decrease from previous years. These aggregate findings mask the extreme differences we found by school. For example, in 7 of the 13 charter schools, the teachers and staff were overwhelmingly satisfied with their school facility (i.e., between 60 and 100 percent of the respondents indicated that they were satisfied or very satisfied). In four schools the staff were split in terms of satisfaction with facilities. At the other extreme, in 2 schools, fewer than 20 percent of the teachers and staff were satisfied with their facility. Interestingly, one of these schools had—what appeared on the surface—to be one of the nicest school buildings we visited.

Unfortunately, we cannot draw any strong conclusions on facility finance at this time. The data from various sources are contradictory, and the expenditure data are confusing and apparently incomplete. This will—no doubt—continue to be a widely debated topic. It is recommended, however, that more complete data be requested and considered before new changes in facility finance are implemented.

5.6 Fiscal Balance

Comparing gross income and expenditure amounts for public and charter schools is not possible because of vast differences in structure: namely, public schools are much larger, offer different services and support, and have a wider array of functions. However, analyzing year-end balances and changes in year-end balances is one of the best means of studying the relative viability of charter schools. In this section, we provide a careful look at year-end balances for all charter schools and public school districts that were included in our analysis. The data contained in Table 5:3 cover the 2002-03, 2003-04, and 2004-05 school years. The data are broken out by per-pupil amounts, so that comparisons can be made among all schools and districts over time.[5]

The analysis reveals substantial fluctuations both between charter and traditional public schools and within the same schools over time. Although there were large differences among both charter schools and districts, it was interesting to find that the standard deviation was relatively similar for the two groups. While charter schools had, on average, a per-pupil year-end balance of $1,341, the traditional school districts had an average year-end balance of $3,006. Over time, the year-end balance for districts remains relatively unchanged while the charter school year-end balance continues to improve.

[5] In addition to breaking out the data per pupil, we also analyzed the year-end balances as a percentage of total revenue receipts for the same year and found similar patterns in the findings.

Table 5:3 Year-End Balances for Charter Schools and Traditional Public School Districts

	2003 Balance		*2004 Balance*		*2005 Balance*	
Public Charter Schools	*Total*	*Per Pupil*	*Total*	*Per Pupil*	*Total*	*Per Pupil*
CS of Wilmington	$3,688,531	$3,945	$3,689,369	$4,019	$3,703,863	$3,957
Positive Outcomes	$91,232	$1,170	$93,555	$835	$232,432	$1,937
East Side CS	$221,150	$1,975	$239,694	$1,665	$358,421	$2,560
Campus Community	$551,319	$993	$14,428	$25	$155,452	$263
Thomas Edison	$340,759	$455	$415,410	$536	$312,086	$397
Sussex Academy	$271,887	$874	$277,508	$904	$575,348	$1,809
Delaware Military Acad.	–-	—	$691,921	$2,261	$226,274	$547
Kuumba Academy	$290,308	$1,423	$163,216	$677	$98,144	$406
Marion T. Academy	$56,412	$96	$236,925	$390	$489,931	$775
Providence Creek	$2,380	$5	$13,978	$21	$219,132	$353
MOT Charter School	$220,074	$419	$355,018	$598	$786,703	$1,165
Newark Charter School	$1,076,250	$1,989	$1,777,752	$2,863	$2,059,156	$3,178
Academy of Dover	—	—	$12,035	$29	$37,997	$89
Mean all charter schools	$567,520	$1,213	$613,908	$1,140	$711,918	$1,341
	2003 Balance		*2004 Balance*		*2005 Balance*	
Public School Districts	*Total*	*Per Pupil*	*Total*	*Per Pupil*	*Total*	*Per Pupil*
Appoquinimink	$14,055,314	$2,431	$9,192,761	$1,437	$45,387,517	$6,764
Brandywine	$38,640,894	$3,642	$58,819,299	$5,548	$36,891,171	$3,466
Christina	$15,993,960	$865	$53,906,831	$2,948	$67,579,609	$3,702
Colonial	$41,811,018	$4,078	$47,261,242	$4,614	$31,614,838	$3,069
Red Clay	$23,622,001	$1,561	$64,922,070	$4,312	$95,839,335	$6,479
Caesar Rodney	$15,292,684	$2,667	$8,281,064	$1,457	$4,666,551	$799
Capital	$26,497,812	$4,350	$11,903,859	$2,015	$7,015,081	$1,196
Lake Forest	$14,303,751	$4,191	$8,125,475	$2,392	$8,526,452	$2,388
Milford	$9,694,315	$2,589	$6,906,111	$1,819	$6,701,839	$1,781
Smyrna	$16,322,588	$5,036	$10,435,638	$3,153	$9,447,142	$2,592
Cape Henlopen	$13,913,649	$3,265	$8,601,837	$2,018	$7,447,822	$1,728
Delmar	$1,890,729	$1,855	$2,396,406	$2,248	$4,345,617	$4,096
Indian River	$53,959,835	$7,122	$34,245,996	$4,509	$37,504,612	$4,901
Laurel	$1,811,800	$906	$1,907,515	$950	$2,134,363	$1,046
Seaford	$4,201,717	$1,226	$3,411,239	$990	$3,546,344	$1,050
Woodbridge	$6,064,305	$3,195	$3,867,750	$2,019	$5,896,701	$3,044
Mean for all districts	18,629,773	$3,061	$20,886,568	$2,652	$23,409,062	$3,006

In 2005, the Charter School of Wilmington and Newark Charter School had year-end per-pupil balances that far exceeded the average for districts ($3,957 and $3,178, respectively). These amounts are especially high relative to the other charter schools. At the other extreme Campus Community Charter School, Providence Creek Charter School, the Academy of Dover, and Thomas A. Edison Charter School all had per-pupil year-end balances of less than $400 in 2005.

Campus Community Charter School and Kuumba Academy both show noticeable decreases in per-pupil year-end balances over the three years included in our analysis. Although we had only 2 years of data for Delaware Military Academy, this school also exhibited a sharp decline in year-end balances between 2004 and 2005. To contrast these findings we had two schools (i.e., MOT Charter School and Newark Charter School) that showed noticeable improvements in year-end balances over time. Providence Creek Charter School was also having a steady improvement in year-end balances, but the balance they maintained in 2005 ($353 per pupil) was far too low and does not suggest that this school is yet financially stable.

5.7 Conclusions

In this chapter, we sought to provide a fair and balanced description of charter school finance in Delaware. Given the data limitations and the highly contentious nature of charter school finance, we were careful to detail all limitations to prevent and discourage misinterpretation of our findings. Our analyses sought to document and compare financial data for charter schools and traditional public schools in Delaware. In the following paragraphs, we provide a summary of our findings regarding charter school funding.

- In absolute terms, traditional public schools reported higher revenues from all three general funding sources: federal, state, and local.
- Differences in revenue between charter schools and traditional public schools is partially explained by the differences in the experience and qualifications of the teachers they hire, type of students they serve, and relative size of schools. Greater experience and education translates into higher salaries for teachers.
- A number of private funding sources are available to charter schools (e.g., foundations, nonprofit organizations, and private companies). Private sources of funding are not included in our financial analysis, because the exact sources and scope of private funding is unknown. However, private sources of funding may help bridge the gap between charter and traditional public schools in terms of funding, and it may explain why some of the charter schools have such large year-end balances that are far larger than those at traditional public schools.

In terms of expenditures, one of the key patterns that we identified was that charter schools were spending a lower proportion of their resources on instruction than traditional public schools are spending. This can be explained by a number of factors including lower teacher salaries in charter schools and the need for charter schools to shift more of their resources to cover the costs of purchasing or renovating facilities.

Interviews with principals and administrators of the charter schools in Delaware provided revealing insights into some of the concerns and perceived constraints regarding charter school finance. While each school had individual concerns, three common themes merit mention. First, a number of charter school administrators complained about the difficulty in collecting money from local districts. Some schools went so far as suggesting that the state intervene on their behalf to aid in collection efforts. Second, and in the same vein, there were many complaints about the timing of when funding was received. Late funding was reported to cause extensive budgetary and planning problems. By the third year of the evaluation, the complaints and concerns about the amount and timing of payments from local districts decreased substantially.

The most common and contentious of all complaints voiced by charter schools was inadequate funding levels. Many administrators spoke of services and personnel they had to forgo in order to account for too little funding. Funding for facilities and transportation were also cited as some of the most troubling issues faced by charter schools.

Charter schools were introduced with the hopes that market competition would spur creativity and generate a more efficient type of school. At face value it would appear that charter schools receive `less funding than public schools. Other indicators from our surveys of teachers, interviews with administrators, and analysis of year-end balances suggest that some charter schools are rather advantaged in terms of finance. However, as is clear from our discussion in this chapter, there are a number of factors that need to be taken into consideration when comparing charter and traditional public school finance. Differences in funding levels may be the result of a combination of teacher experience and qualifications, the types of students that charter school serve, and the size of charter schools. Although we have not been able to draw conclusions, it is our hope that the detailed analysis of existing evidence can facilitate informed discussion on this very charged issue.

Chapter Six
Accomplishment of Mission and Performance Accountability

> *Lofty sounding mission statements often adorn school conference rooms and superintendents' offices. But if a mission statement is to be a true road map for change, it must be both broadly understood and translated into explicit criteria for assessing results.* -Wagner, 1993

In theory, charter schools' contracts with their sponsors are rather direct. Spend the funds responsibly; keep the books balanced; comply with all the regulations; and above all, demonstrate academic achievement as promised. Failure to meet any of these obligations may result in the closure of the charter school. The reality has been less straightforward. Charter schools are far more likely to be closed because of fiscal and/or managerial problems than academic failures. The pressure from satisfied parents and other constituents to keep underachieving schools open may preclude what may be seen as a violation of their contract (Bulkley & Fisler, 2002). In addition, there is considerable controversy over how to measure academic success, especially when the student body may be composed of lower achievers than the rest of the surrounding district (Finn, Manno, & Vanourek, 2000). Further, it has been argued that the educational mistakes of the prior school system may take years for a charter school to overcome.

While student academic performance is one way in which to measure a charter school's performance, it is not a unique measure. Charter schools were established with the purpose of meeting a perceived gap in the offerings provided by traditional public schools. As such, charter schools are expected to have unique missions and corresponding educational approaches. Therefore, it is important to determine the extent to which charter schools are accomplishing their missions as detailed in their performance contracts. Unfortunately, it is often the case that charter schools cannot demonstrate that they are meeting the objectives specified in their contracts, because these objectives are not sufficiently defined or are not measurable. The objectives included in their contracts reflect initial planning ideas from before the schools were opened. After the schools begin operating, the mismatch between objectives specified in the contract and the actual program that evolves becomes quite apparent.

A charter must include realistic, measurable, relevant goals with specific benchmarks; and the subsequent annual reports to the sponsor must clearly display the progress toward these goals. Ideally, schools also must explore reasons for success or failure in meeting the goals and develop plans for continuing their successes and correcting their shortcomings. This is what helps schools become "learning organizations" that continually evaluate themselves and strive toward improvement (Awsumb Nelson, 2002).

Our evaluation team explored how well each of the 13 schools in our study are reporting on their goals and objectives in their annual reports. We examined each school's mission, goals, objectives, and relevant benchmarks to measure progress. First, we looked at each school's mission statement and found them all to be educationally relevant. We then made a subjective analysis of the objectives articulated in the annual reports that covered the range of goals set out in the mission statements. The objectives fell into four areas: (1) academic performance of students; (2) student behavior; (3) market accountability; and (4) mission-related accountability. Most objectives were defined for the academic performance area.

Overall, there was great variability in the number of measurable objectives from each school, as well as the general quality of the contracts and annual reports. For example, some schools presented the performance goals separate from the mission accomplishment goals, while other schools combined them. The majority of the schools reported on their mission accomplishments; however, fewer than a handful created objectives and benchmarks and reported results for the different areas (e.g., Utilizing Successful Teaching and Learning Environments; Services for At-Risk and Special Education Students; Financial Efficiency; Management of the School; Compliance with Federal, State, and Local Laws and Requirements; and Market Accountability). The other schools reported in paragraph format, describing the different processes the school implemented and how well they perceived they were doing in these areas.

The chapter begins with a summary of findings from the previous two years' reports. Next, we share findings from our own evaluation of the extent to which the charter schools are meeting their academic, behavioral, market, and mission accountability objectives. Then we summarize our findings across schools, and the chapter concludes with suggestions for improving the annual reports and strengthening their use as a tool for accountability

Because the doors of Family Foundations Academy, Maurice J. Moyer Academy, Odyssey Charter School, and Pencader Business and Finance Charter School opened in the fall 2006, their annual reports and data cannot be reviewed for this evaluation.

6.1 Review of Year One and Year Two Findings

In our Year 2 evaluation report, we analyzed findings from 13 charter schools that had prepared annual reports for the 2004-05 school year. In Year 1, we had the luxury of a single Delaware charter school annual report after DOE audited the 11 individual reports and combined them. In addition to analyzing the charter schools' annual reports, we also examined the schools' performance agreements and results from self-administered parent satisfaction surveys. We provided an overview of the different missions and goals for the schools.

Highlights of findings from the previous two years' reports are included below:

- The use of standardized tests facilitates clearly measurable academic performance goals. Therefore, the schools can compare their test results to statewide and similar schools' scores. In addition, the schools can break down test results by discipline, grade, gender, and race/ethnicity. Some may argue that school-to-school comparisons are not appropriate for charter schools, some of which serve large proportions of students who are at risk of failure. This is why charter schools may define their own benchmarks for success.

- The goals and objectives specified in the charter schools' performance agreements with the Department of Education (DOE) are unique from most other states in that the agreements also include indicators of market accountability. Typically, charter school contracts or performance agreements cover only objectives related to performance accountability and regulatory accountability. Market accountability works on its own, out in the marketplace. In other words, parents who do not like a charter school can enroll their child in another school; as a result, charter schools without customers will have to close their doors. The use of market indicators in the Delaware performance agreement for schools sponsored by DOE can help provide early warnings regarding a failing charter school. Early warnings mean that steps can be developed to assist schools at risk of closure, or steps can be taken to buffer the impact on districts from the closure of a charter school.
- Another market indicator is parent and teacher surveys. At the beginning, parent surveys were conducted across all charter schools, but it is now up to each school to survey the parents. Only a couple of the schools included performance goals on parent satisfaction. And only a couple schools officially surveyed the parents to gain an understanding about how the school was performing.
- A paradox in the charter school concept provides greater autonomy for schools in exchange for great accountability. By requiring rigid and concrete forms of accountability, the schools actually have their accountability constrained. While charter schools are given greater freedom in the organization of their school and the delivery of instruction, the curriculum is prescriptive since it is based on the state standards and—more importantly— the state assessment test, which is used for accountability purposes.
- The charter schools want autonomy and have specialized mission statements; however, only a handful included goals and objectives based on their missions. The majority of schools provided goals, objectives, and results for academic performance, behavior, and market accountability.

6.2 Findings Regarding Performance Accountability

In this section, we detail the three main goals that are stated in each school's performance agreements, and describe how well the schools report their progress on each of these goals. Then, we provide our findings for the schools that included mission-related goals or objectives.

Academic Achievement

Table 6:1 displays the progress on academic performance for each school. The actual number of academic objectives set by each school varied greatly. Similarly, the quality of objectives varied significantly as well. Several schools mixed process and outcome objectives; even more schools listed objectives that were difficult to measure. As stated in previous year's reports, many schools had objectives that were vague and difficult to measure. The objectives did not contain benchmarks and, as such, were difficult, if not impossible to determine if they were met. Another frequently observed problem was that a number of the charter schools did not include evidence on whether or not the objectives were met. For example, on school listed a process objective "To provide students

with strong academic preparation in language and fine arts, science, mathematics, and social studies." With this objective, it is hard to determine whether or not the school met the benchmark or criteria. But, then, the school listed four other separate objectives that tie to this objective, such as "For students enrolled at the school at least one year, the average performance for each subject at each grade assessed on the DSAP will be above the State average each year." The four separate objectives are really benchmarks for the process objective.

A few schools did not limit themselves to the standard academic objectives in their performance agreements. Instead, these schools developed objectives that were designed to correspond with their unique missions. These objectives were quite helpful in determining if the school was actually achieving their intended educational mission. Although the standard objectives included in the performance agreements are beneficial in determining accomplishment of objectives across schools, individually tailored objectives are key to determining if a school has met the objectives it set for itself. Several of these schools used state and national student performance averages as the benchmark for how well they hope their students will perform on different tests (i.e., Delaware State Standards, ITBS, PSAT).

Table 6:1 Progress on Academic Objectives by School

School	*AYP Performance Rating*	*Academic Objectives*							
		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Academy of Dover Charter School	Commendable	Met	DNM	Met					
Campus Community School	Superior	MM*	Met*	Met	Met	MM	NE	NE	NE
CS of Wilmington	Above Target	Met	PM*	Met					
Delaware Military Acad.	Above Target								
East Side Charter School	Academic Review	DNM	DNM	MM	MM				
Kuumba Academy CS	Above Target	PM	Met	PM	NE	NE	PM	Met	Met
Marion T. Academy	Below Target	DNM	PM	DNM	PM	DNM			
MOT Charter School	Superior	MM	MM						
Newark Charter School	Superior	Met	Met	Met	Met	Met	Met	Met	
Positive Outcomes CS	Below Target	DNM	Met	Met					
Providence Creek Acad. CS	Below Target	DNM*	DNM*	NE					
Sussex Academy of Arts & Sciences	Above Target	Met							
Thomas A. Edison CS	Above Target	DNM	PM	Met	Met				

Notes: Achievement of each objective is rated as "No Evidence" (NE), "Did Not Meet" (DNM), "Partially Met" (PM), "Mostly Met" (MM) and "Met." An asterisk (*) indicates that objectives or evidence is vague.

Behavior

There were considerably fewer behavioral objectives than academic objectives, but still considerable variation among the schools and the number of objectives identified. For the most part, the objectives were limited to attendance and the number of reportable behavioral offenses. However, some schools included behavioral and attitudinal objectives. Table 6:2 shows the progress of schools in accomplishing their behavioral objectives. As compared with their academic objectives, schools were much more successful in meeting their behavioral objectives. Moreover, only a few schools did not provide evidence of their behavioral objectives. On the whole, the behavioral objectives were much more specific than the academic objectives and incorporated clear benchmarks.

Table 6:2 Progress on Behavioral Objectives by School

School	*Behavioral Objectives*					
	1	*2*	*3*	*4*	*5*	*6*
Academy of Dover Charter School	Met	Met	Met			
Campus Community School	Met*					
CS of Wilmington	Met					
Delaware Military Academy						
East Side Charter School	Met	Met	Met			
Kuumba Academy CS	Met	Met	Met			
Marion T. Academy	Met	NE	Met	MM		
MOT Charter School	Met	NE				
Newark Charter School	Met	Met	Met			
Positive Outcomes CS	Met	Met				
Providence Creek Academy CS	Met	NE	Met			
Sussex Academy of Arts & Sciences	Met	Met	Met			
Thomas A. Edison CS						

Notes: Achievement of each objective is rated as "No Evidence" (NE), "Did Not Meet" (DNM), "Partially Met" (PM), "Mostly Met" (MM) and "Met." An asterisk (*) indicates that objectives or evidence is vague.

Market Accountability

Market laws of supply and demand are a cornerstone of the charter school program theory. Therefore, it is appropriate that the annual reports explored several indicators of market accountability: level of enrollment, attrition throughout the year, and year-to-year attrition.

Table 6:3 shows charter schools' progress on the accomplishment of their market accountability objectives. The schools that did create market accountability objectives did a fairly good job at developing them. An example of a typical objective is, "Each year of school operation, the school

will have enough students seek admission to have at least 95 percent of the maximum number of students allowed by the charter enrolled in the first week of the school year." For the most part, the market accountability objectives used by the schools were the objectives included in the performance agreement. In the future, charter schools should include a specific benchmark. For example, instead of stating an objective that "The school will have a waiting list of students seeking admission," the schools should include a specific number in their objective. It is interesting to note that only a third of the charter schools included an objective that pertained to parent satisfaction. In previous years, many of the charter schools were administering and collecting surveys of parents to determine their degree of satisfaction.

Table 6:3 Progress on Market Accountability Objectives

School	*Market Accountability Objectives*					
	1	*2*	*3*	*4*	*5*	*6*
Academy of Dover Charter School	DNM	DNM	DNM			
Campus Community School						
CS of Wilmington	Met	Met				
Delaware Military Academy						
East Side Charter School	Met	Met	Met			
Kuumba Academy CS						
Marion T. Academy	MM	Met	Met			
MOT Charter School	Met	Met	Met	Met	Met*	Met*
Newark Charter School	Met	Met	Met	Met	Met	
Positive Outcomes CS	Met	Met*	Met			
Providence Creek Academy CS	Met	Met	Met	Met		
Sussex Academy of Arts & Sciences	Met	Met	MM	Met		
Thomas A. Edison CS	DNM	PM	Met	Met	Met	

Notes: Achievement of each objective is rated as "No Evidence" (NE), "Did Not Meet" (DNM), "Partially Met" (PM), "Mostly Met" (MM) and "Met." An asterisk (*) indicates that objectives or evidence is vague.

Mission-Related Objectives

Less than half of the schools included specialized objectives that tied to the school's mission or included specialized process objectives that addressed how the school was going to get to a certain outcome. These objectives were quite helpful in determining if the school was actually achieving its intended educational mission. Although the standard objectives included in the performance agreements are beneficial in determining accomplishment of objectives across schools, individually tailored objectives are key to determining if a school has met the objectives it set for itself. Several

schools used state and national student performance averages as the benchmark for how well they hope their students will perform on different tests (i.e., Delaware State Standards, ITBS, PSAT).

Table 6:4 Mission and Specialized Focus Objectives

School	*Objectives*					
	1	*2*	*3*	*4*	*5*	*6*
Academy of Dover Charter School						
Campus Community School	Met	Met	Met	Met	Met	
CS of Wilmington	PM*					
Delaware Military Academy						
East Side Charter School	Met	Met				
Kuumba Academy CS						
Marion T. Academy	MM	Met	PM	PM	MM	PM
MOT Charter School	PM*	PM*	Met*			
Newark Charter School	Met	MM	NE	Met	PM	
Positive Outcomes CS						
Providence Creek Academy CS						
Sussex Academy of Arts & Sciences						
Thomas A. Edison CS						

Notes: Achievement of each objective is rated as "No Evidence" (NE), "Did Not Meet" (DNM), "Partially Met" (PM), "Mostly Met" (MM) and "Met." An asterisk (*) indicates that objective or evidence is vague.

6.3 Areas for Improving the Annual Reports Prepared by Charter Schools

In this section, a short description of areas for improving each school's annual report is included.

Academy of Dover Charter School. On the whole, the Academy of Dover Charter School's discussion of accomplishment of goals and objectives is good, if somewhat limited. Rather than including additional objectives, the school included only standard objectives included in the performance agreement. However, evidence for the objectives that are included is clearly presented. For future years, it would be better if the school would include objectives that related to its unique mission and activities such as "providing rigorous curriculum."

Campus Community School. Campus Community School took a different approach from the other charter schools in the development of its objectives. In fact, the school included only one of the standard performance agreement objectives. Instead, its objectives were much more tailored to its

mission and unique profile. While, in theory, this approach should provide more insight into whether the school actually achieved its individual objectives, the school's objectives were difficult to measure. For example, it is difficult to measure the following objective "To provide students with strong academic preparation in language and fine arts, science, mathematics, and social studies," because it doesn't include a benchmark. A more fitting objective would be "Students' mastery of language and fine arts, science, mathematics, and social studies increases as demonstrated by a 10 percent increase in DSAP scores from the previous year." Most of the objectives identified by Campus Community School could best be described as broad goals, or, long-term desired outcomes rather than objectives. The school's annual report does provide a narrative detailing what activities had been undertaken for the stated goal. However, it is highly recommended that, in the future, Campus Community School creates objectives that are more specific and measurable and linked to evidence of current performance. For example, Campus Community School listed that "A 100% parent participate rate is our expectation." The report includes a description for how (a) parents are visible in the school, (b) a parent contract is required, and (c) parental participation is important to the children's educational success. But, there is no evidence for whether or not there was 100 percent participation on behalf of the parents or recommendations for how to improve participation if it was not at 100 percent.

The Charter School of Wilmington. As was the case in 2004-05, this year's report is clear and well laid out. Goals are clearly stated as are data sources and methods for how goals will be evaluated. In addition, it is one of the few schools that lists findings and implications and recommendations. It is obvious that the school is performing well; however, in certain incidences, evidence demonstrating whether objectives were met was not provided. For example, one of the measurable objectives listed under goal #2— "to enhance the professional development of all teachers, particularly those in math, science, and technology"—is that at least 50 percent of the teachers will utilize skills learned through professional development activities. Unfortunately, no evidence was provided to help determine whether this objective had been met. The school does a good job at addressing mission-specific objectives, such as the use of technology in the classrooms and by the students.

Delaware Military Academy. This school did not include any goals or objectives for how it was going to meet the three different performance categories—academic, behavioral, and market accountability—in addition to any specific mission goals and objectives. The objectives should capture the mission of the school. Delaware Military Academy is a unique school offering a different type of education program, and the objectives should reflect its unique program. It is highly recommended that Delaware Military Academy revisit this section of its report and work with its board to (i) create relevant, measurable objectives; (ii) provide evidence demonstrating whether objectives were met; and (iii) organize the presentation of the information in a manner that facilitates comprehension by readers.

East Side Charter School. Overall, the school's report is very clear and well organized. Determining whether objectives have been met is facilitated by the straightforward presentation of evidence. The objectives also are very clear and tangible. In the future, it would be beneficial if East Side Charter

School were to create additional objectives that were tailored to its individual mission, such as in "providing a safe, caring and nurturing environment" for the students.

Kuumba Academy Charter School. Overall, Kuumba Academy Charter School's analysis of accomplishments of goals and objectives is very clear and well organized. However, it appears as if the evidence for two of the behavioral objectives —"each year, average daily attendance will be at least at state average" and "each year, the school will have fewer reportable incidents pursuant to Delaware code. . . ."—was inadvertently left out. Also, it is not possible to evaluate another behavioral objective, "of all the students attending the school at any grade, at least 70 percent will continue at the school through the end of grade five"—because data were not available. While all of the market accountability objectives were met, only two of the three academic objectives were met. Although the school indicated that performance would be at the state level For one of these objectives, it was below. For the other objective, the school did not provide evidence indicating whether the objective was in fact met. Kuumba Academy Charter School states in its mission that parents are the "primary educators of the children" and that parents are to work in partnership with staff and teachers; however, the school does not have any mission-specific goals or objectives.

Marion T. Academy. It would appear as if the objectives laid out in Marion T. Academy's annual report were too ambitious and not appropriate for the school. While the narrative in the report indicates that the school did not meet or exceed the statewide averages on the DSAP, it did indicate that the school was making progress. Unfortunately, there was often insufficient evidence to know if progress was being made or how much progress was being made over time. Many of the academic objectives appear to be too ambitious and not tailored to the individual school. Moreover, the school does not provide evidence for why a particular objective has or has not been met. For example, one of the academic objectives is to "enable all students to meet the Delaware State Content Standards and to improve school-wide scores on the DSAP Writing by 5 NCEs." The report goes on to state, "the Marion T. Academy did not meet the sixty-five percent goal established in goal #3. The school was able to make significant progress towards meeting this goal." It would have been better if the school had reported the number and proportion of students that met the content standards. When stating whether or not an objective has been met, it is always necessary to include what evidence is being used in determining so. Another example is that the second academic objective states, "For each grade, school average performance on the Stanford 9 will demonstrate an increase of at least one grade level (12 months growth) in each subject area each year. Scores will be reported in NCEs." However, scores are not reported in NCEs; rather, they are presented in quartile groupings. Although the report indicates that students are making progress, the results are not presented in a manner that makes evaluating the objective possible.

MOT Charter School. MOT Charter School appears to be successful, given its "Superior" academic performance rating, although the school's annual report did not contain the evidence to support this. As it turns out, many of its objectives were vague and hard to measure. The school did not list objectives under performance accomplishments, just accomplishments without any goals or benchmarks for grading themselves. In fact, some of the accomplishments were topic labels, e.g., "reportable behavior incidences" or "student discipline." For example, one accomplishment listed was "There were 2 behavior incidents involving 4 students reported to law enforcement and 13

incidents reported to DOE." But we do not know whether this is an improvement or good when compared with other schools. In addition, the school listed topic labels, such as "Improved Science Instruction" and did not include clear objectives. The report goes on to say that the students use the Smithsonian science kits and are engaged in hands-on science activities at least 80 percent of the time.

Newark Charter School. Overall, Newark Charter School's report was well organized and clear. More importantly, all of the objectives were clear and tangible but at times too realistic; or the bar was set too low. Objectives included benchmarks that were easily measurable. This school was one of only a few that included a teacher professional development goal. Some of the objectives combined process and outcomes. Newark Charter School's report could be used as a model for other schools looking to improve the objectives they set for their schools and the manner in which they report evidence of success in their annual reports. Despite having a model annual report, Newark Charter School does not include specific mission-related goals or objectives, such as striving towards a "community of educators, families, and students who value scholarship, good citizenship, and creativity." How does the school know if it is creating a community and instilling good citizenship and creativity in students?

Positive Outcomes Charter School. This report also was very well organized and easy to understand. The school included the standard objectives in the performance agreements as well as objectives tailored to its mission. In some cases, objectives were a little too vague and/or difficult to measure. The report is thorough in that there are charts and graphs for each grade and subject along with a narrative for each grade and subject. Other schools do not go to this depth, which should be required.

Providence Creek Academy Charter School. For the 2004-05 annual report, Providence Creek Academy Charter School narrowed and provided clearer objectives than it had in previous years; however, the evidence was vague and incomplete for many of the objectives. Some of the objectives seemed inappropriate in that they were too general or process-oriented rather than outcome-oriented. The school needs to pursue mission-related goals and objectives. The mission statement says that the school will "provide a dynamic educational experience for children to realize success in academics, athletics, and the arts." However, there is no mention of this within Providence Creek Academy Charter School's performance goals and objectives.

Sussex Academy of Arts & Sciences. This school's discussion of the accomplishment of goals and objectives was clear and well organized. Because the objectives were all variations of the standard objectives laid out in the performance agreements, they were clear and easily measurable. However, there was not sufficient evidence to evaluate one of its two behavioral objectives, i.e., "For each year of operation, the school will have fewer reportable incidents of student misconduct than the average for all schools with similar grade configurations in the state." Although Sussex Academy of Arts & Sciences provides evidence of incidents for its school, it did not indicate the state average, thereby making this objective difficult for readers to evaluate. Like many of the other charter schools, Sussex Academy of Arts & Sciences does not include mission-specific objectives. The school should include goals and objectives that focus on specific parts of its mission, such as "self-motivated, lifelong learners and will become caring and ethical individuals capable of managing a healthy lifestyle."

Thomas A. Edison Charter School. Evaluating whether or not the school met performance objectives was not easy. The annual report could have been better organized, and in many sections the text was difficult to follow. Moreover, objectives for behavior and market accountability were never articulated and could not be considered in our review. Overall, the school met its academic objectives with one notable exception: "The school's average student performance on the DSAP assessment in each content area will meet or exceed the statewide average student performance of students in the same grades for each year of test administration." With the exception of grade 8 reading and grade 8 math, state averages remained noticeably higher than Thomas A. Edison Charter School's. It is recommended that the school consider developing behavioral and market accountability objectives as other charter schools have done, in addition to creating mission-specific objectives.

6.4 Discussion of Findings

Last year's evaluation report indicated that some of the charter schools made improvements in reporting on their accomplishment of mission and objectives. For the most part, the annual reports prepared by the charter schools in 2005-06 are noticeably less detailed and vague regarding measurable objectives. Many of the same areas for improvement that we pointed out last year are still valid since they have not been addressed.

It is important to have a clear, well laid out report. As part of the charter schools' "autonomy in exchange for accountability" agreement, the schools must effectively demonstrate progress toward accomplishing these unique missions. Next, the schools must demonstrate progress toward accomplishing these goals. Therefore, having a well-organized report that clearly details the school's mission and objectives and the extent to which they have been met is imperative.

There are four areas in which charter schools can focus their efforts in regard to improving the overall quality and evaluation of their objectives: (i) developing appropriate objectives, (ii) incorporating benchmarks objectives, (iii) providing evidence as to whether or not the objective has been met, and (iv) developing mission-specific objectives. In the following section, we discuss how the charter schools can address these three issues.

Developing appropriate objectives. In reviewing the charter school's annual reports, it quickly became clear that some schools had developed objectives that were either too vague or not appropriate for their school. It is critical that the schools develop their objectives after carefully analyzing current performance levels and determining what is attainable in the future.

Several of the schools listed the same objectives as in previous years and used the state score or similar school averages as the benchmark. For example, schools would state that students would score at or above the state DSAP average. For a couple of the schools, this was unrealistic for the 2005-06 school year; the consequences of having an unrealistic objective can make it more difficult for a school to demonstrate success. Consequently, if a school consistently fails to meet its performance objectives, it could run the risk being put on probation. Perhaps even more troubling, the school would run the risk of diminishing morale for teachers and administrators. Teachers, as do most professionals, like to feel that they are making progress. If objectives are too unrealistic and thus unattainable, the failure of meeting them may overshadow the fact that real progress is being

made. This should not be interpreted as encouraging schools to set easily attainable goals and objectives.

On the other hand, it was perceived that other schools used the above performance benchmark example as an easy route to ensure they exceeded the benchmark. These schools, of which a few are in the top tier of academic performing schools in Delaware, need to take the time and effort to set specific benchmarks for the different grades and subject matters.

Incorporating benchmarks into objectives. Many of the charter schools developed objectives that were too vague and, as such, were too easily attained. For example, a number of schools merely stated "Improve student achievement levels." Worded as such, the objective would be considered as met by just one student scoring one point higher on a DSAP assessment. Therefore, it is also important that schools develop objectives that are specific and measurable. The objective described in the previous example could easily be improved by changing the wording to "For each subject assessed at each grade level on the DSAP, the school's average performance will meet or exceed the state average each year." In the latter case, the objective has a clear benchmark, exceeding the state average. Benchmarks do not have to be tied strictly to state levels. A perfectly acceptable benchmark would be "Sstudent performance on the DSAP will increase by 5 NCE each year until the school meets state standards." In this example, the benchmark is 5 NCEs, and it is clearly measurable.

Another practice by many schools was to list a general area such as "enrollment target" and then state something along the lines of "90 percent of the non-graduating body returned." "Enrollment target" is clearly not an objective nor is it an achievement target. In cases like this, no evaluation was possible because it was not clear what the objective was and was not possible to determine whether or not the objective was met.

Providing evidence as to whether or not the objective has been met. In many cases, the schools did not provide evidence as to whether or not an objective had been met. For example, an objective would be stated "Eeach year, at least 80 percent of the non-graduating student body will return to the school the following September, excluding students who move," and then the school would simply say, "Tthis objective was met." It is not acceptable to merely state that an objective was or was not met. Rather, it is important that the school describe what evidence is being used to determine whether the objective had been met. Without this information, someone reading the school's annual report will have no way of corroborating the school's assertion. Therefore, it is imperative that all evidence used to evaluate the objective be clearly presented. It is also important to note that in some of the schools' reports, objectives were listed but not mentioned again. For example, a school would list an objective such as "Each year of school operation, the school will have a waiting list of students seeking admission," but then not say whether or not the objective was met. It was not clear if the school had forgotten to provide evidence or if there was no evidence. In either case, schools need to make sure that they are clear and consistent throughout the entire report.

Developing mission-specific objectives. Charter schools were established for the purpose of meeting a perceived gap in the offerings available at traditional schools and as such should have unique missions and corresponding educational approaches. The majority of schools focused primarily on generic types of performance objectives (e.g., DSAP, attendance) and did not have mission-specific objectives, making it difficult to determine whether or not schools are offering a different sort of

education for the children. It is imperative that the schools step back and develop mission-specific objectives.

The charter school law provides schools the opportunity to develop their own additional goals, objectives, benchmarks, and methods by which to assess progress on them. Thus far, charter schools have not been sanctioned based on their performance on these self-stated goals, or even for reporting on them inadequately. While schools should not be sanctioned for failing to meet unreasonable, lofty goals, they should receive more help in defining sensible goals as well as stricter expectations for schools to report on them. Authorizers should emphasize that schools have the opportunity to revise these objectives and modify the contracts. Additional work and improvements on the annual reports will help ensure that they remain a viable tool for accountability. The annual reports help promote charter schools as mission-driven organizations, and they allow the charter schools a vehicle for demonstrating success according to their unique missions and profiles.

Our experience from providing technical assistance to charter schools in other states is that, when given the time and opportunity, charter schools tend to learn more from one another than they do from the feedback from outside reviewers. With this mind, we encourage the charter schools to review and compare one another's annual reports.

The annual reports provide charter schools with a great opportunity to define how they will be held accountable. Initially, it was our understanding that the annual reports would be a key tool for charter school accountability.. In order for this to happen, the charter schools need to be doing a better job at defining measurable objectives and reporting evidence regarding the degree to which they meet their performance objectives. The Department of Education should decide what the future of these annual reports will be. If they are going to be a meaningful tool for accountability, the DOE must also set and enforce standards regarding their quality and content.

Chapter Seven
Student Performance on Delaware Student Testing Program: Cross-Year Analysis Using a Matched Student Design

Charter school performance can be measured in two principal ways. The first is the extent to which a school can achieve the measurable objectives that reflect its mission (see Chapter 6). The second is the performance of charter school students on standardized tests. In this chapter as well as in Chapter 8, we will examine the performance of charter school students on standardized tests by tracking the impact of charter schools on the performance of students over time.

The analysis in this chapter uses a quasi-experimental design to measure change in student performance over time. In Chapter 8, our analysis of performance on the state assessment is based on school-level, rather than student-level data. In both chapters we seek to determine value added over time. For further details on the state assessment program, readers are referred to the Web site of the Delaware Department of Education. Here details on each school's general performance levels and the proportion of its students that meet state expectations are available. This readily available data from the DOE includes extensive group level data that allow cross-sectional looks at how schools are performing. However, these data do not take into consideration the value added by the school over time. Nor does it facilitate comparisons with other schools with similar demographic characteristics.[1] Oftentimes, the charter schools have fewer than 15 test takers in a particular group so the data are not publicly reported to help protect their confidentiality. While these data facilitate a snapshot of current performance, they do not attribute impact of the school on student learning. While the Department of Education provides extensive information and test data to the public, we have sought to measure the impact of the charter school on students over time.

In addition to its extensive warehousing of school level data, the Delaware Department of Education has an advanced performance data system that yields and tracks data for all students in the state. This data set was provided to us by the Department of Education with test data going back to the late 1990s. We ended up analyzing only data from 1999-00 to 2003-04 in our year 1 report. For the year 2 report, we added an additional year of data (i.e., from 1999-00 to 2004-05). For this third and final report we have added an additional year (i.e., 2005-06) to our data set. This data set includes students in charter schools and students in traditional public schools. Identifying information was removed and replaced with unique identifier codes that allowed us to link students

[1] The data do, however, break out performance data by such categories as ethnic background and free and reduced lunch status, which can facilitate some comparisons at the same point in time with the state average or with other schools.

from year to year. The scope and nature of these data allowed us to use a matched student design to examine the impact that charter schools were having on student learning. The matched student design is a quasi-experimental design in which students in the experimental group (i.e., charter schools) are matched according to all relevant background and demographic indicators with students in the control group (i.e., traditional public schools). Students are followed over time, and we track and compare relative gains. More on the specific methods used in our analyses is included in the following section. Following the methodology section, we first present the results for all charter school students and then the results are broken out by school.

While reading this chapter and interpreting its findings, it is important to keep in mind that although we are using a rigorous design, there still are significant limitations in the study. In fact, there are still a few alternative explanations for the results that we cannot yet rule out. For the third and final year of the project, we will be able to add an additional year of results and—more importantly—we will be able to include off-grade test results that will allow us to track students more closely. This matter will be discussed futher in the final section of this chapter. In addition to this precautionary statement, and in light of the limitations spelled out later in the chapter, readers should be careful in generalizing the findings across other charter schools within or outside of Delaware.

7.1 Methodology

In this section, a thorough description of the methodology used for our analyses is included. Note that the methodology we used for our year 1 and year 2 reports was largely the same, although we added a second group of panels in year 2. Our analyses and the methodology we used in year 3 were altered due to the availability of the results from the off-grade assessments. We still use the quasi-experimental matched student design; but rather than constructing more parallel panels, we opted to examine consecutive cohorts of students, thus adding another longitudinal perspective to our analyses. In section 7.2, we include a summary of the findings from the year 2 analyses, and section 7.3 contains the findings from the year 3 analyses.

This methodolgoy section is—admittedly—very technical. The findings in sections 7.2 and 7.3 are sufficiently explained so that readers can choose to go directly to the results. Readers that wish more technical details on how the study was conducted can wade through the details in the remainder of this section.

About the Assessment Instrument

Data for the analyses are from the Delaware Student Testing Program (DSTP), which is the statewide assessment program. The DSTP is used to measure how well students are prepared relative to the Delaware Content Standards in English language arts, mathematics, science, and social studies. The state's standards have been carefully drawn up and have garnered praise as exemplary standards. These standards are disseminated in detail so that schools and teachers know what to expect in terms of the state assessment system.

The DSTP in reading, mathematics, and writing began in spring 1998 in grades 3, 5, 8, and 10. Science and social studies began in spring 1999 in grades 8 and 11 and in Fall 1999 in grades 4 and 6. We obtained student level results only for reading, mathematics, and writing. Science and social

studies will be included in future analyses. Table 7:1 illustrates the number of charter school students that took the DSTP test by school, year, and grade. Before 2001, the number of students was very limited. The enrollment grew after 2001 because of the addition of new charter schools as well as the growth of existing schools. As can be seen in the data, two schools have test data for only two school years and therefore have to be excluded from any longitudinal analyses since there are at least 2 years between any test events (i.e., following a panel of students from grades 3 to 5 requires 3 years of data).

Results from the test are reported at various levels, including the state, district, school, and individual student. Individual student data are protected carefully by the state, and obtaining access to these data involved a lengthy application and permission process. The data obtained for our analyses were stripped of all information that identifies students. Unique identifiers were included, however, which allowed us to track and link student data from year to year.

The results are reported by grade and subject area, and the measures used include both scaled score results on the DSTP and the normal curve equivalent (NCE) scores[2] on the SAT-9. A number of items from the SAT-9 are incorporated in the DSTP math and reading tests (not the writing component) so that equivalent scores can be calculated for the SAT-9.[3] The measures used on the writing component is a raw score based on prompts that vary from year to year. For this reason, it was not possible to trace change scores accurately using the writing test. For this reason, our analyses do not cover the writing results.[4] The data sets we obtained also included such measures as the cut scores with regard to state performance levels. These were not used, however, because they were less sensitive to change by students.

Panel Definition

The goal of our panel definition was to create a random sample of noncharter school students who were demographically matched with charter school students that spanned the greatest number of DSTP assessments. Multiple panel designs were considered. Our aim was to use a panel design with three data points; however, this resulted in too few students with valid test scores at all three data points. We believe this was due to student mobility and the fact that many charter schools did not exist or had a limited grade range in the early years of the reform. The panel design used in year 2 is outlined in Table 7:2. It is a compromise that limits the longitudinal perspective of our analyses, but allows sufficient samples for matching demographic characteristics of students. Development of the six panels (A-F) began with the most current DSTP assessment year (either 2003, 2004, or

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[2] We used NCEs instead of national percentile ranks because the NCE scores are a preferred measure when comparing change scores over time. The distance between NCE units is equivalent, which is not true for the difference between percentile group units because they are ordinal in nature. An NCE score has a minimum of 1, a maximum of 99, a mean of 50, and a standard deviation of 21.06. The standardization inherent in NCE scores makes comparisons between different assessments possible.

[3] The test company that works with the Department of Education is Harcourt Brace Educational Measurement. This company also has the Stanford Achievement Test (SAT-9) in its portfolio of assessments, which makes it possible to include SAT-9 items in the state test.

[4] In the appendix of the year 1 report, our findings from the analysis of writing results were included with the additional limitations of these data clearly spelled out.

Table 7:1 Total Number of Charter School Students Taking the DSTP by School, Grade, and Year

School Name	*1997-98*				*1998-99*				*1999-00*				*2000-01*				*2001-02*				*2002-03*				*2003-04*				*2004-05*				*2005-06*		
Grade	*3*	*5*	*8*	*10*	*3*	*5*	*8*	*10*	*3*	*5*	*8*	*10*	*3*	*5*	*8*	*10*	*3*	*5*	*8*	*10*	*3*	*5*	*8*	*10*	*3*	*5*	*8*	*10*	*3*	*5*	*8*	*10*	*5*	*8*	*10*
The Charter Sch. of Wilmington				135				152				180				246				248				225				228				234				254
Positive Outcomes Charter School			11	9			11	12			12	15			14	10			13	12			12	16			18	16			22	12		8	10
East Side Charter School	10				15				7				31				14				16	31			18	15			16	9			11		
Campus Community School					32	53	8		38	30	30		61	28	23		24	35	50		40	49	82	26	34	27	109	44	40	42	87	46	32	41	21
Thomas A. Edison Charter School													98	84			110	96	68		100	88	50		96	86	51		66	72	42		57	50	
Sussex Acad. of Arts & Sci.															24				57				105				83				98			94	
Kuumba Academy CS																	23				34	18			32	25			38	21			19		
Marion T. Academy													70	25			78	68			73	67			84	69	25		69	53	36		36	12	
Newark Charter School																		161				109	130			160	133			160	159			157	
MOT Charter School																					73	75			73	75			72	72			66	66	
Providence Creek CS																					66	69			93	84			74	69	38		42	39	
Delaware Military Academy																											11	77			68	160			113
Academy of Dover CS																									65	68			62	39			20		
Total	10	0	11	144	47	53	19	164	45	30	42	195	260	137	61	256	249	360	188	260	402	506	379	267	495	609	430	365	437	537	550	452	283	467	398
Total all grades by year	165				283				312				714				1,057				1,554				1,899				1,976				1,148		

Note that the total numbers of test takers for 2005-06 is noticeably smaller. We excluded grade 3, since we were using different test grades for our panels.

2005) and looked back in time to the previous DSTP assessment. Thus, we were able to build panel pairs that examined longitudinal growth from third to fifth grade, fifth to eighth grade, and eighth to tenth grade.

Table 7:2 Description of the Panels from Years 1 and 2 of the Study

	Year of DSTP Data With Test Grades Highlighted in Bold					
Panel	*1999-2000*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2004-05*
A1			**3rd**	4th	**5th**	
A2				**3rd**	4th	**5th**
B1		**3**th	4th	**5th**	6th	
B2			**3**th	4th	**5th**	6th
C1	4th	**5th**	6th7	th	**8th**	
C2		4th	**5th**	6th7	th	**8th**
D1	**5th**	6th7	th	**8th**	9th	
D2		**5th**	6th7	th	**8th**	9th
E1	6th7	th	**8th**	9th	**10th**	
E2		6th7	th	**8th**	9th	**10th**
F1	7th	**8th**	9th	**10th**		
F2		7th	**8th**	9th	**10th**	

Six panels were defined for the year 1 report (i.e., A1 through F1) and with the addition of the 2004-05 results we were able to construct 6 more panels (i.e., A2 through F2). The steps we took to construct these panels are outlined below. The Delaware Department of Education supplied annual data files that were preprocessed in a spreadsheet program by standardizing variable names and missing data identifiers. Following this, we converted the data files to SAS[5] data sets for further analysis. After merging the resulting annual SAS data sets by identification number, all demographic-related variables were stripped and saved for later processing. The remaining data then were written to two data files: reading and math. This process resulted in five primary data sets.

[5] SAS version 9 statistical software package was used to analyze the data.

A panel was created by merging one DSTP subject area (reading or math) with the demographic data and selecting subjects who had valid test data in the two years selected for the panel[6] and who were in the target grade in the last panel year, e.g., grade 5 in 2004 in Panel A1. Once the appropriate populations of students were selected, e.g., the above condition, the matching and random selection processes were undertaken.

Charter students were matched with noncharter students on four demographic characteristics: gender, ethnicity, Title I status, and FRL status. It is important to note that charter school status was defined by where a student was enrolled in the final DSPT assessment for that panel. According to the codebook supplied by DOE, there were five coding levels for ethnicity and two each for gender, Title I, and FRL. Thus, 40 different demographic strata were used for matching.[7] We also considered matching on special education status (two levels) and limited English proficiency (two levels), but this resulted in 160 possible demographic combinations. There was almost no variability in these last two demographic variables, so they were not considered further.

After the 40 demographic strata were defined, the total panel population was broken down among the 40 strata for charter schools and noncharter schools. Table 7:3 contains an illustrative example of the numbers of students in the charter school within each strata as well as the total number of students from the traditional public schools from which we could randomly draw a matching student. This process resulted in several of the strata not containing any students, so the actual number of observed demographic strata was less than 40. Additionally, since there were fewer students in the charter schools than in the noncharter schools, demographic strata may have been expressed in the noncharter schools that were not present in the charter schools; therefore, the charter school students remained unmatched. After the panel population was stratified, demographically matched samples could be drawn from each strata. For example, in strata 8, 104 students were enrolled in the charter schools and 1,309 students were enrolled in the noncharter schools. A randomly selected comparison sample of 104 noncharter students was drawn from the population of 1,309 noncharter students. Thus, a comparison sample was randomly drawn from noncharter school students that was proportional to the number of charter school students across 4 demographic characteristics.

Table 7:3 Population Strata for Panel D1

	Demographic Group																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Public	7	242	43	384	121	40	34	1,309	275	1	.	245	48	369	97	47	38	65	1,273	227	64
Charter	1	7	7	6	16	4	2	104	7	1	1	5	4	3	10	5	2	1	100	7	2

Note. *Public* refers to traditional public schools and c*harter* refers to public charter schools.

In our year 3 analyses we matched charter and noncharter students as described above. However, we deviated from creating a new series of panels as we did in year 2. The presence of the off-grade

[6] For example, in panel A1, ReadAF04="Y" and ReadAF02="Y")

[7] We came up with 40 demographic strata based by multiplying the number of values in each demographic variable: 2*2*2*5=40 possible demographic combinations.

assessment data enabled a more direct approach to examining longitudinal changes. Starting in with the 2002 data, we constructed nonoverlapping (independent) two-year panel groups (referred to as cohorts) at the 4th/5th grade, 7th/8th grade and at the 9th/10th grade for all charter school students. To enter a two-year cohort group, a student had to be present in the same school during both the first and second years of the panel and had to matriculate one grade level. For example, four 2-year cohort panels were constructed for students passing through from 4th to 5th grade, i.e., 2002/03–2003/04 and 2004/05– 2005/06. The selection of these grades was purposeful in that the two grades were contained within a school; that is, students were not transferring from one (e.g., elementary) school to another (e.g., middle) school. Finally, we implemented this strategy three times, creating not one, but three matched noncharter comparison groups.

The rationale for constructing multiple comparison samples is that we noted in year 1 and 2 that there could be some variability in the stability of the statistical findings when only one random comparison group was used and the effect size was not large. By constructing more than one comparison group, we can better evaluate the charter school outcomes over time and incorporate variability into the analysis through matching/sampling procedure. Our choice for three comparison samples is based on parallel findings from the multiple imputation literature that indicates about three data sets are sufficient to estimate sampling variability.

Analytical Strategy

To address the central reform question of whether there is a difference in achievement (reading and math) between students attending charter schools vs. students attending noncharter schools, an analysis of covariance (ANCOVA) was conducted on the last DSTP assessment with the previous DSTP assessment score as the covariate. For the year 1 and 2 reports, separate ANCOVA analyses were examined for DSTP scaled score and SAT-9 NCE for the reading and math assessments. Again we deviated slightly from this in year 3. The off-grade assessment data did not include SAT-9 national percentile ranks or normal curve equivalents. Therefore we used reading and math scale scores which were considered as the next best measure of performance. The findings from the cohort analyses substantially improved our ability to directly assess achievement gains (or losses) over time, e.g., from 2002 to 2006. The full quasi-experimental design is a 4 x 4 factorial ANCOVA with school (charter, noncharter1, noncharter2, and noncharter3) and cohort (02/03, 03/04, 04/05, 05/06) as the two independent variables and math or reading scale score as the dependent variable.

The use of the previous DSTP as the covariate acts as a statistical matching procedure where the means on the last DSTP assessment for each group (charter and noncharter) are adjusted to what they would be if the two groups had scored equally on the previous DSTP assessment. Thus, using the previous DSTP assessment is a statistical control for previous achievement level; as such, the evaluative question directly addressed by the ANCOVA is "Is enrollment in a charter school associated with higher DSTP mean assessment scores in math and reading than enrollment in a noncharter school after adjustment for previous DSTP assessment performance?" ANCOVA in this use is not a proxy for determining causality; for that, random assignment of students to schools would be necessary. As such, we cannot draw causal conclusions regarding the effect of being enrolled in a charter school and gains (or losses) in achievement. Moreover, the ANCOVA does not adequately control for enrollment in a charter school at the time of the first DSTP data point.

7.2 Summary of Findings From Year 2 Analyses

Table 7:4 contains the results from our analysis that combine the findings from the panels from year 1 (Panels A1 to F1) and the panels from year 2 (Panels A2 to F2). This pooled set of results provided us the best and most comprehensive picture of the performance of charter schools. The appendices from the year 2 report contain extensive details on the specific panels in the year 2 analyses. There were two panels and two subjects (i.e., reading and mathematics) for each grade, which means that there were four analyses at each grade level. We did not aggregate the results by grade or subject. Instead, we reported the results from each analysis separately. In our description and discussion of the findings, we drew conclusions by grade and subject.

Before discussing the key findings from our year 2 analysis that are included in Table 7:4, we should review and explain the statistics and column headings in the table. The results are reported by grade and subject area and include both scaled score results on the DSTP and the normal curve equivalent (NCE) scores on the SAT-9. As noted earlier, a number of items from the SAT-9 are incorporated in the DSTP test so that equivalent scores can be calculated for the SAT-9. Therefore, while the scaled score results reflect total scores on the DSTP, the NCEs reflect performance on a subset of questions. This can explain differences in relative performance levels that exist between the two sets of scores.

The *covariate mean* is the mean score for all students in the group in the prior DSTP assessment. Therefore, the covariate mean for students in grade 5 would be their scores two years earlier in grade 3. The *adjusted mean* is the focus of the ANCOVA analysis, the second DSTP assessment. This is not the observed mean score (weighted mean) for the group; rather, it is a mean score adjusted for students' performance on the prior assessment. The ANCOVA provided two statistical tests: one for the covariate (slope of the relationship between the prior assessment and the target assessment is nonzero) and one for the adjusted means (the hypothesis of interest). If the covariate is found to be statistically significant, then the ANCOVA will allow a more powerful test of the adjusted means, which is the second hypothesis considered in the model. Evaluation of the covariate should always be considered and in all analyses was statistically significant. These data are not presented in 7:4. Thus, the use of the ANCOVA was justified in that there was a statistically significant relationship between the prior DSTP assessment and the target DSTP assessment. In Table 7:4 the F-value and associated p-value reported correspond to the hypothesis of no difference between the adjusted (target) DSTP means (charter vs noncharter). If the F-value is large and the corresponding p-value small, it is common practice to reject the hypothesis of no difference in favor of the alternative hypothesis: a difference exists in the adjusted DSTP means between charter and noncharter schools.

Table 7:4 presents DSTP panel data by grade and subject. The results in Table 7:4 indicate that the charter school students often perform better than matched traditional public school students in upper grades. There were small differences between the charter school students and comparison students between grades 3 and 5. Only four differences were statistically significant; two of these favored traditional public schools, and the other two favored charter schools. At grade 8, the reading results for both panels C and D favored charter schools and were statistically significant.

Table 7:4 Performance on DSTP for Charter School Students and Comparison Students by Subject Area and Grade Using Pooled Data From Both 2004 and 2005

Grade and Subject Area	Scaled Score on the DSTP					Normal Curve Equivalent on the SAT-9				
	Covariate Mean	Adjusted Mean	Std Err	F-value	P-value	Covariate Mean	Adjusted Mean	Std Err	F-value	P-value
Grade 5 Reading Panels A1 & A2 (N=1,888)										
Charter school	445.01	485.14	0.73	0.15	0.6982	60.00	61.72	0.45	0.50	0.4801
Control group	447.04	485.54	0.73			61.00	61.27	0.45		
Grade 5 Math Panels A1 & A2 (N=1,995)										
Charter school	436.75	474.36	0.75	5.89	**0.0153**	62.15	63.13	0.46	4.42	**0.0357**
Control group	436.29	476.95	0.75			63.07	61.77	0.46		
Grade 5 Reading Panels B1 & B2 (N=1,803)										
Charter school	439.36	482.84	0.79	0.03	0.8697	57.95	56.87	0.46	4.89	**0.0272**
Control group	443.33	482.66	0.79			59.49	55.44	0.46		
Grade 5 Math Panels B1 & B2 (N=1,848)										
Charter school	432.33	468.60	0.78	4.24	**0.0396**	60.37	61.08	0.52	1.52	0.2182
Control group	432.11	470.81	0.79			61.34	60.16	0.53		
Grade 8 Reading Panels C1 & C2 (N=1,528)										
Charter school	492.98	537.57	0.79	3.90	**0.0485**	61.77	66.69	0.48	13.65	**0.0002**
Control group	485.49	535.35	0.79			59.47	64.20	0.48		
Grade 8 Math Panels C1 & C2 (N=1,580)										
Charter school	482.73	514.33	0.87	1.16	0.2810	66.65	65.91	0.49	13.70	**0.0002**
Control group	471.99	512.99	0.88			61.55	63.31	0.50		
Grade 8 Reading Panels D1 & D2 (N=1,216)										
Charter school	485.37	532.36	0.86	5.52	**0.0190**	59.37	63.12	0.56	4.76	**0.0293**
Control group	479.05	529.50	0.86			57.55	61.38	0.57		
Grade 8 Math Panels D1 & D2 (N=1,240)										
Charter school	475.74	510.96	0.91	0.44	0.5076	63.80	62.92	0.56	9.81	**0.0018**
Control group	468.72	510.10	0.92			60.71	60.41	0.57		
Grade 10 Reading Panels E1 & E2 (N=972)										
Charter school	548.58	541.75	1.03	36.29	**<.0001**	71.39	67.19	0.66	36.67	**<.0001**
Control group	531.28	532.84	1.03			61.67	61.45	0.66		
Grade 10 Math Panels E1 & E2 (N=1,010)										
Charter school	537.65	562.97	1.20	26.90	**<.0001**	73.87	70.97	0.63	11.09	**0.0009**
Control group	509.98	553.99	1.20			61.76	67.98	0.63		
Grade 10 Reading Panels F1 & F2 (N=780)										
Charter school	550.51	542.72	1.15	8.89	**0.0030**	73.17	62.32	0.69	39.37	**<.0001**
Control group	531.25	537.76	1.15			63.85	56.11	0.69		
Grade 10 Math Panels F1 & F2 (N=802)										
Charter school	537.33	563.82	1.37	22.52	**<.0001**	74.86	68.94	0.78	4.11	**0.0431**
Control group	508.26	554.40	1.37			60.64	66.65	0.78		

The largest differences between charter school students and matched students in traditional public schools were at grade 10. Here all of the comparisons favored charter schools and were statistically significant. In other words, the charter school students included in the panels were gaining more on the DSTP between grade 8 and grade 10 than traditional public school students. The differences that were significant at grades 8 and 10 typically were larger and remained statistically significant even after we generated additional randomly selected comparison groups. One serious limitation to keep in mind here is that many students in the grade 8 to grade 10 panels did not actually enter a charter school until grade 9. Also, many students were dropped from this panel because they did not have a grade 8 DSTP score, probably because they were enrolled in private schools or possibly were coming from out of state. The availability of the off-grade results for our year 3 analyses means that we were better able to ensure that the difference between the first and second test result was due to the impact of the charter school since we could ensure that students were enrolled at the charter school only between the two test points.

The data in Table 7:4 illustrate important information about the types of students attracted to charter schools. While many charter schools establish curricular profiles and marketing materials that make them most attractive to students failing in traditional public schools, some charter schools also have profiles and marketing practices that help them attract high performing students. The covariate means in Table 7:4 represent the pretest scores of the students that are matched by race, free and reduced lunch status, English language proficiency status, and Title I status. When the covariate mean for the charter school group and control group is similar, this means that the charter school has students who are performing similarly to their demographically matched peers. When the charter school group has a higher covariate mean than the control group, this indicates that the enrolled charter school students already had higher performance levels at the time of pretest.

A comparison of the covariate means at grade 4 illustrates that charter school students and demographically similar students in the control group have similar pretest performance levels. At grade 8, the charter schools are clearly attracting and enrolling higher performing students. This difference is further exacerbated in grade 10, where the charter school students have substantially higher pretest scores than their demographically similar peers. These comparisons suggest that while the charter schools on the whole are not "creaming" or attracting the best performing students in lower elementary grades, they clearly are doing so in the lower and upper secondary levels.

The data in 7:4 are aggregated across all the schools, which masks large differences among the schools, both in terms of the students they enroll and in terms of the growth in test scores they can achieve. The year 2 evaluation report includes a breakout and discussion of the data by school, which uncovers the fact that the types of students attracted to the schools (in terms of academic performance) differ greatly just as the overall impact of individual schools differs.

In our year 2 analyses, we also examined time effects to see if charter schools' relative performance was improving over time. In these analyses, pooled data for each cohort (i.e., 2004 and 2005) were coded for endpoint. The construction of the two groups of panels yielded nonoverlapping cohorts of students. From our findings, we could not clearly discern improvements or declines in performance over time in either reading or math. Our analyses from year 3, which are reported in the next section, revisit this question of whether the charters schools' relative performance is improving or worsening over time.

7.3 Findings from Year 3 Analyses

The key findings from our year 3 analyses are illustrated in Figures 7:4, 7:5, and 7:6. These figures illustrate charter schools' results for grades 5, 8, and 10, respectively. Along with the graphic displays of the results, there are tables with key descriptive statistics for the group of charter school students and three comparison groups with matched students in noncharter schools. The adjusted or least square means refer to the mean scale score after adjusting for test results at the preceding grade. Note that while the Y-axis scale is not identical in all graphs, we have consistently used a 25 point range on this scale so that relative change can be compared from graph to graph. Table 7:5 includes the ANCOVA results that examine differences between school type, and cohorts and interaction between school type and cohort.

Table 7:5 ANCOVA Summary Table With p-Values

	Math Scale Score			Reading Scale Score		
Grade-Level	School Type (C, NC1, NC2, NC3)	Cohort (02-03,03-04, 04-05, 05-06)	Interaction	School Type (C, NC1, NC2, NC3)	Cohort (02-03,03-04, 04-05, 05-06)	Interaction
4th to 5th	=.0131	=.0074	=.1222	=.0282	=.*0557*	=.0005
7th to 8th	<.0001	<.0001	=.0517	<.0001	<.0001	<.0001
9th to 10th	=.1222	=.0517	=.0354	<.0001	<.0001	=.1400

Note. Findings that are not statistically significant are underlined in the table.

Grade 5 Results

We found statistically significant differences between the charter school students' growth in performance relative to the growth in achievement for the three comparison groups of noncharter school students. Results indicated that the 5th grade mean math scale score of the charter school students (Least Square Mean [*LSM]* = 472.86) was significantly lower (p = .0020) than the pooled mean of the noncharter students (*LSM* = 475.33). Note that Table 7:5 includes information indicating whether differences were statistically significant or not. We compared consecutive cohorts over time and found that relative to the 2002-03 year, mean math scale scores remained similar in 2003-04, but increased significantly in 2004-05. That gain was maintained in 2005-06. Thus, while students in charter schools evidenced significantly lower overall performance in math scale scores than their matched peers in noncharter schools, there has been an indication of a slight improvement since 2002-03, although these gains were made by students in both charter and noncharter schools. Figure 7:1 presents the *LSM* math scale scores for the 5th grade school types by cohort analysis.

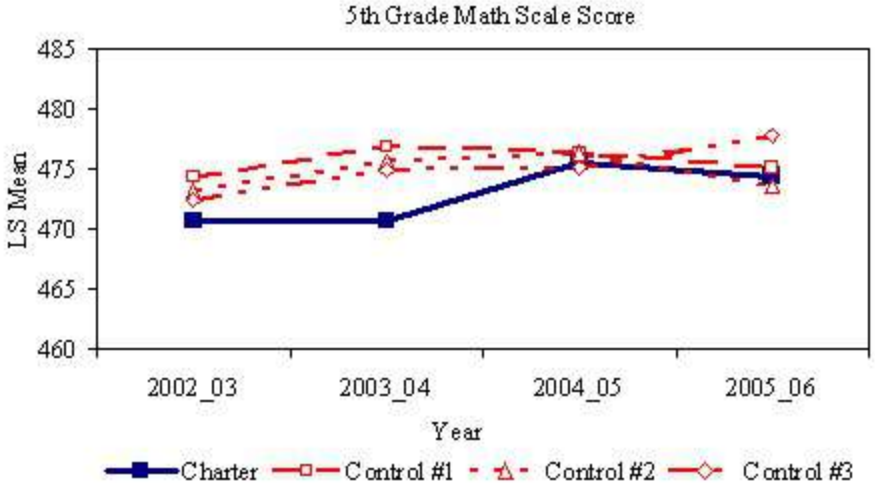
In terms of reading results, we found an overall statistically significant school-type effect. In other words, the performance of charter school students at grade 5 were significantly lower than the pooled results from the 3 comparison groups of matched students. Also, we found a marginally

Math Grade 5

Group	N	Year	Least Square Means	Standard Error
Charter	195	2002_03	470.68	1.43
Charter	255	2003_04	470.72	1.24
Charter	255	2004_05	475.60	1.25
Charter	249	2005_06	474.44	1.25
Noncharter1	194	2002_03	474.36	1.43
Noncharter1	254	2003_04	476.93	1.24
Noncharter1	253	2004_05	476.41	1.24
Noncharter1	249	2005_06	475.18	1.25
Noncharter2	194	2002_03	473.24	1.42
Noncharter2	254	2003_04	475.66	1.24
Noncharter2	253	2004_05	476.36	1.24
Noncharter2	249	2005_06	473.60	1.25
Noncharter3	194	2002_03	472.44	1.42
Noncharter3	254	2003_04	474.94	1.24
Noncharter3	253	2004_05	475.14	1.24
Noncharter3	249	2005_06	477.81	1.25

Reading Grade 5

Group	N	Year	Least Square Means	Standard Error
Charter	195	2002_03	487.38	1.60
Charter	255	2003_04	478.78	1.38
Charter	255	2004_05	481.99	1.39
Charter	249	2005_06	476.61	1.40
Noncharter1	194	2002_03	483.29	1.59
Noncharter1	254	2003_04	484.90	1.38
Noncharter1	253	2004_05	483.16	1.39
Noncharter1	249	2005_06	481.64	1.39
Noncharter2	194	2002_03	484.61	1.58
Noncharter2	254	2003_04	484.98	1.38
Noncharter2	253	2004_05	484.45	1.39
Noncharter2	249	2005_06	482.17	1.39
Noncharter3	194	2002_03	482.37	1.58
Noncharter3	254	2003_04	483.57	1.38
Noncharter3	253	2004_05	482.77	1.39
Noncharter3	249	2005_06	485.61	1.39



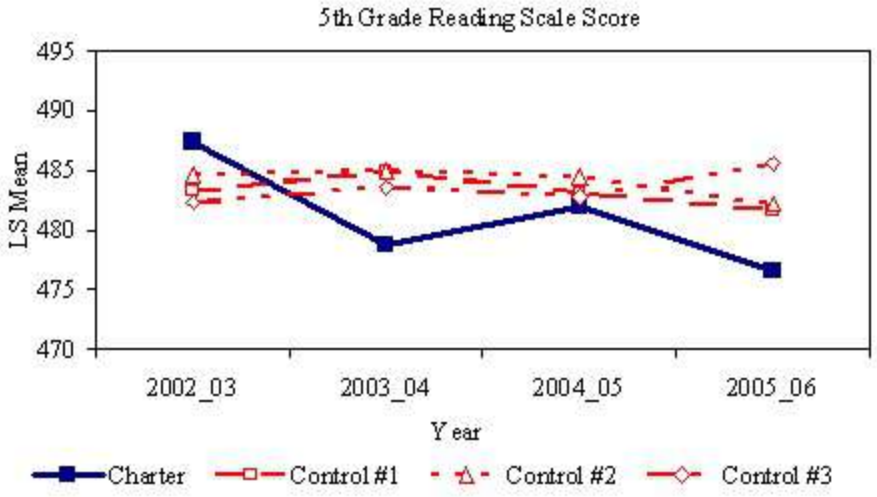


Figure 7:1 Grade 5 Results for Math and Reading: Comparison of Adjusted Means for Charter School Students and Three Comparison Groups of Matched Students

significant cohort effect (p = .0596) and a statistically significant interaction (p = .0005). The presence of a significant interaction precluded analysis and interpretation of the main effects; and thus, a structured *post hoc* strategy was initiated. First, a simple effects analysis focused on differences among school-type groups in each cohort. This was followed by a more sensitive school-type bycohort trend contrast. This contrast tests for diverging linear responses between the charter and pooled noncharter groups. While there were no significant differences in 2002-03 between charter school and noncharter school students, there was a statistically significant difference by school type in 2003-04 (p=.0024). Here we found that charter school students had significantly lower mean reading scale scores than students in the noncharter schools. Differences among school type were also observed in the 2005-06 cohort where a similar pattern emerged with charter schools having lower adjusted means than the comparison groups. Results of the group by trend contrast confirmed significant differences in the linear response trajectory between the charter and pooled noncharter groups (p = .0018). Figure 7:1 presents the *LSM* reading scale scores for the 5th grade school type by cohort analysis and clearly shows the steeper decline in the charter school mean reading scale scores than in the noncharter schools.

As is apparent in the results from Figure 7:1, the grade 5 charter school students tend to lag behind and are showing less growth over time than their matched peers. Note that the charter school results are highlighted in the solid line and the dashed lines represent the three groups of matched noncharter schools. The math results at grade 5 show some improvement in the last two years to a level comparable to that of the comparison groups.

Grade 8 Results

For grade 8 math, we found statistically significant differences between the charter school students' growth in performance relative to the growth for the three matched groups of noncharter school students. We also found a statistically significant change in relative performance over time (i.e., cohort effect), although no interaction between school type and cohort was apparent. Results indicated that the 8th grade mean math scale scores of the charter school students were significantly higher (p = .0001) than the pooled results of the noncharter students. *Post hoc* analysis of the significant cohort main effect indicated that the 2004-05 year evidenced a significantly lower mean math scale score than any of the other cohorts. Although students in charter schools at grade 8 have significantly higher overall math scale scores than their matched noncharter students, there was little improvement in these scores over time. Figure 7:2 presents the *LSM* math scale scores for the 8th grade school type by cohort analysis.

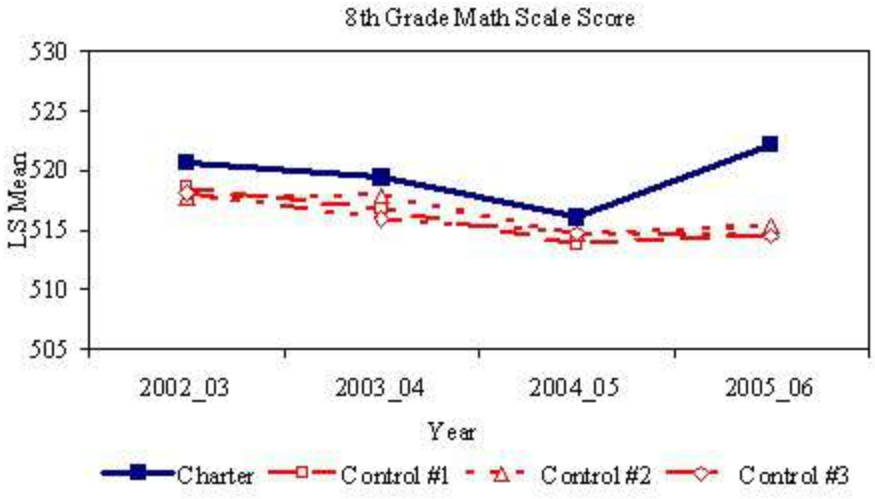
In reading, we found a statistically significant difference by school type. Charter school students were gaining more than their matched peers in the three comparison groups. Over time, we also found a statistically significant cohort effect (p<.0001) and a statistically significant interaction between school type and cohort (p<.0001). The presence of a significant interaction precluded analysis and interpretation of the main effects, and thus the structured *post hoc* strategy was initiated. Results indicated that there were statistically significant differences among school-type groups in 2004-05 such that charter school students had significantly higher mean reading scale scores than noncharter school students, all p's<.05. Differences by school type were also observed in the 2005-06 cohort where the same pattern emerged with charter schools having higher adjusted means. Results of the group by trend contrast confirmed significant differences in the linear response trajectory between the charter and pooled nocharter groups (p < .0001). Figure 7:2 presents the *LSM*

Math Grade 8

Group	N	Year	Least Square Means	Standard Error
Charter	294	2002_03	520.65	1.19
Charter	320	2003_04	519.44	1.15
Charter	451	2004_05	516.08	0.97
Charter	435	2005_06	522.14	0.98
Noncharter1	293	2002_03	518.56	1.21
Noncharter1	319	2003_04	516.78	1.15
Noncharter1	451	2004_05	513.88	0.97
Noncharter1	434	2005_06	514.65	0.99
Noncharter2	293	2002_03	517.68	1.20
Noncharter2	319	2003_04	517.93	1.15
Noncharter2	451	2004_05	514.70	0.96
Noncharter2	434	2005_06	515.36	0.98
Noncharter3	293	2002_03	518.16	1.20
Noncharter3	319	2003_04	515.98	1.15
Noncharter3	451	2004_05	514.72	0.97
Noncharter3	434	2005_06	514.53	0.98

Reading Grade 8

Group	N	Year	Least Square Means	Standard Error
Charter	294	2002_03	534.55	1.15
Charter	320	2003_04	533.10	1.10
Charter	451	2004_05	539.29	0.93
Charter	435	2005_06	544.92	0.94
Noncharter1	293	2002_03	532.59	1.15
Noncharter1	319	2003_04	533.77	1.10
Noncharter1	451	2004_05	535.51	0.93
Noncharter1	434	2005_06	534.70	0.95
Noncharter2	293	2002_03	535.17	1.15
Noncharter2	319	2003_04	534.47	1.10
Noncharter2	451	2004_05	535.98	0.93
Noncharter2	434	2005_06	535.62	0.95
Noncharter3	293	2002_03	534.10	1.15
Noncharter3	319	2003_04	533.91	1.10
Noncharter3	451	2004_05	535.49	0.93
Noncharter3	434	2005_06	534.47	0.95



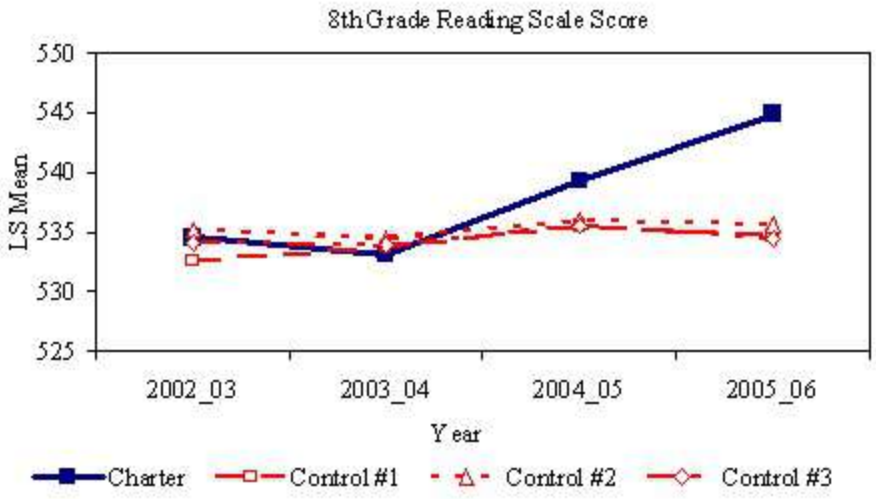


Figure 7:2 Grade 8 Results for Math and Reading: Comparison of Adjusted Means for Charter School Students and Three Comparison Groups of Matched Students

reading scale scores for the 8th grade school-type by cohort analysis and clearly depicts a steeper incline in the charter school mean reading scale scores than that of noncharter schools.

In summary, while the grade 8 results for charter schools were very similar to their matched peers in 2002-03 and 2003-04, the charter school students outpaced their matched peers in the subsequent two years. The reason for this accelerated growth in 2004-05 and 2005-06 can be explained largely by the addition of new charter schools and not necessarily by the improved performance of existing charter schools over time (note that the number of students in each cohort grows close to 30 percent between 2003-04 and 2004-05).

Grade 10 Results

Results of the 10th grade analysis revealed a statistically school-type effect ($p < .0001$), cohort effect ($p < .0001$), and a statistically significant interaction ($p = .0354$) for math scaled score. Results of the interaction analysis indicated statistically significant differences among the school type groups in 2002-03 such that charter school students had significantly higher mean math scaled scores than noncharter school students in two of the three comparison groups (2 & 3). Differences among school type were also observed in the 2003-04 cohort where a more obvious pattern emerged with charter school students having higher mean scores than all noncharter groups, all p's<.0001. In the 2004-05 cohort, an identical pattern to the 2003-04 cohort was observed; charter students had a statistically significant higher mean than all noncharter groups. And, again, a parallel pattern was observed in the 2005-06 cohort; charter school students had a higher mean than all noncharter groups, all p's<.0001. Results of the group by trend contrast failed to detect significant differences in the linear response trajectory between the charter and pooled noncharter groups. Figure 7:3 presents the *LSM* math scale scores for the 10th grade school type by cohort analysis and clearly depicts horizontal performance in math scale scores in both charter and noncharter schools.

Results for reading revealed a statistically significant school-type effect (p<.0001) and cohort effect (p<.0001), but no statistically significant interaction. To examine the school-type main effect, a contrast was tested that pooled all three noncharter groups together and compared this with the charter schools. Results indicated that the 10th grade mean reading scale score of the charter school students was significantly higher (p<.0001) than the pooled noncharter mean. *Post hoc* analysis of the significant cohort main effect indicated that relative to the 2002-03 year, there was a statistically significant increase in mean reading scale score in 2003-04 ($p = .0011$), which was followed by a significant loss in 2004-05 ($p = .0002$). There were no other statistically significant findings. While there was some statistically significant year-to-year variation, there is no indication of any overall gain or loss in reading scale scores since 2002-03. One year stands out as significantly better (2003-04) but the gains made regressed back to previous levels in the next year. In contrast, students in the charter schools evidenced significantly higher reading scale scores than their matched noncharter peers regardless of cohort. Figure 7:3 presents the *LSM* reading scale scores for the 10th grade school-type by cohort analysis.

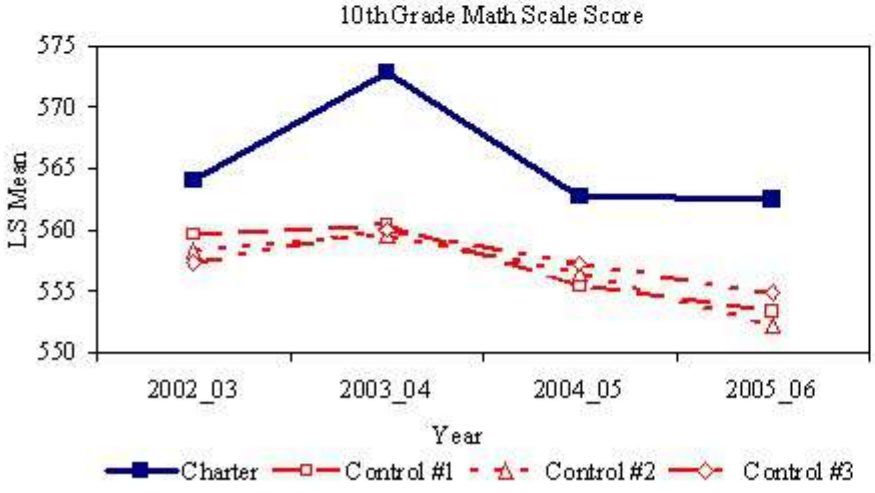
The charter school students at grade 10 consistently out performed and out gained their matched peers in noncharter schools in both math and reading. The 2003-04 results appear as a bit of an anomaly since the advantage of the charter school students is especially large. However, the charter school students continue to outgain their matched peers by 5 to 8 scale score points each year.

Math Grade 10

Group	N	Year	Least Square Means	Standard Error
Charter	217	2002_03	564.00	1.48
Charter	258	2003_04	572.88	1.37
Charter	372	2004_05	562.70	1.13
Charter	394	2005_06	562.50	1.11
Noncharter1	217	2002_03	559.57	1.48
Noncharter1	258	2003_04	560.41	1.35
Noncharter1	371	2004_05	555.45	1.14
Noncharter1	392	2005_06	553.34	1.10
Noncharter2	217	2002_03	558.31	1.49
Noncharter2	258	2003_04	559.57	1.36
Noncharter2	371	2004_05	556.43	1.13
Noncharter2	392	2005_06	552.21	1.10
Noncharter3	217	2002_03	557.29	1.48
Noncharter3	258	2003_04	560.02	1.36
Noncharter3	371	2004_05	557.23	1.14
Noncharter3	392	2005_06	554.84	1.10

Reading Grade 10

Group	N	Year	Least Square Means	Standard Error
Charter	217	2002_03	541.34	1.43
Charter	258	2003_04	547.71	1.31
Charter	372	2004_05	540.00	1.09
Charter	394	2005_06	541.44	1.07
Noncharter1	217	2002_03	535.16	1.42
Noncharter1	258	2003_04	539.74	1.30
Noncharter1	371	2004_05	535.53	1.09
Noncharter1	392	2005_06	535.20	1.05
Noncharter2	217	2002_03	535.30	1.42
Noncharter2	258	2003_04	538.34	1.30
Noncharter2	371	2004_05	536.64	1.09
Noncharter2	392	2005_06	533.63	1.05
Noncharter3	217	2002_03	536.89	1.42
Noncharter3	258	2003_04	537.23	1.31
Noncharter3	371	2004_05	536.77	1.08
Noncharter3	392	2005_06	535.94	1.06



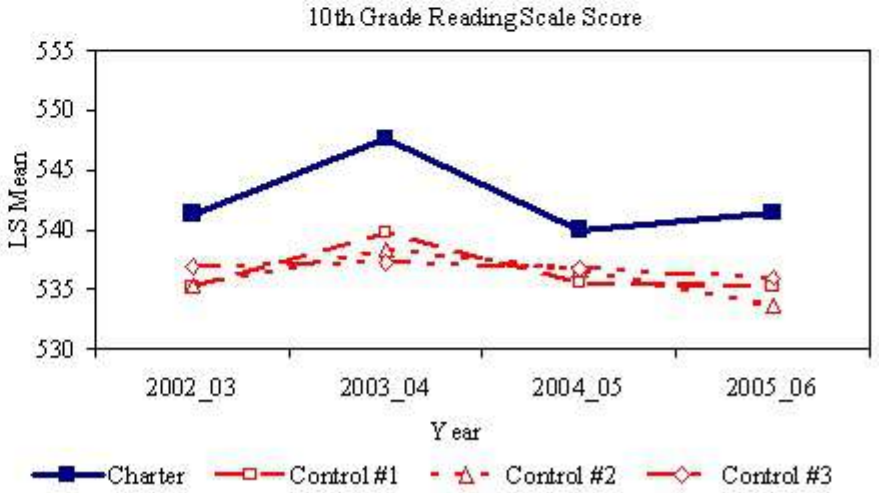


Figure 7:3 Grade 10 Results for Math and Reading: Comparison of Adjusted Means for Charter School Students and Three Comparison Groups of Matched Students

Appendix E includes information on the aggregate results for all the charter schools. The tables in this appendix include further details on the unadjusted mean scale scores for students in charter schools as well as students in the matched comparison groups.

Summarized School Analyses

Math and reading scale score ANCOVA results for each charter school are summarized in Table 7:6. Detailed information on group means (adjusted for the covariate) with associated standard errors are presented in Appendix E. Individual school-level results vary considerably, with some schools performing exceptionally well and other schools losing ground to matched peers in noncharter schools over time.

For the charter schools with students in 4th and 5th grades, most of the effects were nonsignificant with only five notable interactions, two in math for Academy of Dover Charter School and East Side Charter School and three in reading for Academy of Dover Charter School, Marion T. Academy, and Providence Creek Charter School. The findings reveal that students in East Side Charter School, significantly improved their mean math scores in the 2003-04 cohort only to return to a performance level similar to the 2002-03 cohort later. Performance in reading at the 4th to 5th grade for Marion T. Academy revealed that these students in the 2002-03 cohort started out very high but fell off sharply in later cohorts where there was essentially a flat trajectory in mean reading scale scores for noncharter students. A different pattern emerged in Providence Creek Charter School where charter school students showed little gain over consecutive cohorts although the matched peers in the noncharter students showed significant gains in the 2004-05 cohort. Findings for the Academy of Dover Charter School reveal very low math and reading scale scores in the 2005-06 cohort.

At the middle school level (this includes findings from grades 7 and 8), the four statistically significant interactions were observed: Newark Charter School for both math and reading scale scores, math scale score in MOT Charter School, and reading scale score in Positive Outcomes Charter School. Newark Charter School students evidenced a marked increase in mean reading scores beginning in the 2004-05 year and continued to rise in the 2005-06 cohort, while their matched peers in noncharter schools evidenced little gains over the four cohorts. While results from the math analysis indicated performance for all noncharter cohorts remained quite stable, students in Newark Charter School peaked in the last cohort (2005-06). Reading performance for 2005-06 cohort MOT Charter School students showed marked improvement over the 2004-05 cohort, whereas noncharter students showed no real change. The interaction for Positive Outcomes Charter School just manages to reach a statistically significant level. Unfortunately, due to small cell sample sizes in this analysis, an interpretation of this effect is not recommended.

At the high school level (grades 9 and 10), performance for the four charter schools in this group revealed that the Charter School of Wilmington and Positive Outcomes Charter School evidenced statistically significant group by cohort interactions for the math scale score. While mean math scale scores in The Charter School of Wilmington are significantly higher than any of the noncharter comparison groups, there was a significant gain in mean math performance between the 2002-03 and 2003-04 cohorts that dropped away in subsequent cohorts. Noncharter students evidenced little consistent gain or loss in mean math scale scores. Positive Outcomes Charter School results showed a rather large decrease in performance in the 2004-05 cohort with a slight rebound in the 2005-06 cohort relative to the first two cohorts. Noncharter comparison students evidenced consistent

performance across the cohorts with a notable exception in noncharter group 3 for the 2005-06 cohort, which showed a substantial gain in mean math scale score performance.

Table 7:6 Factorial (Group by Cohort) ANCOVA Summary For Each Charter School

		Math			*Reading*		
School	*Grade*	*School Type*	*Cohort*	*Interaction*	*School Type*	*Cohort*	*Interaction*
Academy of Dover CS	4/5	=.0231	=.2697	=.0299	=.0361	=.0202	=.0222
Campus Community School	4/5	=.1320	=.0451	=.4646	=.2161	=.8586	=.4517
	7/8	***=.0002***	=.2346	=.6243	=.1685	<.0001	=.0660
	9/10	=.6538	=.2831	=.9688	=.9467	=.9507	=.9368
The Charter School of Wilmington	9/10	<.0001	<.0001	=.0353	**<.0001**	<.0001	=.4341
Delaware Military Academy	9/10	=.8788	=.0377	=.9846	=.4379	=.0877	=.6583
East Side Charter School	4/5	=.0074	=.1100	=.0122	=.2062	=.1758	=.5630
Sussex Academy of Arts & Sciences	7/8	**=.0021**	=.0239	=.2776	**=.0002**	<.0001	=.2965
Kuumba Academy CS	4/5	=.4245	=.0300	=.9942	=.5438	=.0026	=.7147
Marion T. Academy	4/5	=.0665	=.1135	=.7384	=.3193	=.1069	<.0001
	7/8	=.0675	=.2893	=.4642	=.1168	=.0017	=.4136
MOT Charter School	4/5	=.8046	=.0053	=.4007	=.6109	=.0085	=.5221
	7/8	=.1543	=.4960	=.0024	**=.0043**	=.1384	=.1165
Newark Charter School	7/8	=.0010	=.1323	<.0001	=.0494	<.0001	<.0001
Positive Outcomes Charter School	7/8	=.7779	=.1201	=.2864	=.1277	=.1871	=.0498
	9/10	=.8590	=.0197	=.0283	=.2664	=.4469	=.0711
Providence Creek CS	4/5	***=.0015***	=.0666	=.4893	=.0010	=.0005	=.0160
	7/8	=.0682	=.0710	=.1955	=.3614	<.0001	=.4617
Thomas A. Edison Charter School	4/5	=.8758	=.1475	=.3868	=.8881	=.8449	=.1171
	7/8	**=.0003**	=.0050	=.3353	**=.0017**	=.9219	=.1654

Note. The covariate effect was statistically significant in all analyses and therefore not included.
Also, p-values are presented in bold when the interaction is not statistically significant and the main effect for school type is statistically significant. These p-values are underlined if the difference favors the charter school students and italic if the difference favors noncharter students.

Also presented in Table 7:6 in bold face type are statistically significant effects for school type. This main effect can only be interpreted meaningfully if the interaction (school-type by cohort) is not significant. We have identified charter school students that differed from their noncharter school peers by either underline (difference favors the charter school students) or italic (difference favors the noncharter students). Surprisingly, there are no advantages (or disadvantages) for students attending charter schools in the 5th grade analyses. Moreover, only three charter schools showed an advantage for their students (Sussex Academy of Arts & Sciences, MOT Charter School, and Thomas A. Edison Charter School) in the 8th grade analysis, but one school evidenced a disadvantage (Campus Community School). In our 10th grade analysis only students from The Charter School of Wilmington showed a distinct pattern of superior performance.

7.4 A Comparison of DSTP Results for New Enrollees and Feeder Schools

In this section, we examine the question of whether charter schools are creaming the best students from surrounding district schools or whether they are attracting and enrolling struggling students that perform lower than peers from their noncharter school. As will be apparent, the answer is complicated. While some schools are in fact recruiting and enrolling students that perform better than their peers from the feeder school (i.e., the district school that charter school students once attended) other charter schools are enrolling students that perform lower than their peers in the district school they were once enrolled. These analyses also suffered from the fact that many charter schools are feeding themselves. Moreover, the choice of the assessment grades (4th to 5th) in elementary schools virtually guaranteed these schools feeding themselves. The restricted nature in which we selected specific grades impacted many of the other charter schools as well. For example, Newark Charter School actually begins in grade 5; thus, by grade 7 it is feeding itself. This left three charter schools for this analysis: The Charter School of Wilmington and Delaware Military Academy, both at the 9th to 10th grade level, and Positive Outcomes Charter School at the 7th to 8th grade level.

To conduct this analysis, we compared the mean scale score for students in the year previous to enrolling in a charter school. "New enrollees" refers to the students that enter a charter school, and their mean score is for the year prior to enrolling in a charter school. The feeder school mean is based on the mean scores for the schools that had the most students leave to attend the particular charter school in question. In many cases, there are as many possible feeder schools. For The Charter School of Wilmington, we identified 24 feeder schools from which we selected the top 3 schools to obtain greater than 50 percent of the cohort. For Delaware Military Academy, we identified 22 feeder schools from which we selected the top 6 schools to obtain greater than 50 percent of the cohort. We identified six feeder schools for Positive Outcomes Charter School, all of which we used.

Table 7:7 presents data on math scaled scores for the feeder school analysis for the three charter schools in 2006 (the standard deviations are included within the parentheses). To facilitate interpretation of this analysis, a comparison year must be set. In these charter schools there are several possible target years. To account for this possibility and to make our analyses valid, the most current data was set as the target year (2006). Thus, data from 2005 represents incoming students, e.g., feeder students. To identify feeder schools, we started with a target year (e.g., 2006) in the 2005-

06 cohort and looked back to 2005 to identify the school each student attended prior to enrolling in a charter school. The feeder analysis depicted in this table thus shows mean math scale scores in the preceding year for students who attended one of the feeder schools to a charter school and those students who did not self-select into the charter school as well as the mean difference in these means. Negative differences represent the case where the students not attending the charter school outperformed students going into the charter school. Positive differences reflect the opposite: students going into the charter school outperforming students not going into the charter school. In an extreme case (e.g., The Charter School of Wilmington), where the difference is both positive and large, this could represent a charter school "creaming" the best students from its feeder schools.

Table 7:7 A Comparison of DSTP Results for New Enrollees at Charter Schools and Students in the Feeder Schools (based on 2005-06 data)

	Grades	*Mean Scale Score for Year Preceding Enrollment*		
		Feeder School Mean Score	*New Enrollee Mean Score*	*Difference in Mean Scores*
Positive Outcomes Charter School	7/8	489.37 (45.9)	440.25 (11.2)	-49.12
The Charter School of Wilmington	9/10	489.37 (45.9)	594.60 (44.3)	105.23
Delaware Military Academy	9/10	494.14 (40.4)	516.58 (33.5)	22.44

7.5 A Comparison of DSTP Results for Stayers, Leavers, and Newcomers

Table 7:8 presents summary data from the stayer/leaver/newcomer (SLN) analysis for all charter schools from 2002 to 2006. Mean math scale score data for each charter school grade and cohort are presented in Appendix F for students classified as stayers, leavers and newcomers. To determine who is a stayer, leaver, or newcomer, a target year is first defined. Then *stayers* are identified as those students that were enrolled in the target year and then progressed a grade and were enrolled in the same school in the subsequent year. For example, consider all of the students enrolled in a charter school in 2005 as the target year. Students continuously enrolled in the same charter school in 2006 and who progressed a year, e.g., 4th to 5th grade, represent *stayers*. *Leavers* are those students who progressed a grade level in 2006 but are not in the same charter school. *Newcomer* students are those individuals who were not in the charter school in 2005 in 4th grade but entered 5th grade in 2006. Newcomers may be thought of as replacement students. In many cases sample sizes are too small to justify statistical analysis at the level of the school; however, some trends can be detected visually.

To simplify comparisons between stayers and leavers and stayers and newcomers, each cohort

Table 7:8 Stayer, Leaver, Newcomer Summary Analysis

Grade Level	*Leavers > Stayers*	*Newcomer > Stayer*
4th to 5th	71%	57%
7th to 8th	44%	19%
9th to 10th	8%	38%

within a school and grade were coded as follows. If the leavers' or newcomers' math scale score was higher than the stayer mean, a code of 1 was assigned. Otherwise, a code of 0 was assigned. Table 7:8 presents percentages of cohorts by grade comparisons of leavers and newcomers classified with higher mean scores. In 71 percent of the 4th to 5th grade comparisons, leavers outperform stayers[8] (p=.0233), suggesting that the higher ability students are fleeing the charter schools at the elementary level. In the middle school grades, leavers showed no particular tendency to have either higher or lower mean math scale scores, (p=.5637). At the high school level, however, in only 1 of the 12 possible comparisons did the leavers outperform the stayers (p =.0023), indicating that it was the low ability students fleeing from the charter high schools.

Newcomers tend to be similar to stayers in elementary grades (p=.4497), indicating that replacement students are drawn from the same pool of students as the original cohort. In middle school, however, newcomers evidence lower mean math scores significantly more often than the original stayer group (p = .0011). In high school there is insufficient evidence to suggest that newcomers are different (in terms of their math scale score) from the original stayer group (p=.4054).

To illustrate these effects at the level of the school, two charter schools were selected from the data presented in Appendix F. Table 7:9 presents stayer, leaver, and newcomer data for Marion T. Academy and The Charter School of Wilmington. Although there is some variation in the data, these two schools illustrate the overall finding presented above. In the 4th to 5th grade comparisons, leavers generally evidence higher mean math scale scores than stayers, whereas in 9th to 10th grade this trend is reversed. Also presented in this table are the respective numbers of students that are classified as stayers, leavers, and newcomers. Note the high rate of mobility at Marion T. Academy where close to 37 percent of the students are leaving. This can be contrasted with The Charter School of Wilmington where fewer than 1 percent of the students leave. Clearly, these two charter schools are drawing from two very different student populations.

Table 7:9 Illustrative Results from Two Charter Schools

	Grade	Year	Stayer	Leaver	Newcomer
Marion T. Academy	4/5	2003	443.68 (59)	437.15 (13)	453.00 (5)
		2004	436.56 (50)	445.29 (21)	441.38 (13)
		2005	457.77 (26)	461.00 (12)	445.45 (11)
		2006	455.61 (36)	460.50 (14)	464.33 (3)
The Charter School of Wilmington	9/10	2003	591.98 (211)	577.25 (4)	592.60 (5)
		2004	611.20 (220)	598.00 (4)	637.67 (3)
		2005	608.71 (226)	572.00 (2)	579.33 (3)
		2006	609.66 (254)	582.00 (1)	594.50 (2)

Note. The number of students in each group is included in parentheses.

[8] After coding leavers as 1 if their mean exceeded stayers or 0 if their mean was lower, a chi square test for equal proportions (π = .50) was conducted.

7.6 Limitations in Our Analyses and Findings

In this section we highlight and discuss some key limitations. It is important to note that the panel design that we used for the analyses in years 1 and 2 of the evaluation had a number of inherent limitations. These limitations were addressed in year 3 when we were able to get access to offgrade assessment data and follow students in consecutive years, rather than attempt to trace them back 2 or 3 years when they last took a high stakes assessment test. While the analyses in year 3 have addressed some of the limitations, they also come with their own limitations, such as the fact that we are now combining results from recognized high stakes tests with the results from offgrade assessments that some school may not take as seriously as others. By including findings from both year 2 and year 3 in this chapter, we hope that we have improved readers' confidence in the findings, which really do not vary between the two years.

Controlling for Number of Years at a Charter School

The analyses conducted in years 1 and 2 of the evaluation were limited in that we were not able to adequately control for the number of years a student was enrolled in a charter school. At best, data about a student could appear every other year. Thus, we conducted several pilot analyses to examine the effect of this possibility. Using the same analytical strategy, we constructed a second covariate representing the number of years a student was enrolled in a charter school. Thus, this new covariate ranged from 0 to 2 or 3, depending on the panel. Using Panel A math scale score and NCE SAT-9, we examined the influence of adding the second covariate. ANCOVA findings indicated that both covariates (previous assessment score and the new covariate, years) were statistically significant in the math scaled score analysis. Moreover, the statistically significant difference observed in Table 7:4 that favored the noncharter schools actually increased when we controlled for the number of years at a charter school. Although this brief examination remains limited, the impact of adding a covariate that statistically controls for the number of years a student attended a charter school did not alter the general findings presented in Table 7:4.[9]

Controlling for Mobility

Related to our challenge to control for the number of years students actually spent at a charter school is the issue of mobility. Due to limitations in data and in the design used in years 1 and 2, we could not adequately control for mobility across schools. When we attempted to build panels across more than two assessment points, students inevitably changed schools, since the range of grades within most charter schools was limited. At the posttest, all students are enrolled in a charter school. However, our analyses for years 1 and 2 did not require that the student also be enrolled in the same school at the time of the pretest. It is implicit in our interpretation that students remain enrolled in the same school although it is possible that some students moved to the charter school shortly before the posttest. While the data would allow us to restrict the analyses only for students who remained

[9] When we examined this possibility at the school level, we found that, due to the manner in which we constructed our panels, addition of the second covariate was not justified. For example, in The Charter School of Wilmington, only 1 student previously had been enrolled in a charter school. A large portion of these students presumably came from private schools.

at the same school, there were a number of complications with this. For example, in our year 1 and 2 analyses, the DSTP results did not include results for students at every grade level and most of the charter schools provide for only limited grade ranges. Therefore, large portions of the students have to switch schools between tests.[10]

We also examined the impact of mobility by comparing mobility among charter school students (experimental group) and the traditional public school students (control group). Specifically, we compared the total number of students at the time of the posttest. This represents the target population we were seeking to capture. The panel design, however, requires that students take the DSTP 2 years previously in Panels A, B, E, and F and 3 years previously for Panels C and D. As it turned out, the numbers in the panel were noticeably smaller than the numbers of actual test takers. The reason for the drop in test takers was because a portion of the students did not have pretest scores. This can be due to a number of reasons, including (i) student was not enrolled in a public school in Delaware (some students move to the state; and others are enrolled in private schools, which are not required to take the DSTP); (ii) the student did not receive a valid test score at the time of the pretest either because he or she was not present or because he or she may have been classified as special education or limited English proficiency; or (iii) the student was retained or repeated one or more grades.

The charter schools had a larger proportion of their students excluded from the panels used in years 1 and 2 than did the traditional public schools. This can potentially bias the data in a number of ways, particularly when the students excluded differ in performance levels from the students included. For example, a sizeable proportion of the students in the Thomas A. Edison Charter School were excluded because they had to repeat one or more grades. Students who are repeating grades are likely to be lower performing students, and excluding them presumably has biased the analyses.

If we look at the loss of students from the analysis in Panel E1 (grade 8 to grade 10), we see that we captured 87.8 percent of the noncharter students and 81.5 percent of the charter students in the aggregated data presented in Table 7:4. While this difference does not look great, the school-level analyses illustrated large and dramatic differences. For example, in The Charter School of Wilmington, only 136 students had both valid 8th and 10th grade scores in the year 2 analyses, which yielded only a 59.6 percent capture rate. Thus, the analyses for this school are somewhat suspect in that there is an unknown sampling bias that resulted in a large drop in students with both 8th and 10th grade scores. Using the same panel, we examined the decline in sample for Campus Community School last year. Of the 44 possible students, only 30 of them also had 8th grade scores, providing a 68.2 percent capture rate.

Our analyses for year 3 have accounted for limitations related to mobility. We did this by requiring that students included in the analysis be present at the same school for both test events. This was possible with the use of offgrade test that allowed us to select results from 2 consecutive grade levels at the elementary school (grades 4 to 5), middle school (grades 7 to 8), and high school (grades 9-10) levels.

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[10] In a school like The Charter School of Wilmington, which serves grades 9-12, only one grade is tested in this range (i.e., grade 10). Therefore, the pretest for this group is the DSTP at grade 8. All students would be classified as "movers."

Other Limitations

As noted in the methodology section of this chapter, our use of Analysis of Covariance (ANCOVA) is not a proxy for determining causality. Therefore, one should be careful in drawing causal connections between the effect of being enrolled in a charter school and gains (or losses) in achievement.

Other general limitations to keep in mind are the fact that the charter school reform in Delaware is still relatively new. More critically, some of the school level findings are for schools that have operated for only four or five years. Because charter school reforms vary so extensively by state, one needs to be very cautious and restrain from making generalizations within and especially across states.

Chapter Eight
Student Performance on Delaware Student Testing Program: Residual Gains Analysis

This chapter addresses school performance as measured by student achievement on the DSTP. A number of strategies were considered for analyzing student performance data. In the previous chapter we utilized one of the most rigorous designs possible when student level data were available. In this chapter, we will utilize one of the most rigorous designs and methodological approaches suitable for group or school level data. It should be clear that analyses based on changes of individual students is far more rigorous and desirable than analyses based on school aggregate data.

We have used residual gains analysis for a number of our state evaluations when there are no individual student data available. Delaware provides us with a unique opportunity to compare results from the best possible analyses of student-level data with the best possible analyses of school-level data. As will be seen, the results from the residual gains analysis do not differ from the results we secured using a matched student design.

The results highlighted in this chapter are intended to provide a comprehensive look at the current performance and trends in performance of the charter schools. While the previous chapter considered only math and reading, we also cover results from science, social studies, and writing in this chapter.

8.1 Review of Methodology for Assessing Student Achievement

The data used for these analyses are school-level DSTP results (i.e., average scale scores for reading, math, science, and social studies, and raw scores for writing) for students at five grade levels: 3rd, 5th, 6th, 7th, and 9th. To estimate the pattern of growth or change, it was necessary to track school-level performance across time; the period of time used was 2002 through 2006.

To estimate patterns of student achievement and growth or decline, we fit regression models to each subject and each grade level (3rd, 5th, 8th, 10th, and 11th) for each year (2001, 2002, 2003, 2004, 2005) using noncharter public schools as the reference in the models. By using noncharter public schools as a point of reference, it is possible to determine whether or not the charter schools perform similar to, above, or below other schools throughout the state. Variables controlled for in the models included percentage of students in special education, percentage of low income students (i.e., receiving free or reduced lunch), and percentage of minority students.

From these regression models, three estimates were produced: (1) actual, or observed, scale scores; (2) predicted, or expected, scale scores; and (3) residual, or difference in, scale scores. The

actual DSTP scores are the mean school-level DSTP scale score that was achieved by the school for a given grade in a given year. Predicted DSTP scale scores were those that were anticipated in comparison with noncharter public schools for a given grade in a given year. In other words, the predicted scores represent how a charter school is expected to score based on how demographically similar noncharter schools perform. Residual scale scores are the difference between actual and predicted DSTP scale scores for a given grade in a given year. These residuals, or differences, indicate that the school in question is either performing at, above, or below other demographically similar schools (i.e., a residual of 0 indicates that the school performs at the average of all other similar schools); a negative residual means the charter school is performing worse than predicted, and a positive number indicates it is performing better than predicted.

These residual scores also can be used to assess value added by schools or relative change over time. An average annual change score is calculated for actual scores and for the residuals, which indicates whether or not the schools in question are making gains over time.

While Appendix G contains school-level results for each charter school, the findings covered in this chapter focus on results aggregated across all the charter schools. To aggregate school-level results for all charter schools, we weighted the results by the number of test takers at each charter school. In other words, the average across all the charter schools takes the number of students within those schools into account (for any given grade and any given year).

The discussion of methods in this chapter has been kept rather brief and relatively nontechnical. Readers interested in a more detailed exposition of methods may contact the authors or refer to our evaluation of charter schools in Pennsylvania where we first developed and applied this methodology (see Miron, Nelson, & Risley, 2002). In the next section, a description of the results and trends, with an emphasis on aggregate results for all the charter schools, is included.

8.2 Performance on DSTP

When analyzing school performance data, a number of items need to be taken into consideration. First, there might be differences in tests from one year to the next. These might be the result of changes in the test questions or changes in the scoring related to criteria for meeting state standards. Efforts are made to equate the test from year to year to minimize the influence of changes in the test instruments. There also might be differences in student performance between grades. To understand relative school performance scores, it is necessary to analyze across grades, schools, and districts. By comparing the performance of all test takers at all levels, it is possible to determine, study, and understand trends

Table 8:1 shows the results from our analyses of math and reading combined. The table lists the actual scores or average scale score for all charter school students by grade and year. The predicted value is also listed. Once again, the predicted value is the estimated performance for the charter schools based on the performance of demographically similar noncharter public schools. Finally, in the right-hand column, we include the residual scores or the difference between what the charter schools achieved and what they were predicted to achieve. A positive residual score means that the charter schools are doing better than expected. A negative score indicates that they are not performing as well as predicted or as well as similar noncharter public schools.

By grade, we can see that charter schools perform rather poorly at grades 3 and 5. Here most of the residual scores are negative. Over time, however, the fifth grade residual scores are improving or becoming less negative (note that the average annual change for residuals at grade five is +1.84). At grade 3, students in charter schools are losing ground to demographically similar traditional public schools; the average annual change in residuals is -0.82.

At grade 8 we see the most improvements over time. Initially the residual scores were negative, but by 2003 they were consistently positive. Finally, at grade 10, we see the highest actual scores and the highest residual scores. Over time, however, the average change in residuals decreased (i.e., the average annual change is -5.89), but the performance of charter school students at grade 10 remains far above the predicted scores.

These results at grade 10 are largely due to the exceptional performance of The Charter School of Wilmington. This is a selective college prep school that consistently has high test scores. The residuals at this school are especially high because we compared this school with district schools that have 25 percent minority students. Most district schools with minority students have larger concentrations of African-American and Hispanic students, while The Charter School

Table 8:1 Results for Math and Reading Aggregated by Grade and Across All Grades

	Year	*N*	*Actual*	*Predicted*	*Residual*
Grade 3	2001	257	406.40	421.34	- 14.94
	2002	226	401.56	422.39	- 20.83
	2003	395	421.95	442.28	- 20.33
	2004	479	419.08	441.96	- 22.88
	2005	455	421.38	439.60	- 18.23
Average annual change			3.74	4.57	**-0.82**
Grade 5	2001	133	445.41	458.69	- 13.28
	2002	353	480.90	477.93	2.97
	2003	474	470.34	482.08	- 11.74
	2004	602	473.94	480.75	-6.81
	2005	539	480.73	486.66	-5.92
Average annual change			8.83	6.99	**1.84**
Grade 8	2001	47	509.74	523.31	- 13.57
	2002	169	510.23	518.44	-8.21
	2003	365	523.13	517.28	5.85
	2004	413	523.40	517.83	5.57
	2005	559	528.59	524.06	4.53
Average annual change			4.71	0.19	**4.53**
Grade 10	2001	247	568.23	520.85	47.38
	2002	248	565.25	535.70	29.55
	2003	259	565.89	539.51	26.37
	2004	354	566.95	539.88	27.07
	2005	450	558.57	534.74	23.83
Average annual change			-2.41	3.47	**-5.89**
ALL	*Year*	*N*	*Actual*	*Predicted*	*Residual*
GRADES	2001	171	482.45	481.05	1.40
	2002	249	489.49	488.62	0.87
	2003	373	495.33	495.29	0.04
	2004	462	495.84	495.10	0.74
	2005	501	497.32	496.26	1.06
Average annual change			3.35	3.51	**-0.16**

of Wilmington's minority students are comprised of Asian-American students, which is the highest scoring subgroup in the country.

The bottom set of results in Table 8:1 depict the aggregate results across grades. These figures correspond to the results depicted in Figure 8:1, which illustrates the combined results in math and reading for third, fifth, eighth and tenth grades across all 13 charter schools. The dashed line indicates the average actual scale scores. Here we can see small growth on the part of the charter schools over time. This growth may be due—in part—to the addition of new schools or shifting patterns of enrollments. In other words, this dashed line denotes the trend in mean scale scores for all charter schools, but it does not prove whether charter schools are improving performance over time.

The solid line in Figure 8:1 represents the mean residual scores. This trend line indicates how charter schools are doing relative to demographically similar noncharter public schools. Except for 2003, the charter schools are performing slightly better than their demographically matched schools. Over time, however, the charter schools are losing a little ground to their demographically matched schools.

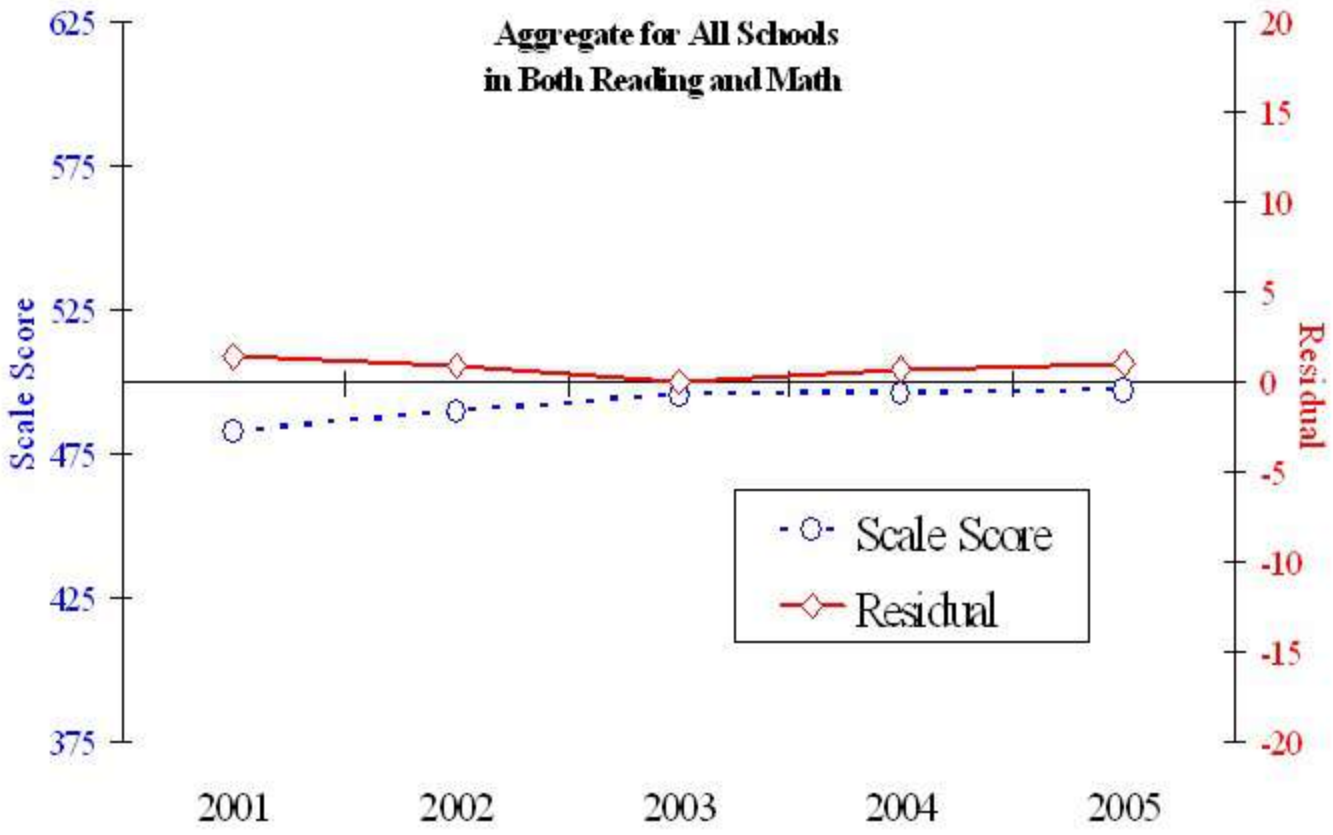
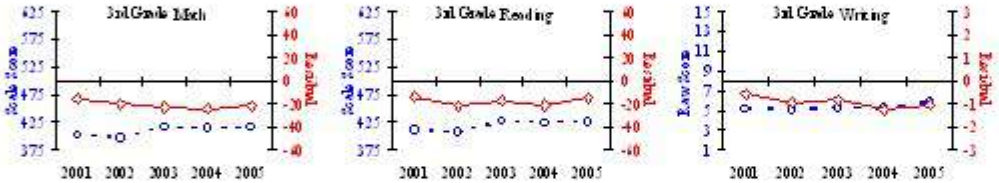


Figure 8:1 Aggregate Results on the DSTP Across All Charter Schools

Table 8:2 Charter School Results on the DSTP: Aggregate Results Across all Schools by Grade and Year (Actual, Predicted and Residuals Scores)

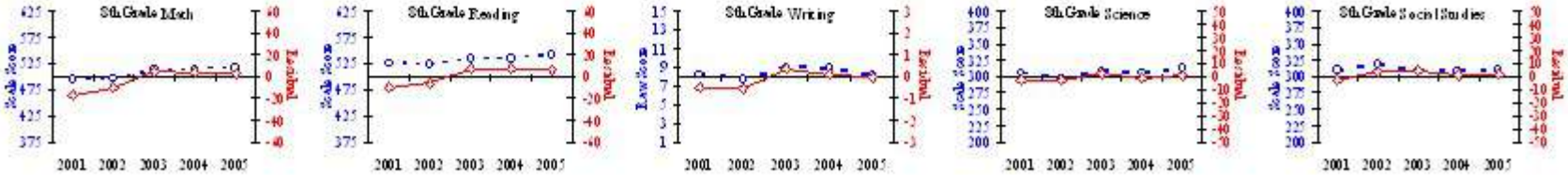
School Name	Year	Math				Reading				Writing				Science				Social Studies			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Grade 3	2001	260	401.32	417.41	-16.09	253	411.49	425.27	-13.78	257	5.14	5.71	-0.57								
	2002	232	396.84	416.50	-19.65	220	406.27	428.28	-22.00	232	5.00	5.96	-0.96								
	2003	400	416.47	439.45	-22.99	389	427.43	445.11	-17.68	400	5.27	6.08	-0.81								
	2004	489	414.10	438.57	-24.48	468	424.07	445.34	-21.28	490	5.19	6.46	-1.27								
	2005	472	417.07	438.51	-21.45	437	425.69	440.70	-15.01	472	5.93	6.97	-1.04								
Average annual change			3.94	5.28	-1.34		3.55	3.86	-0.31		0.20	0.32	-0.12								
Grade 5	2001	136	440.80	455.41	-14.62	130	450.02	461.97	-11.95	136	6.40	7.31	-0.90								
	2002	358	476.60	471.06	5.54	348	485.20	484.80	0.40	359	7.72	7.59	0.13								
	2003	497	461.18	477.46	-16.28	451	479.50	486.70	-7.20	505	7.36	7.71	-0.35								
	2004	616	468.02	477.07	-9.05	588	479.87	484.43	-4.56	606	7.36	7.87	-0.51								
	2005	550	475.46	482.92	-7.46	528	486.01	490.40	-4.38	392	7.14	7.54	-0.40								
Average annual change			8.67	6.88	1.79		9.00	7.11	1.89		0.18	0.06	0.13								
Grade 8	2001	47	494.00	510.81	-16.82	46	525.48	535.80	-10.32	47	8.23	8.73	-0.50	47	305.68	308.37	-2.69	47	309.11	311.56	-2.45
	2002	173	496.87	507.20	-10.33	165	523.59	529.68	-6.10	174	7.73	8.30	-0.57	173	295.19	297.76	-2.58	106	318.07	314.55	3.52
	2003	367	512.04	507.47	4.57	363	534.22	527.09	7.13	367	8.96	8.62	0.34	363	308.19	305.90	2.29	363	308.46	303.99	4.47
	2004	418	513.91	509.82	4.09	407	532.88	525.83	7.06	418	8.86	8.77	0.09	415	305.91	306.73	-0.82	416	307.16	305.90	1.26
	2005	567	515.87	512.82	3.05	550	541.31	535.29	6.02	408	8.14	8.18	-0.04	570	312.66	311.89	0.77	570	310.45	308.84	1.61
Average annual change			5.47	0.50	4.97		3.96	-0.13	4.09		-0.02	-0.14	0.12		1.75	0.88	0.86		0.34	-0.68	1.02
Grades 10-11	2001	247	578.99	522.53	56.46	247	557.47	519.18	38.29	247	9.14	7.19	1.95	168	317.94	307.71	10.23	169	314.76	306.97	7.79
(Math, Reading and writing are for grade 10 and science and social studies is grade 11)	2002	247	579.83	540.83	39.00	248	550.67	530.58	20.09	247	8.41	8.03	0.38	244	327.46	308.41	19.05	238	330.40	307.23	23.17
	2003	267	578.29	548.14	30.15	251	553.49	530.89	22.60	267	10.08	9.28	0.80	238	327.29	305.08	22.21	238	326.46	303.38	23.08
	2004	363	580.07	547.85	32.22	344	553.83	531.90	21.93	364	9.70	8.92	0.78	364	322.54	302.64	19.89	361	331.13	297.09	34.04
	2005	460	580.09	558.83	21.26	440	547.05	530.64	16.41	460	9.65	8.98	0.67	341	326.62	310.29	16.33	339	328.29	309.16	19.64
Average annual change			-2.23	4.08	-6.30		-2.60	2.86	-5.47		0.13	0.45	-0.32		2.17	0.65	1.52		3.51	0.55	2.96

Grade 3

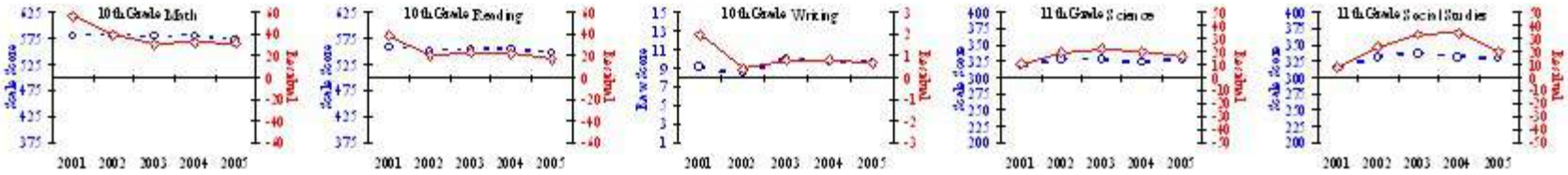


Grade 5

Grade 8



Grades 10-11



Scale Score
Residual

While Table 8:1 and Figure 8:1 contain combined results for math and reading, Table 8:2 contains results aggregated for all schools, but broken out by grade and subject. The key findings that can be summarized across all the data and graphs in Figure 8:2 include the following:

- ❏ Charter schools are doing less well at grades 3 and 5, where they are behind their demographically similar district schools.
- ❏ Charter schools are slightly better at grade 8 relative to demographically matched schools.
- ❏ At Grade 10, charter schools are far exceeding the performance levels of demographically similar district schools.
- ❏ On the whole, charter schools are performing slightly better on reading than math. Writing results follow a similar pattern as reading.
- ❏ Science and social studies are included in the state assessment only at grades 8 and 11. On these two subject area tests, the charter schools are performing well according to our results.

8.3 School Level Results

As one might imagine, the DSTP results varied extensively by school. Appendix G contains a complete set of results from the residual gains analysis that are broken out by school and subject. From the graphs and tables in this appendix, one can examine detail on each charter school in the state and quickly determine the nature and pattern of its performance on the state assessment.

Grade 3 results. The school level results at grade 3 revealed that nearly all schools had negative residuals. In other words, they were performing lower than expected. East Side Charter School had positive residuals, although over time it was losing ground and the residual line approached and dipped into negative residuals. A few of the schools such as Campus Community School and Kuumba Academy Charter School were gaining ground over time; as their residuals became less negative and in some cases turned to slightly positive residuals. The results for Marion T. Academy and Providence Creek Charter School were negative and growing slightly worse over time.

Grade 5 results. The overall results at grade 5 were not very promising. Except for Newark Charter School, all of the schools had negative residuals. Interestingly, even Newark Charter School showed a trend toward less positive residuals, for some subjects this school also dipped into negative residuals, indicating that its students were performing worse than predicted by the regression analyses. The Thomas A. Edison Charter School provided some optimistic findings at grade 5 as its residuals became less and less negative over time. By 2005 the school performance was similar to demographically matched schools in math and reading, although writing still lagged behind. The Academy of Dover Charter School, Marion T. Academy, and Providence Creek Charter School all had results that were noticeably below predicted values; over time the schools were not making up ground. In the case of the Academy of Dover Charter School, it was losing ground relative to demographically similar schools.

Grade 8 results. The overall picture in terms of residual scores was somewhat more positive at grade 8 where more than half of the schools had positive residuals, indicating that they were performing better than predicted. Some noteworthy results at grade 8 were apparent at both Thomas A. Edison and the Sussex Academy of Arts & Sciences where the residuals improved and became noticeably more positive over time. Marion T. Academy also had a positive trend, although we had test results for only two years at grade 8, so the change over one year is too tentative to suggest that

this is a trend. Newark Charter School had positive residuals at grade 8 across all subjects; over time the residuals were becoming more positive in math, reading, and science, although the writing results appeared to worsen over time.

Grade 10 and 11 results. The DSTP subject tests for math, reading, and writing are administered at grade 10, and the science and social studies tests are administered at grade 11. Overall, The Charter School of Wilmington performed exceptionally well on all subject tests. Its residual scores were far above predicted values, and they appeared to become even more positive over time. While Positive Outcomes Charter School and Delaware Military Academy had too few years of results to interpret easily, Campus Community School did have sufficient data to interprete and appeared to be making improvements over time. Its residuals, which were initially negative, became less negative over time.

8.4 Limitations to the Residual Gains Analysis

We conducted the residual gains analysis for a couple of reasons. One was that this provided us a relatively easy way to obtain a broader picture of charter schools in terms of grades and subjects. Our matched student design from the previous chapter had higher requirements for the data; thus, we restricted the analysis to reading and math. We also considered findings from writing, science, and social studies. A second reason for conducting the residual gains analysis was so that we could compare and contrast the results from the two different approaches. As it turns out, our findings are rather identical regardless of whether we are working with individual student data or more general school-level data. Although the findings are similar, it is important to point out that the residual gains analysis is riddled with far more limitations. Below, we describe the two main limitations dealing with mobility of students and missing data.

Mobility. When tracing trends over time, the residual gains analysis cannot control for students coming and going. Therefore, some changes in results may not be due to the school, but rather to the addition or departure of students. The longitudinal trends we follow using the residual gains analysis are not actually based on same groups of students. In fact, we are comparing consecutive groups of students at the same grade level (e.g., we compare last year's 5^{th} graders with this year's 5^{th} graders, rather than comparing last year's 4^{th} graders with this year's 5^{th} graders).

Missing or underreported data. With the data we reported on in the previous chapter, we could trace individual students over time; and we could determine when they switched schools and even when they missed a test event. When working with school-level data we often found that extensive data were missing for the charter schools because the state cutoff requires at least 15 test takers in a group in order to release the mean score. This is a measure to ensure the confidentiality of the performance data. Since many charter schools have fewer than 15 students taking the test, we ended up with plenty of gaps in the results and missing years in the trends that are being projected.

The results from our analysis using a quasi-experimental design based on individual student data are rather identical to our less rigorous residual gains analysis. Although the residual gains methodology is recognizably limited, the findings from this report give credence to its use in evaluating the impact of reforms and new programs on student achievement, particularly when individual student data are not available. The residual gains analysis allows us to compare schools with other demographically similar schools and to examine relative change or growth over time.

These two aspects make this approach far superior to simple cross-sectional analyses or studies that compare relative school performance to the state average rather than with demographically similar schools.

Delaware is further ahead than most other states in terms of capturing and storing individual student data and then using the resulting data sets for evaluations and research. Because many other states do not warehouse student-level data or because they cannot make student-level data available for research or evaluation, the residual gains approach can serve as a suitable alternative in other states when individual student data are not available.

Chapter Nine
Impact of Charter Schools on Surrounding Public Schools

Charter schools potentially can serve to have a variety of impacts—both positive and negative—on surrounding public schools. Commonly cited areas of impact include loss of students and funding, causing shifts in student demographics within the sending schools/districts. Charter schools also can promote positive change in traditional public schools either through competition or by example. For example, the presence of charter schools or other choice options means that traditional public schools must compete to retain their students. Theoretically, this competition can force the traditional public schools to work harder to serve and educate their students. Similarly, the presence of innovative schools can be a source of learning or inspiration for traditional public schools.

The key evaluation questions that will be addressed in this chapter include the following:

- ❑ What is the impact of charter schools on traditional public schools in Delaware?
  - ▸ Have charter schools negatively impacted traditional public schools by attracting students and corresponding resources?
  - ▸ Have charter schools attracted select groups of students that have left the traditional public schools more segregated by race, class, and ability?
- ❑ Aside from charter schools, could other school choice programs in Delaware explain changes in enrollment patterns within the traditional public schools?
- ❑ Have charter schools promoted change in traditional public schools due to competition or due to the sharing of innovations?

We revisit and answer these questions in the closing section of the chapter. To consider and answer these questions, we first include a few descriptive sections that examine other school choice programs in the state (Section 9.1). Enrollment patterns and trends are included (Sections 9.2 and 9.3). In Section 9.4 we review our data regarding the competitive impacts and/or sharing of innovations.

9.1 Delaware School Choice Option and Enrollment Patterns

Charter schools have grown relatively swiftly in Delaware to the point where they now enroll around 5.5 percent of all public school students in the state (for more details on the specifics of the Delaware charter school law see Chapter 2). Charter schools, however, are not the only choice option for

families. A large percentage of Delaware students still attend local traditional public schools based on geographic area and residency. However, families also may choose from nonpublic options (e.g., private and parochial schools as well as homeschooling); or they can choose other public schools than the one they are initially assigned. Choosing other public schools occurs through intradistrict choice programs (within the resident school district) or interdistrict public school of choice programs (outside of the resident school district). Figure 9:1 shows K-12 enrollment numbers by resident district and type of school. Appendix H contains a supplementary data table with detailed 2005-06 school district enrollment numbers and percentages according to the various choice options noted above.

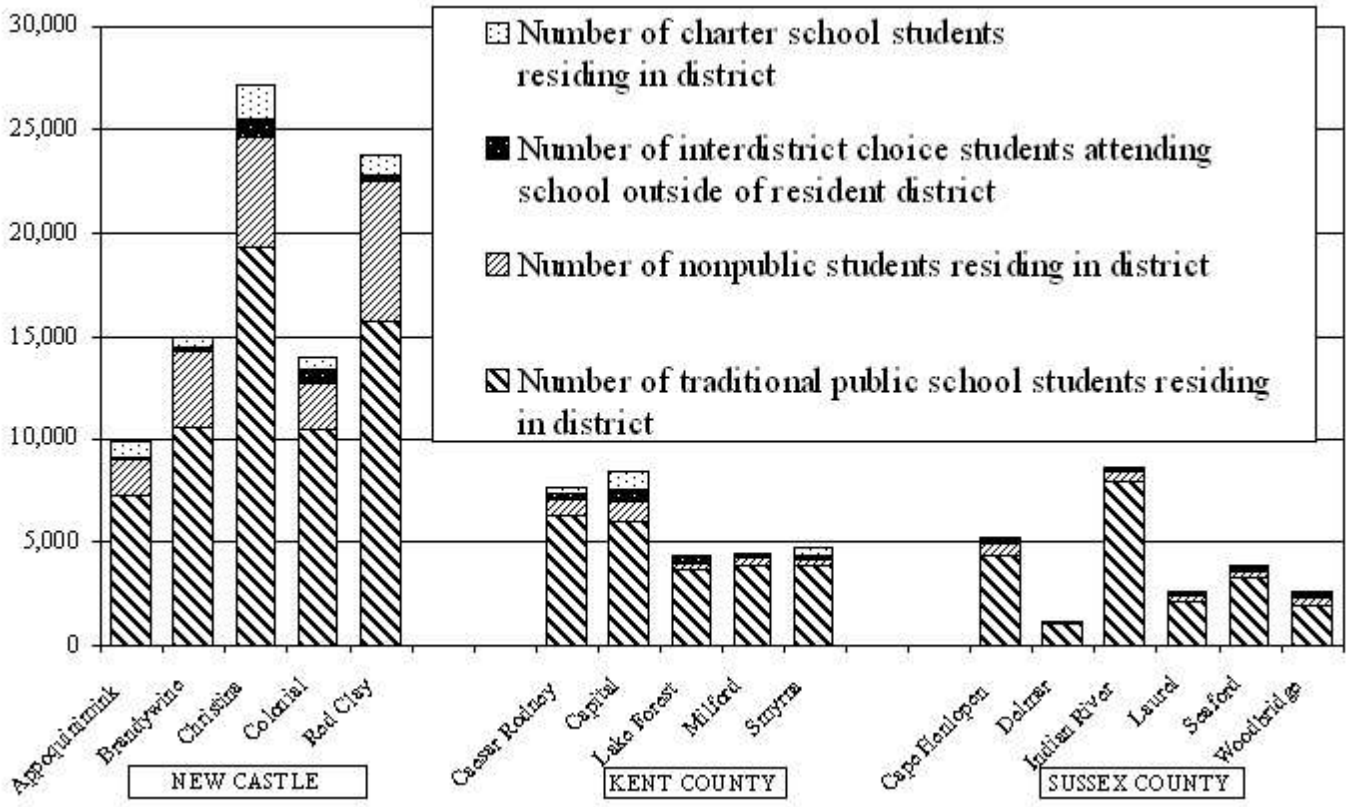


Figure 9:1 K-12 Student Numbers by County and Resident District, 2005-06
Note: The figure does not show interdistrict enrollment gained from nonresident students.

Interdistrict Choice

Statewide public school choice was expanded with the passage of the School District Enrollment Choice Program in 1996. This program began in the 1996-97 school year and requires each local school district to have a policy that specifies which schools are open for "choice" and which schools

are not. The district policy must establish criteria for acceptance or rejection of applications, and it must spell out priorities for acceptance.[1]

The traditional public school districts in the state vary widely in their policies for accepting intra- and interdistrict choice students. The districts also vary in how their enrollments have been affected by school choice programs. Not all schools accept choice program applicants. Choice options within public schools are based on criteria such as capacity at each school, projected seats available, and intradistrict residency. New applications for a school choice selection generally are due in January of the preceding school year, and a parent or guardian can list first-, second-, and third-ranked choices. Students may be put on a waiting list for a school assignment selection.

Appendix H contains interdistrict choice program enrollment numbers by each school district. In 2004-05 Red Clay, Caesar Rodney, and Indian River school districts gained the greatest number of interdistrict choice students. Thus, these districts had significantly higher numbers of nonresident choice program students entering the school district versus resident students who chose school enrollment outside the district. These districts had a net gain of 797, 310, and 207 students, respectively. Christina, Colonial, Capital, and Woodbridge school districts had the largest decreases in enrollment due to the choice program. These schools had a net loss of 651, 301, 310, and 167 students, respectively.

Similar to the patterns of the traditional public School District Enrollment Choice Program, charter schools also vary widely in their criteria and policies for student enrollment. Two districts have criteria of residency within a 5-mile radius of the school. About half of the schools reported that they had waiting lists for enrollment, and one school's wait list included 500 students (ISDN, n.d.). Some schools have open enrollment for most grades if they have not reached full capacity. Waiting lists are most common for entry-level grades.

Private or Nonpublic Options

Many types of nonpublic schools add to the range of education choices. Nonpublic schools are comprised of Catholic schools, other religion-affiliated schools, and independent private schools that also contain the categories of single and multifamily homeschooling. When examining Delaware nonpublic school enrollment data and traditional public schools data (from 1996 through 2005), enrollment at nonpublic schools increased proportionally by more than 2,000 students, or 9.2 percent. Altogether, the proportion of students enrolled in private schools has remained around 16 percent. The enrollment trend depicting the slow but steady incline for the past decade is shown in Figure 9:2. Appendix H contains a supplementary data table with detailed 2005-06 school district enrollment numbers and percentages according to the various choice options mentioned above.

Statewide enrollment trends over a 10-year time span (1994 vs. 2004) for all nonpublic schools by type show there has been a 1.8 percent decrease in Catholic school enrollment, a 22.5 percent increase in other religion affiliation schools, and a 17.7 percent increase in independent nonpublic

[1] Information regarding the School District Enrollment Choice Program may be found in Delaware Code, Title 14, Section 405 and at www.doe.state.de.us/info/schools/choice.shtml.

schools.[2] One of the largest growing school type subcategories is the number of homeschools and homeschool enrollment. In 1995-96 there were 74 homeschools and a total homeschool enrollment of 1,087 students. In 2004-05 there were 836 homeschools with 2,418 students (a 222 percent increase).[3]

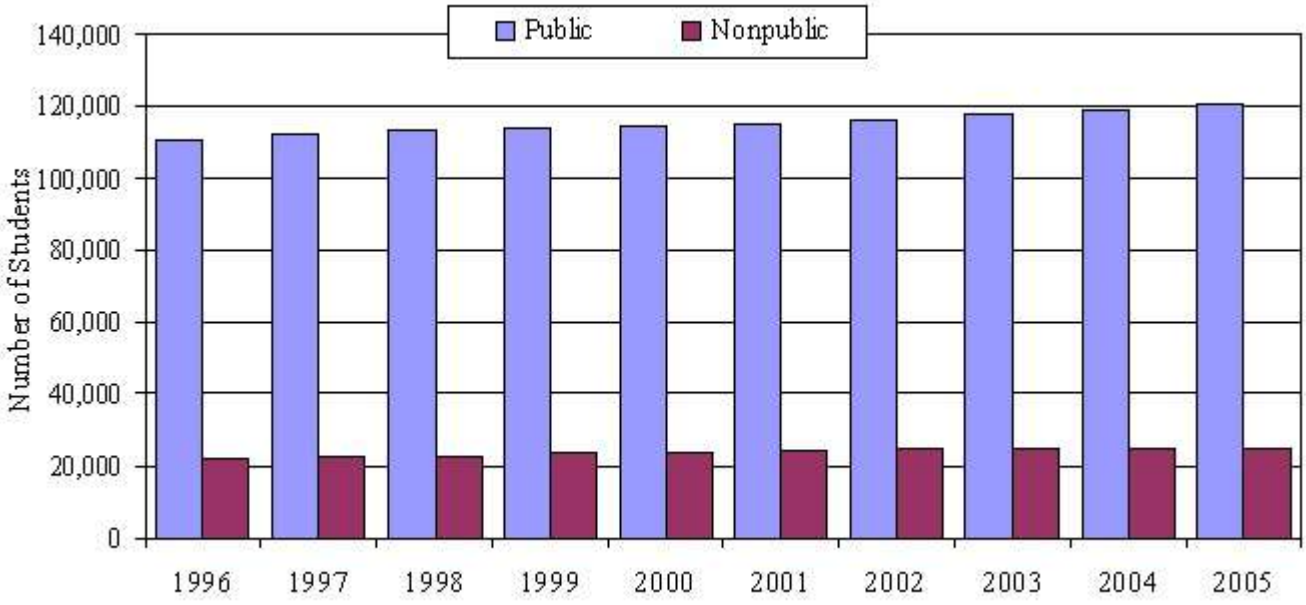


Figure 9:2 Enrollment Trends in Public and Nonpublic Schools from 1996 to 2005

9.2 Shifts in Student Enrollment

When examining all of the school choice possibilities and student enrollment patterns, one sees a dynamic and fairly complex system, as with any statewide school system. Figure 9:3 shows the enrollment increases and decreases over one-year and five-year time periods for traditional public schools, charter schools, and nonpublic schools in each county. Appendix I contains a table with detailed enrollment numbers and percentage increases and decreases by county. Overall, some school districts have been more resilient in adapting to and/or being affected by the changing scene and dynamics.

[2] Nonpublic school enrollment data are from the DOE Enrollment Report Nonpublic Schools in Delaware 2004-05. Table 1 Statewide Enrollment Trends, All Nonpublic Schools by Type 1984-2004. Retrieved 1/4/2006 from http://www.doe.state.de.us/files/pdf/dedoe_nonpubenroll200405.pdf.

[3] Table 7, Statewide Enrollment Trends, All Nonpublic Schools by Type, 1984-2004.

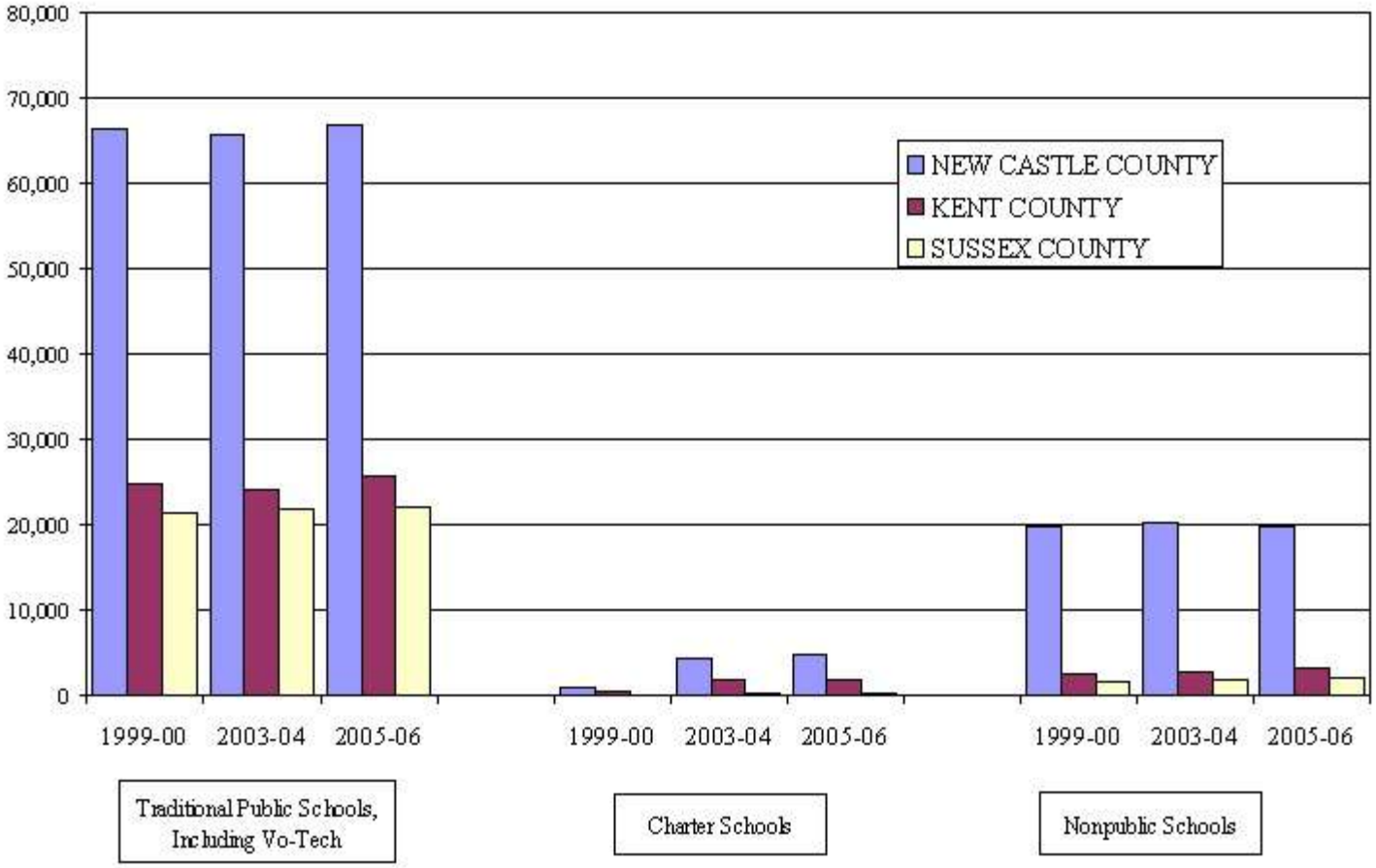


Figure 9:3 Enrollment Increases/Decreases by County Over Previous Five Years

State enrollment figures for the 2005-06 school year continued their steady upward trend. Public school enrollment increased by 2.4 percent, or 2,699 students, over 2004 levels. By contrast, charter school enrollment increased by 5 percent in 2005, or 308 students, an indication of continued interest by parents to exercise this option of choice.[4] While charter school enrollment continues to grow, it comprises only a small fraction of the total public school population, averaging about 5.5 percent of total public school enrollments.

While many districts appear—on the surface—to not be greatly impacted by the charter schools, the Capital School District in Kent County seems to be a notable exception. This district experienced a substantial impact on its enrollment from charter schools, which appears to be directly linked to the charter schools in its area:

[4] http://www.doe.k12.de.us/info/reports/enrollment.shtml (Public Schools by District and by Charter for 2004-05 and 2005-06; retrieved 1/25/07)

- In 2004-05 and 2005-06, charter school enrollment in this district has been at 10.9 percent and 12.4 percent, respectively, of the district's total enrollment.
- In actual numbers, this translates to a "loss" of 880 and 876 students from the traditional public schools in this district for these same years.
- These numbers and their percentages are substantially higher than in most of the more densely populated school districts found in New Castle County, nearly double in some cases (see Appendix I).
- Of the four charter schools available in Kent County, the Campus Community Charter School, located in Dover has the highest concentration of students from within the Capital district.

9.3 Shifts in Student Demographics

In addition to total enrollment trends, several other demographic trends have been analyzed to determine what impact, if any, charter schools have had on district schools in terms of shifts in ethnicity, socioeconomics, English language learners (ELLs), and special education. More specifically, we were interested in determining whether charter schools were in any way leaving the sending schools and districts more segregated or fragmented by race/ethnicity, social class, or ability.

Ethnicity

Data for all ethnic groups from 1999-00, 2002-03, and 2005-06 were reviewed for private schools, charter schools, and traditional public schools. The data was further broken out by county. During each year within this six-year period, nonpublic and traditional public schools experienced only fractional percentage shifts in their ethnic groups. Our findings for the period 1999 to 2006 are found below:

- Private schools experienced a modest gain (<1 percent) for each ethnic group, with the exception of whites, who decreased in representation by 2.2 percent.
- Traditional public schools in the state experienced a similar but slightly more pronounced trend, with most ethnic groups increasing and whites decreasing.
  a. Hispanics increased the most from 5.4 percent to 9.2 percent.
  b. Whites decreased the most from 61.6 percent to 55.1 percent.
  c. African Americans increased by 1.9 percent, from 30.6 percent to 32.5 percent.
- Charter schools, most of which serve predominantly one ethnic group, remained relatively unchanged over time.[5]

[5] For more details on current ethnic distributions in charter schools, see Table 9:1 as well as our discussion of this topic in chapter 3 in this report.

While the data point to gradual shifts within each ethnic group for all types of schools examined, currently no clear evidence suggests that charter schools are having a significant impact on the ethnic mix of students in traditional public schools. It cannot be overstated, however, that charter schools are increasingly becoming more segregated by race/ethnicity. As presented in chapter three, no charter school in Delaware can be considered to be comprised of a mix of minority and nonminority students. Rather, Delaware's charter schools are very homogeneous, with seven schools serving mostly white students and five schools serving mostly African-American students.

To illustrate the potential impact a charter school can have on a traditional public school district, consider the case of Campus Community Charter School in the Capital School District. It is important to note that Campus Community is the only charter school in Delaware with a somewhat mixed enrollment. While Capital school district is 42 percent white and 49 percent African-American, Campus Community has a 64 percent white enrollment and only a 30 percent African-American enrollment. This indicates that the school is much more likely to attract and enroll white students. The net impact on the district is mitigated—in part—because of the Academy of Dover with its 90 percent African-American enrollment. Therefore, even though the two charter schools are oversampling a single ethnic group from the district, they are not attracting the same ethnic group, and thus the schools' impact on the sending schools is somewhat balanced. In summary, while the charter schools may be creating more homogeneous learning environments, they are not really impacting the diversity within the surrounding district.

Table 9:1 lists race/ethnicity percentages for traditional public school districts located within a five-mile radius of the charter schools that were operating in 2005-06.[6] Together with the district data on ethnicity, we have grouped the charter schools that are located within each of these districts.

The only charter school that has an ethnic composition that is similar to the local school district is Providence Creek, since composition of students in the Smyrna School District only differed by a few percentage points.

Just to contrast the ethnicity data between the public and private schools, we included the breakout of private school students by ethnicity in the bottom rows in Table 9:1. As is apparent, these private school and homeschools largely cater to nonminority families. There has been a steady increase in the number of private school students in the state; but as a proportion of all students, the trend has remained flat with around 16 percent of the students enrolled in private schools, including homeschools.

Figure 9:4 illustrates the shift in students over time by ethnicity and county. New Castle County, where most of the charter schools are located, has seen a rather sharp drop in the proportion of white students that occurred during the time frame when the charter schools greatly expanded. Nonetheless, the charter schools in New Castle County enroll only around 200 more white than minority students, so the overall trend in this county must be explained by demographic changes in the general population. A similar trend is seen in the data for Kent County where the enrollment in traditional public schools is increasingly minority students. The charter schools in this county are largely balanced and attract only slightly more white students than minority students. Thus, they cannot explain the noticeable trend toward higher proportions of minority students over time.

[6] The districts within a five-mile radius were determined using National Center for Education Statistics (NCES) Common Core of Data (CCD) information.

Table 9:1 Public School Enrollment by Ethnicity in the Districts Surrounding the Charter Schools in 2005-06

School District	*White*	*African American*	*Hispanic*	*Asian American*	*American Indian*
Appoquinimink	72.4%	19.9%	3.9%	3.4%	0.4%
MOT Charter School	87.7%	9.7%	1.2%	1.5%	0.0%
Brandywine	53.6%	39.3%	3.2%	3.7%	0.2%
Thomas A. Edison CS	1.7%	93.9%	3.2%	0.6%	0.6%
Caesar Rodney	64.0%	27.7%	5.0%	2.8%	0.5%
Positive Outcomes CS	76.3%	21.1%	2.6%	0.0%	0.0%
Capital School District	42.4%	49.0%	5.5%	2.5%	0.6%
Academy of Dover	4.9%	90.9%	2.6%	0.5%	1.0%
Campus Community CS	64.0%	29.7%	3.4%	2.5%	0.3%
Christina	42.3%	41.8%	11.4%	4.3%	0.2%
Newark Charter School	75.3%	13.6%	2.9%	7.7%	0.5%
Marion T. Academy	0.4%	97.2%	2.2%	0.2%	0.0%
Kuumba Academy CS	0.0%	97.5%	2.5%	0.0%	0.0%
Colonial	39.9%	43.6%	13.6%	2.6%	0.3%
East Side Charter School	0.0%	98.5%	1.5%	0.0%	0.0%
Indian River	63.7%	19.7%	15%	1.2%	.4%
Sussex Academy	88.5%	5.0%	3.4%	1.9%	1.2%
Red Clay Consolidated	49.4%	27.5%	19.1%	3.8%	0.2%
Delaware Mil. Academy	81.5%	12.8%	4.9%	0.8%	0.0%
The CS of Wilmington	71.4%	7.4%	1.9%	18.9%	0.3%
Smyrna	77.3%	18.1%	3.3%	1.2%	0.1%
Providence Creek CS	79.0%	17.0%	1.8%	1.0%	1.2%
Total for All District Schools	55.1%	32.5%	9.2%	2.8%	0.3%
Private Schools Only	84.0%	9.3%	2.7%	3.3%	0.2%
Home Schools Only	86.2%	8.3%	2.3%	1.6%	0.7%
Total for all Private Schools	84.2%	9.2%	2.7%	3.2%	0.2%

* Data retrieved from http://profiles.doe.k12.de.us/EntitySearch.ASPx. Note that these figures do not include other charter schools, vocational tech schools, or private schools. All the districts were located within a five-mile radius of the charter schools.

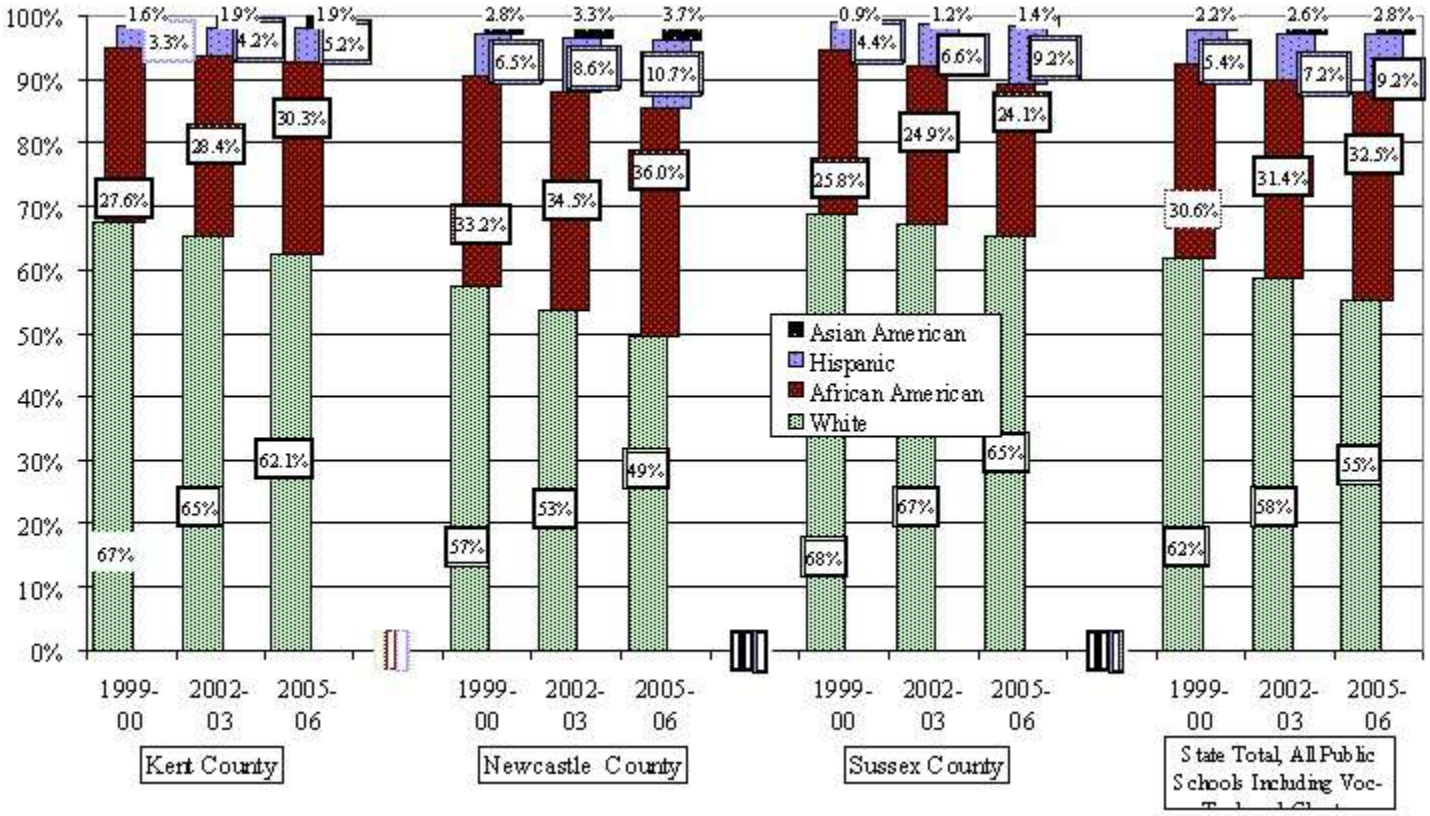


Figure 9:4 Shifts in Student Enrollment Over the Past Five Years by Ethnicity and County

Other Student Characteristics: ELL, Low Income, Special Education

Demographic shifts were also examined in traditional public school and charter school populations for those classified as English language learners (ELLs formerly classified as limited English proficiency [LEPs]), low socioeconomic (as measured by participation in the free and reduced price lunch programs [FRL]), and special education. Enrollment information is based on data from DOE *2005-06 School Profiles* and DOE enrollment reports.[7] These results are displayed in Table 9:2.

In every instance, charter schools were found to have substantially fewer ELL students than the surrounding district. Aside from Positive Outcomes, no charter school had a higher proportion of special education students than their local district. In most cases, the differences are quite large.

[7] 2005-06 numbers from DOE DE School Enrollment Reports and "Detailed Enrollment Reports" Excel file. Retrieved 1/11/2006 from http://www.doe.k12.de.us/info/reports/enrollment.shtml.

Table 9:2 Public School Enrollment in the Districts Surrounding the Charter Schools in 2005-06: Participation Rates in ELL, Free and Reduced Lunch Program, and Special Education

Traditional Public School Districts	*ELL*	*Low Income*	*Spec. Ed.*	*Total Enrollment*
Appoquinimink	1.7%	13.1%	12.8%	7,294
MOT Charter School	0.0%	8.2%	11.3%	673
Brandywine	3.2%	37.3%	12.0%	10,573
Thomas A. Edison CS	0.7%	84.0%	6.7%	840
Caesar Rodney	1.6%	31.2%	19.0%	6,967
Positive Outcomes CS	0.0%	39.5%	51.8%	114
Capital	2.8%	47.9%	20.6%	5,982
Academy of Dover CS	0.8%	71.7%	2.3%	385
Campus Community School	0.3%	22.9%	10.7%	589
Christina	4.5%	43.5%	16.6%	19,233
Kuumba Academy CS	0.8%	71.2%	1.2%	243
Marion T. Academy	0.4%	76.1%	5.4%	502
Newark Charter School	0.0%	5.7%	6.0%	647
Colonial	6.5%	44.8%	15.3%	10,475
East Side Charter School	0.0%	77.2%	3.0%	202
Indian River	7.2%	43.8%	18.9%	7,887
Sussex Academy of Arts & Sciences	0.0%	14.0%	5.3%	322
Red Clay Consolidated	8.4%	43.0%	14.0%	15,728
Delaware Military Academy	0.0%	0.0%	3.5%	509
The Charter School of Wilmington	0.1%	2.8%	0.1%	935
Smyrna	1.6%	24.8%	15.8%	3,930
Providence Creek	0.0%	27.9%	10.2%	605
Total All Traditional Public Schools	4.1%	38.9%	13.6%	120,938

In terms of family income, 5 charter schools were found to be "segregative high income." By our own definition, to be segregative high income means the charter schools should have a difference greater than 10 percentage points in the percentage of their students qualifying for FRL and the district's FRL rate. The "segregative high income" schools were Campus Community, Newark CS, Sussex Academy, The Charter School of Wilmington, and the Delaware Military Academy. These schools are attracting and enrolling substantially fewer low-income students than the local district. The Delaware Military Academy, Charter School of Wilmington, and Sussex Academy are 3 extreme cases, since these schools have FRL rates that are 43, 40, and 30 percentage points lower than their local districts, respectively.

Five charter schools were found to be "segregative low-income," since they enrolled a substantially higher proportion of FRL students than the local district. These schools are Academy of Dover, East Side Charter School, Kuumba Academy, Marion T. Academy, and Thomas A. Edison.

9.4 Improving the Education System by Sharing Innovations and Competitive Effects

Charter schools were originally designed to expand parental choice in public schools and to provide incentives for traditional public schools to improve their performance. Thanks to increased autonomy, charter schools were seen as schools that could experiment with new educational innovations and, if the experiments were successful, they could be emulated by the other public schools. Conversely, charter schools could provide an alternative against which the public schools would have to compete. This competition would spur the public schools to improve in order to avoid losing students to the charter schools. These scenarios reflect two potential models by which innovations may diffuse from charter schools to traditional public schools: the collegial model and the market competitive model. The collegial model postulates that diffusion takes place through open cooperation, while the competitive model postulates that it takes place as the result of competing for the same market share (Miron & Nelson, 2002).

In the collegial model, the charter school willingly shares its ideas with the noncharter schools, which attempt to emulate them. This presumes cooperative relations between the host district and the charter schools, relations that are more the exception than the rule. Such relations are most feasible when the charter school is initiated and/or sponsored by the host district. The charter schools that lack supportive relations with their host districts may be less likely to share their innovations willingly.

Generally, a relationship that ranges from uncooperative to hostile may not foster the open sharing of ideas; this phenomenon has been seen in other states. Communications between charter schools and traditional public schools regarding innovations may be limited and even discouraged. Adversarial relations may lead traditional public school staff to discredit rather than emulate or even actively compete with the charter schools.

Charter schools have now been operational long enough for their concept to become fully institutionalized within Delaware's educational system. As part of the data-gathering effort for this report, many public and charter school administrators were interviewed individually to learn more about their perceptions of the impacts and influences charter schools were having on public schools and vice versa. We were interested in determining the nature of the relationship between charter and traditional public schools as well as the existence (or lack there of) of competition or the sharing of innovative effects. Through these interviews, several general themes emerged.

Competition

Officials from both charter schools and traditional public school districts agreed that the initiation of charter schools introduced competition into the education arena: competition for students, for funding, and for staff and resources. Philosophically, most agreed that competition was theoretically a healthy component and one that should drive improvements and innovation in public education for the common good of all students. However, several administrators pointed to the fact that few specific

changes and improvements have been made in the traditional public schools in response to good charter school examples. In addition, they professed some concern that competition for students and the funding that follows were driving the wrong behaviors and overshadowing the potential benefits of sharing ideas for changes and improvements. A few offered suggestions and their ideas on how teachers could build more collaborative partnerships for the mutual benefit of all students. Some expressed their desire and hope that the Delaware Department of Education would start examining the positive models created by charter schools in order to replicate them in the traditional public school system.

Some traditional public school administrators said that charter schools provided some relief to their overcrowding and overextended student/teacher ratios; however, this relief was tempered by the perception that the playing field for recruiting and admitting students was not level. Some expressed concern that charter schools seemed to be creaming off the better performing students or those from families with more resources and higher incomes because charter schools can regulate who is accepted. Traditional public schools are obligated to accept every student, regardless of income, student academic performance, or behavioral issues.

9.5 Creating Segregated Learning Environments

In interviews with charter school and traditional public school administrators, we asked questions regarding whether or not charter schools were creating segregative learning environments and about the impacts of charter schools on the local districts in terms of diversity. Most of those we interviewed were very direct in noting that they were aware that some have strong concerns about the resegregation of the school system as a whole. The folks we interviewed, however, were not greatly concerned about this.

A few charter school administrators expressed an explicit intent to create a charter school environment that would meet the homogeneity desires of parents. Others explained that homogeneity was not an original goal of their school, but that it evolved into a more ethnically segregated population due to their geographic location, word of mouth promotion by parents and students who shared similar cultural interests, and family self-selection.

As can be seen in the quotes below, the charter school administrators were not hesitant to state that their schools were highly segregated.

- ❏ "Our charter school is contributing to the segregation by ability-level because this school is attracting the best students."
- ❏ "Parents have to do something to get their kids in this charter school and get the draw on the lottery and get their kids in uniforms."
- ❏ "Often parents go to charter schools because they want an all black school. People will leave a school to go to an all black school, but not to go to a poor school."
- ❏ "Public school systems are not set up equitably. African-American parents want to have a charter school that answers their needs. Our school challenges their students to be excellent. As a result, we do not worry about having diversity."

- ❑ "Our school did not open to be homogeneous, it just happened that way. We are a segregated school, but the question should be the quality of what they get in the segregated school."

Why or how do charter schools become so segregated? Below we summarize some of the suggested reasons or factors that have led to the segregated charter schools.

- ❑ The location of the school, which may be placed in within a highly segregated housing market.
- ❑ Parents self-select into homogeneous learning environments.
  - — "Parents choose segregated environments for their child to attend because of homogeneity."
  - — Another school district official stated, "I don't think that charter schools are desegregating. Families choose for lots of reasons. Mostly because it is close to home or because they have a relative nearby. Families are making choices that lead to this situation, not charter schools."
- ❑ Many parents learn about the school through word of mouth.
  - — "The local day care is a Head Start program that largely serves African-American families. It is here that parents share information about schools with each other."
- ❑ In some instances the full day kindergarten was a reason that many low-income families turned to specific charter schools. This allowed the parent(s) to work more outside the home and to save on child care costs.

As presented in chapter three, with one exception the charter schools in Delaware are very homogeneous with regard to demographics. Seven charter schools had a clear majority of white students, and five had a majority of black students. While it is clear that the charter schools are creating homogeneous and segregated learning environments, what remains to be seen is the impact they are having on the diversity within the sending schools.

Administrators' perceptions were somewhat mixed on the issue of whether or not charter schools were causing resegregation, an issue that has received a fair amount of publicity across the state. While there was some uncertainty as to the validity of the resegregation concern, several charter school administrators openly acknowledged that their schools were attracting distinct and homogeneous groups of students from the local districts. In some cases, they attract the high performing students, as we saw from our findings in chapter 7. In one case, the charter school is attracting students with mild disabilities or students that are struggling academically in traditional public schools. The cultural profiles of some of the schools, also makes them attractive to specific minority groups.

> We are definitely taking the black kids out of the district. For K-3 there is a lot of value when there is less diversity. There is such a difference in culture between poverty and middle class. They can change culturally. But the poverty aspect is very difficult to change. Most mainstream schools won't change their program for minority students and that is a real shame."
>
> – Charter school administrator

As we noted in the earlier sections of this chapter, the annual demographic data from across the state does not provide evidence that charter schools are leaving the local districts more segregated by race or class. There are shifts in demographics, but these cannot be explained by the presence of charter schools. Also, the diverse groups of charter schools tend to balance the impact on the sending districts since some charter schools attract white students and others in the same community attract minority students. In the words of one charter school director, "I don't think we are affecting the district in terms of contributing to segregation. We counterbalance the impact on the district by other charter schools." Many of the charter school and district administrators we talked with noted that the media coverage in the state suggests that charter schools are accelerating the resegregation of the schools. While they are creating segregated learning environments within their schools, we could not find sufficient evidence that they were the cause of the resegregation that is gradually occurring across the state.

9.6 Summary

In 1996, statewide public school choice was expanded with the passage of the School District Enrollment Choice Program. This program requires each local school district to have a policy that specifies which schools are open for "choice" and which schools are not. The traditional public school districts vary widely across the state in their policies for accepting and intra- and interdistrict choice students. The districts also vary in how their enrollments have been affected by school choice programs. In addition, there are many nonpublic school options for parents to choose from for their students.

Overall, enrollment in the three school choice possibilities has increased over time. The nonpublic school enrollments have grown considerably, especially homeschools, religion-affiliated schools, and independent nonpublic schools. Traditional public school enrollment has grown, too, 2.4 percent between 2004 and 2005. And while charter school enrollment continues to grow, it comprises only a small fraction of the total public school population, averaging about 5.5 percent of total public school enrollments. On the surface, many public school districts have not been impacted greatly by the charter schools. Capital School District in Kent County seems to be a notable exception, with 12.4 percent of the district's students enrolled in charter schools in 2005-06.

While the data point to gradual shifts within each ethnic group for all types of schools examined, currently no clear evidence suggests that charter schools are having a significant impact on the ethnic mix of students in traditional public schools. It cannot be overstated, however, that charter schools are becoming increasingly more segregated by race/ethnicity. Demographic shifts were also examined in traditional public school and charter school populations for those students classified as English language learners (ELLs), low socioeconomic (as measured by participation in the free and reduced price lunch programs [FRL]), and special education. In every instance, charter schools were found to have substantially fewer ELL students than the surrounding district.

In terms of family income, 5 charter schools were found to be "segregative high income." By our own definition, to be segregative high income means the charter schools should have a difference greater than 10 points in the percentage of their students qualifying for FRL and the district's FRL rate. On the other hand, 5 charter schools were found to be "segregative low-income," since they enrolled a substantially higher proportion of FRL students than the local district.

Why or how do charter schools become so segregated? Below we summarize some of the suggested reasons or factors that have led to the segregated charter schools.

- The location of the school, which may be placed in within a highly segregated housing market.
- Parents self-select into homogeneous learning environments.
    - Parents choose segregated environments for their child to attend because of homogeneity.
    - A school district official stated, "I don't think that charter schools are desegregating. Families choose for lots of reasons. Mostly because it is close to home or because they have a relative nearby. Families are making choices that lead to this situation, not charter schools."
- Many parents learn about the school through word of mouth.
    - "The local day care is a Head Start program that largely serves African-American families. It is here that parents share information about schools with each other."
- In some instances the full day kindergarten was a reason that many low-income families turned to specific charter schools. This allowed the parent(s) to work more outside the home and to save on child care costs.

Administrators' perceptions were somewhat mixed on the issue of whether or not charter schools were causing resegregation, an issue that has received a fair amount of publicity across the state.

Officials from both charter schools and traditional public school districts agreed that the initiation of charter schools introduced competition into the education arena: competition for students, for funding, and for staff and resources. Philosophically, most agreed that competition was theoretically a healthy component and one that should drive improvements and innovation in public education for the common good of all students. However, several administrators pointed to the fact that few specific changes and improvements have been made in the traditional public schools in response to good charter school examples.

Chapter Ten
Dilemmas and Issues Related to Overseeing a Successful Charter School Reform

In this chapter, a summary of the relevant findings and a discussion of issues related to oversight of Delaware charter schools is provided. Important questions are addressed such as, How do authorizers differ in terms of oversight practices? How does Delaware compare with other states with regard to oversight of its charter schools? What factors or conditions facilitate rigorous oversight? What are the advantages and disadvantages of rigorous oversight?

The first section includes a description of the oversight activities by the two authorizers. The second section includes a summary of thoughts and comments from the charter schools regarding oversight, particularly as it relates to the work of DOE. The third section summarizes findings from relevant research that provide a comparative look at the oversight of charter schools in Delaware. Key policy issues are discussed in the fourth section, and the fifth and final section of this chapter examines the likely factors related to the relative success of Delaware's charter schools.

10.1 Oversight of Delaware Charter Schools

A charter is a contract between a school represented by its governing board and the authorizer that approved or sponsored the charter school. It is important for both the school and the authorizer to cooperate and perform their respective jobs as expected in order for the overall reform to work successfully. The school needs to abide by applicable regulations and produce the results it has promised. The authorizer needs to provide oversight and use its authority to intercede when things are not working and to revoke the charter when the school is no longer viable or no longer able to live up to terms agreed upon in the performance contracts.

Multiple authorizers or sponsors of charter schools are permitted under the legislation governing the Delaware charter school reform. The State Board of Education (SBOE) and the boards of local districts are allowed to sponsor charter schools. While the SBOE has granted charters for 19 charter schools thus far (2 of these have since closed), the only other board to sponsor a charter school has been the Board of Education for the Red Clay Consolidated School District, which has sponsored 3 charter schools.

Analysis of Time and Effort Devoted to Charter Schools by DOE and SBOE

One important activity in the first year of our evaluation of the Delaware charter school reform was an examination of the amount of time devoted to charter schools by the State Board of Education and

the Department of Education. This issue arose out of a concern that charter schools, while enrolling only 5.5 percent of the states' public school students, were requiring a disproportional amount of time and resources. Sources of data include a review of minutes from board meetings from 2002 to 2004 and interviews with members of the State Board of Education.

The amount of time that state board members devoted to charter school matters varied by person by time of year. When new charter school applications were being considered, a larger portion of meeting time was devoted to charter schools. At busier times, it was reported that board members were devoting around 20 percent of their time to charter schools. One board member served as the point person for charter school issues, and she reported that she spent a majority of her time in meetings or reviewing documentation in relation to charter school matters.

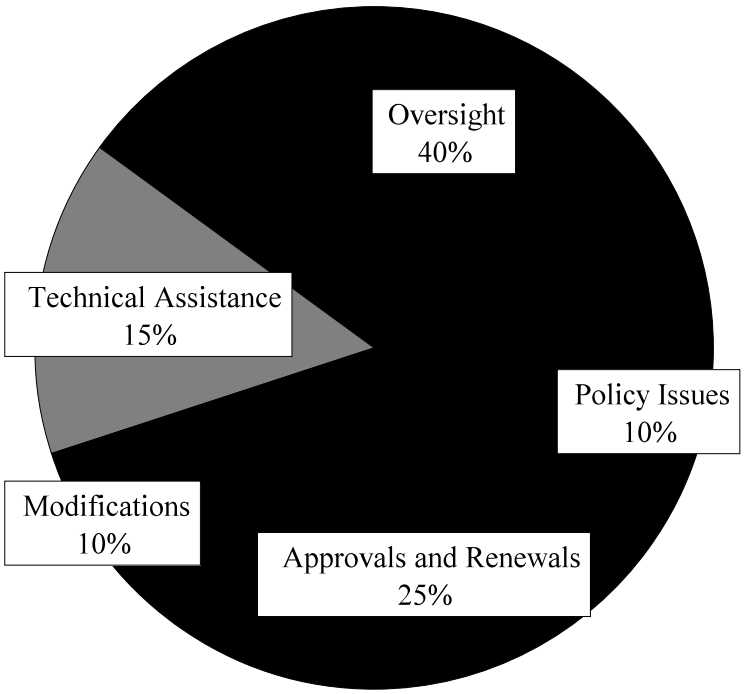


Figure 10:1 Breakout of Time Devoted by Select DOE Staff to Charter Schools by Activity Type

Based on the literature and on our previous studies, it is apparent that the Delaware State Board of Education was far more involved in charter school-related matters between 2002-04 than other states where state boards sponsor charter schools.

In 2006, the board members still spend time reviewing reports and documents to prepare for decisions to be made regarding charter schools at their regular board meetings. They also attend or participate in accountability committee meetings, and they occasionally venture out to visit charter schools on their own time or as part of official events. The amount of time the state board has devoted to charter schools has been reduced considerably since 2004, but—not surprisingly—still consumes a disproportionately large part of their responsibilities.

A second component of the 2004 time allocation study was a series of interviews with senior DOE employees such as the deputy and associate secretaries of education, as well as employees working with programs such as special education and teacher certification. While the DOE employee assigned to the charter school office reported that 100 percent of his time was devoted to charter school matters, other DOE personnel reported that charter school-related matters comprised between 15 and 60 percent of their time. Again, work loads varied by time of year. Of the total time spent dealing with charter schools, about 40 percent of this was spent on routine oversight such as reading reports, reviewing records and, in some cases, making site visits. Figure 10:1 illustrates the estimated proportion of time the DOE staff we interviewed were devoting to charter school-related activities. From our site visits in 2006, we learned that DOE staff were spending less time on site visits and that there are fewer calls for assistance from charter schools. These signs suggest a

normalization as schools establish working routines and procedures and as DOE becomes more aware of these schools and comfortable with its ability to meet compliance expectations.

Summary of Work from the Charter School Accountability Committee

A larger portion of the oversight work undertaken by the DOE is conducted by the Charter School Accountability Committee. This committee is comprised of several senior DOE staff and three members of the SBOE who serve as ex-officio members of this committee. In 2004, we analyzed the monthly or twice-monthly updates on charter schools. Every report listed the status of each charter school (i.e., no action pending, compliance issue, charter modification application, formal review, or probation) and provided a brief description.

In 2004, we reviewed reports, interviewed committee members, observed a committee meeting, and gained considerable insight into the work and functioning of this committee. In the two subsequent years, we continued to seek inputs and insights from DOE staff. Overall, we found that the majority of topics discussed and voted on by the members of committee were these:

- ❑ Discussion of new charter applications (this is a multistep process)
- ❑ Applications to renew charters and recommendations thereof (again, often a multistep process)
- ❑ Determination of whether or not probable grounds exist to order remedial measures for schools that are out of compliance
- ❑ Recommendations for modification requests (again, often a multistep process)
- ❑ Status of charter schools' compliance

Oversight by the Red Clay Consolidated School District

The school board of the Red Clay Consolidated School District currently sponsors three charter schools and has approved a provisional charter for KIPP Academy. The schools the district sponsors are the Charter School of Wilmington, which was the first charter school (chartered in 1995 and opened in 1996); Delaware Military Academy; and Odyssey Charter School. All three schools have very focused profiles and serve specific niches. Based on a review of limited available documents and on interviews with a district official and the directors of the three charter schools, we were able to gain some insight into the nature of the oversight provided by the district.

All key informants agreed that the amount of oversight provided by the district is minimal. The Red Clay district official stated that "Our district board of education firmly believes that charter schools are designed to take creative and unique approaches to work with students so they perform better." Therefore, our "responsibility is to free them up and make sure that they are upholding their charter. We are not there to micromanage." The schools must submit an annual report to the district. From this annual report and from informal communications with the schools throughout the year, the district administrators indicated that they had a sense of what was going on.

While the Red Clay Consolidated School District does not provide extensive oversight, it is very careful with regard to the schools it charters or sponsors. By sponsoring only sound and viable groups, the district officials agree that they have helped ensure that less oversight would be required over time. District staff are in regular communication with their charter schools so they could easily intercede if they see problems arising.

In the words of one satisfied charter school director, "The district issues the charter and gets out of the way. They've been great." In referring to the oversight of the Red Clay district, another charter school director indicated, "Red Clay's oversight is sufficient and appropriate . . . I spend very little time responding to requests or preparing reports." A Red Clay district official also indicated that they spend little time on oversight. He indicated that the time for oversight comes up when it is time for renewal of charters or when new applications are being considered.

As noted above, the district personnel and administrators of charter schools authorized by the Red Clay Consolidated School District report good relationships and satisfaction with the limited amount and nature of the oversight. As the district official stated, "The state does not know the community where it charters. We know whether an application for a charter will be a good match for the community, so the schools we approve are more likely to be successful." Because of the more lax oversight and lack of documentation regarding compliance by these schools, it is hard to know whether charter schools sponsored by Red Clay are more accountable or have fewer problems with regard to following regulations.

The charter schools sponsored by the Red Clay district indicated that they received informal visits by the local district school board as well as by DOE. The school representatives from the three schools spoke differently about their oversight by DOE. One thinks Red Clay is being pressured by DOE to enforce tougher oversight onto the school. In addition, this school official stated that DOE officials visit, but they do not necessarily take the time to learn about what the school is doing. The other schools reported that DOE is getting better about the amount of paperwork required (less repetition) and that DOE conducts its obligatory 1-2 visits a year, which is fine. One school administrator went on to say that DOE is sometimes curious about what is going on in the school and has been great to work with.

Red Clay has a committee comprised of 10-12 people (2 school board members) who review applications for new charter schools. It usually takes 3 to 4 months for the entire process when a group is requesting a new school charter. The district official stated that there are many follow-up questions and requests by the committee before public hearings are held; then they prepare a report for the new charter school applicant to review. After review, the district makes the report public and reviews the report publicly with the board of education. In some cases, the board will grant a provisional charter (such as the case with KIPP Academy) that typically places conditions on finance and location/facility. The provisional charter also helps the applicants approach financiers or banks for securing funding for the start-up of the charter school. After financing is secured, the district reconsiders the charter and grants final approval.

10.2 Charter Schools' Comments and Concerns Regarding DOE Oversight

In Chapter 2 we provided a summary of the comments and views of charter school representatives regarding the charter school law and DOE oversight. In this section, we provide a summary of the opinions and comments of charter school administrators with regard to oversight. As stated in Chapter 2, the views of charter school administrators have not changed significantly from the first year of the evaluation.

This list is a sampling of the more common concerns and complaints voiced by charter schools staff. Comments listed are not necessarily shared by all charter schools.

- *Excessive regulation and oversight*. The administrators were mixed on this concern, but those who thought that DOE is excessive in its oversight agree with some of the administrators from the Year 1 report, who stated that DOE's interpretation of the legislation and oversight was "overly rigid" and "anticharter."
- *Excessive requests for information*. This year, administrators did not agree on the amount of paperwork required by DOE. Some stated that the amount of paperwork was getting better, while others thought it was redundant and too much. An inherent problem is that since charter schools are also officially their own district or LEA, they receive all the DOE mailings that district offices would receive.
- *Bureaucracy*. The administrators discussed the need for DOE to streamline its processes causing inefficiency. But, more importantly, administrators addressed the rigid enforcement of regulations across all charter schools even though each charter school is different. The oversight is the same for both established and new schools.
- *Barrier to innovation*. Because of federal and state regulations and the push toward standards-based education and high stakes testing, the school administrators stated that they are unable to be innovative and creative. Charter schools do not have to use the state curriculum, but the charter school students have to pass the state assessment tests. One administrator asks, "When the school is exceeding and meeting the state standards, why so much accountability?" Another administrator stated, "There is a great attempt at educating everybody, but the government wants to fit all kids into one mold. Their hand is too close to the school."

It is important to point out that the charter school administrators also identified many positive aspects of their relationship with DOE. For example, most volunteered that they greatly appreciated the technical assistance provided by DOE and that they were pleased with the friendly and timely assistance provided by DOE staff.

10.3 Comparison of Oversight Practices

Oversight is increasingly being seen as critical for the success of charter school reforms. Oversight varies considerably between authorizers in the same state, as they do between DOE and the Red Clay Consolidated School District. Large differences also exist between states. The differences exist due to the particular roles and interests of the authorizers granting the charter, and they exist depending on guidance provided by laws and regulations. They also differ depending on the amount and source of funding available for oversight activities. In this section, we include a summary of findings from cross-state studies of authorizers and charter school oversight. Particular attention is given to the findings that are specific to Delaware or findings that cover the states used in Chapter 2 for the comparison of charter school laws.

Bierlein Palmer and Gau study on charter school authorizers (2003). To examine the pivotal role of the charter authorizer, Bierlein Palmer and Gau (2003) conducted a study to answer questions about charter school authorizing. The study focused on a number of indicators that covered such topics as the support of state policy environments for charter schools and authorizers, practices of oversight and accountability, and respect for charter school autonomy.

The study, funded by the Thomas B. Fordham Institute, relied on data collected from nearly 900 individuals representing authorizers, charter operators, and charter observers across 23 states and the District of Columbia. The investigators gave a letter grade for each state based on its charter policy environment and its charter authorizer behavior. The criteria for the state charter policy environment included support for charter schools and support and external accountability for authorizers. The criteria for charter authorizer behavior included the application and approval processes, performance contracts, oversight, renewal and revocation processes, and transparency and internal accountability. Delaware ranked 14 out of 24 states with an overall letter grade of C+. Interestingly, no state was given an overall grade better than a B+. Table 10:1 includes the grades and overall ranking of states from the larger region surrounding Delaware.

Table 10:1 State Summary of Accountability Ratings (Adapted from Bierlein Palmer and Gau 2003)

State	*Policy Environment*	*Authorizer Behavior*	*Overall Grade*	*Overall Rank*
Massachusetts	B	A-	B+	1
New Jersey	B-	B+	B	4
North Carolina	C	B+	B	5
District of Columbia	C	B	B-	9
Connecticut	D+	B	B-	10
New York	C	B-	B-	13
Delaware	C	C+	C+	14
Pennsylvania	D	D+	D+	23

Bierlein Palmer and Gau (2003) reported that, despite interest in the development and operation of charter schools, survey respondents gave Delaware an overall grade of C+. The grades for the main categories are shown in Table 10:2. The findings in the following paragraphs reflect the summative statements prepared by Bierlein Palmer and Gau (2003, pp. 39-40).

Survey respondents gave Delaware a C- in the area of support for charter schools because of a perceived lack of political support, a reportedly weak public understanding of charter schools, and a reported lack of acceptance by districts. With the exception of the Red Clay Consolidated School District, no other school district has yet sponsored a charter school. The researchers gave Delaware high marks for nongovernmental support for charter schools because of the Delaware Charter Schools Network and the Innovative School Development Company that serves as a resource center and offers loan guarantee funds for charter facilities.

The grade of B- in the category of support and external accountability for authorizers was due to reports provided to the legislature; the existence of the Charter School Accountability Committee; and the existence of a comprehensive, school-based accountability system for all public schools. Based on responses from their informants, concerns were expressed about adequate state funding for charter school authorizing staff and activities.

Grades in the area of authorizer practices ranged from a D for application processes to a B+ for performance contracts. Although there are published requirements for a charter application, survey respondents reported a lack of information on how applications were to be scored. The application processes grade was also low because the Department of Education and the districts can decline to

accept applications. Delaware received high marks, however, for having a detailed application time line.

Table 10:2 Authorizer Ratings for Delaware by Category (Adapted from Bierlein Palmer and Gau, 2003)

Criteria	*Average Score (4-point scale)*	*Grade*
1. State Policy Environment		C
A. Support for Charter Schools	2.45	C-
B. Support & External Accountability for Authorizers	2.73	B-
2. Authorizer Practices		C+
A. Application Processes	2.09	D
B. Approval Processes	2.73	B-
C. Performance Contracts	3.09	B+
D. Oversight	2.94	B
E. Renewal & Revocation Processes	2.90	B
F. Transparency & Internal Accountability	2.49	C-
Overall Grade		C+

The B- in the approval processes category reflects the uncertainty over the consequences of new charter regulations created as clarifications of the law. Delaware received high scores for allowing an adequate time period for schools to prepare to open and for responding to applicants' questions about charter proposals.

The B+ in the category of performance contracts is Delaware's highest score. The state received high marks for contracts that incorporate all the performance expectations. In terms of oversight, the Bierlein Palmer and Gau study gave Delaware a B. This relatively high grade was due to the compliance-oriented practices, existence of performance benchmarks that were agreed upon and measurable, regular site visits, compilation of financial and performance reports, and communication with schools with regard to compliance issues.

Delaware's B in the category of renewal and revocation processes is related to the clear written criteria for renewal, analysis of school data, and the quality of the processes. The state received a C- in the area of transparency and internal accountability because of its perceived lack of transparency about key decisions and the failure to evaluate its authorizing practices.

In summary, Delaware's extensive procedures and guidelines for charter schools appear to have both positive and negative implications. It is important to note that although the approach by Bierlein Palmer and Gau provides a framework for assessment, it focuses largely on compliance with processes rather than on the outcomes of a school's innovative performance.

Lake's paper on holding charter authorizers accountable (2006). Lake began by stating, "If the charter school movement fails to provide itself as a viable source of higher quality public schools, bad authorizing and oversight will probably be a major reason" (p. 1). Even though 85 percent of charter school authorizers are local school boards, the state has a responsibility to ensure high-quality public oversight. Lake went on to state that charter school advocates should be concerned that the movement will suffer politically from uneven quality and scandals due to laid-back or lenient

authorizing. "Thoughtful, responsible chartering is in the advocates' interest," and this is a new understanding. In the past, advocates defined a "strong" law as one under which it was easy to obtain a charter and authorizers did not have much power. Lake called for a new definition of a "strong" charter law, in which the law is "demanding but with navigable routes to chartering with effective checks on quality authorizing" (p. 3).

At the end of the paper, Lake proposed four mechanisms that might improve authorizers' actions through accountability (she primarily is addressing mechanisms for the states to use with local school board authorizers). First, increase accountability by requiring authorizers to present more information about the schools, such as disclosing school information, having the schools rate the authorizer, and completing a report on the authorizer and its schools. Second, have the authorizer conduct third party audits or reviews, and establish objective state standards. Third, require authorizers to create performance goals. Last, create competing markets with multiple authorizers.

In Delaware, the Red Clay school district requires an annual report, which is also provided to DOE. This is the only accountability mechanism besides the renewal of the charter. The Red Clay school district administrator stated that the district was in continuous communication with the schools so if there is a potential problem, district officials would know about this early on.

Bierlein Palmer's policy report on alternative charter school authorizers (2006). One has to take into consideration the state context and the individuals involved in determining whether or not an authorizer will perform well. In her policy report for the Progressive Policy Institute, Bierlein Palmer described three core criteria that make some authorizers better than others. The authorizer (1) wants the job as authorizer and oversees more than a handful of schools, (2) is relatively insulated from local and state politics, and (3) has the ability to develop sufficient infrastructure in order to achieve quality outcomes, rather than just perform traditional oversight roles. In addition, she found that states are beginning to turn to "alternative" charter school authorizers, including independent state-level charter boards, higher education institutions, city government, and nonprofit associations, and that these authorizers are rapidly becoming the preferred authorizers. In addition, states are increasingly asking these alternative authorizers to develop model authorizing processes. Fourteen states allow alternative charter school authorizers, including the District of Columbia.

Delaware does not allow alternative charter school authorizers. According to Bierlein Palmer, the quality of the two Delaware authorizers—state board of education and local school district board —is "limited" or "very limited" in the three core criteria areas: desire to be an authorizer, political insulation, and ability to create adequate infrastructure. Table 10:3 contains Bierlein Palmer's summary of potential for quality authorizing by the different types of authorizers.

Gau's study on trends in charter school authorizing (2006). In a study commissioned by the Thomas B. Fordham Institute as a follow-up to Bierlein Palmer & Gau's 2003 study, Gau presented the findings that were profiled against five elements of successful charter authorizing practices. The five elements were determined by an expert advisory group: (1) data-driven decision making and rigorous, objective selection and renewal processes; (2) sound working relations between authorizer and school; (3) skilled personnel; (4) adequate resources and autonomy; and (5) parent and community input.

A few of the findings were contrary to previous research or research conducted when the charter school movement was young. For example, an earlier study by the Center for Education Reform indicated that 66 percent of closures were because of financial problems or mismanagement. However, Gau's study found that authorizers reported that they do not renew charters primarily

because of poor student academic performance. Second, authorizers have become choosier in their charter approvals. Delaware has no charter school cap, and Gau's findings found that the approval rate in no charter cap states was 74 percent before 2003; but between January 2003 and January 2005, only 58 percent of the charters were approved.

Table 10:3 Summary Analysis of Potential for Quality Authorizing

	Desire to be an Authorizer (for more than 1-2 schools)	*Political Insulation (to make data-driven decisions)*	*Ability to Create Adequate Infrastructure (focused primarily on outcomes, not compliance)*
Separate State Charter Boards	Strong	Moderate	Fairly Strong
Universities	Moderate	Fairly Strong	Fairly Strong
Nonprofits	Moderate	Strong	Fairly Strong
Municipalities	Moderate	Limited	Moderate
State Board of Education	Limited	Limited	Moderate
County/Regional Board	Very Limited	Very Limited	Limited
Local District Board	Very Limited	Very Limited	Limited

She found that the quality of oversight varied by the different types of authorizers. More than 44 percent of the authorizers, primarily the smaller ones, practiced limited oversight. This includes local school boards, such as the Red Clay district in Delaware, whereas the state board of education authorizers were found to have either limited oversight (50 percent) or hands-on (40 percent). Delaware's state board of education would be considered a hands-on authorizer.

Overall, independent chartering boards and nonprofit associations received a *strong* rating, whereas local school district boards and state boards of education received a *moderate* rating (strong, moderate, or weak). The state board of education was *strong* for data-driven decision making and was *weak* for ensuring adequate resources, autonomy, and community and parent input. The local school district board received a *moderate* rating for data-driven decision making, adequate resources and autonomy, and community and parent input. Both received a *moderate* rating for sound working relations and a *strong* rating for skills personnel.

Hassel and Batdorff study on high stakes decision making by authorizers (2004). In a different study, Hassel and Batdorff (2004) examined 50 cases where charter school authorizers had to make decisions to renew, not renew, or revoke charters. Their analysis shed important insights into the performance of authorizers. On the basis of their research, they identified three pillars of an accountability system necessary to provide the information authorizers need to make good decisions. Those pillars are setting clear and measurable expectations, gathering adequate and appropriate information, and making decisions based on performance compared with expectations.

Among relevant key findings of their study are that many authorizers lacked one or more of the basic pillars necessary to make key decisions, and authorizers' activities often lack transparency. Authorizers that were successful at setting clear expectations and collecting relevant data were more

often larger authorizing entities with adequate staff and resources devoted to charter school oversight.

Delaware charter authorizers and schools earn high marks in the areas of setting clear expectations and collecting adequate data. Hassel and Batdorff commended the Delaware documentation pertaining to the charter schools' goals and progress toward those goals. They reviewed the documentation for the initial three-year performance agreement, the application for a five-year renewal, and the accountability committee's evaluation of a school's progress. The researchers found that the documents showed clearly defined goals and expectations that could form the basis for a performance audit.

10.4 Discussion of Key Policy Issues Relevant to Oversight

Chapter 2 discussed the studies conducted by the Center for Education Reform (2006), Miron (2005), and Chi and Welner (in press), which found Delaware to have "strong" charter school laws. The researchers found DOE and SBOE more involved and providing more rigorous charter school oversight than most other authorizers. Also differing from authorizers in other states is DOE's distribution of responsibility for oversight across a large number of persons. In other states it is more common for a single program officer or representative of the authorizer to oversee the charter schools and present items for action or approval to a board or a senior level executive. In Delaware, a larger number of persons across the department and—in particular across the accountability committee—share responsibility for decisions and actions with regard to oversight. This can result in better decision making, but it also means there is more work for more persons. Although representatives from the charter schools criticize about excessive oversight, it is clear that Delaware's charter schools are more highly accountable than charter schools we have seen in other states we have evaluated, such as Illinois, Michigan, Ohio, and Pennsylvania..

Advantages and Disadvantages of Rigorous Oversight

Many issues need to be considered and balanced when it comes to rigorous oversight of charter schools. Below is a brief list of what we see to be some of the primary advantages and disadvantages of rigorous oversight, such as that pursued by the Delaware Department of Education. The main advantages of more rigorous oversight include the following:

- ❏ More likely that only the sound applications for charters are approved and charter boards are prepared to run a school
- ❏ More likely that poor performing charter schools will close
- ❏ Less likely that management companies with high cost structures will remain
- ❏ Less likely that children and communities are negatively affected by poor performing charter schools or untimely closure of charter schools

On the other hand, the main disadvantages of rigorous DOE and SBOE oversight and regulation include the following:

- ❏ Charter schools are less free to innovate.

- ❑ Charter schools have less autonomy and flexibility that may be necessary to ensure a more efficient and effective use of limited resources.
- ❑ Human and financial resources of the Delaware State Board of Education and Delaware Department of Education are disproportionately directed to charter schools that serve a small portion of the states' public school students.

Factors Related to DOE Rigorous Oversight

The extensive and thorough oversight provided by DOE is rather unique. The Delaware Department of Education is able and willing to monitor the performance and viability of the charter schools closely and hold them accountable to regulations and their specific performance agreements. The capacity for this type of oversight can be attributed to a number of factors including (i) small size of the state and scale of the reform, (ii) detailed and centralized accountability system, (iii) devoted and effective DOE staff, and (iv) timely and well-targeted technical assistance.

One key factor is the small size of the state and the relatively small number of charter schools. Many examples were shared with us to illustrate that everyone knows everyone in the state. This type of environment leads to better communication and greater responsiveness. The statistical indicators for charter schools in the state data files were surprising in that there were few instances of missing data.[1] The small number of charter schools means that it is possible to know and communicate with all of them on a regular basis. Although the total number of schools is relatively small for a state, it is sufficient for a few authorizers as they work to achieve some relative economy of scale. Developing oversight routines and procedures may take time, but when these can apply to more than a dozen schools rather than 1 or 2, the oversight becomes more cost-efficient. Another part of the small size equation is that DOE is able to work with and respond to new charter applicants on their proposals and provide them adequate time to open their school doors. Beirlein Palmer and Gau gave Delaware a B- for its approval process.

Another important factor is the highly detailed and centralized accountability and monitoring system that exists. The state assessment system allows DOE and district staff to readily monitor and review detailed student-, class-, school-, and district-level data. The charter schools are included in the existing databases used in the state, including the assessment system, teacher certification, and finance/purchasing. Gau (2006) verified that state boards of education are usually strong in having data accountability systems in place that then are used for various oversight decisions. In addition, Hassel and Batdorff (2004) stated that Delaware earned high marks for collecting data.

A third factor that makes rigorous and effective oversight possible is devoted and well-organized DOE staff. An example to illustrate this point is that DOE staff that serve on the accountability committee report that they spend substantial amounts of time outside of regular working hours reading and reviewing materials so that they are well prepared for meetings and hearings. An illustration of why the staff are effective in their work is a tracking system used by the charter school office to monitor compliance activities and track the status and action on all conditions that need to be addressed by charter schools.

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[1] In other states, monitoring of charter schools is undermined by the extensive amount of missing data or misreported data from charter schools.

The oversight provided by DOE is dependent upon the training and skills of administrators and administrative assistants at charter schools who have to enter and update data for state databases. The DOE has been active in providing guidance and training for charter school employees responsible for this work.

The rigorous oversight has gotten easier over time as schools become more familiar with requirements and move beyond the start-up phase and as DOE is able to streamline routines and oversight activities. A problem in other states that may also be relevant to Delaware is the lack of funding for oversight activities. This may be particularly important for districts with limited human and financial resources available to establish and implement oversight activities.

Balance Between Rigorous Oversight and Autonomy of Charter Schools

In Delaware the rigor of oversight has increased over time.[2] Some reported that this was in response to pressure from local school districts to make the legislation more restrictive. Others indicated that this was a response to the untimely closure of Georgetown Charter School and importance of avoiding scandals. Regardless of the reasons for the increasing expectations for charter schools, it was widely reported by the schools that the increasing demands for compliance and accountability have restricted their flexibility to pursue unique missions or to adapt to the unique and changing needs of the charter schools.

At the same time, Delaware's charter school law is characterized by more safeguards for traditional public schools, such as caps on the number of students funded in each charter school, etc., than what is typically seen in other states. These safeguards are critical to the overall success of the reform, particularly in terms of minimizing unanticipated outcomes. At the same time, such safeguards also may lessen the competitive response that charter schools are intended to spark.

In terms of oversight, the Bierlein Palmer and Gau study gave Delaware a B. This relatively high grade was due to the compliance-oriented practices, existence of performance benchmarks that were agreed upon and measurable, regular site visits, compilation of financial and performance reports, and communication with schools with regard to compliance issues.

While many charter schools consistently are not in compliance with all relevant regulations, the DOE must ensure that they become compliant. This has led to excessive time on the part of DOE employees who are burdened with communication and activities related to due process given the schools. In the words of one DOE official, "We are tired of handholding." While many compliance issues are not major, more time is needed to know whether the charter schools are going to be able to play by the rules set for them.

To lighten its burden, DOE can choose to overlook minor indiscretions; or it can choose to take more drastic action, like initiating steps to close schools not in compliance.[3] If closing a charter school was an easy measure without possible negative impacts on students in surrounding district

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[2] This is referred to as "compliance creep" by Bierlein Palmer and Gau (2003), which means the tendency of authorizers to slide further toward the accountability-via-compliance camp at the cost of flexibility.

[3] Closing poor performing charter schools improves the aggregate performance of charter schools since the data and results from the poor schools are dropped from the group. Closing poor performing schools also sends a strong message to other charter schools that they need to be accountable. Finally, closing poor performing schools shifts the media attention from struggling schools to the successful ones that remain.

schools, the latter alternative might be easy. However, closure of charter schools is anything but easy. Closure is difficult because the schools have a constituency; they have infrastructure and material goods that are difficult to liquidate; and many steps are involved in allowing the schools due process, which is costly in dollars and in personnel associated with this work.

Establishing and maintaining a balance that protects the charter schools' autonomy while maintaining rigorous oversight is important for the years to come. It is also hoped that the issues that surface regarding the nature and amount of oversight provide a better framework for understanding the balance that is needed between oversight to ensure quality schools and autonomy and flexibility needed to operate a charter school. In many respects, the DOE and SBOE are in a good place right now. It is easier to back off on tight oversight than it is to try to get tougher on regulations after schools establish working practices.

10.5 Conclusion

It is clear from the findings outlined in chapters 7 and 8 that charter schools in Delaware are highly accountable and their performance—in terms of student achievement—is similar to or slightly better than what we found in traditional public schools. The strong accountability and the relative positive performance of these schools can be attributed to a number of factors. Key factors that are likely to explain the relatively positive outcomes include the following:

Rigorous Approval Process

Delaware was found to be highly selective in approving applications for charters (Miron, 2005; Chi & Welner, in press). Red Clay Consolidated School District indicated that it has been very selective in the schools it sponsors. Over time, the State Board of Education has also raised the bar in terms of the quality of applications it will consider and approve. As pointed out by board members, some of the most important oversight occurs during the application phase.

Miron (2005) found that the quality of applications has improved over time because the groups (1) respond to increased expectations by the authorizers, (2) learn from peers, and (3) receive greater support from resource centers and advocacy groups that were not as prevalent in the 1990s.

Rigorous Oversight

As noted earlier, the Delaware Department of Education rigorously oversees the charter schools including visits and systematic collection of data (e.g., annual reports, annual financial audits, student performance data, and student and teacher demographic data). Unlike many other states, the Delaware Department of Education has also demonstrated that it is able and willing to intercede when schools are struggling and take action against schools that are not in compliance with applicable regulations. The rigor of the oversight has apparently increased with time. This may not be appreciated by charter schools and it may impede the autonomy of the schools, but it appears that this oversight helps ensure the viability of the schools and keeps them focused on the outcomes they have agreed to meet.

Delaware received a B from Bierlein Palmer and Gau (2003) for its oversight processes. This relatively high grade was due to DOE's compliance-oriented practices, existence of performance

benchmarks that were agreed upon and measurable, regular site visits, compilation of financial and performance reports, and communication with schools with regard to compliance issues.

Clear and Measurable Expectations

Rigorous oversight would be undermined or difficult to enforce if there were not clear and measurable expectations for the charter schools. Each charter school sponsored by the SBOE has a performance agreement with clear and measurable objectives. The work of the SBOE and DOE is exemplary in this respect and should be seen as a model for other authorizers. The comprehensive and detailed data yielded by this system facilitate and hopefully lead to data-driven decision making. While other authorizers find it difficult to close poor performing schools due to insufficient evidence, this will not be the case in Delaware.

Comprehensive and Valid Data That are Readily Available

Comprehensive school-level data are available for all public schools in Delaware. The charter schools are included and incorporated into existing statistical and informational data sets, and these typically are available online from the Department of Education Web site. While it is common in other states to find that charter schools have substantial amounts of missing data in school data files, we were surprised and pleased to find that there were few or no instances where charter schools had missing data in the Delaware statistical files. Beyond the general data reported by schools, there were self-reported audits of data by charter schools in their annual reports. Comprehensive and valid data that are readily available are critical for data-driven decision making.

Extensive Technical Assistance

Technical assistance is provided by DOE in a number of forms. First of all, a comprehensive technical assistance manual has been developed by DOE. Another form of technical assistance includes workshops and special training sessions that are provided to charter school staff. Staff throughout the DOE are available to answer questions from charter schools and traditional public schools alike. In addition, charter school administrators, especially the newer ones, talked about how accommodating the DOE staff were by going to their schools and training staff on the software and data entry. Support and technical assistance also are provided by the Innovative Schools Development Corporation.

Relatively Strong Funding

While many states allocate less funding to charter schools than to traditional public schools, Delaware's funding mechanism calls for 100 percent of the per-pupil revenue received by district schools. Delaware received a 5 out of a 5 for per-pupil funding from the Center for Education Reform (2006). Charter schools also received start-up funds from the federal Public Charter School Program. Many charter schools, however, indicate that they have insufficient funds to secure or renovate facilities for use. At the same time, a number of the schools reported substantial amounts of private funds that have been used for facilities.

Bipartisan Support

In states where the charter school reform is polarized, we typically see excessive attacks on charter schools, whether this is warranted or unwarranted. We also typically find much less transparency. Both of these instances create an environment that is less conducive to good oversight. The charter school reform in Delaware is rather bipartisan in terms of political support, which has helped create a more constructive environment for supporting and overseeing the schools.

From the findings of their survey with authorizers, charter operators, and charter observers, Bierlein Palmer and Gau (2003) gave Delaware a C- in the area of support for charter schools because of a perceived lack of political support, a reportedly weak public understanding of charter schools, and a reported lack of acceptance by districts. During the 2006 interviews with charter school administrators, we also heard that there still is a lack of overall political support and school district support, and the public's weak understanding of charter schools.

Final Comments

Delaware charter schools and their authorizers have benefited from their collective experiences. Over time, the DOE has strengthened its capacity to screen charter school proposals, set high expectations, trained new charter school operators, and managed data. Charter school staff have learned to operate in the challenging environment where much is expected of them. In the next phase of the charter school reform in Delaware, progress can be made in several areas including the streamlining and systematizing of data collection by the DOE, further development of a supportive charter school network, continued working on the relationships between school districts and charter schools, and supporting organizations that can shift some responsibility for technical assistance away from DOE.

The Delaware charter school reform is among the more closely monitored and regulated reforms in the nation. We say this based, not only on our evaluation of charter school reforms in five other states, but also on what we have learned from the literature. This said, it is important to point out that more rigorous regulation and oversight of charter schools is not necessarily bad. Although the charter schools complain of too much interference, and although staff and resources at the Delaware Department of Education are taxed with extra work, it is likely that this more rigorous regulation and oversight has led to more stable, viable, and better performing charter schools.

While moderate success is obvious in the charter schools, a number of negative or unanticipated outcomes need to be watched and considered carefully. These include accelerating the resegregation of public schools by race, class, and ability, and the disproportionate diversion of district and state resources (both financial and human resources) from districts to the more recently established charter schools. Finally, attention must be given to those charter schools that are serving minority and low-income students, since a majority of them are lagging behind in performance and show signs that they are less stable and viable.

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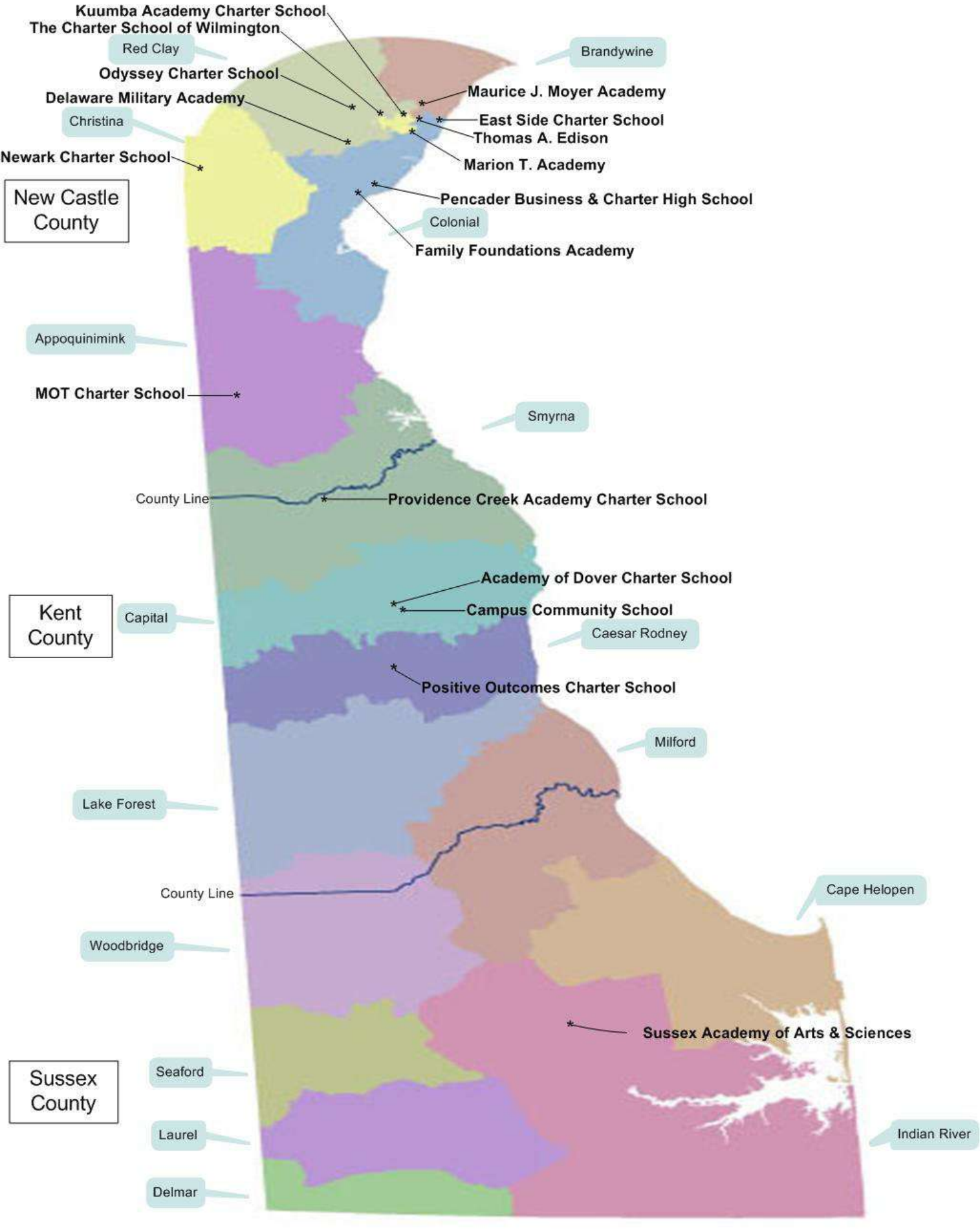
Appendix A
Location of Delaware Charter Schools



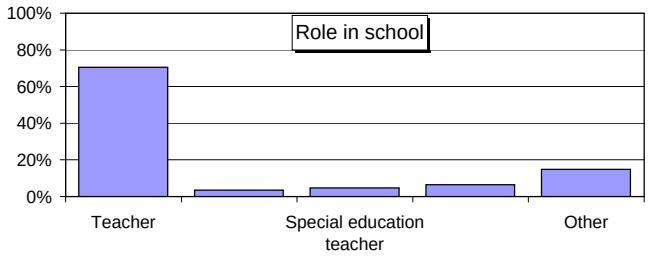
Appendix B Aggregate Results from the Charter School Teacher Survey

2005-06 Charter School Survey
Descriptive statistics

Informant Group: Teachers/Staff (N=377)

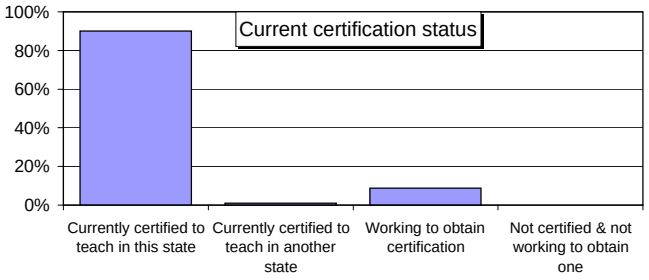
1. What is your role at this school?

	Teacher	Teaching assistant	Special education teacher	Principal/ director	Other	Total	Missing
N	265	13	18	24	56	376	1
%	70.5%	3.5%	4.8%	6.4%	14.9%	100.0%	



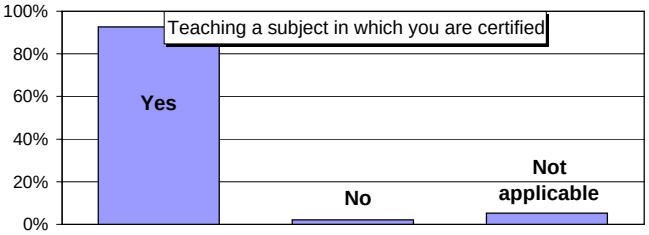
2. What is your current teaching certification status (teachers only)?

	Currently certified to teach in this state	Currently certified to teach in another state	Working to obtain certification	Not certified and not working to obtain certification	Total
N	255	3	25	0	283
%	90.1%	1.1%	8.8%	0.0%	100.0%



3. Are you teaching in a subject area in which you are certified to teach? (teachers only)

	Yes	No	Not applicable	Total
N	262	6	15	283
%	92.6%	2.1%	5.3%	100.0%

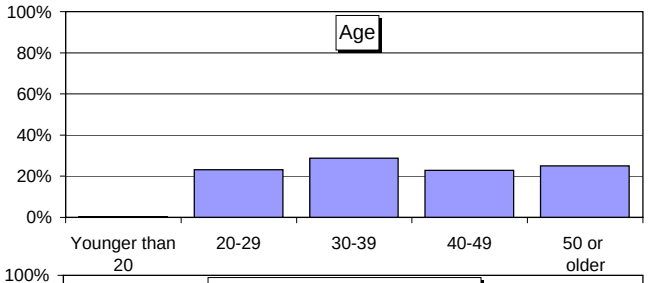


4. With which grade do you mostly work?

	Grade Level															
	K	1st	2nd	3td	4th	5th	6th	7th	8th	9th	10th	11th	12th	Not applicable	Total	Missing
N	22	18	13	16	16	24	26	28	30	29	28	16	18	71	355	22
%	6.2%	5.1%	3.7%	4.5%	4.5%	6.8%	7.3%	7.9%	8.5%	8.2%	7.9%	4.5%	5.1%	20.0%	100.0%	

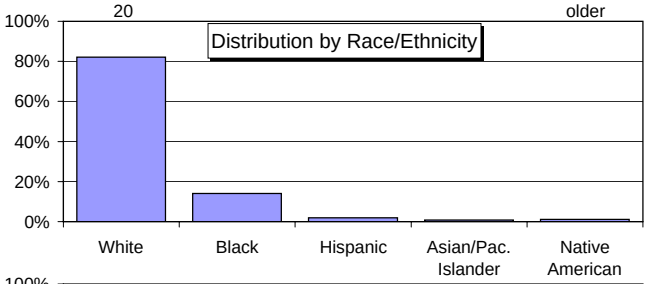
5. What is your age?

	Younger than 20	20-29	30-39	40-49	50 or older	Total	Missing
N	1	87	108	86	94	376	1
%	0.3%	23.1%	28.7%	22.9%	25.0%	100.0%	



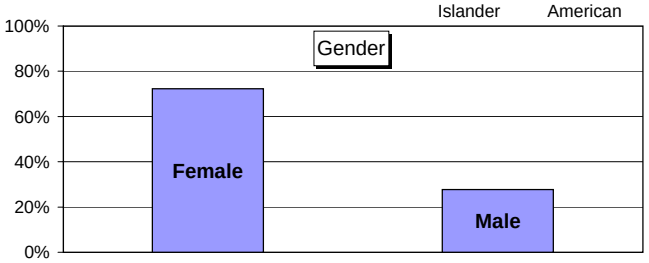
6. What is your race/ethnicity?

	White	Black	Hispanic	Asian/Pac. Islander	Native American	Total	Missing
N	308	53	7	3	4	375	2
%	82.1%	14.1%	1.9%	0.8%	1.1%	100.0%	



7. What is your gender?

	Female	Male	Total	Missing
N	255	98	353	24
%	72.2%	27.8%	100.0%	



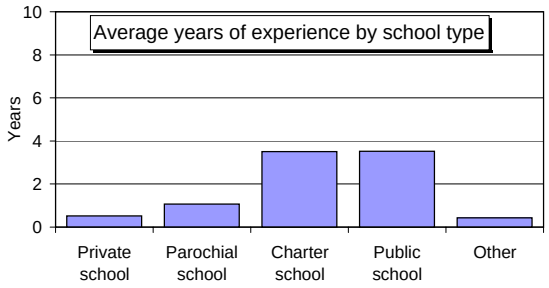
Note: Questions 2 and 3 include the responses from only those staff who indicated that they were teachers.

8. How many years of experience have you had in each of these types of schools (teachers only)

	Private school	Parochial school	Charter school	Public school	Other	Total	Total (excluding "other")
Mean	0.52	1.07	3.50	3.52	0.44	9.06	8.62
STD	2.21	3.62	2.19	5.66	1.71	7.76	7.59

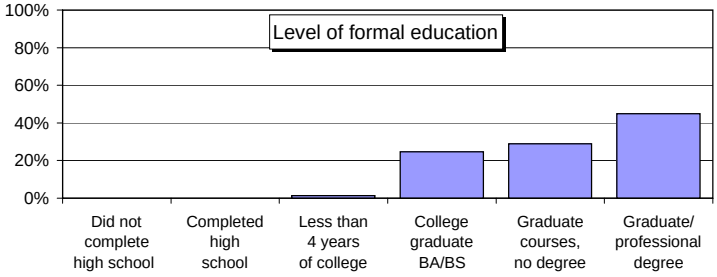
9. Years at current school?

Years at current school
3.43
2.17



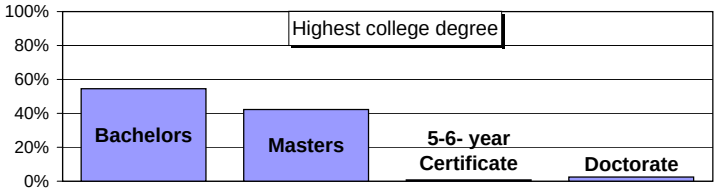
10. How much formal education have you had (teachers only)

	Did not complete high school	Completed high school	Less than 4 years of college	College graduate BA/BS	Graduate courses, no degree	Graduate/ professional degree	Total
N	0	0	4	70	82	127	283
%	0.0%	0.0%	1.4%	24.7%	29.0%	44.9%	100.0%



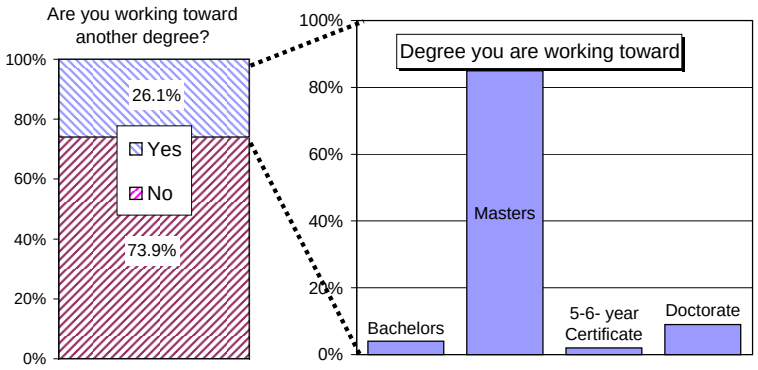
11. What is the highest college degree you hold? (teachers only)

	Bachelors	Masters	5-6- year Certificate	Doctorate	Total
N	152	118	2	7	279
%	54.5%	42.3%	0.7%	2.5%	100.0%



12a. Are you working toward another degree at this time?

	No	Yes	Total	Missing
N	275	97	372	5
%	73.9%	26.1%	100.0%	

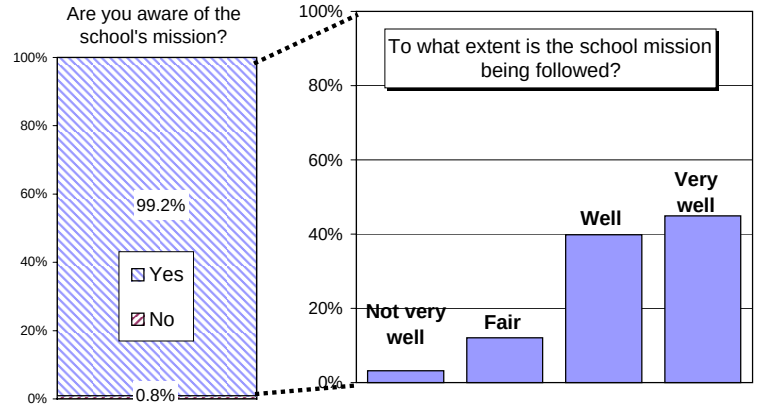


12b. If yes, what degree?

	Bachelors	Masters	5-6- year Certificate	Doctorate	Total	Missing
N	4	85	2	9	100	277
%	4.0%	85.0%	2.0%	9.0%	100.0%	

13a. Are you aware of the school's mission?

	No	Yes	Total	Missing
N	3	373	376	1
%	0.8%	99.2%	100.0%	

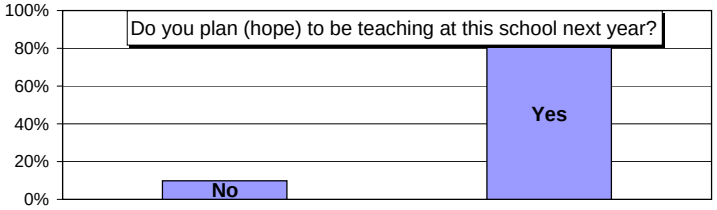


13b. If yes, to what extent is the mission being followed by the school?

	Not very well 1	Fair 2	Well 3	Very well 4	Total	Missing
N	12	45	149	168	374	3
%	3.2%	12.0%	39.8%	44.9%	100.0%	

14. Do you plan (hope) to be working at this school next year?

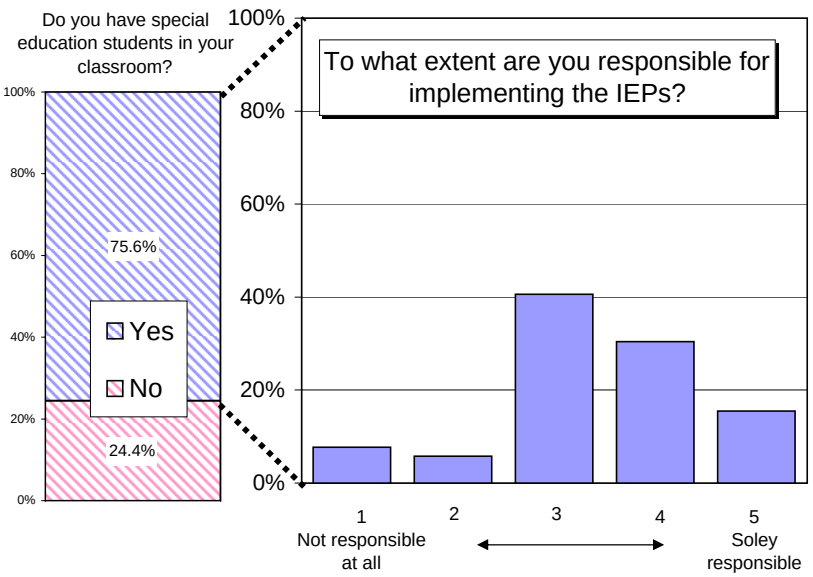
	No	Yes	Total	Missing
N	33	304	337	40
%	9.8%	90.2%	100.0%	



Note: Questions 8, 9, 10 and 11 include the responses from only those staff who indicated that they were teachers

15a. If you are a classroom teacher, do you have students identified for special education services in your classes?

	No	Yes	Total	Missing
N	64	198	262	115
%	24.4%	75.6%	100.0%	

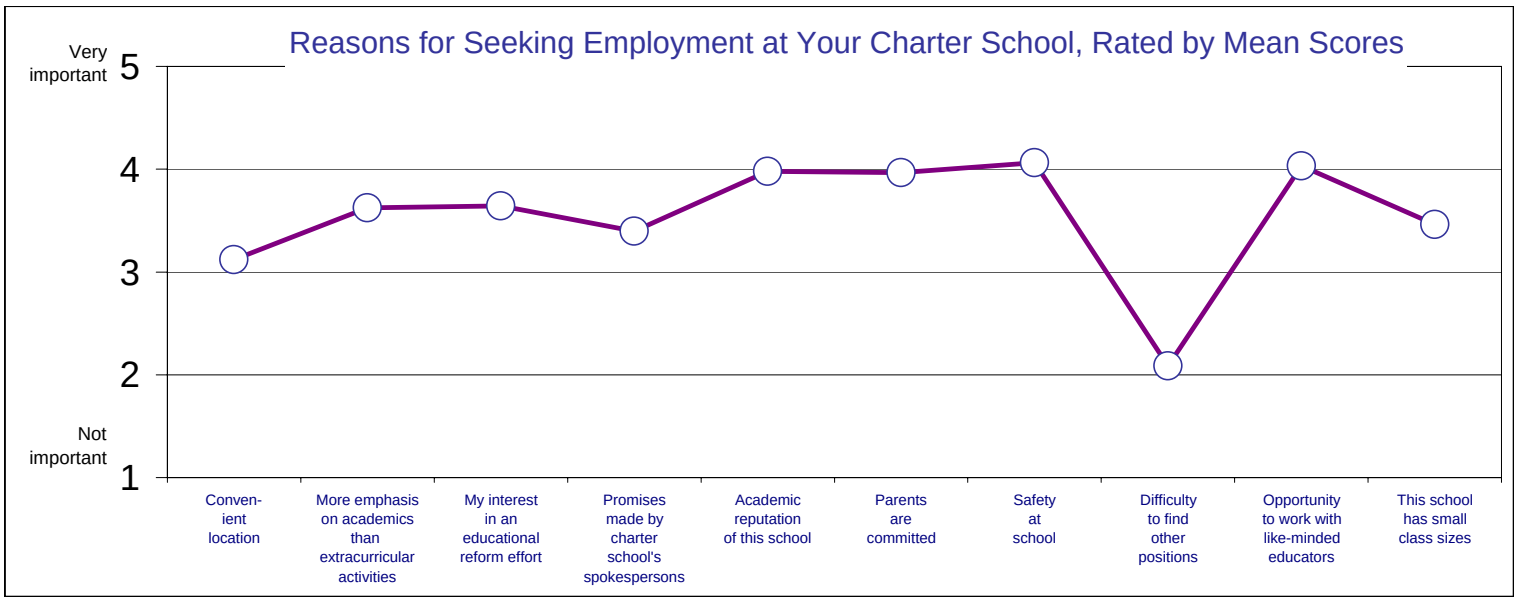


15b. If yes, to what extent are you responsible for implementing the IEPs?

	Not responsbile at all ←				Solely responsible →	Total	Missing
	1	2	3	4	5		
N	16	12	84	63	32	207	170
%	7.7%	5.8%	40.6%	30.4%	15.5%	100.0%	

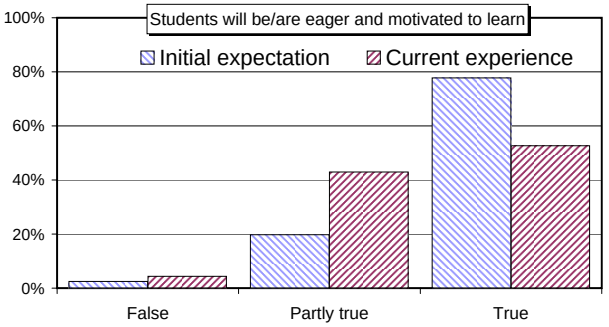
16. Rate the importance of the following factors in your decision to seek employment at this school.

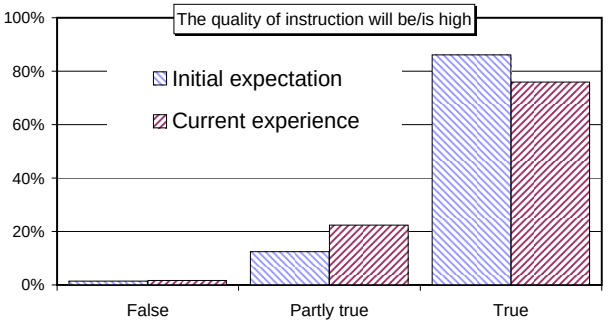
	Percentages: Not important 1	2	3	4	Very important 5	Mean	STD	Median	N	Missing
Convenient location	15.2%	14.2%	32.4%	19.8%	18.4%	3.12	1.30	3.0	374	3
More emphasis on academics as opposed to extracurricular activities	5.9%	7.8%	28.2%	34.3%	23.9%	3.62	1.11	4.0	373	4
My interest in being involved in an educational reform effort	6.4%	8.3%	26.3%	32.4%	26.5%	3.64	1.15	4.0	373	4
Promises made by charter school's spokespersons	13.2%	10.5%	23.2%	29.2%	23.8%	3.40	1.31	4.0	370	7
Academic reputation (high standards) of this school	5.6%	5.6%	16.4%	29.8%	42.5%	3.98	1.15	4.0	372	5
Parents are committed	4.3%	4.8%	18.7%	34.2%	38.0%	3.97	1.07	4.0	374	3
Safety at school	2.4%	4.8%	19.6%	30.6%	42.6%	4.06	1.02	4.0	373	4
Difficulty to find other positions	47.1%	15.5%	24.8%	6.5%	6.0%	2.09	1.23	2.0	367	10
Opportunity to work with like-minded educators	3.0%	2.4%	19.5%	38.6%	36.5%	4.03	0.96	4.0	370	7
This school has small class sizes	10.7%	7.5%	30.8%	26.5%	24.4%	3.46	1.24	4.0	373	4

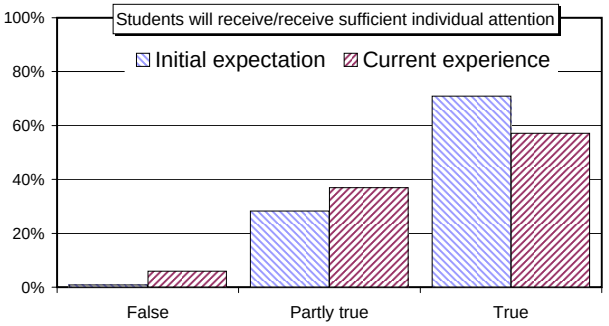


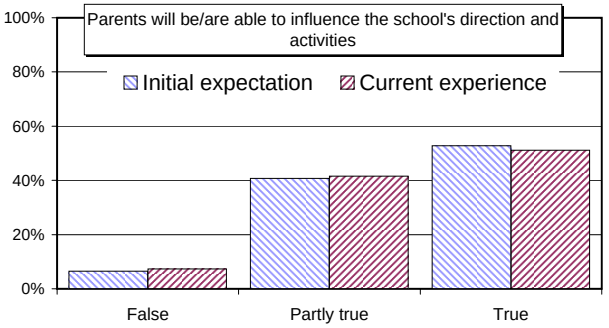
17. Rate each of the following statements as to what you expected when you first began working at this school (initial expectation)and how you would rate it today (current experience).

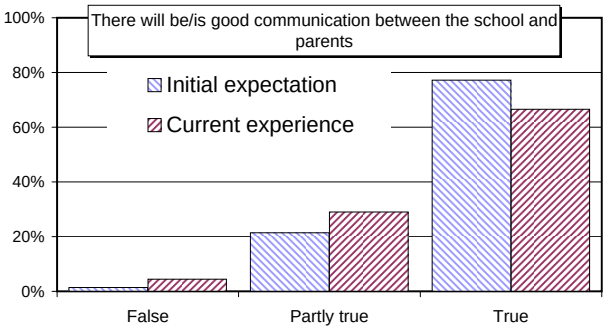
	Initial Expectation							Current Experience						
	False 1	Partly True 2	True 3	Mean	STD	Don't know	Mis-sing	False 1	Partly true 2	True 3	Mean	STD	Don't know	Mis-sing
Students will be/are eager and motivated to learn	2.5%	19.8%	77.7%	2.75	0.49	9	9	4.4%	43.0%	52.6%	2.48	0.58	4	10
The quality of instruction will be/is high	1.4%	12.5%	86.1%	2.85	0.40	6	11	1.7%	22.3%	76.0%	2.74	0.47	6	13
Students will receive/ receive sufficient individual attention	0.9%	28.3%	70.9%	2.70	0.48	13	14	5.9%	37.0%	57.1%	2.51	0.61	7	13
Parents will be/are able to influence the direction and activities at the school	6.5%	40.8%	52.8%	2.46	0.62	24	12	7.3%	41.5%	51.1%	2.44	0.63	9	14
There will be/is good communica-tion between the school and parents/ guardians	1.4%	21.3%	77.2%	2.76	0.46	9	12	4.5%	29.0%	66.6%	2.62	0.57	5	13





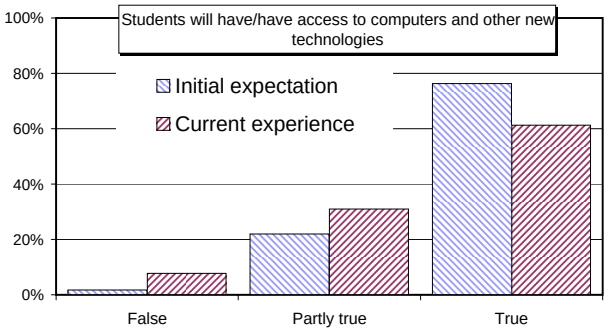


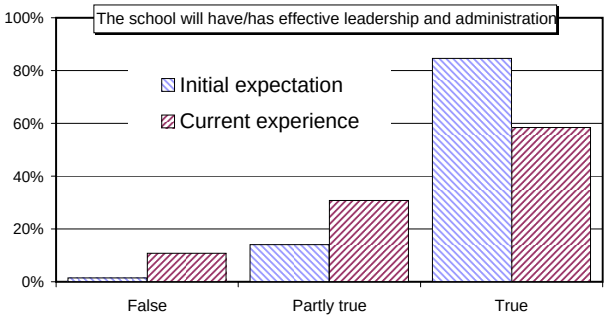


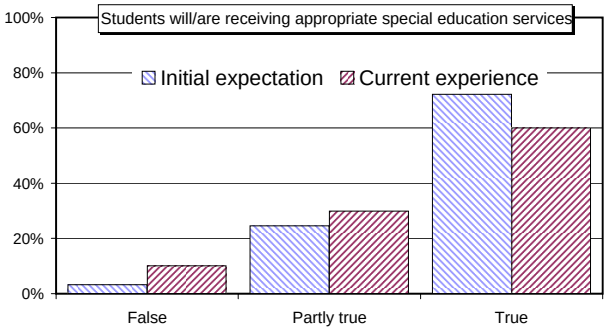


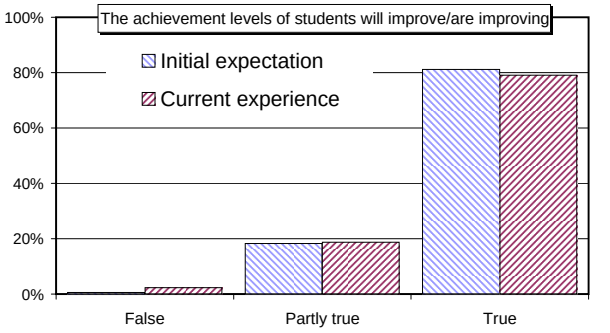
17. Rate each of the following statements as to what you expected when you first began working at this school (initial expectation)and how you would rate it today (current experience).

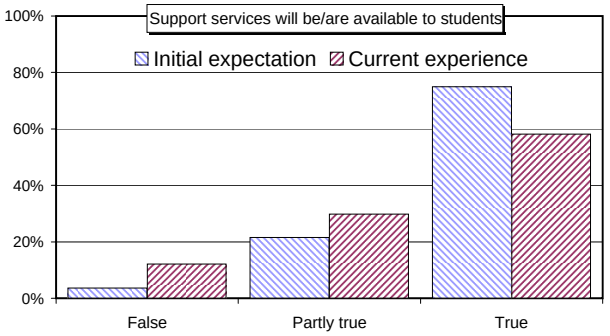
	Initial Expectation							Current Experience						
	False 1	Partly True 2	True 3	Mean	STD	Don't know	Mis-sing	False 1	Partly true 2	True 3	Mean	STD	Don't know	Mis-sing
Students will have/have access to computers and other new technologies	1.7%	22.0%	76.3%	2.75	0.47	11	11	7.7%	30.9%	61.3%	2.54	0.64	5	10
The school will have/has effective leadership and admin-istration	1.4%	14.0%	84.6%	2.83	0.41	10	11	10.8%	30.7%	58.4%	2.48	0.68	5	11
Students will/are receiving appropriate special education services, if necessary.	3.2%	24.6%	72.2%	2.69	0.53	49	15	10.1%	29.9%	60.1%	2.50	0.67	32	17
The achievement levels of students will improve/are improving	0.6%	18.2%	81.2%	2.81	0.41	15	11	2.3%	18.7%	79.0%	2.77	0.47	13	11
Support services (i.e., counseling, health care, etc.) will be/are available to students	3.6%	21.5%	74.9%	2.71	0.53	31	11	12.1%	29.8%	58.1%	2.46	0.70	7	14





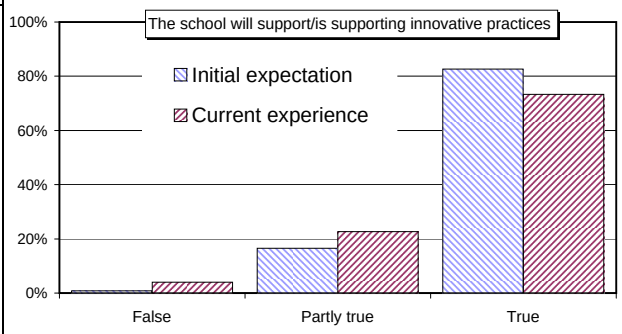


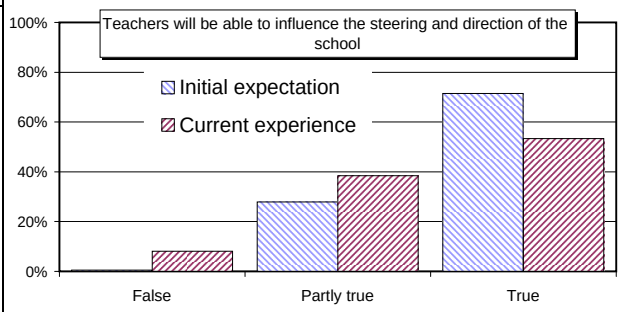


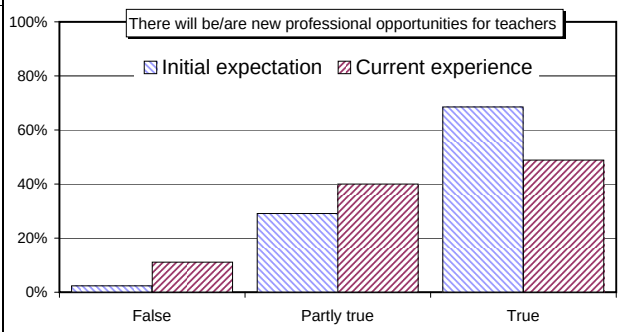


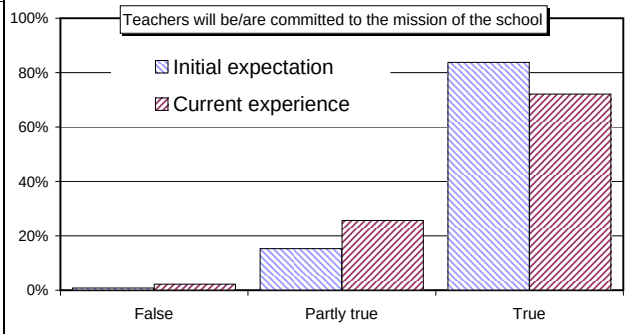
17. Rate each of the following statements as to what you expected when you first began working at this school (initial expectation)and how you would rate it today (current experience).

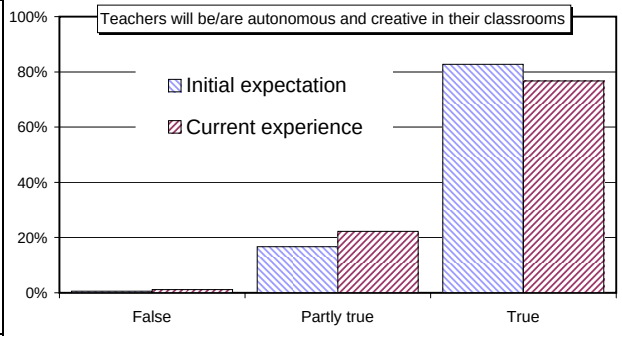
	Initial Expectation							Current Experience						
	False 1	Partly True 2	True 3	Mean	STD	Don't know	Mis-sing	False 1	Partly true 2	True 3	Mean	STD	Don't know	Mis-sing
The school will support/is supporting innovative practices	0.9%	16.5%	82.7%	2.82	0.41	20	11	4.0%	22.7%	73.4%	2.69	0.54	13	11
Teachers will be able to influence the steering and direction of the school	0.6%	28.0%	71.5%	2.71	0.47	19	11	8.1%	38.5%	53.4%	2.45	0.64	9	12
There will be/are new professional opportunities for teachers	2.4%	29.1%	68.5%	2.66	0.52	34	13	11.1%	40.1%	48.8%	2.38	0.68	21	14
Teachers will be/are committed to the mission of the school	0.9%	15.3%	83.8%	2.83	0.40	14	11	2.2%	25.6%	72.1%	2.70	0.51	7	11
Teachers will be/are autonomous and creative in their classrooms	0.6%	16.7%	82.7%	2.82	0.40	13	11	1.1%	22.2%	76.7%	2.76	0.46	10	11





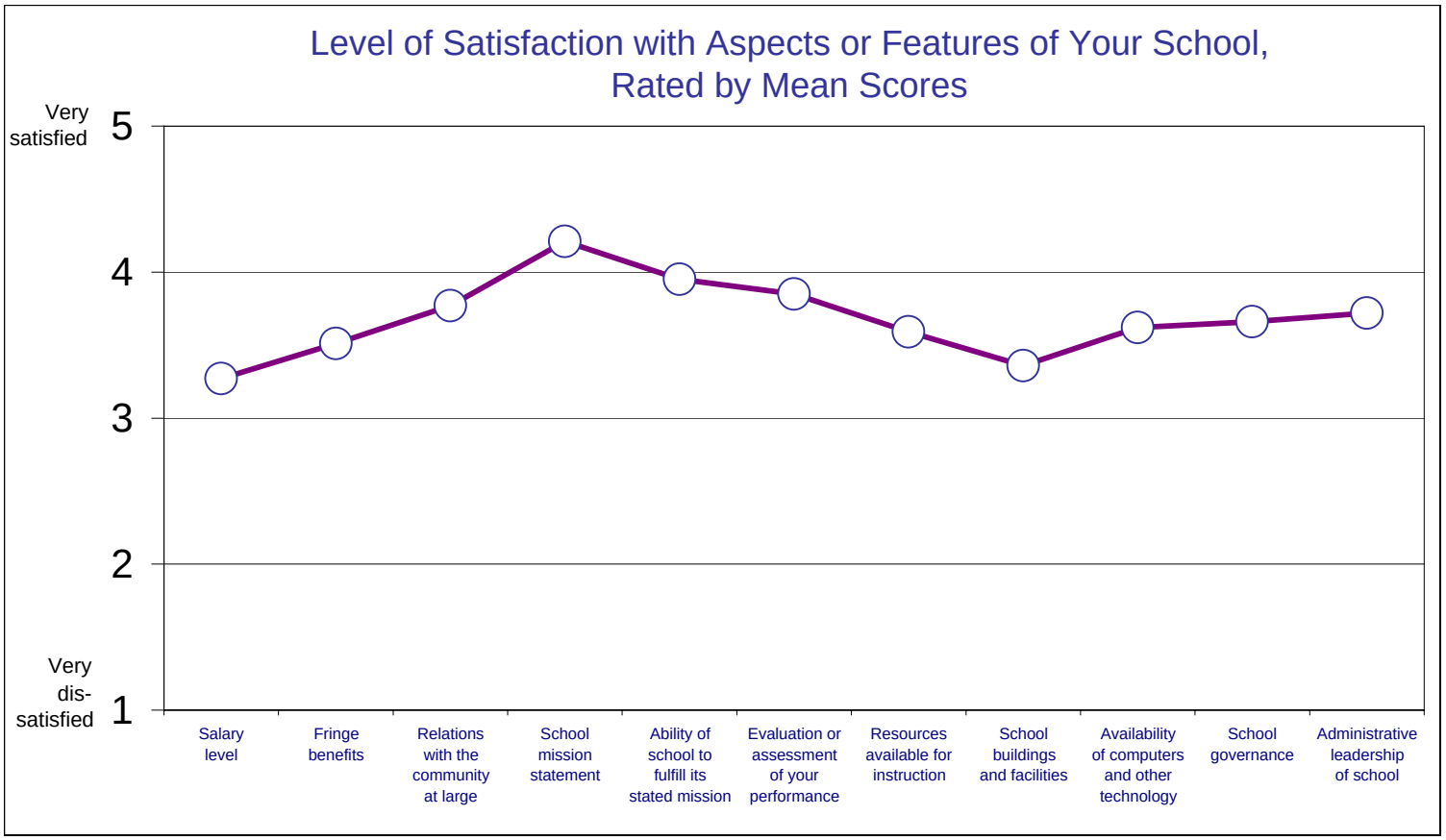






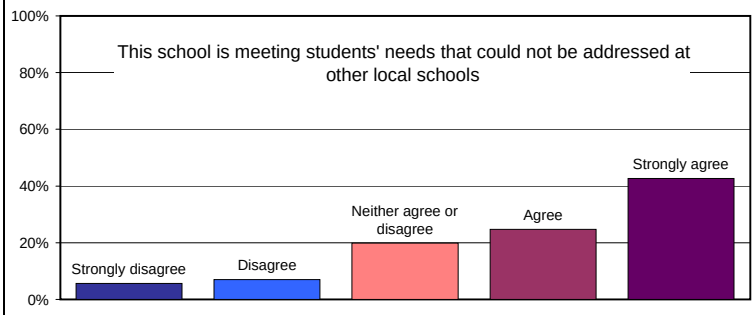
18. Rate your level of satisfaction with the following aspects or features of your school.

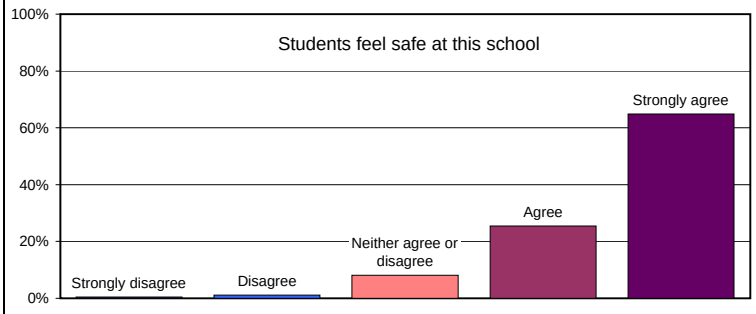
	Percentages					Mean	STD	Median	N	Don't know	Missing
	Not very satisfied 1	2	3	4	Very satisfied 5						
Salary level	9.0%	17.7%	29.3%	25.8%	18.2%	3.27	1.21	3.00	368	4	5
Fringe benefits	4.8%	13.5%	29.8%	30.1%	21.9%	3.51	1.12	4.00	356	16	5
Relations with the community at large	2.5%	5.6%	31.3%	33.0%	27.6%	3.77	1.00	4.00	355	15	7
School mission statement	0.3%	1.4%	20.1%	33.1%	45.2%	4.21	0.83	4.00	363	7	7
Ability of the school to fulfill its stated mission	1.9%	6.6%	22.5%	33.0%	36.0%	3.95	1.01	4.00	364	6	7
Evaluation or assessment of your performance	3.9%	7.5%	22.9%	31.8%	34.0%	3.85	1.09	4.00	362	10	5
Resources available for instruction	3.9%	13.9%	26.5%	30.9%	24.8%	3.59	1.12	4.00	359	13	5
School buildings and facilities	15.2%	12.2%	20.9%	24.5%	27.2%	3.36	1.39	4.00	368	3	6
Availability of computers and other technology	8.2%	12.3%	21.3%	25.4%	32.8%	3.62	1.28	4.00	366	6	5
School governance	5.3%	9.5%	26.7%	30.6%	27.9%	3.66	1.14	4.00	359	12	6
Administrative leadership of school	6.8%	9.8%	23.9%	23.6%	35.9%	3.72	1.24	4.00	368	4	5

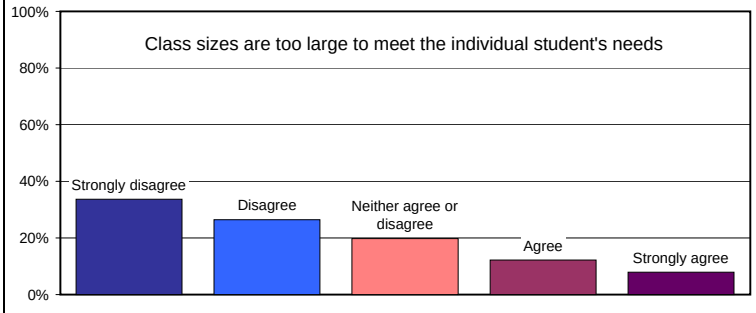


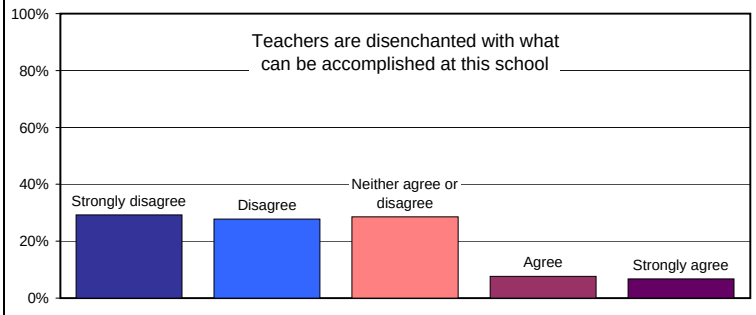
19. To what extent do you agree or disagree with the following statements about your school?

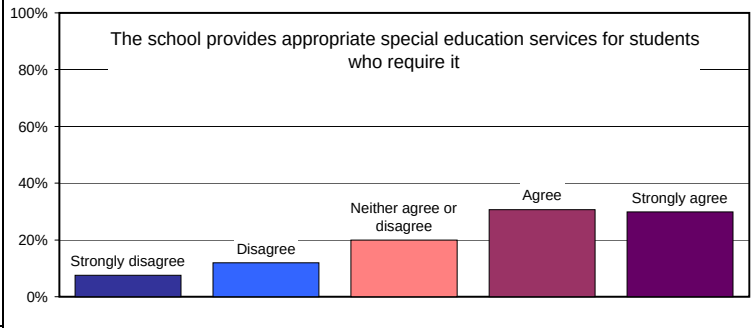
		Strongly disagree 1	2	3	4	Strongly agree 5	Mean	STD	N	Don't know	Mis-sing
a.	This school is meeting students' needs that could not be addressed at other local schools	5.6%	7.0%	19.9%	24.7%	42.7%	3.92	1.19	356	17	4
b.	Students feel safe at this school	0.5%	1.1%	8.1%	25.4%	64.9%	4.53	0.74	370	5	2
c.	Class sizes are too large to meet the individual student's needs	33.7%	26.4%	19.8%	12.2%	7.9%	2.34	1.27	368	6	3
d.	Teachers are disenchanted with what can be accomplished at this school	29.2%	27.8%	28.6%	7.6%	6.8%	2.35	1.17	353	21	3
e.	The school provides appropriate special education services for students who require it	7.5%	11.9%	20.0%	30.7%	29.9%	3.64	1.23	335	35	7





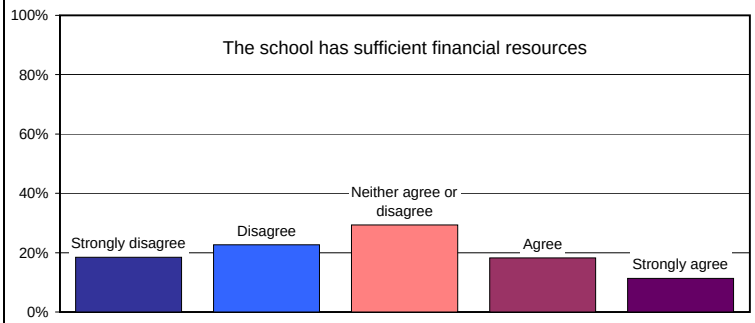


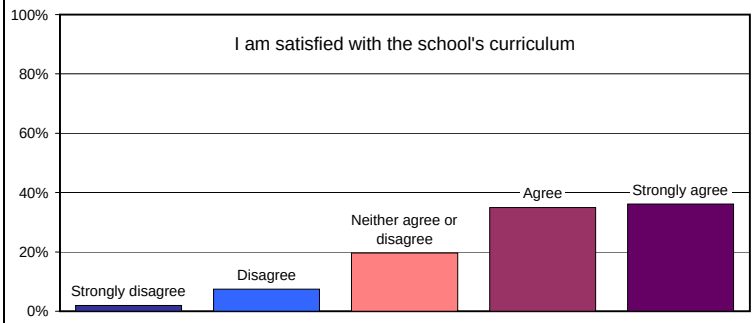


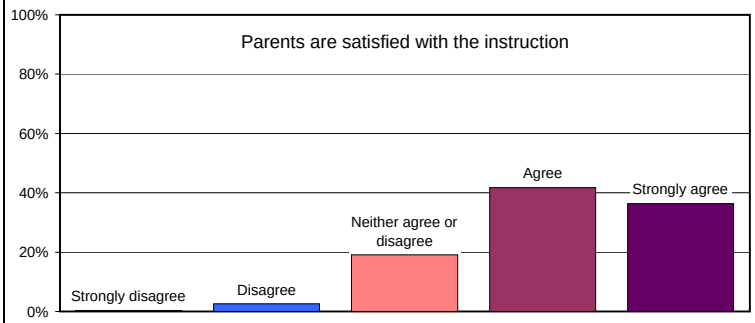


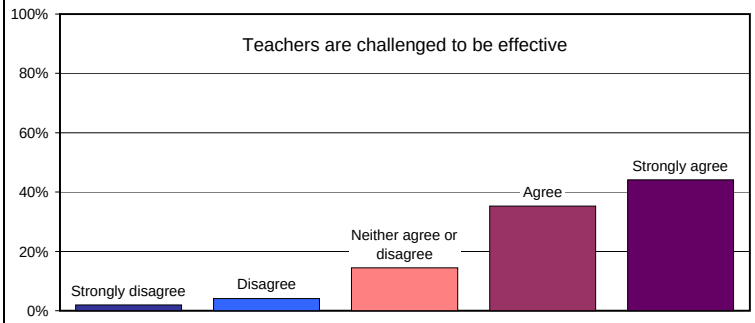
19. To what extent do you agree or disagree with the following statements?

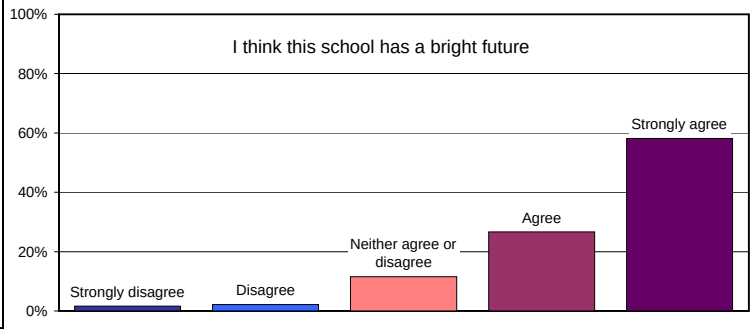
		Strongly disagree 1	2	3	4	Strongly agree 5	Mean	STD	N	Don't know	Mis-sing
f	The school has sufficient financial resources	18.5%	22.7%	29.3%	18.2%	11.3%	2.81	1.25	335	37	5
g	I am satisfied with the school's curriculum	1.9%	7.4%	19.6%	35.0%	36.1%	3.96	1.01	363	11	3
h	Parents are satisfied with the instruction	0.3%	2.6%	19.1%	41.7%	36.3%	4.11	0.82	350	25	2
l	Teachers are challenged to be effective	1.9%	4.1%	14.5%	35.3%	44.1%	4.16	0.95	365	10	2
j	I think this school has a bright future	1.6%	2.2%	11.5%	26.6%	58.1%	4.37	0.89	365	9	3





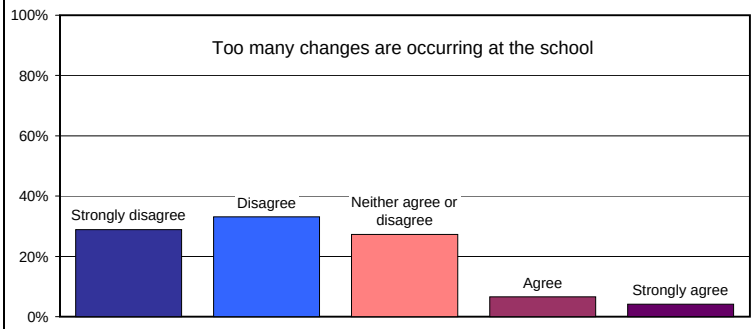


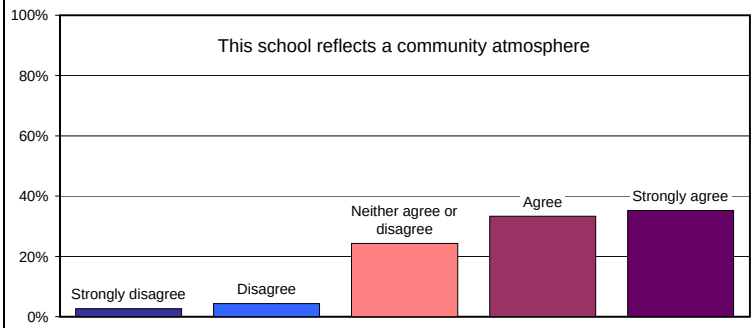


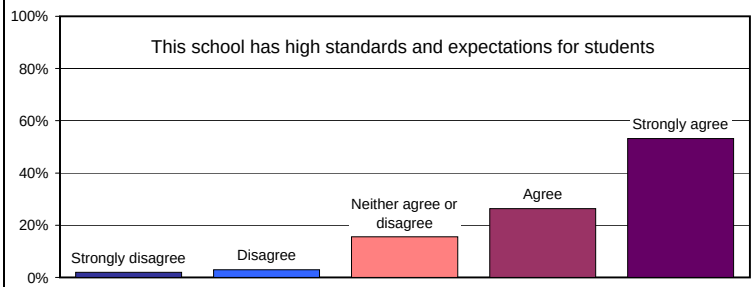


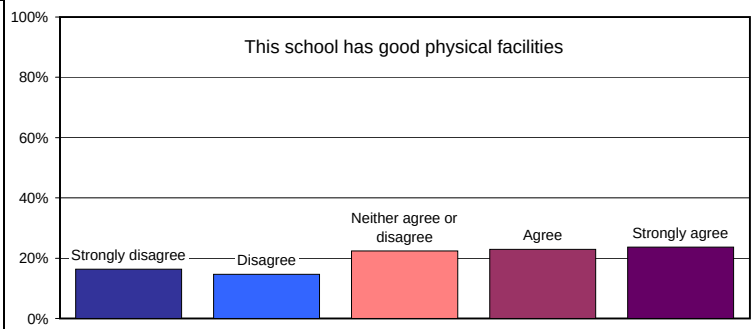
19. To what extent do you agree or disagree with the following statements?

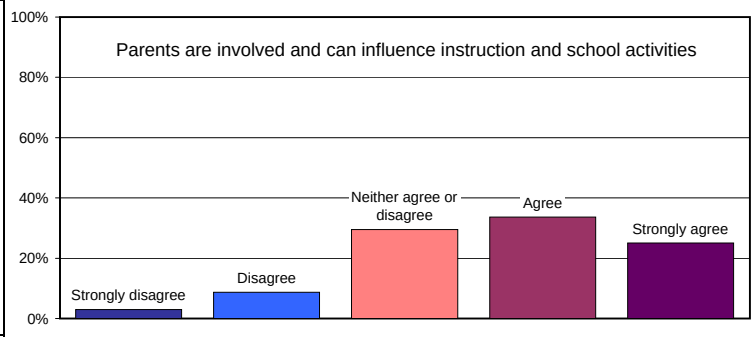
		Strongly disagree 1	2	3	4	Strongly agree 5	Mean	STD	N	Don't know	Mis-sing
k	Too many changes are occurring at the school	28.9%	33.1%	27.3%	6.6%	4.1%	2.24	1.07	363	10	4
l	This school reflects a community atmosphere	2.7%	4.4%	24.3%	33.3%	35.2%	3.94	1.01	366	8	3
m	This school has high standards and expectations for students	1.9%	3.0%	15.6%	26.3%	53.2%	4.26	0.95	372	4	1
n	This school has good physical facilities	16.4%	14.6%	22.4%	22.9%	23.7%	3.23	1.39	371	3	3
o	Parents are involved and can influence instruction and school activities	3.0%	8.7%	29.5%	33.6%	25.1%	3.69	1.04	366	9	2





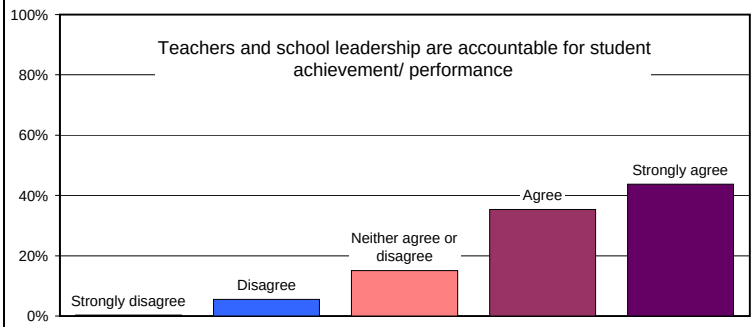


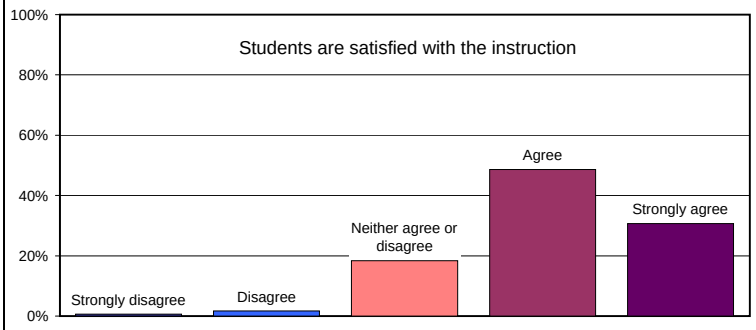


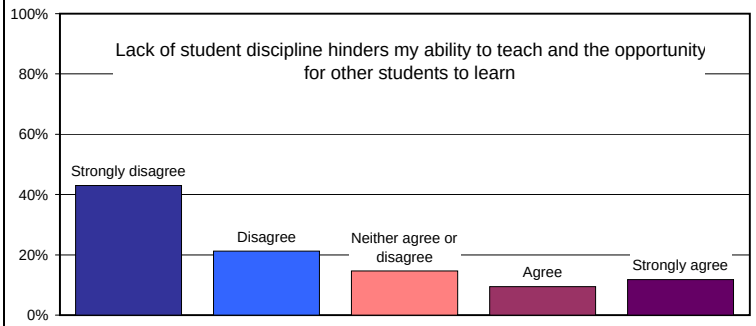


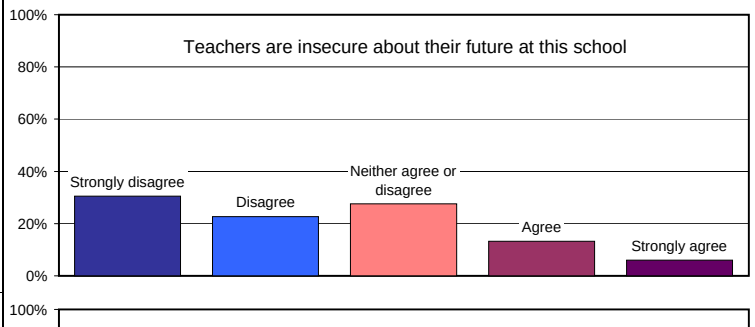
19. To what extent do you agree or disagree with the following statements?

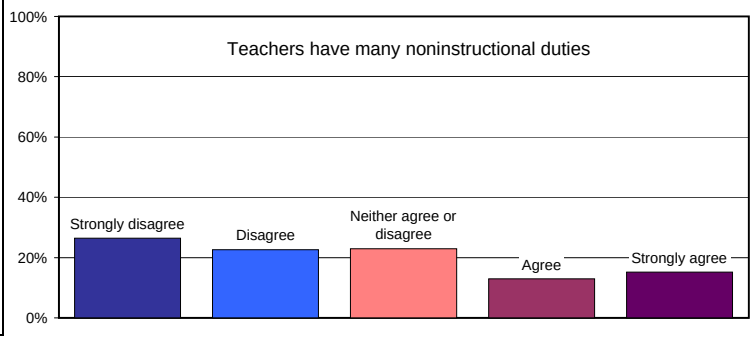
		Strongly disagree 1	2	3	4	Strongly agree 5	Mean	STD	N	Don't know	Mis-sing
p	Teachers and school leadership are accountable for student achievement/ performance	0.3%	5.5%	15.1%	35.4%	43.7%	4.17	0.90	364	11	2
q	Students are satisfied with the instruction	0.6%	1.7%	18.4%	48.6%	30.7%	4.07	0.78	348	27	2
r	Lack of student discipline hinders my ability to teach and the opportunity for other students to learn	43.0%	21.2%	14.6%	9.4%	11.8%	2.26	1.40	363	13	1
s	Teachers are insecure about their future at this school	30.5%	22.7%	27.6%	13.2%	6.0%	2.42	1.22	348	27	2
t	Teachers have many noninstructional duties	26.4%	22.6%	22.9%	12.9%	15.2%	2.68	1.39	363	12	2











Appendix C Characteristics of Charter School Teachers Compiled from the School Profiles

Delaware Charter Schools	Year Opened	Staffing Ratios					Race/Ethnicity 2005-06					Instructional Staff			Average Teacher Salary: School year 05-06
		Students per Teacher	Students per Admin'or	per Instructional Staff	per Pupil Support Staff	School Staff per Admin'or	Amer Indian	Black	Asian-American	Hispanic	White	# of Teachers	# of Librarians	# of Pupil Support Staff	
Academy of Dover	2003	18.3	385.0	13.3	385.0	37.0	0.0%	70.0%	0.0%	0.0%	30.0%	21.5	0.0	1.0	$32,436
Campus Community School	1998	14.7	196.3	11.5	117.8	21	0.0%	9.4%	0.0%	3.8%	86.8%	40.3	0.0	5.4	$44,610
CS of Wilmington	1996	20.3	187.0	19.5	155.8	12.4	0.0%	2.1%	2.1%	2.1%	93.8%	46.0	0.0	6.0	$52,559
Delaware Military Academy	2003	18.9	254.5	18.9	169.7	17.0	0.0%	3.7%	0.0%	0.0%	96.3%	27.0	0.0	3.0	$51,747
East Side CS	1997	12.6	40.4	10.1	202.0	5.0	0.0%	57.1%	0.0%	9.5%	33.3%	16.8	0.0	1.0	$37,957
Kuumba Academy CS	2001	16.2	81.0	10.6	81.0	10.0	0.0%	65.2%	4.3%	0.0%	30.4%	15.0	2.0	3.0	$36,529
Marion T. Academy CS	2000	18.6	167.3	13.2	125.5	16.7	0.0%	56.4%	2.6%	2.6%	38.5%	27.0	0.0	4.5	$37,421
MOT CS	2002	19.8	168.3	15.7	336.5	12.0	0.0%	11.6%	0.0%	2.3%	86.0%	34.0	0.0	2.0	$34,753
Newark CS	2001	24.0	215.7	21.3	323.5	12.0	0.0%	0.0%	0.0%	3.4%	96.6%	27.7	0.0	2.8	$56,337
Positive Outcomes CS	1996	10.4	114.0	8.1	114.0	17.0	0.0%	7.1%	0.0%	0.0%	92.9%	11.0	0.0	1.0	$42,635
Providence Creek Academy CS	2002	17.8	151.3	15.5	605.0	11.0	2.5%	0.0%	2.5%	0.0%	95.0%	34.0	0.0	1.0	$33,361
Sussex Academy of Arts & Scienc	2000	18.9	322.0	18.9	322.0	24.0	0.0%	0.0%	0.0%	0.0%	100.0%	17.0	0.0	1.0	$49,416
Thomas A. Edison CS	2000	18.3	280.0	14.5	280.0	21.3	0.0%	51.7%	0.0%	3.4%	44.8%	46.0	1.0	3.0	$39,886
State of Delaware		15.3	171.3	176.0			0.2%	11.1%	0.5%	1.4%	86.9%	7920.0	127.0	654.0	$52,486
	TOTAL	244.1	2734.1	367.1	3217.8	216.4	0.0%	70.0%	0.0%	0.0%	311.0%	363.3	3.0	34.7	
	AVG	17.4	195.3	26.2	247.5	16.6	0.0%	17.5%	0.0%	0.0%	77.8%	27.9	0.2	2.7	43101
	MED	18.3	187.0	14.5	202.0	16.7	0.0%	0.0%	0.0%	0.0%	90.5%	27.0	0.0	2.8	41260
	STD	3.5	95.9	4.1	147.4	8.1	0.0%	35.0%	0.0%	0.0%	32.4%	11.6	0.6	1.7	
	MIN	10.4	40.4	8.1	81	5	0.0%	0.0%	0.0%	0.0%	0.0%	11	0	1	33361
	MAX	24	385	21.3	605	37	0.0%	70.0%	0.0%	0.0%	100.0%	46	2	6	56337

Appendix D
Legislative Language Regarding
Charter School Finance in Delaware

Title 14.
§ 509. School financing.

(a) Charter schools shall be eligible for public funds under procedures established by this section. Notwithstanding that this Code may establish procedures for the funding of a public school choice program and that such program may include charter schools among those schools which students may choose, funding for charter schools shall be as provided in this section.

(b) A charter school shall receive a payment with respect to each of its students equal to:

(1) From the State on or before November 30, the funding equivalent to the Division I staffing, including fractional funding of partial units, excluding funding for a Superintendent, Division II -- All Other Costs and Energy funding, minor capital improvements and school building maintenance funded generated by the annual student unit count conducted on September 30 of each year in accordance with Department of Education regulations. In the case of Division III -- Equalization, a charter school shall receive from the State an amount that is determined by weighting the Division III per unit values that would have been generated by its students had they been counted in their district of residence. In addition, a charter school shall receive a pro-rated portion of any other funds appropriated to the Department of Education that are intended to be allocated on a student, employee or school state share. Furthermore, a charter school which was in operation as of September 15, 1999, shall receive from the state an amount based on the Education Expense and Property Tax Relief Fund allocations to be determined by weighting the funding that would have been generated by its students had they been counted in their district of residence. For the purposes of calculating such funding, each charter school student shall be counted in a separately reported unit count of the charter school, and not counted for any purposes in the student's district of residence. For any partially funded unit generated at a charter school, the charter school is free to negotiate the use of such unit with the chartering district, and other public school districts, in order to purchase central custodial, administrative, clerical, direct teaching or educationally related services. If such an agreement is not negotiated, a payment based on the average State cost per unit shall be payable to both the charter school and the district issuing the charter, provided that the sum of both fractions justifies an additional unit. The State shall advance 75% of the anticipated funding pursuant to this subsection at the beginning of each fiscal year, provided that the charter school has provided the Department of Education with a preliminary roster of its students on or before May 1 of such year, and does not maintain the status of formal review or probation. The status of formal review or probation shall prompt the Department of Education to advance a level of funding appropriate to pending administrative action. A final roster shall be due September 30.

(2) From the school districts in which its students reside on or before November 30 of each year, the local cost per student (regular or special education, as the case may be), net of transportation expenses provided for pursuant to § 508 of this title. The school districts in which its students reside shall advance at least 35% of the anticipated funding pursuant to this subsection at the beginning of each fiscal year provided that the charter school has provided the school districts of residence with a preliminary roster of its students on or before May 1 of such year. This advance may be paid from Division III -- Equalization funds if the district's prior fiscal year current expense local funds balance was 20% or less pursuant to § 1507 of this title. A final roster shall be due September 30.

(c) If a parent or legal guardian of a student enrolled outside the district pursuant to this chapter moves during the school year to a district different from the district in which his or her child resided at the time of the annual unit count, the child's first district of residence shall continue to be responsible for payments to the charter school for the balance of the school year pursuant to subsection (b)(ii) of this section. The child's new district of residence shall be responsible for all such payments during succeeding years.

(d) The Department of Education shall annually calculate the local cost per student expended by each school district for each type of student for the year immediately preceding based on the formula set forth in subsection (e) of this section, adjusted by a factor necessary to fund the charter school on a basis reasonably equivalent to the current year local cost per student, which factor shall be established in the annual appropriations act. The Department shall annually certify each local district's local cost per student expenditure by September 1st of each year.

(e) Local cost per student as used in this section shall be calculated as follows:

Total Local Operating Expenditure in Preceding Fiscal Year

_____

_____ Total Division I Units minus Special School Units

_____

_____ Number of Pupils per Unit

Where:

Total Local Operating = Sum of all expenditures

Expenditure in from local sources minus

Preceding FY local expenditures for tuition minus local expenditures for debt service minus local expenditures for Minor Capital Improvement minus local cafeteria expenditures minus any other local expenditures deemed by the Secretary of Education to be inappropriate for inclusion for the purpose of this chapter.

Division I Units = Division I Units certified by

For each District the Department of Education or Special School as of September 30th of each year
Pupils per Unit = Number of Pupils required for

particular unit of funding as specified in § 1703 of this title.

(f) For any student, who because of educational need requires services that are appropriately financed pursuant to the provisions of Chapter 6 of this title, either at the outset or subsequent to a decision to enroll in a charter school, the student's district of residence shall remain financially responsible for such student and the charter school shall receive from such district a payment determined in accordance with the provisions of Chapter 6 of this title.

(g) Any payment received by a charter school pursuant to this section may be used for current operations, minor capital improvements, debt service payments or tuition payments.

(h) The Department of Education, in consultation with the Office of Management and Budget, shall annually publish a list of vacant and unused buildings and vacant and unused portions of buildings that are owned by this State or by school districts in this State and that may be suitable for the operation of a charter school. The Department of Education, in consultation with the Office of Management and Budget, shall make the list available to applicants for charter schools and to existing charter schools. The list shall include the address of each building, a short description of the building and the name of the owner of the building.

(i) In return for the receipt by a charter school of state funds allocated directly to the school for extra time, professional development, driver education or disciplinary programs, the school shall provide such programs.

(j) If after September 30, a pupil ceases to be enrolled in a charter school and is thereafter enrolled in a reorganized school district for the balance of the fiscal year, nothing contained in this section shall prevent a charter school which has received any funding for the student and the school district in which the student is subsequently enrolled from entering into an agreement providing for the proration of student funding between or among the charter school and the school district in which the student is subsequently enrolled. Funding in any subsequent fiscal year shall be as otherwise provided in this Code. (70 Del. Laws, c. 179, § 2; 70 Del. Laws, c. 186, § 1; 71 Del. Laws, c. 132, §§ 360, 361; 71 Del. Laws, c. 180, § 26; 71 Del. Laws, c. 354, § 383; 72 Del. Laws, c. 395, § 351; 73 Del. Laws, c. 164, §§ 9, 10; 75 Del. Laws, c. 88, § 16(2); 75 Del. Laws, c. 89, § 425.)

http://www.delcode.state.de.us/title14/c005/

Appendix E
Aggregate and School Level Results on the DSTP

Aggregate Results for All Charter Schools
Weighted Means for Math and Reading Standard Scores in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	2002-03		*2003-04*		*2004-05*		*2005-06*	
	4th	*5th*	*4th*	*5th*	*4th*	*5th*	*4th*	*5th*
Math	429.67	451.94	444.73	464.17	452.24	475.14	450.38	472.42
Charter		**470.68**		**470.72**		**475.60**		**474.44**
		±1.43		±1.24		±1.25		±1.25
Math	441.45	465.17	453.70	477.66	458.65	480.98	460.15	481.13
NonCharter1		**474.36**		**476.93**		**476.41**		**475.18**
		±1.43		±1.24		±1.24		±1.25
Math	443.37	465.29	453.85	476.51	461.31	483.08	461.63	480.75
NonCharter2		**473.24**		**475.66**		**476.36**		**473.60**
		±1.42		±1.24		±1.24		±1.25
Math	443.32	464.36	454.68	476.46	461.98	482.57	461.59	484.93
NonCharter3		**472.44**		**474.94**		**475.14**		**477.81**
		±1.42		±1.24		±1.24		±1.24
Reading	433.29	467.07	455.65	474.32	464.02	483.54	458.53	474.08
Charter		**487.38**		**478.78**		**481.99**		**476.61**
		±1.60		±1.38		±1.39		±1.40
Reading	451.06	475.63	466.62	488.21	468.90	487.93	468.09	486.00
NonCharter1		**483.29**		**484.90**		**483.16**		**481.64**
		±1.59		±1.38		±1.39		±1.39
Reading	450.61	476.58	466.35	488.10	469.79	489.85	467.42	486.05
NonCharter2		**484.61**		**484.98**		**484.45**		**482.17**
		±1.58		±1.38		±1.39		±1.39
Reading	452.11	475.39	467.14	487.26	471.79	489.86	465.88	488.40
NonCharter3		**482.37**		**483.57**		**482.77**		**485.61**
		±1.58		±1.38		±1.39		±1.39

For both Math and Reading, we have listed the actual mean scores and adjusted mean scores for the charter school students as well as for each of the groups that contain matched students for each charter school student. The first row in each cell contains the actual mean scores. The key numbers to review and compare are the numbers highlighted in bold text in the second row of each cell. These bolded numbers refer to the adjusted mean which takes into account differences scores

at the previous grade level. Therefore, all things equal, one would expect the adjusted scores to be equal for the charter schools and each of their three matched groups of noncharter school students. The last row in each cell contains the measure of standard error.

As is apparent, the charter school students tend to lag behind in math and reading by 3 to 9 points except for the first year in reading when they had a higher adjusted mean in reading than their matched peers.

Weighted means for reading standard scores in 4^{th} and 5^{th} Grade with 5^{th} Grade Least Square Means (adjusted for the covariate) ± Standard Error

Table 7:Y Weighted Means for Math and Reading Standard Scores in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	2002-03		2003-04		2004-05		2005-06	
	7th	8th	7th	8th	7th	8th	7th	8th
Math	429.67	451.94	444.73	464.17	452.24	475.14	450.38	472.42
Charter		**520.65**		**519.44**		**516.08**		**522.14**
		±1.19		±1.15		±0.97		±0.98
Math	441.45	465.17	453.70	477.66	458.65	480.98	460.15	481.13
NonCharter1		**518.56**		**516.78**		**513.88**		**514.65**
		±1.21		±1.15		±0.97		±0.99
Math	443.37	465.29	453.85	476.51	461.31	483.08	461.63	480.75
NonCharter2		**517.68**		**517.93**		**514.70**		**515.36**
		±1.20		±1.15		±0.96		±0.98
Math	443.32	464.36	454.68	476.46	461.98	482.57	461.59	484.93
NonCharter3		**518.16**		**515.98**		**514.72**		**514.53**
		±1.20		±1.15		±0.97		±0.98
Reading	517.28	537.53	520.97	538.70	522.81	546.03	516.76	547.30
Charter		**534.55**		**533.10**		**539.29**		**544.92**
		±1.15		±1.10		±0.93		±0.94
Reading	506.01	527.90	507.13	529.73	514.27	536.67	508.59	531.96
NonCharter1		**532.59**		**533.77**		**535.51**		**534.70**
		±1.15		±1.10		±0.93		±0.95
Reading	506.96	531.27	510.75	533.01	515.32	537.63	509.41	533.25
NonCharter2		**535.17**		**534.47**		**535.98**		**535.62**
		±1.15		±1.10		±0.93		±0.95
Reading	507.55	530.51	509.20	531.28	514.82	537.00	511.36	533.53
NonCharter3		**534.10**		**533.91**		**535.50**		**534.47**
		±1.15		±1.10		±0.93		±0.95

Table 7:Z Weighted Means for Math and Reading Standard Scores in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	2002-03		2003-04		2004-05		2005-06	
	9th	10th	9th	10th	9th	10th	9th	10th
Math	569.61	588.19	571.68	599.33	562.92	580.41	567.64	584.93
Charter		**564.00**		**572.88**		**562.70**		**562.50**
		±1.48		±1.37		±1.13		±1.11
Math	524.47	541.03	534.31	551.37	537.21	548.47	544.72	553.94
NonCharter1		**559.57**		**560.41**		**555.45**		**553.34**
		±1.48		±1.35		±1.14		±1.10
Math	525.10	540.93	534.99	550.98	538.79	551.46	541.84	550.42
NonCharter2		**558.31**		**559.57**		**556.43**		**552.21**
		±1.49		±1.36		±1.13		±1.10
Math	525.47	539.71	532.29	548.92	535.98	549.25	540.47	551.36
NonCharter3		**557.29**		**560.02**		**557.23**		**554.84**
		±1.48		±1.36		±1.14		±1.10
Reading	570.39	557.42	568.17	562.32	563.47	551.18	568.34	556.22
Charter		**541.34**		**547.71**		**540.00**		**541.44**
		±1.43		±1.31		±1.09		±1.07
Reading	532.45	525.08	537.07	532.75	541.77	531.67	545.28	533.85
NonCharter1		**535.16**		**539.74**		**535.53**		**535.20**
		±1.42		±1.30		±1.09		±1.05
Reading	533.69	526.20	539.92	532.98	542.16	533.29	545.26	532.39
NonCharter2		**535.30**		**538.34**		**536.64**		**533.63**
		±1.42		±1.30		±1.09		±1.05
Reading	535.76	529.13	537.18	530.41	540.65	532.37	541.66	532.14
NonCharter3		**536.89**		**537.23**		**536.77**		**535.94**
		±1.42		±1.31		±1.08		±1.06

Figure 7:ZZ ANCOVA Summary Table Pooled for Charter School Analysis

		Math			Reading		
	DF	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	1	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
Group (C, NC1, NC2, NC3)	3	=.0131	<.0001	<.0001	=.0282	<.0001	<.0001
Cohort (02-03,03-04,04-05, 05-06)	3	=.0074	<.0001	<.0001	=.0557	<.0001	<.0001
Group x Cohort	9	=.1222	=.0517	=.0354	=.0005	<.0001	=.1400

The only findings that are not statistically significant are underlined in the table. The p-values for

SCHOOL LEVEL ANALYSES

Exhibit X:X
ANCOVA Summary Table for Charter School of Wilmington

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate			<.0001			<.0001
Group (C, NC1, NC2, NC3)			<.0001			<.0001
Cohort			<.0001			<.0001
Group*Cohort			=.0353			=.4341

Exhibit X:X
Charter School of Wilmington
Weighted Means for Math Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	9th	10th	9th	10th	9th	10th	9th	10th
	573.26	592.08	581.30	610.83	586.52	608.29	589.15	609.66
Charter		**569.19**		**580.49**		**573.12**		**571.99**
		±1.58		±1.57		±1.57		±1.48
	529.35	542.20	533.64	549.55	539.07	552.67	542.60	552.48
NonCharter1		**560.39**		**563.02**		**560.91**		**558.00**
		±1.59		±1.54		±1.53		±1.42
	529.67	542.88	535.06	551.14	540.34	551.73	542.87	552.35
NonCharter2		**560.55**		**563.29**		**559.73**		**557.52**
		±1.59		±1.54		±1.53		±1.42
	529.73	543.75	533.01	549.45	541.66	550.66	539.67	551.95
NonCharter3		**561.78**		**563.53**		**557.19**		**560.15**
		±1.60		±1.54		±1.54		±1.42

Weighted Means for Reading Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	572.97	560.02	574.48	568.94	570.10	565.94	583.87	570.84
Charter		**545.18**		**553.04**		**547.00**		**548.51**
		±1.44		±1.41		±1.41		±1.33
	535.04	528.69	537.37	532.83	544.98	536.80	543.80	533.16
NonCharter1		**538.72**		**541.01**		**540.15**		**537.39**
		±1.43		±1.40		±1.38		±1.29
	534.94	527.98	538.79	533.21	543.91	535.54	544.87	535.33
NonCharter2		**538.07**		**540.46**		**539.45**		**538.89**
		±1.43		±1.40		±1.38		±1.29
	536.69	528.59	537.24	535.05	546.80	536.30	542.98	533.37
NonCharter3		**537.36**		**543.22**		**539.41**		**538.12**
		±1.44		±1.40		±1.40		±1.29

Exhibit X:X
ANCOVA Summary Table for Positive Outcomes Charter School

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate		<.0001	<.0001		<.0001	<.0001
Group (C, NC1, NC2, NC3)		=.7779	=.8590		=.1277	=.2662
Cohort		=.1201	=.0197		=.1871	=.4469
Group*Cohort		=.2864	=.0283		=.0498	=.0711

Exhibit X:X
Positive Outcomes Charter School
Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	7th	8th	7th	8th	7th	8th	7th	8th
	467.20	491.80	478.50	507.25	504.60	498.90	496.00	514.25
Charter		**512.13**		**517.26**		**485.09**		**508.29**
		±7.91		±8.75		±5.59		±8.74
	491.40	508.40	463.00	476.75	493.50	505.90	481.75	501.00
NonCharter1		**506.64**		**500.91**		**505.22**		**508.04**
		±7.81		±8.86		±5.53		±8.74
	503.20	518.40	476.50	504.00	495.40	511.60	470.00	493.75
NonCharter2		**505.86**		**515.84**		**506.18**		**511.52**
		±7.85		±8.76		±5.53		±8.80
	505.00	518.80	499.75	511.75	493.40	510.60	466.50	495.75
NonCharter3		**504.62**		**502.36**		**507.01**		**516.71**
		±7.86		±8.75		±5.53		±8.83

Weighted Means for Reading Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	494.20	497.60	494.00	516.75	507.40	517.60	496.25	518.75
Charter		**504.88**		**524.17**		**515.56**		**524.58**
		±8.63		±9.65		±6.09		±9.64
	498.60	540.60	512.75	524.75	513.80	533.00	492.75	498.50
NonCharter1		**544.77**		**518.93**		**526.44**		**506.80**
		±8.62		±9.64		±6.12		±9.65
	507.60	544.40	502.25	538.00	506.00	527.20	483.75	489.75
NonCharter2		**542.22**		**539.60**		**526.15**		**504.41**
		±8.61		±9.63		±6.09		±9.71
	515.60	541.60	521.00	539.50	507.20	531.80	495.00	527.25
NonCharter3		**533.77**		**527.86**		**529.90**		**533.96**
		±8.64		±9.68		±6.09		±9.64

Exhibit X:X
Positive Outcomes Charter School
Weighted Means for Math Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	9th	10th	9th	10th	9th	10th	9th	10th
	474.38	486.63	490.00	479.67	529.75	513.25	465.60	511.80
Charter		**522.44**		**504.52**		**502.21**		**555.04**
		±7.91		±11.99		±10.25		±9.93
	519.50	534.88	535.50	540.50	548.50	545.50	489.20	508.60
NonCharter1		**532.50**		**524.59**		**518.59**		**531.87**
		±7.22		±10.30		±10.49		±9.37
	529.13	549.25	539.50	538.50	547.75	549.25	522.80	530.80
NonCharter2		**538.73**		**519.20**		**522.97**		**525.64**
		±7.28		±10.35		±10.48		±9.14
	534.38	557.50	536.75	535.00	507.00	521.00	519.60	514.60
NonCharter3		**542.54**		**518.03**		**529.21**		**512.14**
		±7.34		±10.32		±10.23		±9.13

Weighted Means for Reading Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	503.00	487.75	508.00	471.00	532.25	522.25	465.20	480.40
Charter		**502.96**		**490.13**		**515.92**		**523.44**
		±6.42		±10.41		±8.95		±8.61
	533.38	523.14	520.00	523.50	553.00	542.00	483.80	479.00
NonCharter1		**517.21**		**526.19**		**520.39**		**508.34**
		±6.77		±8.94		±9.08		±8.29
	535.00	529.00	527.75	534.25	567.25	554.75	524.00	498.80
NonCharter2		**520.65**		**531.23**		**522.65**		**498.55**
		±6.35		±8.94		±9.25		±7.99
	558.88	533.71	532.25	523.25	523.00	515.25	516.80	502.60
NonCharter3		**506.32**		**516.92**		**515.73**		**507.65**
		±7.06		±8.95		±8.93		±8.00

Exhibit X:X
ANCOVA Summary Table for East Side Charter School

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	<.0001			<.0001		
Group (C, NC1, NC2, NC3)	=.0074			=.2062		
Cohort	=.1100			=.1758		
Group*Cohort	=.0122			=.5630		

Exhibit X:X
East Side Charter School
Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
	414.35	444.26	412.50	456.25	421.86	437.14	448.27	444.00
Charter		**459.12**		**472.28**		**447.28**		**437.53**
		±4.00		±5.45		±7.01		±5.58
	439.91	465.96	439.33	466.82	467.14	493.00	459.73	481.27
NonCharter1		**464.74**		**467.09**		**474.66**		**467.60**
		±3.85		±5.56		±7.10		±5.65
	442.52	465.28	426.25	451.67	459.57	483.71	452.55	466.09
NonCharter2		**462.62**		**459.04**		**470.14**		**456.93**
		±3.85		±5.35		±7.04		±5.60
	437.39	462.74	435.00	454.58	442.43	469.14	447.91	466.00
NonCharter3		**463.11**		**456.46**		**466.35**		**459.76**
		±3.84		±5.32		±6.97		±5.58

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	419.52	450.26	428.25	461.83	426.86	436.57	405.18	444.64
Charter		**465.25**		**470.89**		**446.58**		**469.37**
		±5.20		±7.04		±9.20		±7.58
	447.91	479.00	441.75	475.67	471.00	490.29	470.00	491.91
NonCharter1		**474.70**		**475.55**		**470.30**		**472.60**
		±5.07		±7.00		±9.30		±7.47
	443.13	476.70	440.33	458.75	472.86	485.29	454.18	465.09
NonCharter2		**475.64**		**459.60**		**464.03**		**456.53**
		±5.06		±7.00		±9.32		±7.34
	437.87	471.22	439.67	465.50	454.43	471.57	454.73	478.00
NonCharter3		**473.74**		**466.80**		**462.84**		**469.07**
		±5.06		±7.00		±9.19		±7.35

Exhibit X:X
ANCOVA Summary Table for Campus Community School

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
Group =(C, NC1, NC2, NC3)	=.1320	=.0002	=.6538	=.2161	=.1685	=.9471
Cohort	=.0451	=.2346	=.2831	=.8586	<.0001	=.9507
Group*Cohort	=.4646	=.6243	=.9688	=.4517	=.0660	=.9368

Exhibit X:X

Campus Community School

Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
Charter	458.37	472.95 **480.32** ±3.05	448.50	471.89 **487.11** ±4.73	458.64	486.36 **493.52** ±3.48	473.93	499.10 **494.09** ±3.65
NonCharter1	463.74	477.79 **480.89** ±3.04	468.44	488.50 **487.86** ±4.70	472.06	484.52 **481.17** ±3.53	458.67	496.93 **482.59** ±3.67
NonCharter2	462.88	481.23 **485.01** ±3.04	453.50	479.56 **490.80** ±4.72	464.73	489.09 **491.41** ±3.47	476.57	492.53 **485.43** ±3.65
NonCharter3	476.37	492.67 **485.73** ±3.05	457.61	482.06 **490.03** ±4.71	475.88	494.76 **488.20** ±3.48	472.37	491.47 **487.71** ±3.64

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

Charter	463.95	489.05 **498.96** ±3.09	472.56	489.61 **492.84** ±4.74	477.70	502.58 **501.81** ±3.50	485.47	502.77 **495.97** ±3.68
NonCharter1	472.26	491.28 **494.74** ±3.07	492.89	508.06 **495.49** ±4.77	479.91	490.06 **487.58** ±3.50	484.40	503.93 **497.96** ±3.68
NonCharter2	471.14	492.72 **497.05** ±3.07	477.28	503.11 **502.67** ±4.74	477.30	498.36 **497.91** ±3.50	478.37	500.60 **499.32** ±3.67
NonCharter3	478.56	499.67 **498.24** ±3.07	473.28	499.56 **502.23** ±4.74	477.55	497.06 **496.41** ±3.50	477.00	496.93 **496.71** ±3.67

Exhibit X:X

Campus Community School

Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03	03/04	04/05	05/06

	7th	8th	7th	8th	7th	8th	7th	8th
	500.92	509.00	487.22	502.64	500.44	510.56	493.50	497.64
Charter		**501.76**		**508.05**		**503.74**		**497.07**
		±4.14		±2.48		±3.03		±3.38
	492.13	515.46	486.30	503.79	494.91	512.80	491.94	508.14
NonCharter1		**516.13**		**510.24**		**510.96**		**508.97**
		±4.14		±2.48		±3.02		±3.38
	484.96	506.96	484.81	503.66	503.47	520.67	497.22	515.94
NonCharter2		**514.07**		**510.91**		**511.14**		**512.03**
		±4.14		±2.46		±3.03		±3.38
	486.38	502.50	485.68	503.69	509.69	525.49	499.47	511.03
NonCharter3		**508.34**		**510.16**		**510.36**		**505.09**
		±4.14		±2.46		±3.04		±3.38

Weighted Means for Reading Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	510.42	531.46	513.75	529.64	522.49	552.11	504.92	540.72
Charter		**529.24**		**525.34**		**540.80**		**542.65**
		±4.04		±2.42		±2.97		±3.30
	500.50	522.46	500.04	520.97	512.09	541.04	504.50	524.06
NonCharter1		**527.71**		**526.56**		**537.57**		**526.29**
		±4.04		±2.41		±2.95		±3.30
	498.38	524.71	500.66	527.37	516.47	545.60	507.92	532.53
NonCharter2		**531.56**		**529.50**		**538.82**		**532.19**
		±4.05		±2.41		±2.96		±3.30
	500.04	517.96	502.57	528.56	515.29	543.64	506.19	532.61
NonCharter3		**523.55**		**532.25**		**537.76**		**533.57**
		±4.05		±2.40		±2.96		±3.30

Exhibit X:X

Campus Community School

Weighted Means for Math Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	9th	10th	9th	10th	9th	10th	9th	10th
			522.50	539.67	530.08	539.88	509.21	522.92
Charter				**542.15**		**535.62**		**537.23**
				±2.97		±3.49		±3.66
			514.64	527.00	527.96	537.96	535.57	539.79
NonCharter1				**536.46**		**535.58**		**532.67**
				±3.02		±3.49		±3.72
			519.58	532.00	535.23	543.23	523.67	534.71
NonCharter2				**537.10**		**534.37**		**536.15**
				±3.06		±3.50		±3.63
			529.94	543.66	528.65	537.42	529.17	540.38
NonCharter3				**538.03**		**534.42**		**536.92**
				±3.01		±3.49		±3.63

Weighted Means for Reading Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

			536.64	529.83	542.50	534.15	535.33	527.21
Charter				**529.69**		**529.92**		**527.98**
				±3.71		±4.37		±4.55
			525.17	519.83	535.31	526.46	538.63	531.00
NonCharter1				**527.47**		**527.25**		**527.78**
				±3.79		±4.37		±4.65
			532.46	528.14	544.96	532.65	538.63	529.71
NonCharter2				**530.92**		**526.70**		**528.18**
				±3.77		±4.38		±4.55
			532.64	525.43	540.38	535.65	536.42	528.79
NonCharter3				**526.57**		**532.90**		**528.81**
				±3.76		±4.37		±4.55

Exhibit X:X
ANCOVA Summary Table for Thomas Edison Charter School

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	<.0001	<.0001		<.0001	<.0001	
Group (C, NC1, NC2, NC3)	=.8758	=.0003		=.8881	=.0017	
Cohort	=.1475	=.0050		=.8449	=.9219	
Group*Cohort	=.3868	=.3353		=.1171	=.1654	

Exhibit X:X
Thomas Edison
Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
	422.66	443.45	438.78	465.82	453.30	477.36	445.94	468.70
Charter		**458.07**		**467.75**		**467.85**		**464.98**
		±2.63		±2.90		±2.94		±2.85
	425.10	449.84	443.10	466.08	454.14	473.55	451.94	471.51
NonCharter1		**463.54**		**464.60**		**463.38**		**463.07**
		±2.66		±2.90		±2.98		±2.86
	431.22	457.59	434.10	456.00	454.71	478.20	449.25	472.55
NonCharter2		**465.46**		**461.61**		**467.59**		**466.23**
		±2.62		±2.90		±2.98		±2.85
	428.56	450.19	438.63	465.55	452.96	475.24	449.26	469.09
NonCharter3		**460.16**		**467.59**		**466.01**		**462.77**
		±2.63		±2.90		±2.97		±2.85

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	426.08	456.78	444.10	470.51	458.46	479.08	453.49	466.08
Charter		**471.06**		**473.66**		**473.37**		**463.43**
		±2.81		±3.09		±3.13		±3.03
	434.11	460.89	453.00	473.76	463.18	479.29	456.17	477.89
NonCharter1		**471.19**		**471.42**		**470.66**		**473.69**
		±2.82		±3.09		±3.17		±3.03
	436.16	462.78	444.31	462.63	468.51	486.71	455.72	479.06
NonCharter2		**470.83**		**465.65**		**474.80**		**475.04**
		±2.79		±3.09		±3.18		±3.03
	436.49	463.02	448.53	474.16	466.86	482.37	458.51	476.53
NonCharter3		**470.87**		**474.58**		**471.47**		**470.79**
		±2.79		±3.09		±3.18		±3.04

Exhibit X:X

Thomas Edison

Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	7th	8th	7th	8th	7th	8th	7th	8th
	448.41	474.71	458.53	490.76	489.69	516.31	492.63	506.39
Charter		**495.40**		**503.23**		**502.27**		**489.86**
		±3.17		±3.43		±3.34		±2.97
	462.33	481.88	474.85	492.62	476.47	490.59	476.42	490.49
NonCharter1		**492.13**		**491.20**		**486.27**		**487.74**
		±3.16		±3.41		±3.42		±2.97
	464.56	480.24	477.26	497.53	479.56	493.74	472.11	485.49
NonCharter2		**489.13**		**494.06**		**486.78**		**487.50**
		±3.19		±3.42		±3.37		±3.00
	464.67	475.85	477.94	501.06	474.22	488.20	475.84	490.69
NonCharter3		**488.29**		**497.02**		**485.91**		**488.43**
		±3.19		±3.42		±3.37		±2.97

Weighted Means for Reading Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	473.14	505.00	473.57	514.09	497.03	529.83	490.46	526.28
Charter		**513.71**		**521.82**		**523.49**		**524.08**
		±2.88		±3.20		±3.10		±2.74
	473.62	506.32	485.71	512.32	493.64	518.00	491.89	515.38
NonCharter1		**515.16**		**513.12**		**512.60**		**512.27**
		±2.99		±3.18		±3.19		±2.77
	473.73	507.85	491.59	515.79	497.89	521.46	485.76	513.00
NonCharter2		**517.15**		**512.88**		**512.95**		**513.76**
		±2.95		±3.19		±3.15		±2.77
	478.32	512.20	490.53	519.97	494.11	516.80	494.73	519.36
NonCharter3		**517.19**		**517.72**		**510.74**		**514.46**
		±3.02		±3.18		±3.15		±2.77

Exhibit X:X
ANCOVA Summary Table for Sussex Academy of Arts and Sciences

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate		<.0001			<.0001	
Group (C, NC1, NC2, NC3)		=.0021			=.0002	
Cohort		=.0239			<.0001	
Group*Cohort		=.2776			=.2965	

Exhibit X:X
Sussex Academy of Arts and Sciences
Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	7th	8th	7th	8th	7th	8th	7th	8th
Charter	498.87	525.62 **532.61** ±1.97	515.73	535.41 **527.58** ±2.27	518.74	536.57 **526.10** ±2.10	526.69	542.25 **524.79** ±2.13
NonCharter1	498.43	514.70 **522.08** ±1.97	505.96	523.29 **524.05** ±2.27	503.56	520.22 **523.13** ±2.10	506.59	522.50 **521.85** ±2.13
NonCharter2	496.94	517.92 **526.61** ±1.97	512.99	527.21 **520.93** ±2.29	504.29	518.04 **520.31** ±2.10	512.13	527.92 **523.26** ±2.12
NonCharter3	493.30	513.91 **525.80** ±1.98	506.99	526.11 **525.97** ±2.27	498.51	517.76 **525.16** ±2.11	515.85	527.80 **519.87** ±2.12

Weighted Means for Reading Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

Charter	526.28	549.88 **547.39** ±1.87	541.99	555.13 **542.31** ±2.17	543.06	558.81 **545.29** ±2.01	538.20	564.23 **553.91** ±2.02
NonCharter1	516.12	533.56 **537.72** ±1.88	523.75	541.23 **540.41** ±2.15	518.59	537.63 **540.32** ±2.00	512.10	539.98 **546.43** ±2.02
NonCharter2	515.03	534.11 **538.99** ±1.88	524.99	544.96 **542.72** ±2.17	516.97	538.22 **541.99** ±2.00	515.97	541.51 **545.80** ±2.01
NonCharter3	513.14	535.42 **541.54** ±1.88	521.63	540.51 **541.07** ±2.15	516.38	540.11 **544.27** ±2.00	519.58	543.21 **544.64** ±2.02

Exhibit X:X
ANCOVA Summary Table for Thomas Delaware Military Academy

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate			<.0001			<.0001
Group (C, NC1, NC2, NC3)			=.4715			=.8788
Cohort			=.0863			=.0377
Group*Cohort			=.0354			=.9846

Exhibit X:X

Delaware Military Academy

Weighted Means for Math Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	9th	10th	9th	10th	9th	10th	9th	10th
					527.18	539.87	534.87	544.29
Charter						**546.23**		**543.18**
						±1.75		±1.83
					533.66	545.62	537.62	546.57
NonCharter1						**546.20**		**544.33**
						±1.75		±1.84
					535.22	548.96	533.84	544.32
NonCharter2						**547.24**		**544.72**
						±1.77		±1.83
					538.72	550.38	532.13	541.19
NonCharter3						**546.27**		**543.16**
						±1.75		±1.83

Weighted Means for Reading Standard Score in 9th and 10th Grade with 10th Grade Least Square Means (adjusted for the covariate) ± Standard Error

					539.95	528.53	544.22	532.25
Charter						**528.84**		**529.94**
						±1.94		±2.04
					538.61	531.37	539.50	528.63
NonCharter1						**532.47**		**529.32**
						±1.95		±2.04
					540.08	534.65	537.64	527.87
NonCharter2						**534.19**		**529.70**
						±1.96		±2.06
					541.86	531.86	537.64	527.21
NonCharter3						**530.88**		**528.40**
						±1.96		±2.06

Exhibit X:X
ANCOVA Summary Table for Kuumba Academy

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	<.0001			<.0001		
Group (C, NC1, NC2, NC3)	=.4245			=.5438		
Cohort	=.0300			=.0026		
Group*Cohort	=.9942			=.7147		

Exhibit X:X
Kuumba Academy
Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
	436.00	457.14	450.37	460.32	469.46	483.69	429.12	454.47
Charter		**463.27**		**454.61**		**462.27**		**466.27**
		±5.06		±4.35		±5.36		±4.63
	447.57	471.79	440.11	454.79	437.82	460.00	451.88	470.06
NonCharter1		**468.39**		**457.54**		**466.63**		**463.11**
		±5.05		±4.34		±5.70		±4.60
	446.00	472.71	431.05	449.26	434.00	461.67	450.12	472.41
NonCharter2		**470.61**		**459.47**		**469.44**		**466.92**
		±5.05		±4.37		±5.47		±4.59
	452.29	475.71	433.05	454.89	442.33	465.58	448.65	471.29
NonCharter3		**468.43**		**463.45**		**466.50**		**467.01**
		±5.07		±4.36		±5.45		±4.59

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	447.21	470.71	441.58	466.21	472.77	481.77	442.59	459.71
Charter		**473.51**		**473.06**		**466.19**		**465.83**
		±5.34		±4.59		±5.60		±4.85
	455.79	490.00	445.53	459.11	446.45	463.92	461.76	477.94
NonCharter1		**486.63**		**463.12**		**468.53**		**470.27**
		±5.34		±4.58		±6.02		±4.86
	454.86	485.64	445.58	464.58	440.58	463.75	459.59	476.65
NonCharter2		**482.94**		**468.55**		**471.32**		**470.55**
		±5.34		±4.58		±5.78		±4.85
	460.57	488.14	437.89	461.47	449.92	473.58	461.47	479.71
NonCharter3		**481.33**		**470.97**		**474.44**		**472.25**
		±5.35		±4.61		±5.76		±4.86

Exhibit X:X
ANCOVA Summary Table for Marion T. Academy

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	<.0001	<.0001		<.0001	<.0001	
Group (C, NC1, NC2, NC3)	<.0665	=.0675		<.3193	=.1168	
Cohort	<.1135	=.2893		<.1069	=.0017	
Group*Cohort	=.7384	=.4642		<.0001	=.4136	

Exhibit X:X
Marion T. Academy
Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
	419.43	446.90	419.65	438.96	438.96	463.38	435.67	460.30
Charter		**463.99**		**455.87**		**465.18**		**465.02**
		±2.68		±2.82		±3.81		±3.59
	449.37	468.31	447.07	466.65	446.04	469.24	455.96	478.89
NonCharter1		**462.61**		**462.70**		**466.07**		**468.16**
		±2.62		±2.75		±3.73		±3.61
	443.00	464.88	446.00	467.46	443.56	464.96	448.93	470.22
NonCharter2		**464.03**		**464.32**		**463.68**		**464.85**
		±2.61		±2.75		±3.73		±3.59
	448.78	470.27	443.17	467.85	445.48	473.60	453.07	479.93
NonCharter3		**465.01**		**466.86**		**470.85**		**471.40**
		±2.62		±2.75		±3.73		±3.60

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	418.86	468.02	436.83	451.59	447.60	476.58	446.70	460.07
Charter		**490.70**		**461.84**		**479.00**		**463.50**
		±3.16		±3.21		±4.41		±4.15
	458.06	478.59	458.83	477.39	463.17	482.28	462.15	489.59
NonCharter1		**474.16**		**472.43**		**472.83**		**482.34**
		±3.03		±3.19		±4.42		±4.16
	453.94	477.20	453.89	480.43	460.84	476.12	456.48	481.33
NonCharter2		**475.61**		**478.89**		**469.77**		**478.00**
		±3.02		±3.18		±4.32		±4.15
	460.12	478.55	452.09	479.50	458.40	482.92	457.44	488.48
NonCharter3		**472.70**		**479.20**		**478.25**		**484.48**
		±3.03		±3.18		±4.32		±4.16

Exhibit X:X

Marion T. Academy

Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	7th	8th	7th	8th	7th	8th	7th	8th
			464.27	477.27	461.07	464.46	446.83	459.54
Charter				**490.98**		**470.97**		**481.38**
				±5.44		±3.43		±5.33
			454.18	472.55	473.93	484.39	479.77	500.69
NonCharter1				**485.08**		**479.65**		**490.84**
				±5.49		±3.42		±5.04
			468.55	488.36	473.00	491.18	476.46	493.54
NonCharter2				**488.33**		**487.25**		**486.58**
				±5.44		±3.42		±5.02
			477.73	489.36	469.61	483.75	469.54	479.38
NonCharter3				**481.30**		**482.79**		**478.49**
				±5.46		±3.41		±5.00

Weighted Means for Reading Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

			480.73	504.73	472.43	508.00	463.08	478.23
Charter				**508.82**		**517.71**		**497.29**
				±5.50		±3.50		±5.36
			473.00	503.27	491.79	521.43	491.23	517.46
NonCharter1				**512.60**		**518.03**		**514.44**
				±5.53		±3.45		±5.06
			490.45	527.92	496.72	526.86	495.85	521.69
NonCharter2				**515.42**		**520.12**		**515.54**
				±5.49		±3.47		±5.07
			493.45	519.91	487.82	518.36	499.46	510.69
NonCharter3				**515.38**		**517.64**		**502.09**
				±5.50		±3.44		±5.08

Exhibit X:X
ANCOVA Summary Table for Academy of Dover

		Math			Reading		
	DF	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	1	<.0001			<.0001		
Group C, NC1, NC2, NC3	3	=.0231			=.0361		
Cohort 02/03,03/04,04/05,/05/06	1	=.2697			=.0202		
Group*Cohort	3	=.0299			=.0222		

Exhibit X:X
Academy of Dover
Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
					427.52	454.00	428.33	441.58
Charter						**459.76**		**446.63**
						±4.48		±4.72
					429.52	449.95	437.42	466.00
NonCharter1						**455.20**		**466.62**
						±4.37		±4.56
					434.32	459.92	451.79	476.84
NonCharter2						**462.01**		**460.04**
						±4.34		±4.63
					441.76	463.71	457.26	481.79
NonCharter3						**461.79**		**470.78**
						±4.34		±4.70

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

					446.52	476.00	434.17	441.95
Charter						**476.42**		**448.25**
						±5.05		±5.38
					440.81	468.33	448.47	472.37
NonCharter1						**471.79**		**472.15**
						±4.94		±5.18
					449.48	479.33	458.26	478.32
NonCharter2						**478.64**		**473.41**
						±4.93		±5.21
					447.76	475.52	458.00	479.63
NonCharter3						**475.65**		**474.85**
						±4.92		±5.21

Exhibit X:X
ANCOVA Summary Table for Providence Creek Academy

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	<.0001	<.0001		<.0001	<.0001	
Group (C, NC1, NC2, NC3)	=.0015	=.0682		=.0010	=.3614	
Cohort	=.0666	=.0710		=.0005	<.0001	
Group*Cohort	=.4893	=.1955		=.0160	=.4617	

Exhibit X:X
Providence Creek Academy
Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
			455.02	469.11	454.16	469.52	448.44	470.14
Charter				**477.79**		**479.10**		**484.75**
				±2.76		±3.06		±3.36
			461.87	485.35	466.66	495.45	474.31	496.39
NonCharter1				**487.84**		**493.62**		**487.65**
				±2.77		±3.01		±3.34
			463.35	482.98	475.39	503.11	472.39	494.83
NonCharter2				**484.14**		**493.40**		**487.82**
				±2.77		±3.03		±3.34
			466.25	484.85	462.11	483.18	480.94	501.03
NonCharter3				**483.38**		**485.45**		**486.29**
				±2.77		±3.01		±3.36

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

			465.70	479.87	461.64	477.68	461.47	475.19
Charter				**485.43**		**486.10**		**483.72**
				±2.56		±2.82		±3.11
			473.29	489.92	478.43	502.18	475.69	493.56
NonCharter1				**489.25**		**498.80**		**492.09**
				±2.58		±2.80		±3.10
			485.17	485.25	483.84	505.14	473.39	489.36
NonCharter2				**485.17**		**497.95**		**489.52**
				±2.58		±2.81		±3.10
			480.48	491.40	471.14	490.77	485.08	509.11
NonCharter3				**485.15**		**492.51**		**501.05**
				±2.58		±2.80		±3.11

Exhibit X:X

Providence Creek Academy

Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	7th	8th	7th	8th	7th	8th	7th	8th
					469.41	480.76	485.06	503.61
Charter						**506.19**		**514.22**
						±3.66		±3.36
					510.34	516.76	502.67	520.33
NonCharter1						**503.43**		**514.28**
						±3.60		±3.35
					503.66	522.38	498.39	518.97
NonCharter2						**515.39**		**516.69**
						±3.58		±3.35
					498.66	519.52	501.61	519.61
NonCharter3						**517.26**		**514.55**
						±3.57		±3.35

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

					489.17	515.10	493.21	527.67
Charter						**526.08**		**535.87**
						±3.60		±3.36
					516.24	525.51	505.58	535.91
NonCharter1						**517.60**		**534.62**
						±3.57		±3.33
					510.62	531.52	506.21	535.30
NonCharter2						**527.77**		**534.58**
						±3.56		±3.33
					510.55	530.86	510.39	539.09
NonCharter3						**526.16**		**535.50**
						±3.55		±3.33

Exhibit X:X
ANCOVA Summary Table for Mot Charter School

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate	<.0001	<.0001		<.0001	<.0001	
Group (C, NC1, NC2, NC3)	=.8046	=.1543		=.6109	=.0043	
Cohort	=.0053	=.4960		=.0085	=.1384	
Group*Cohort	=.4007	=.0024		=.5221	=.1165	

Exhibit X:X
Mot Charter School
Weighted Means for Math Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	4th	5th	4th	5th	4th	5th	4th	5th
			464.77	479.23	460.21	485.55	463.30	490.45
Charter				**485.33**		**495.63**		**496.90**
				±2.75		±2.67		±2.75
			471.84	488.11	497.37	501.77	479.05	596.07
NonCharter1				**488.97**		**497.06**		**491.60**
				±2.74		±2.61		±2.75
			470.98	491.96	478.68	499.31	474.73	496.13
NonCharter2				**493.46**		**495.11**		**494.85**
				±2.75		2.61		±2.74
			468.45	487.84	482.13	502.79	481.07	499.86
NonCharter3				**491.21**		**495.04**		**493.89**
				±2.75		±2.62		±2.75

Weighted Means for Reading Standard Score in 4th and 5th Grade with 5th Grade Least Square Means (adjusted for the covariate) ± Standard Error

			477.43	491.73	477.81	492.08	475.82	493.39
Charter				**494.54**		**494.79**		**497.23**
				±2.75		±2.63		±2.75
			480.88	495.54	482.42	504.31	479.82	494.50
NonCharter1				**495.95**		**503.68**		**495.63**
				±2.75		±2.61		±2.75
			486.14	497.41	486.40	504.11	479.86	493.70
NonCharter2				**494.26**		**500.79**		**495.48**
				±2.75		±2.61		±2.75
			480.30	492.64	486.68	505.35	484.88	499.46
NonCharter3				**493.44**		**501.84**		**497.17**
				±2.75		±2.61		±2.75

Exhibit X:X

Mot Charter School

Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	7th	8th	7th	8th	7th	8th	7th	8th
					505.84	520.02	496.26	522.08
Charter						**513.40**		**525.32**
						±2.51		±2.55
					502.72	516.94	491.51	505.89
NonCharter1						**514.14**		**513.57**
						±2.49		±2.56
					510.56	528.75	494.36	506.56
NonCharter2						**518.62**		**511.58**
						±2.51		±2.55
					505.09	521.25	490.34	508.11
NonCharter3						**516.24**		**516.89**
						±2.49		±2.56

Weighted Means for Reading Standard Score in 7th and 8th Grade with 7th Grade Least Square Means (adjusted for the covariate) ± Standard Error

					517.33	544.17	515.69	545.95
Charter						**539.62**		**542.73**
						±2.46		±2.49
					516.56.	539.45	500.30	522.46
NonCharter1						**535.60**		**530.31**
						±2.44		±2.51
					520.08	544.53	503.00	524.33
NonCharter2						**538.15**		**530.23**
						±2.44		±2.50
					517.28	539.22	498.20	525.00
NonCharter3						**534.85**		**534.36**
						±2.44		±2.52

Exhibit X:X
ANCOVA Summary Table for Newark Charter School

	Math			Reading		
	4 - 5	7 - 8	9 - 10	4 - 5	7 - 8	9 - 10
Covariate		<.0001			<.0001	
Group (C, NC1, NC2, NC3)		<.0001			=.0494	
Cohort		<.1323			<.0001	
Group*Cohort		<.0001			<.0001	

Exhibit X:X
Newark Charter School
Weighted Means for Math Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

	02/03		03/04		04/05		05/06	
	7th	8th	7th	8th	7th	8th	7th	8th
Charter	516.44	532.25 **525.88** ±1.90	524.11	540.26 **527.26** ±1.87	534.60	550.31 **528.25** ±1.73	525.42	554.31 **540.18** ±1.69
NonCharter1	494.88	515.78 **528.13** ±1.92	502.59	523.45 **529.04** ±1.86	507.36	523.59 **524.93** ±1.72	506.16	521.07 **523.66** ±1.69
NonCharter2	495.71	514.47 **525.99** ±1.91	497.05	516.97 **527.29** ±1.88	506.61	524.62 **526.61** ±1.72	514.14	527.99 **523.72** ±1.69
NonCharter3	493.33	513.43 **526.97** ±1.92	497.85	518.58 **528.20** ±1.88	509.63	523.81 **523.17** ±1.72	508.37	525.09 **525.80** ±1.69

Weighted Means for Reading Standard Score in 7th and 8th Grade with 8th Grade Least Square Means (adjusted for the covariate) ± Standard Error

Charter	527.35	541.05 **535.23** ±1.83	529.02	543.63 **536.44** ±1.80	536.12	556.20 **544.58** ±1.66	525.06	556.61 **552.30** ±1.62
NonCharter1	507.86	533.58 **540.44** ±1.84	516.91	533.91 **534.68** ±1.79	515.21	541.78 **544.01** ±1.65	515.34	536.74 **538.87** ±1.62
NonCharter2	513.12	536.66 **540.10** ±1.84	514.32	533.14 **535.94** ±1.79	515.62	539.99 **541.94** ±1.65	517.68	539.43 **540.01** ±1.62
NonCharter3	511.57	533.06 **537.46** ±1.84	514.07	533.31 **536.01** ±1.81	518.34	539.68 **539.82** ±1.65	516.01	541.09 **542.78** ±1.62

Appendix F
School Level Result Regarding the Stayer and Leaver Analysis

Table 5:Xb Comparison of DSTP Results (Math Standard Score) for Stayers and Leavers by School

			Mean Scale Score for Stayers and Leavers		
	Grades Evaluated	*year*	*Stayers (n)*	*Leavers (n)*	*Newcomer (n)*
Academy of Dover	4/5	2003			
		2004			
		2005	449.86 (22)	461.58 (24)	448.20 (10)
		2006	438.45 (20)	453.50 (14)	448.29 (7)
Positive Outcomes	7/8	2003	490.00 (8)	464.00 (2)	508.00 (1)
		2004	511.38 (8)		482.60 (8)
		2005	500.55 (11)	430.00 (2)	460.14 (7)
		2006	488.63 (8)	435.50 (2)	490.29 (7)
	9/10	2003	492.79 (14)		533.50 (2)
		2004	504.09 (11)	470.00 (2)	476.33 (3)
		2005	497.00 (8)	496.67 (3)	496.00 (4)
		2006	516.10 (10)	474.00 (1)	512.33 (3)
Campus Community Schools	4/5	2003	471.26 (47)	547.00 (1)	506.00 (1)
		2004	468.85 (20)	515.50 (2)	469.50 (6)
		2005	485.76 (37)	507.33 (3)	487.50 (6)
		2006	499.88 (32)	490.50 (2)	481.75 (4)
	7/8	2003	506.58 (26)	530.67 (3)	481.17 (41)
		2004	502.00 (70)	505.39 (18)	490.37 (19)
		2005	506.63 (51)	500.57 (7)	499.13 (23)
		2006	493.17 (41)	519.46 (13)	483.10 (21)
	9/10	2003			507.65 (23)
		2004	542.89 (37)	509.83 (6)	512.40 (5)
		2005	535.14 (29)	531.00 (5)	548.14 (7)

		2006	528.57 (21)	531.25 (4)	543.20 (5)
East Side Charter School	4/5	2003	444.77 (26)	432.00 (3)	438.80 (5)
		2004	453.43 (14)	425.00 (2)	479.00 (1)
		2005	440.50 (8)	451.33 (3)	464.00 (1)
		2006	444.60 (11)	489.00 (1)	427.00 (1)
Charter School of Wilmington	9/10	2003	591.98 (211)	577.25 (4)	592.60 (5)
		2004	611.20 (220)	598.00 (4)	637.67 (3)
		2005	608.71 (226)	572.00 (2)	579.33 (3)
		2006	609.66 (254)	582.00 (1)	594.50 (2)
Sussex Academy of Arts and Sciences	7/8	2003	525.62 (105)	522.57 (7)	
		2004	535.77 (81)	484.33 (3)	535.00 (1)
		2005	535.13 (96)	537.29 (7)	531.00 (1)
		2006	540.85 (94)	525.50 (6)	
Thomas Edison Charter School	4/5	2003	437.42 (73)	443.21 (19)	434.33 (12)
		2004	460.00 (58)	460.28 (18)	449.44 (16)
		2005	472.63 (56)	459.00 (9)	474.40 (5)
		2006	464.63 (57)	474.20 (10)	
	7/8	2003	470.52 (48)	472.91 (22)	440.50 (2)
		2004	484.78 (41)	488.83 (6)	497.56 (9)
		2005	508.95 (42)	477.38 (8)	461.00 (2)
		2006	505.56 (50)	470.00 (9)	486.29 (7)
Delaware Military Academy	9/10	2003			
		2004			526.55 (53)
		2005	539.51 (118)	534.29 (7)	503.67 (3)
		2006	542.24 (113)	538.00 (5)	524.33 (3)
Kuumba Academy	4/5	2003	459.07 (15)	479.00 (1)	469.00 (2)
		2004	459.85 (20)	455.43 (7)	463.00 (3)
		2005	482.93 (15)	458.60 (5)	465.00 (3)
		2006	453.95 (19)	465.67 (3)	448.00 (1)
Marion T Academy	4/5	2003	443.68 (59)	437.15 (13)	453.00 (5)
		2004	436.56 (50)	445.29 (21)	441.38 (13)

		2005	457.77 (26)	461.00 (12)	445.45 (11)
		2006	455.61 (36)	460.50 (14)	464.33 (3)
	7/8	2003			
		2004	467.17 (18)	479.57 (7)	456.17 (6)
		2005	462.13 (30)	475.87 (15)	460.17 (6)
		2006	459.92 (12)	465.47 (17)	436.00 (2)
Providence Creek Academy	4/5	2003			
		2004	462.92 (62)	475.25 (8)	469.72 (18)
		2005	466.10 (48)	482.62 (13)	469.07 (15)
		2006	463.67 (42)	470.41 (17)	452.50 (18)
	7/8	2003			
		2004			
		2005	473.82 (34)	501.00 (10)	493.25 (4)
		2006	501.62 (39)	493.83 (18)	491.14 (7)
MOT Charter School	4/5	2003			
		2004	474.20 (61)	463.86 (7)	496.83 (12)
		2005	380.24 (66)	433.00 (1)	525.00 (3)
		2006	486.33 (66)	498.25 (4)	481.00 (5)
	7/8	2003			
		2004			
		2005	514.39 (69)	563.00 (1)	511.00(1)
		2006	519.70 (66)	516.89 (9)	497.33 (3)
Newark Charter School	7/8	2003	531.57 (124)	542.00 (1)	519.00 (4)
		2004	538.95 (127)	509.00 (3)	524.20 (5)
		2005	547.96 (152)	512.50 (2)	531.30 (5)
		2006	552.87 (157)	526.25 (4)	569.00 (2)

Stayer=A stayer is defined as a student who is present and completes a test in two consecutive years at a charter school.

Leaver=A leaver is defined as a student that is present for a state test in first year, but then is missing in the subsequent year.

Newcomer=A newcomer is defined as a student that was not present in the school in the first year but appeared in the second year.

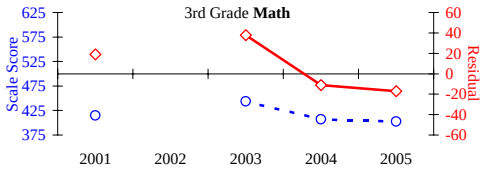
Appendix G
School Level Results From the Residual Gains Analysis

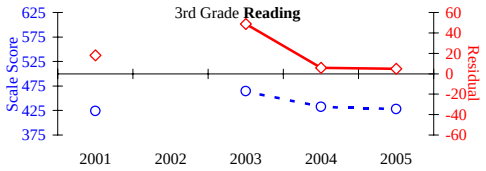
Appendix G
School Level Results From the Residual Gains Analysis

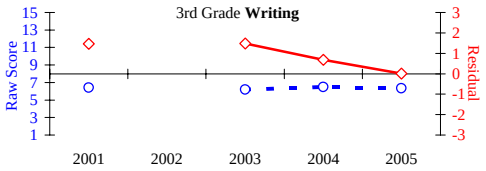
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 3 Results by Grade and Year

School Name	Year	3rd Grade Math				3rd Grade Reading				3rd Grade Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
East Side Charter School	2001	31	414.84	395.85	18.99	31	423.77	405.71	18.06	31	6.42	4.95	1.47
	2002	13				13				14			
	2003	16	443.50	405.71	37.79	16	464.50	415.81	48.69	16	6.19	4.71	1.48
	2004	17	406.94	418.16	-11.22	17	432.47	426.76	5.71	17	6.47	5.78	0.69
	2005	19	402.47	419.66	-17.19	16	427.75	423.02	4.73	19	6.32	6.31	0.01
Average annual change			-3.09	5.95	-9.05		1.00	4.33	-3.33		-0.02	0.34	-0.36
Campus Community Charter School	2001	61	437.26	448.97	-11.71	60	442.83	451.83	-9.00	61	5.62	6.56	-0.94
	2002	24	427.17	452.03	-24.86	24	439.50	456.83	-17.33	24	6.42	6.95	-0.53
	2003	40	447.20	451.44	-4.24	38	463.18	456.47	6.71	40	6.70	6.35	0.35
	2004	34	444.50	453.37	-8.87	31	459.32	458.08	1.24	34	6.85	6.84	0.01
	2005	42	455.50	454.54	0.96	40	461.05	454.20	6.85	42	8.29	7.52	0.77
Average annual change			4.56	1.39	3.17		4.56	0.59	3.96		0.67	0.24	0.43
Thomas A. Edison Charter School	2001	98	385.27	405.41	-20.14	94	397.11	414.73	-17.62	97	4.69	5.30	-0.61
	2002	110	391.38	406.76	-15.38	105	398.20	418.45	-20.25	109	4.69	5.57	-0.88
	2003	98	401.88	414.35	-12.47	96	406.28	423.17	-16.89	99	4.55	5.13	-0.58
	2004	96	407.23	418.74	-11.51	89	419.87	427.65	-7.78	96	4.94	5.78	-0.84
	2005	74	416.51	419.10	-2.59	66	422.64	422.52	0.12	74	5.34	6.22	-0.88
Average annual change			7.81	3.42	4.39		6.38	1.95	4.44		0.16	0.23	-0.07
Kuumba Academy Charter School	2001												
	2002	22	392.82	431.77	-38.95	21	409.95	446.74	-36.79	21	5.29	6.81	-1.52
	2003	34	396.12	420.84	-24.72	33	406.55	428.25	-21.70	34	4.97	5.46	-0.49
	2004	32	406.78	428.66	-21.88	27	414.37	436.15	-21.78	32	5.72	6.42	-0.70
	2005	47	416.77	422.17	-5.40	38	426.89	425.17	1.72	47	6.77	6.47	0.30
Average annual change			7.98	-3.20	11.18		5.65	-7.19	12.84		0.49	-0.11	0.61

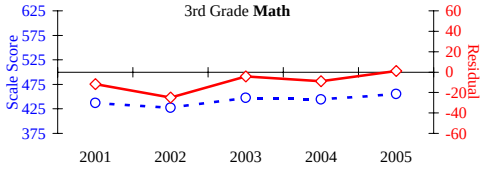
East Side Charter School

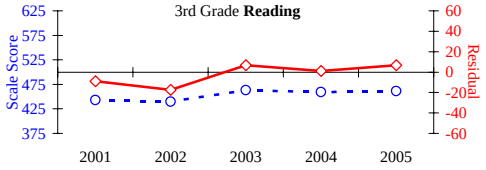


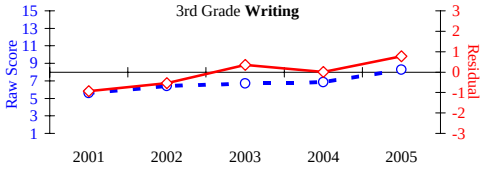




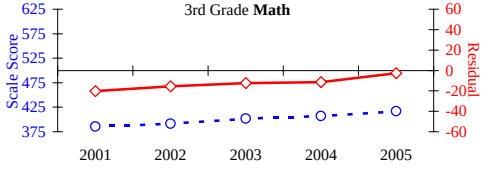
Campus Community Charter School

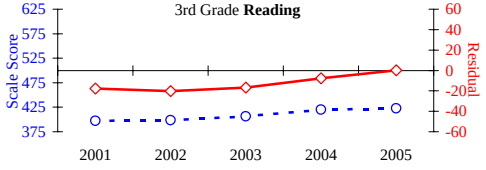


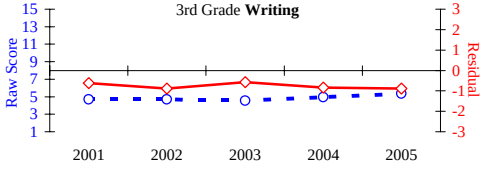




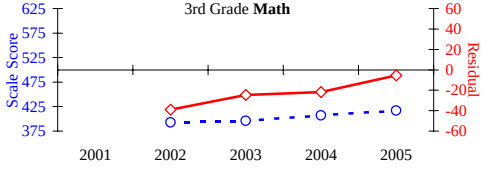
Thomas A. Edison Charter School

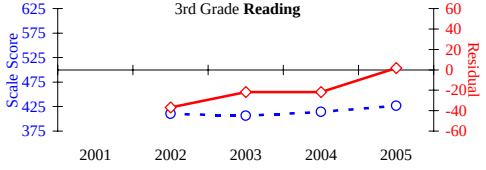


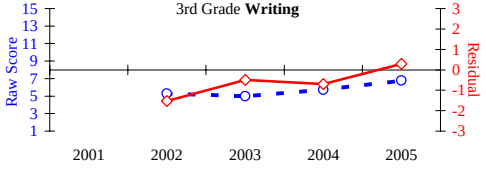


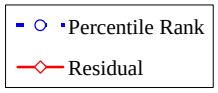


Kuumba Academy Charter School





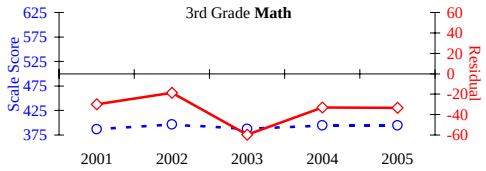


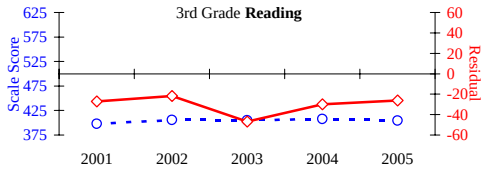


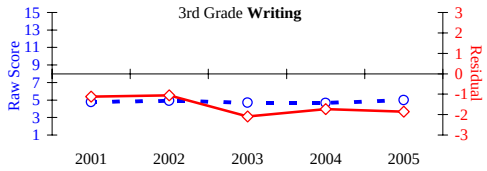
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 3 Results by Grade and Year

School Name	Year	3rd Grade Math				3rd Grade Reading				3rd Grade Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Marion T. Academy	2001	70	386.47	416.25	-29.78	68	398.12	425.33	-27.21	68	4.76	5.87	-1.11
	2002	76	396.34	414.96	-18.62	70	405.89	427.69	-21.79	78	4.92	5.97	-1.05
	2003	73	387.62	447.25	-59.63	70	404.76	451.47	-46.71	73	4.70	6.80	-2.10
	2004	82	394.83	427.99	-33.16	84	407.82	437.81	-29.99	84	4.65	6.37	-1.72
	2005	74	394.65	427.92	-33.27	69	404.67	430.80	-26.13	75	4.99	6.85	-1.86
Average annual change			2.04	2.92	-0.87		1.64	1.37	0.27		0.06	0.24	-0.19
Academy of Dover	2001												
	2002												
	2003												
	2004	65	395.00	425.73	-30.72	59	394.81	435.60	-40.79	63	3.79	6.10	-2.31
	2005	63	396.83	425.07	-28.24	62	399.52	429.51	-29.98	62	4.92	6.56	-1.64
Average annual change			1.83	-0.66	2.49		4.71	-6.09	10.80		1.13	0.46	0.67
Providence Creek Academy	2001												
	2002												
	2003	66	431.35	454.31	-22.96	65	436.95	458.51	-21.56	65	5.23	6.43	-1.20
	2004	91	417.87	457.65	-39.78	93	427.86	460.72	-32.86	92	5.00	6.85	-1.85
	2005	80	420.39	457.90	-37.51	74	426.96	457.83	-30.87	79	5.01	7.45	-2.44
Average annual change			-5.48	1.79	-7.27		-5.00	-0.34	-4.66		-0.11	0.51	-0.62
MOT Charter School	2001												
	2002												
	2003	73	438.16	461.43	-23.27	71	451.90	464.60	-12.70	73	5.99	6.79	-0.80
	2004	72	448.25	466.80	-18.55	68	455.51	467.73	-12.22	72	6.29	7.30	-1.01
	2005	73	436.05	465.49	-29.44	72	449.13	463.49	-14.36	74	7.31	7.84	-0.53
Average annual change			-1.06	2.03	-3.09		-1.38	-0.55	-0.83		0.66	0.53	0.13

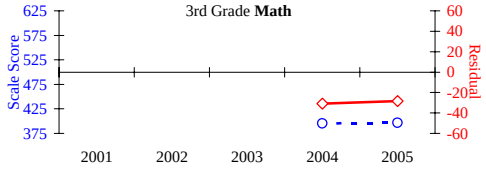
Marion T. Academy

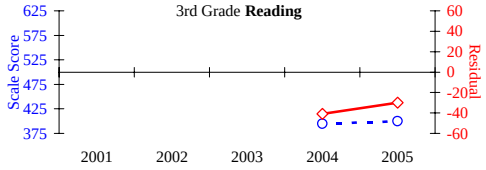


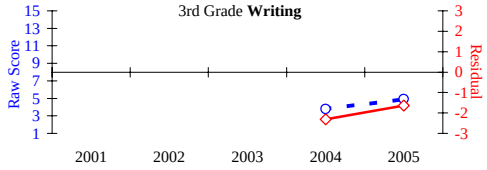




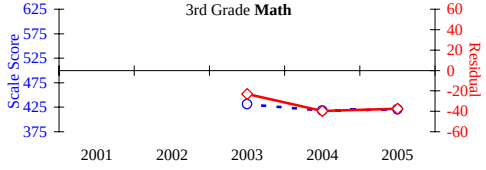
Academy of Dover

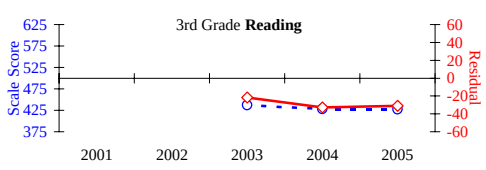


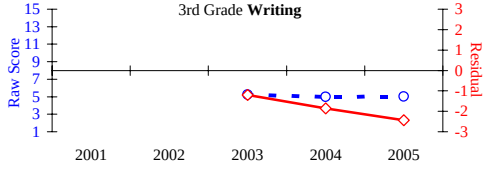




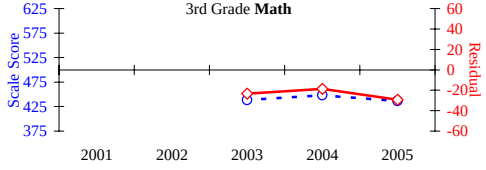
Providence Creek Academy

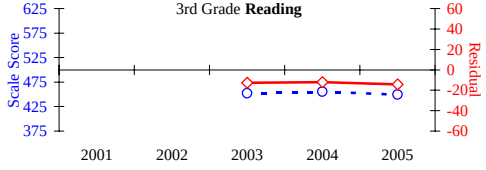


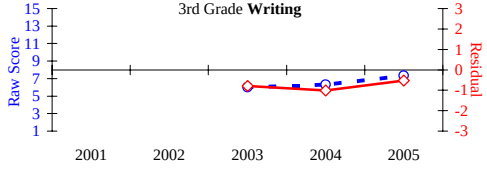


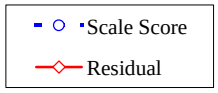


MOT Charter School





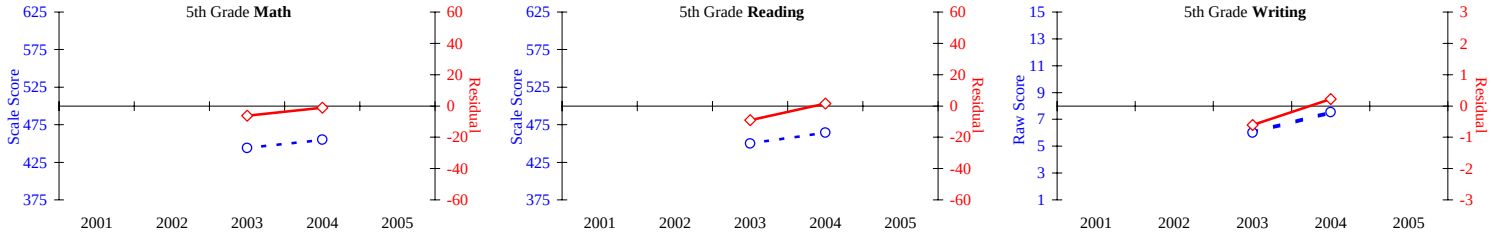




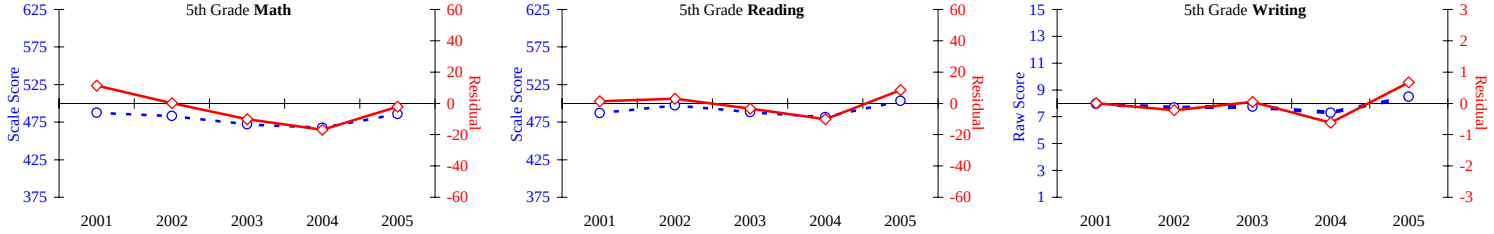
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 5 Results by School and Year

School Name	Year	5th Grade Math				5th Grade Reading				5th Grade Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
East Side Charter School	2001												
	2002												
	2003	31	443.81	450.12	-6.30	31	450.03	459.04	-9.01	31	6.00	6.61	-0.61
	2004	15	455.13	456.20	-1.07	15	464.27	462.79	1.48	15	7.53	7.31	0.22
	2005	10				9				10			
Average annual change			11.32	6.08	5.24		14.24	3.75	10.50		1.53	0.70	0.83
Campus Community Charter School	2001	28	487.50	476.07	11.43	28	487.11	485.74	1.37	28	7.96	7.96	0.00
	2002	34	483.09	482.96	0.13	32	497.16	494.25	2.91	34	7.68	7.90	-0.22
	2003	49	472.00	482.13	-10.13	8	488.48	491.81	-3.33	48	7.75	7.71	0.04
	2004	27	467.56	484.35	-16.79	27	481.30	491.37	-10.07	27	7.30	7.92	-0.62
	2005	44	485.89	488.03	-2.14	42	503.19	494.67	8.52	44	8.48	7.81	0.67
Average annual change			-0.40	2.99	-3.39		4.02	2.23	1.79		0.13	-0.04	0.17
Thomas A. Edison Charter School	2001	84	429.73	447.54	-17.81	78	442.24	452.76	-10.52	83	6.17	7.03	-0.86
	2002	96	436.94	446.83	-9.89	90	453.54	461.51	-7.97	96	6.31	6.79	-0.48
	2003	88	436.59	456.86	-20.27	82	454.01	465.58	-11.57	88	6.18	6.96	-0.78
	2004	86	456.92	456.60	0.32	80	466.64	463.96	2.68	85	6.89	7.30	-0.41
	2005	75	467.19	463.56	3.63	72	470.00	469.27	0.73	74	6.68	7.06	-0.38
Average annual change			9.36	4.01	5.36		6.94	4.13	2.81		0.13	0.01	0.12

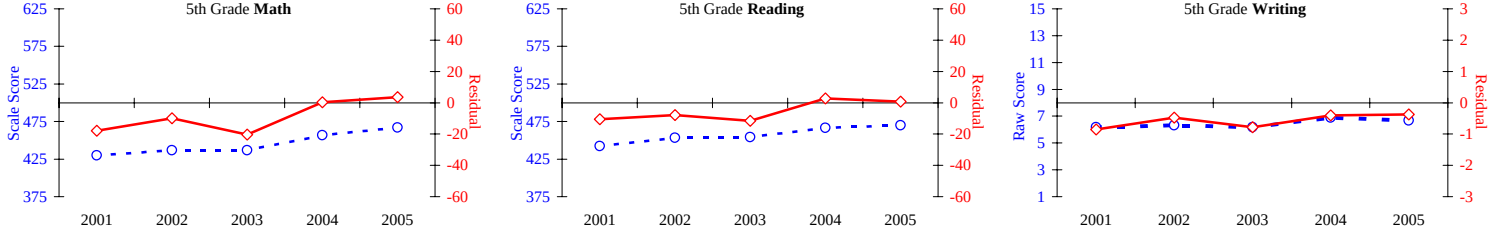
East Side Charter School

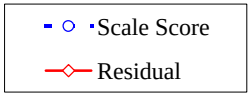


Campus Community Charter School



Thomas A. Edison Charter School

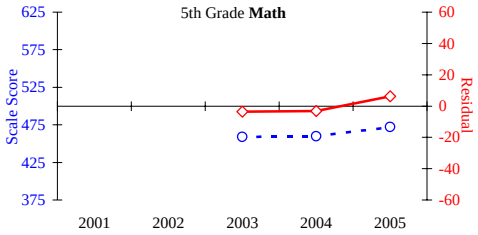


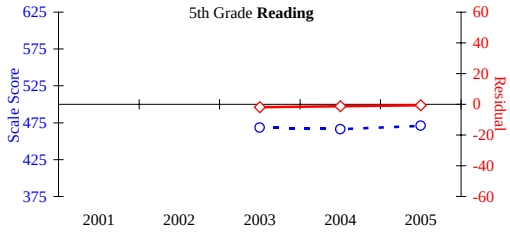


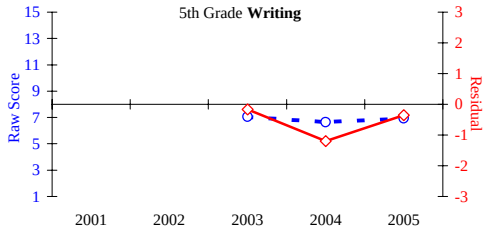
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 5 Results by School and Year

School Name	Year	5th Grade Math				5th Grade Reading				5th Grade Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Kuumba Academy Charter School	2001												
	2002												
	2003	18	459.00	462.49	-3.49	18	468.33	470.11	-1.78	18	7.06	7.23	-0.17
	2004	25	459.64	462.73	-3.09	24	466.33	467.63	-1.30	25	6.64	7.83	-1.19
	2005	25	472.24	466.03	6.21	21	470.90	471.43	-0.53	25	6.92	7.28	-0.36
Average annual change			6.62	1.77	4.85		1.29	0.66	0.63		-0.07	0.02	-0.09
Marion T. Academy Charter School	2001	24	425.04	458.87	-33.83	24	432.04	464.18	-32.14	25	5.44	7.52	-2.08
	2002	67	441.34	455.38	-14.04	66	458.15	472.24	-14.09	68	6.50	7.24	-0.74
	2003	66	445.02	482.60	-37.58	60	469.67	491.47	-21.80	67	5.91	8.49	-2.58
	2004	69	436.97	461.36	-24.39	67	448.19	470.26	-22.07	69	6.00	7.78	-1.78
	2005	60	448.62	470.08	-21.46	53	459.62	475.54	-15.92	61	6.67	7.57	-0.90
Average annual change			5.90	2.80	3.09		6.90	2.84	4.06		0.31	0.01	0.29
Academy of Dover	2001												
	2002												
	2003												
	2004	67	445.57	460.79	-15.22	66	462.42	470.56	-8.14	67	7.01	7.52	-0.51
	2005	41	445.76	466.94	-21.18	39	463.13	473.59	-10.46	41	7.24	7.26	-0.02
Average annual change			0.19	6.15	-5.96		0.71	3.03	-2.32		0.23	-0.26	0.49

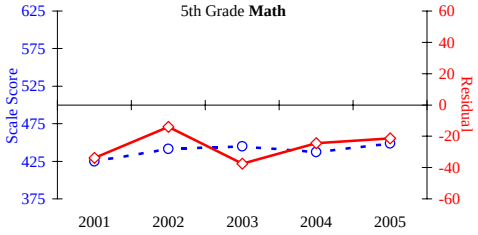
Kuumba Academy Charter School

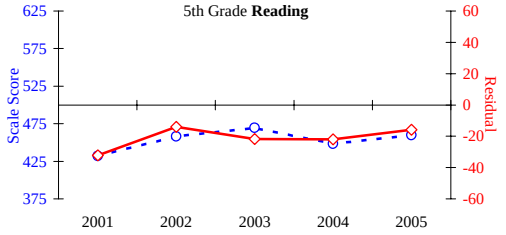


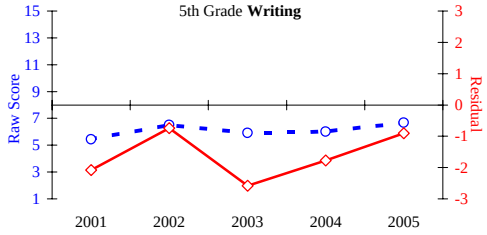




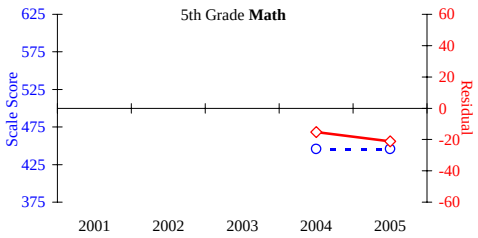
Marion T. Academy Charter School

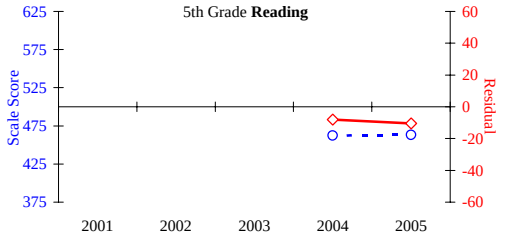


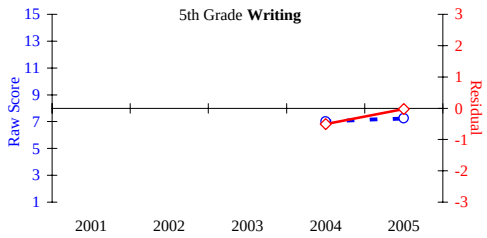


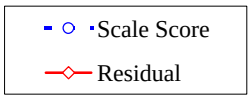


Academy of Dover





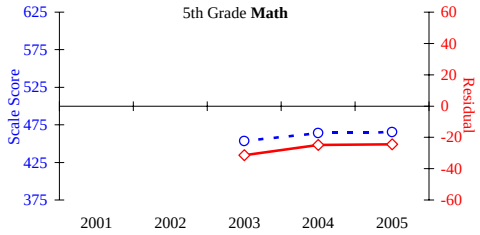


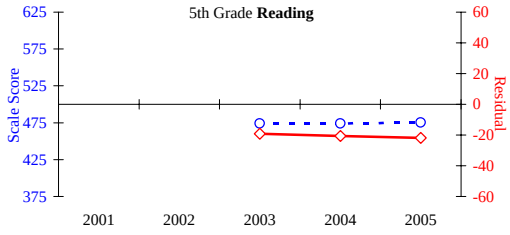


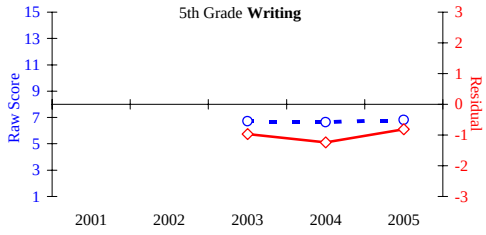
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 5 Results by School and Year

School Name	Year	5th Grade Math				5th Grade Reading				5th Grade Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Providence Creek Academy	2001												
	2002												
	2003	68	453.18	484.58	-31.40	69	473.97	493.04	-19.07	69	6.72	7.69	-0.97
	2004	84	464.15	488.95	-24.80	80	474.09	494.73	-20.64	84	6.64	7.88	-1.24
	2005	72	465.17	489.51	-24.34	69	475.22	497.14	-21.92	73	6.82	7.64	-0.82
Average annual change			6.00	2.46	3.53		0.63	2.05	-1.42		0.05	-0.03	0.08
MOT Charter School	2001												
	2002												
	2003	68	453.18	484.58	-31.40	74	497.39	498.59	-1.20	75	8.76	8.01	0.75
	2004	84	464.15	488.95	-24.80	72	493.35	498.67	-5.32	75	7.76	8.23	-0.47
	2005	72	465.17	489.51	-24.34	72	487.85	502.51	-14.66	74	7.53	7.97	-0.44
Average annual change			6.00	2.46	3.53		-4.77	1.96	-6.73		-0.62	-0.02	-0.59
Newark Charter School	2001												
	2002	161	513.56	489.53	24.03	160	511.78	501.19	10.59	161	9.08	8.15	0.93
	2003	109	501.22	490.24	10.98	109	505.00	498.10	6.90	109	8.89	8.02	0.87
	2004	159	503.64	492.26	11.39	157	507.56	498.41	9.15	159	8.64	8.25	0.39
	2005	161	503.72	496.12	7.60	160	508.84	501.94	6.91				
Average annual change			-3.28	2.20	-5.48		-0.98	0.25	-1.23		-0.22	0.05	-0.27

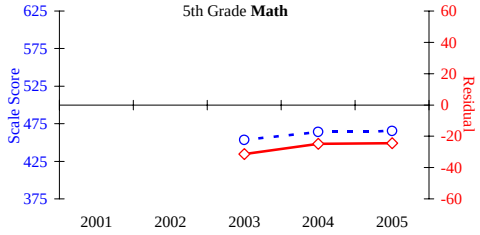
Providence Creek Academy

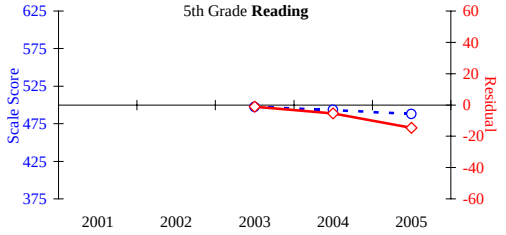


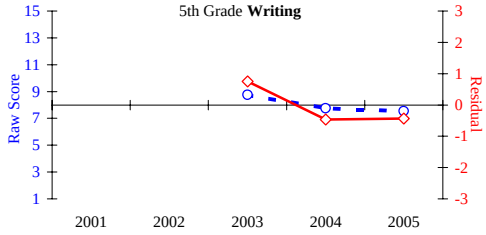




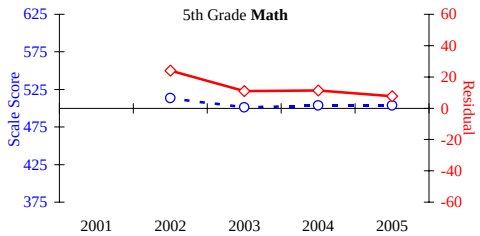
MOT Charter School

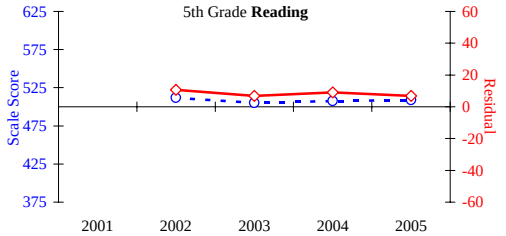


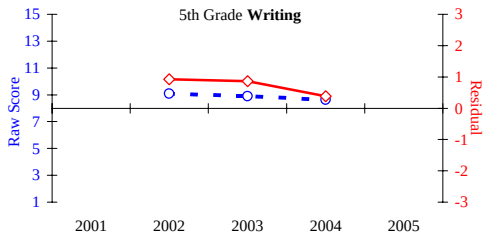


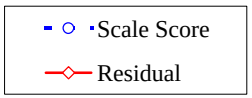


Newark Charter School





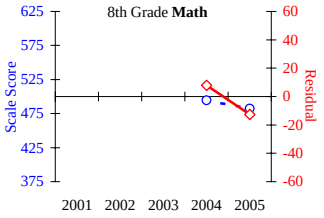


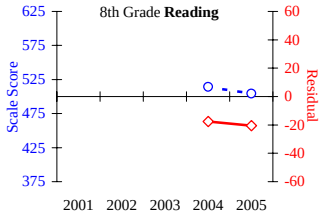


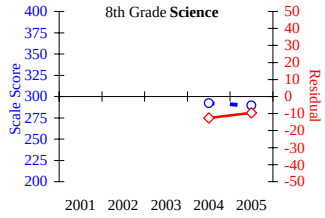
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 8 Results by Grade and Year

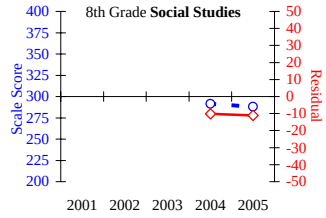
School Name	Year	8th Grade Math				8th Grade Reading				8th Grade Science				8th Grade Social Studies				8th Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Positive Outcomes Charter	2001	14				14				14				14				14			
	2002	13				11				13				13				13			
	2003	12				9				12				12				12			
	2004	18	494.28	486.47	7.81	15	514.13	531.71	-17.58	17	292.18	304.71	-12.53	18	291.22	301.30	-10.08	18	7.17	8.30	-1.13
	2005	23	482.35	495.00	-12.64	22	504.05	524.66	-20.61	25	289.48	299.14	-9.66	25	288.12	299.12	-11.00	23	6.96	7.26	-0.30
Average annual change			-11.93	8.52	-20.45		-10.08	-7.05	-3.03		-2.70	-5.56	2.86		-3.10	-2.17	-0.93		-0.21	-1.04	0.83
Campus Community Chart	2001	23	492.91	508.11	-15.20	23	524.61	533.21	-8.60	23	307.17	307.15	0.02	23	311.26	310.51	0.75	23	8.04	8.63	-0.59
	2002	48	518.08	517.44	0.64	48	541.19	539.92	1.27	50	316.24	309.80	6.44	50	314.98	312.30	2.68	49	8.55	8.56	-0.01
	2003	82	490.85	504.98	-14.13	81	523.49	526.11	-2.62	79	305.33	305.72	-0.39	79	300.72	303.89	-3.17	82	8.57	8.52	0.05
	2004	108	495.39	512.15	-16.76	105	524.77	527.49	-2.72	109	298.87	308.24	-9.37	109	301.06	306.98	-5.92	108	8.32	8.82	-0.50
	2005	88	497.85	511.70	-13.85	87	543.33	534.06	9.27	88	308.22	311.26	-3.04	88	308.63	308.40	0.23	88	8.31	8.31	0.00
Average annual change			1.24	0.90	0.34		4.68	0.21	4.47		0.26	1.03	-0.77		-0.66	-0.53	-0.13		0.07	-0.08	0.15
Thomas A. Edison Charter	2001																				
	2002	68	460.71	481.02	-20.31	60	495.37	501.80	-6.43	67	260.37	275.75	-15.38					68	6.63	7.63	-1.00
	2003	50	469.32	483.26	-13.94	47	501.89	502.56	-0.67	50	273.58	285.60	-12.02	50	275.42	287.82	-12.40	50	7.40	7.81	-0.41
	2004	51	486.27	465.78	20.49	47	512.53	483.80	28.73	50	276.06	273.69	2.37	50	283.04	279.37	3.67	51	8.14	7.26	0.88
	2005	46	506.83	461.37	45.46	42	526.38	495.40	30.98	46	289.65	275.18	14.47	46	293.46	279.15	14.31	46	7.70	6.97	0.73
Average annual change			15.37	-6.55	21.92		10.34	-2.13	12.47		9.76	-0.19	9.95		9.02	-4.34	13.36		0.36	-0.22	0.58

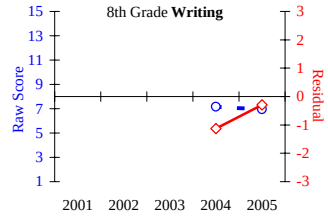
Positive Outcomes Charter School



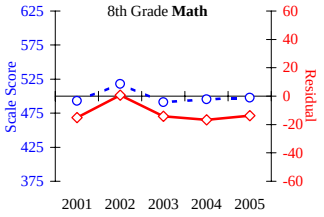


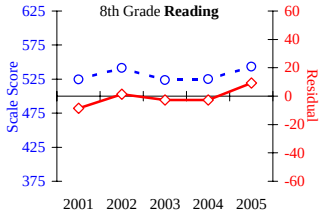


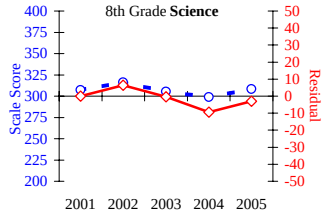


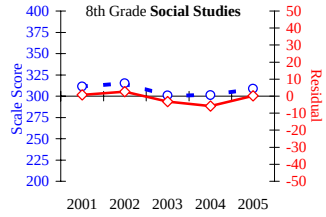


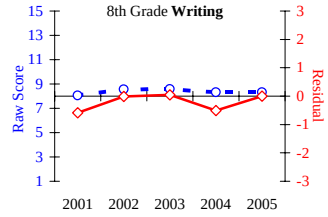
Campus Community



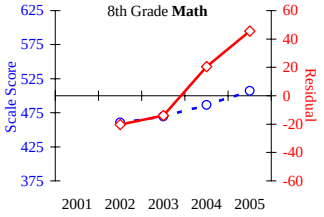


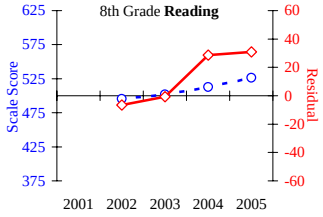


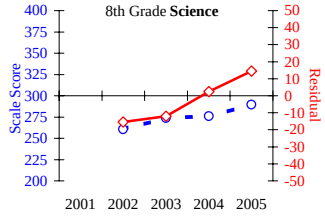


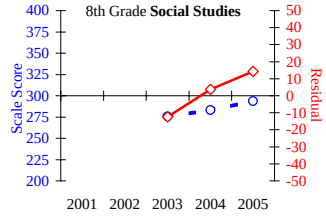


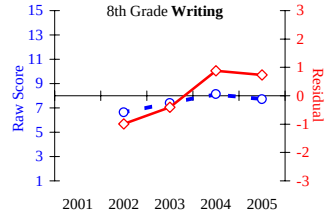
Thomas A. Edison Charter School

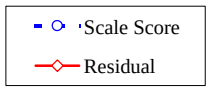








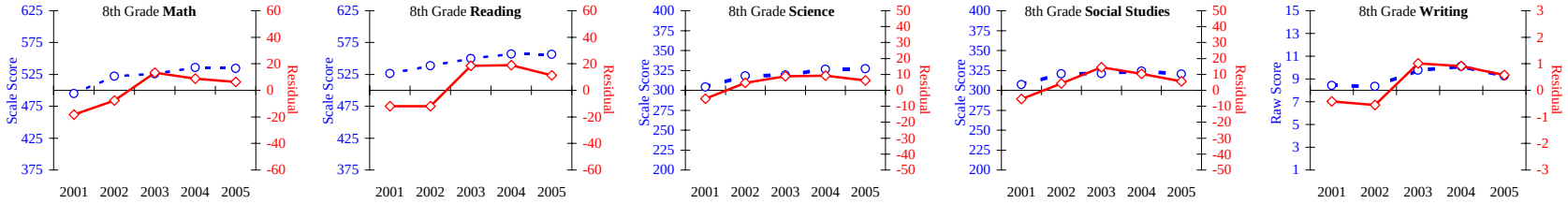




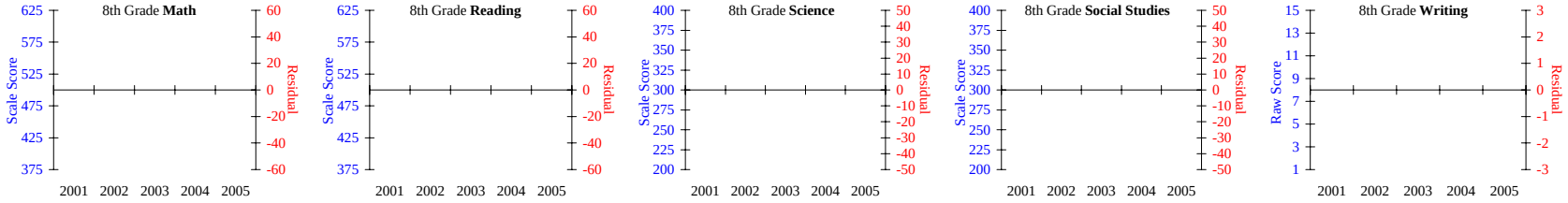
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 8 Results by Grade and Year

School Name	Year	8th Grade Math				8th Grade Reading				8th Grade Science				8th Grade Social Studies				8th Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Sussex Academy of Arts &	2001	24	495.04	513.40	-18.36	23	526.35	538.39	-12.04	24	304.25	309.54	-5.29	24	307.04	312.56	-5.52	24	8.42	8.83	-0.41
	2002	57	522.16	529.82	-7.66	57	538.46	550.41	-11.95	56	318.04	313.36	4.68	56	320.82	316.56	4.26	57	8.33	8.88	-0.55
	2003	105	525.62	512.42	13.20	105	549.88	531.49	18.39	104	319.18	310.35	8.83	104	321.24	306.82	14.42	105	9.76	8.74	1.02
	2004	83	535.77	526.91	8.86	82	556.98	538.14	18.84	82	326.28	317.11	9.17	82	324.04	313.62	10.43	83	10.10	9.19	0.91
	2005	98	534.50	528.21	6.29	98	556.46	545.19	11.27	98	326.92	320.72	6.20	98	320.42	314.76	5.66	98	9.27	8.70	0.57
Average annual change			9.86	3.70	6.16		7.53	1.70	5.83		5.67	2.80	2.87		3.35	0.55	2.80		0.21	-0.03	0.25
Delaware Military Academy	2001																				
	2002																				
	2003																				
	2004	11				9				11				11				11			
	2005																				
Average annual change			0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00
Marion T. Academy	2001																				
	2002																				
	2003																				
	2004	25	463.28	471.66	-8.38	25	481.72	490.92	-9.20	25	264.84	279.85	-15.01	25	277.52	286.25	-8.73	25	7.44	7.72	-0.28
	2005	40	462.35	465.58	-3.23	36	508.14	501.30	6.84	40	278.33	283.42	-5.09	40	287.18	288.59	-1.41	40	7.48	7.33	0.15
Average annual change			-0.93	-6.08	5.15		26.42	10.38	16.04		13.49	3.57	9.92		9.66	2.34	7.32		0.04	-0.39	0.43

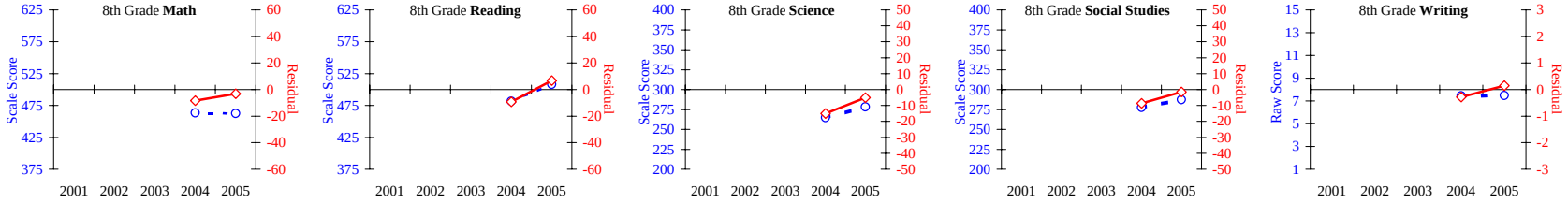
Sussex Academy of Arts & Sciences

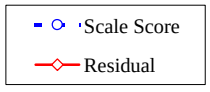


Delaware Military Academy



Marion T. Academy

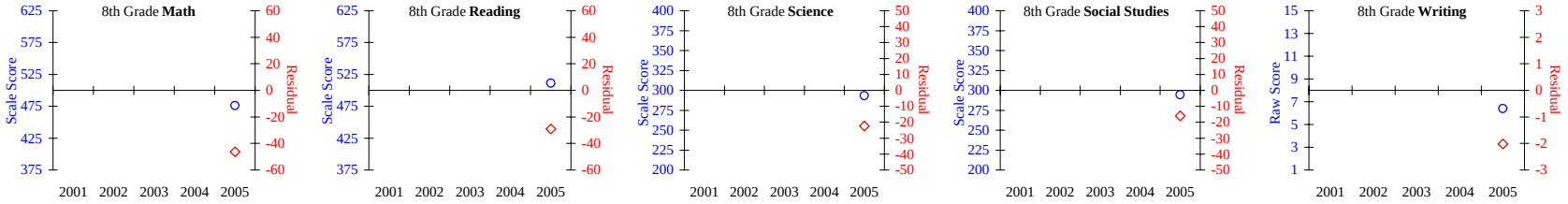




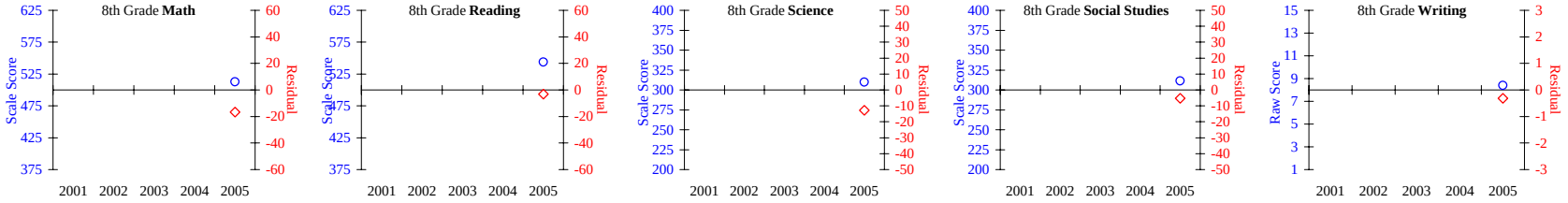
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 8 Results by Grade and Year

School Name	Year	8th Grade Math				8th Grade Reading				8th Grade Science				8th Grade Social Studies				8th Writing			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Providence Creek Academy	2001																				
	2002																				
	2003																				
	2004																				
	2005	40	475.85	522.00	-46.15	38	511.47	540.55	-29.08	39	293.21	315.60	-22.39	39	294.44	310.34	-15.90	40	6.40	8.42	-2.02
Average annual change			475.85	522.00	-46.15		511.47	540.55	-29.08		293.21	315.60	-22.39								
MOT Charter School	2001																				
	2002																				
	2003																				
	2004																				
	2005	73	512.59	529.37	-16.78	68	543.75	546.80	-3.05	74	309.59	322.41	-12.82	74	311.31	316.63	-5.32	73	8.40	8.72	-0.32
Average annual change			128.15	132.34	-4.20		135.94	136.70	-0.76		77.40	80.60	-3.20		77.83	79.16	-1.33		2.10	2.18	-0.08
Newark Charter School	2001																				
	2002																				
	2003	130	530.86	514.36	16.50	130	539.95	533.03	6.92	130	314.44	310.25	4.19	130	315.65	308.00	7.65	130	9.16	8.90	0.26
	2004	133	538.09	524.50	13.59	133	543.36	537.68	5.68	132	319.92	316.90	3.02	132	318.62	314.62	4.01	133	9.29	9.29	0.00
	2005	159	546.86	523.40	23.47	159	553.57	543.39	10.19	160	331.36	320.74	10.62	160	323.05	316.63	6.43				
Average annual change			182.29	174.47	7.82		184.52	181.13	3.40		110.45	106.91	3.54		107.68	105.54	2.14		0.00	0.00	0.00

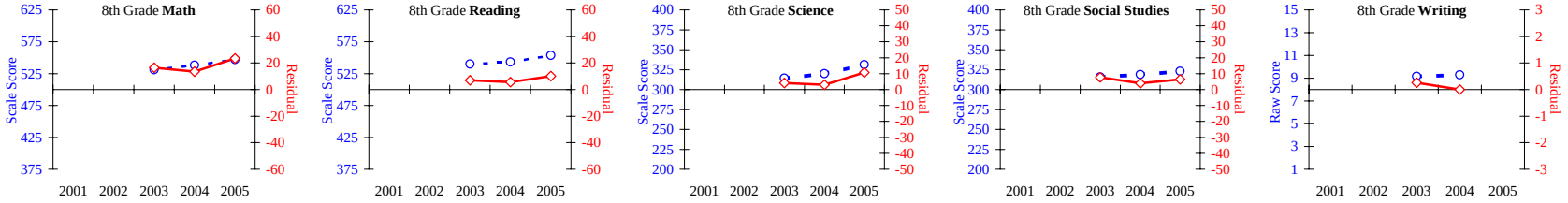
Providence Creek Academy

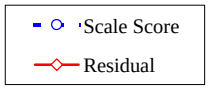


MOT Charter School



Newark Charter School

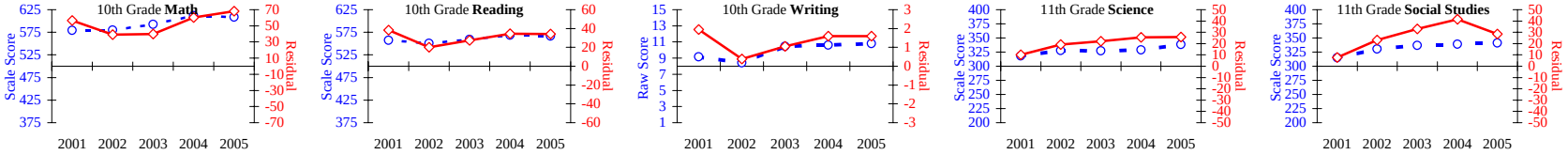




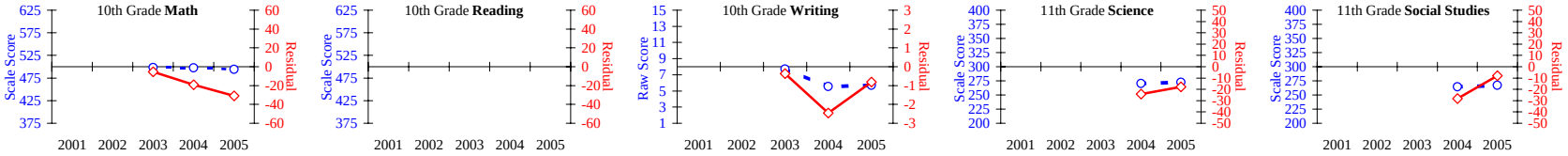
Delaware Charter School Results - Predicted and Actual Percentile Ranks on the DSTP: Grade 10 and 11 Results by Grade and Year

School Name	Year	10th Grade Math				10th Grade Reading				10th Grade Writing				11th Grade Science				11th Grade Social Studies			
		N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual	N	Actual	Predicted	Residual
Charter School of Wilming	2001	247	578.99	522.53	56.46	247	557.47	519.18	38.29	247	9.14	7.19	1.95	168	317.94	307.71	10.23	169	314.76	306.97	7.79
	2002	247	579.83	540.83	39.00	248	550.67	530.58	20.09	247	8.41	8.03	0.38	244	327.46	308.41	19.05	238	330.40	307.23	23.17
	2003	225	592.53	552.80	39.73	225	559.03	531.69	27.34	225	10.45	9.39	1.06	238	327.29	305.08	22.21	238	336.46	303.38	33.08
	2004	228	611.85	551.35	60.50	228	568.49	533.91	34.58	228	10.61	9.02	1.59	224	328.96	303.30	25.66	224	338.71	297.33	41.38
	2005	234	608.07	539.87	68.20	234	566.22	532.07	34.15	234	10.81	9.21	1.60	212	338.30	312.48	25.82	212	341.11	312.61	28.50
Average annual change			7.27	4.34	2.93		2.19	3.22	-1.03		0.42	0.50	-0.09		5.09	1.19	3.90		6.59	1.41	5.18
Positive Outcomes Charter	2001	10				10				10				8				9			
	2002	12				12				12				5				5			
	2003	16	497.88	503.15	-5.27	14				16	7.69	8.06	-0.37	9				9			
	2004	15	497.67	516.74	-19.07	8				16	5.56	8.02	-2.46	18	270.22	294.44	-24.22	15	264.27	292.59	-28.32
	2005	16	494.31	525.23	-30.92	12				16	5.69	6.50	-0.81	19	272.26	290.17	-17.91	17	266.94	274.81	-7.87
Average annual change			-1.79	11.04	-12.82		0.00	0.00	0.00		-1.00	-0.78	-0.22		2.04	-4.26	6.30		2.67	-17.78	20.45
Campus Community Chart	2001																				
	2002																				
	2003	26	504.58	535.49	-30.91	26	505.50	523.95	-18.45	26	7.81	8.58	-0.77								
	2004	44	539.39	539.39	0.00	42	526.12	525.93	0.19	44	8.25	8.63	-0.38	22	299.95	302.70	-2.75	22	299.55	297.80	1.76
	2005	48	530.63	532.96	-2.33	46	527.24	524.87	2.37	48	8.69	8.69	0.00	38	309.92	306.67	3.25	38	312.87	304.68	8.19
Average annual change			13.03	-1.26	14.29		10.87	0.46	10.41		0.44	0.05	0.39		9.97	3.97	6.00		13.32	6.88	6.44
Delaware Military Academy	2001																				
	2002																				
	2003																				
	2004	76	524.54	548.37	-23.83	74	524.38	529.11	-4.73	76	8.67	8.96	-0.29								
	2005	162	534.40	540.41	-6.01	160	524.72	530.21	-5.49	162	8.65	8.99	-0.34	72	315.40	311.09	4.31	72	315.54	309.47	6.07
Average annual change			9.86	-7.96	17.82		0.34	1.10	-0.76		-0.02	0.03	-0.05		0.00	0.00	0.00		0.00	0.00	0.00

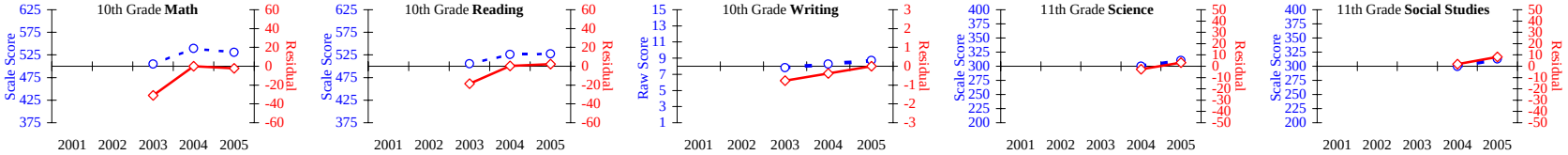
Charter School of Wilmington



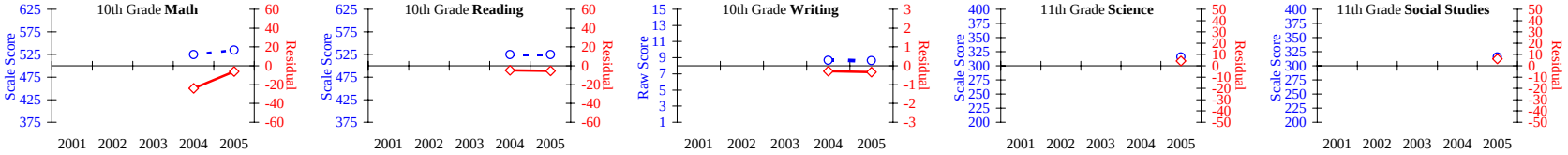
Positive Outcomes Charter School

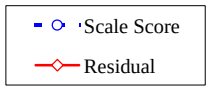


Campus Community Charter School



Delaware Military Academy





Appendix H Delaware School Enrollment for 2005-06

	Total Non Vo-Tech Students Recorded in District	2005-06 Total Traditional Public School District Enrollment (non vo-tech, non charter school) [1]	2005-06 Total Choice Students (Inter & Intra)	Inter-District Choice (resident from another district, district receiving/gaining Choice student) [2]	Inter-District Choice (residents leaving district for Choice, district losing student) [2]	Total Inter-District Choice Effect on Enrollment	Percent of Inter-District Choice Effect on District Resident Enrollment	Charter School Enrollment by Resident District [3]	Percent of Charter School Enrollment by District Resident	Nonpublic Enrollment, Residing in District [4]	Percent of Nonpublic School Enrollment by District Resident	Total Inter-District Choice Effect Less Charter School and Nonpublic Enrollment	Percent of Inter-District Choice, Charter, and Nonpublic Enrollment in District
NEW CASTLE COUNTY													
Appoquinimink	9,059	7,296	389	53	83	-30	-0.3%	792	8.7%	1,763	19.5%	-2,585	-28.5%
Brandywine	14,204	10,577	2,015	384	212	172	1.2%	520	3.7%	3,627	25.5%	-3,975	-28.0%
Christina	24,618	19,236	1,797	307	876	-569	-2.3%	1,705	6.9%	5,382	21.9%	-7,656	-31.1%
Colonial	12,752	10,476	633	184	569	-385	-3.0%	581	4.6%	2,276	17.8%	-3,242	-25.4%
Red Clay	22,445	15,729	6,536	1,104	292	812	3.6%	1,021	4.5%	6,716	29.9%	-6,925	-30.9%
KENT COUNTY													
Caesar Rodney	7,630	6,319	966	541	249	292	3.8%	266	3.5%	831	10.9%	-805	-10.6%
Capital	7,042	5,982	535	312	514	-202	-2.9%	876	12.4%	1,060	15.1%	-2,138	-30.4%
DAFB		480											
Lake Forest	4,063	3,742	560	238	266	-28	-0.7%	76	1.9%	321	7.9%	-425	-10.5%
Milford	4,346	3,909	196	250	175	75	1.7%	35	0.8%	437	10.1%	-397	-9.1%
Smyrna	4,275	3,909	325	171	128	43	1.0%	355	8.3%	345	8.1%	-657	-15.4%
SUSSEX COUNTY													
Cape Henlopen	4,894	4,370	60	122	259	-137	-2.8%	70	1.4%	524	10.7%	-731	-14.9%
Delmar	1,132	1,071	67	55	111	-56	-4.9%	1	0.1%	52	4.6%	-109	-9.6%
Indian River	8,385	7,885	1,036	310	111	199	2.4%	106	1.3%	500	6.0%	-407	-4.9%
Laurel	2,359	2,131	164	110	189	-79	-3.3%	21	0.9%	228	9.7%	-328	-13.9%
Seaford	3,658	3,304	737	168	176	-8	-0.2%	100	2.7%	354	9.7%	-462	-12.6%
Woodbridge	2,321	1,943	0	70	248	-178	-7.7%	16	0.7%	378	16.3%	-572	-24.6%
TOTAL	133,183	108,359	16,016	4,379	4,458	-79		6,541	4.9%	24,794	18.6%	-31,414	-23.6%

NCC Votech (New Castle)	3,492
Polytech (Kent County)	1,150
Sussex Technical (Sussex County)	1,193
	5,835

TOTAL DISTRICT 114,194

1 DDOE School Enrollment Reports. Public Schools, 2004-05, by District. Retrieved January 4, 2006 from http://www.doe.state.de.us/info/reports/enrollment.shtml

2 DDOE Specialty Report. Charter School and Across District Choice: Statistics and Maps from the September 30th 2005 Unit Count. Table 1, Number and Percent of Students by Choice District and Resident District, September 2005. Retrieved January 22, 2007 from http://www.doe.state.de.us/info/reports/.

3 DDOE School Enrollment Reports. Public Schools, 2004-05, by Charter School. Retrieved January 4, 2006 from http://www.doe.state.de.us/info/reports/enrollment.shtml

4 DDOE Enrollment Report. Nonpublic Schools in Delaware, 2004-2005. Table 4, September 2004 Enrollment, DE Public and Resident Nonpublic Students by District of Residence (All Nonpublic Schools). (p. 9). Retrieved January 4, 2006 from http://www.doe.state.de.us/info/reports/enrollment.shtml

Appendix I Enrollments Trends Tracking One and Five Year Changes

	TRADITIONAL PUBLIC SCHOOL DISTRICTS					CHARTER SCHOOLS					NON-PUBLIC SCHOOLS				
	1999-2000 Traditional Public School Enrollment	*2003-04 Traditional Public School District Enrollment*	*2004-05 Traditional Public School District Enrollment*	*1-Year Increase/ Decrease in Enrollment (Percent)*	*5-Year Increase/ Decrease in Enrollment (Percent)*	*1999-2000 Charter School Enrollment*	*2003-04 Charter School Enrollment*	*2004-05 Charter School Enrollment*	*1-Year Increase/ Decrease in Enrollment (Percent)*	*5-Year Increase/ Decrease in Enrollment (Percent)*	*1999-00 Non-Public Enrollment, Residing in District*	*2003-04 Non-Public Enrollment, Residing in District*	*2004-05 Non Public Enrollment, Residing in District*	*1-Year Increase/ Decrease in Enrollment (Percent)*	*5-Year Increase/ Decrease in Enrollment (Percent)*
NEW CASTLE COUNTY															
Appoquinimink	4894	6395	6710	4.9%	37.1%			804			831	1327	1495	12.7%	79.9%
Brandywine	11200	10602	10645	0.4%	-5.0%			476			3891	3651	3563	-2.4%	-8.4%
Christina	20404	19410	19421	0.1%	-4.8%			1749			5018	5611	5537	-1.3%	10.3%
Colonial	10638	10342	10455	1.1%	-1.7%			554			2164	2295	2291	-0.2%	5.9%
NCC VoTech	3384	3396	3464	2.0%	2.4%										
Red Clay	15715	15554	15394	-1.0%	-2.0%			981			7866	7155	7065	-1.3%	-10.2%
	66235	65699	66089	0.6%	-0.2%	837	4206	4564	8.5%	445.3%	19770	20039	19951	-0.4%	0.9%
KENT COUNTY															
Caesar Rodney	6686	6596	6741	2.2%	0.8%			298			650	777	834	7.3%	28.3%
Capital	6204	5909	5865	-0.7%	-5.5%			880			985	1021	1085	6.3%	10.2%
DAFB															
Lake Forest	3470	3397	3571	5.1%	2.9%			74			233	292	302	3.4%	29.6%
Milford	3847	3797	3762	-0.9%	-2.2%			35			265	367	410	11.7%	54.7%
Polytech Vocationa	1119	1146	1149	0.3%	2.7%										
Smyrna	3405	3310	3645	10.1%	7.0%			389			267	322	368	14.3%	37.8%
	24731	24155	24733	2.4%	0.0%	363	1747	1676	-4.1%	361.7%	2400	2779	2999	7.9%	25.0%
SUSSEX COUNTY															
Cape Henlopen	4213	4262	4311	1.1%	2.3%			51			224	393	486	23.7%	117.0%
Delmar	785	1066	1061	-0.5%	35.2%			3			35	58	55	-5.2%	57.1%
Indian River	7597	7756	7798	0.5%	2.6%			124			293	412	459	11.4%	56.7%
Laurel	2097	2007	2040	1.6%	-2.7%			22			213	247	256	3.6%	20.2%
Seaford	3749	3444	3376	-2.0%	-9.9%			91			285	389	369	-5.1%	29.5%
Sussex Technical	1161	1211	1215	0.3%	4.7%										
Woodbridge	1830	1916	1937	1.1%	5.8%			17			335	361	364	0.8%	8.7%
	21432	21662	21738	0.4%	1.4%	0	307	308	0.3%	0.0%	1385	1860	1989	6.9%	43.6%
STATE TOTAL	112398	111516	112560	0.9%	0.1%	1200	6260	6548	4.6%	445.7%	23555	24678	24939	1.1%	5.9%

SUMMARY--TOTAL ENROLLMENT	1999-2000	2003-04	2004-05
NEW CASTLE	86,842	89,944	90,604
KENT	27,494	28,681	29,408
SUSSEX	22,817	23,829	24,035
STATE TOTAL	137,153	142,454	144,047