



Charter Schools Institute
State University of New York

Central New York Charter School for Math and Science

I. INTRODUCTION

The third year site visit is part of a comprehensive accountability system for New York State charter schools sponsored by the State University of New York Charter Schools Institute. The site visit during the school's third year of operation provides an independent assessment of the school's progress toward its academic and organizational goals as defined in its accountability plan.

The third year site visit complements the yearly reviews conducted by Institute staff and corroborates the school's own annual reports of progress toward the targets it defined in its Accountability Plan. The visit provides an independent assessment of the school's progress and provides recommendations to the school as it prepares to apply for charter renewal in its fifth year of operation. The recommendations represent the experienced opinions of the inspection team and are intended to offer the school guidance for enhancing the evidence base for its renewal application.

II. CONDUCT OF THE VISIT

The third year site visit to the Central New York Charter School for Math and Science was conducted on May 20-21, 2003 by an independent team of experienced educators contracted by the Institute and led by Doug Lemov, an independent education consultant. It consisted of:

Doug Lemov, Independent education consultant, former Vice President for Accountability, Charter Schools Institute, Albany, NY; former Principal and Founder, Academy of the Pacific Rim Charter School, Boston MA.

Kelly Garrett, former founder and director, Project Chrysalis [Charter] Middle School, Houston, TX; former Founder and Director, Perea Preschool, Memphis, TN, MBA candidate, Harvard Business School, Boston, MA.

Evan Rudall, Special Assistant to the Deputy Chancellor, New York City Board of Education; former founder and Co-Director Roxbury Prep Charter School, Boston, MA.

Radiclani Clytus, PhD candidate, Department of African-American Studies, Yale University, New Haven, CT; former Research Analyst, Charter School Institute, Albany, NY; former curriculum designer, UMOJA project, New Haven, CT.

The team used the goals outlined in school's Accountability Plan and questions outlined by the Charter Schools Institute in the site visit protocol in guiding their observations of the school's academic and organizational effectiveness as well as their examination of the

case the school has presented to document its success. Prior to the one and a half day visit, the team reviewed the school's documents including its annual *Accountability Plan Progress Report*, its original charter application, and reports from previous informal site visits by the Charter Schools Institute. At the school, the team interviewed the school administrator, Board representatives, staff, parents, and students. They visited classes at every grade level to understand the efforts the school is making to achieve its academic and organizational goals. The team offered a brief oral summary of its findings and recommendations to school leaders and invited them to ask for clarification as needed.

Part I of this report offers the team's judgments about the school's effectiveness at meeting the broad goals defined in the charter school law (Education Law §2850(2) (a-f)):

- improving student learning and achievement;
- increasing learning opportunities for all students (particularly students at risk of academic failure);
- encouraging the use of different and innovative teaching methods;
- creating new professional opportunities for teachers, school administrators and other school personnel;
- expanding parental choice in public schools; and
- moving from a rule-based to performance-based accountability system by holding schools accountable for meeting measurable student achievement results.

The judgments of the team are organized into the same three categories as the school's other accountability documents: academic program, organizational viability, and unique programmatic areas.

The second part of the report assesses the quality of the school's own measures of its progress, and offers suggestions for enhancing the evidence base on which renewal decisions will be made at the school's fifth year of operation.

III. SCHOOL DESCRIPTION

Central New York Charter School for Math and Science was approved by the State University Board of Trustees in January 2000 and by the Board of Regents in April of that year. It opened in September 2000. The initial charter allowed for 528 students in grades K-6 in its first year, growing to 816 students enrolled in grades K-10 by the end of the first charter term. However, the school's Board of Trustees successfully petitioned last year to limit the grades served by the school to K-6, a move that should allow the school to focus more intently on serving those grades as effectively as possible.

The Central New York Charter School for Math and Science school year lasts 195 days with an instructional day from 8:00 a.m. until 4:00 p.m. The school is located at 610 East Genesee Street, on a two building campus, formerly science teaching and laboratory facilities for Syracuse University. The founders of CNYCS included the now-retired president of the SUNY College of Environmental Science and Forestry, as well as local

educators and civic leaders who sought to provide the children of Syracuse with a public school that links rigorous academics with a focus on math, science and technology. To oversee its management, the school contracted with Beacon Education Management, Inc., subsequently Chancellor Beacon Academies (CBA), which currently runs 3 schools in New York State and 81 charter and private schools nationally. The school received one of the five waivers from collective bargaining requirements provided the State University in the Charter Schools Act of 1998.

During its second year of operations, the school replaced its lead administrator, choosing first an interim Director and then, in the spring, selecting Robert Bone to be the lead administrator.

On the day of the site visit, the children were aware of and occasionally commented on visitors. Otherwise, the day featured no significant anomalies or schedule changes and the principal believed that visitors would observe a “typical” day.

PART I: SCHOOL PROGRESS REPORT

I. ACADEMIC PROGRAM

As documented by assessment data and site-visit reports, the school appeared to struggle over the course of its first two years to build an academic program that supported strong student achievement. Within the past year the school appears to have made improvements in some key areas. These improvements include progress on the 4th grade New York State Language Arts Assessment and the development of a strong and viable Accountability Plan. Nonetheless while the apparent improvements in some aspects of the school’s program indicate that it may yet foster increased levels of students achievement, the existing data on student performance is poor, and the school must recognize that dramatic progress will likely be needed in the remaining two years of the charter if it is to make a compelling argument for its effectiveness. The tasks of achieving and demonstrating outstanding growth in student achievement should therefore be approached with a sense of urgency by all members of the school community.

- To what extent have students attained expected skills and knowledge?

Student performance on fourth grade New York State Assessments in Math, English Language Arts, Science and Social Studies suggests that the school has not yet performed at a level comparable with the rigorous and ambitious goals established in the school’s Accountability Plan. Nor have students in the school performed at the same level as their peers in the Syracuse City School District.

Student Achievement in Mathematics

In 2001, 36 percent of fourth graders at the Central New York Charter School for Math and Science scored proficient or higher on the New York State 4th Grade Math

Assessment as compared to 49 percent for the Syracuse City School District on the same exam. Thus the percentage of proficient fourth grade students in the charter school lagged the rate of proficient students in the district by 13% in 2001. It is worth noting, however, that no students enrolled during the 2000-2001 school year met the criterion established in the school's Accountability Plan- that 75% of those students who had been enrolled in the school for two or more years would achieve proficiency. This criterion was included in recognition of the fact that fourth grade tests measure skills and knowledge deriving from several years of schooling and that remediating the performance deficits of students might reasonably take time. Thus the 2001 scores may best be viewed at least in part as baseline scores; implicit in this assumption, however, is the expectation that scores would rise thereafter.

On the 2002 New York State 4th Grade Math Assessment, 27 percent of fourth graders at the Central New York Charter School for Math and Science scored proficient or higher as compared to 45 percent for the Syracuse City School District on the same exam. Thus the percentage of proficient fourth grade students in the charter school lagged the rate of proficient students in the district in 2002 by 18%, an increase in this discrepancy of 5% despite declining scores in the city overall. Further, while comparisons between years present validity challenges since they compare different groups of fourth grade students on different tests, and while the data for 2002 does not yet represent the performance of students who have been enrolled at the charter school for two years or more, there is little indication that students enrolled in the school were, as of 2002, closing in on proficiency at a rate that was faster than that of the Syracuse City School District or, in fact, that they were closing in on proficiency at all. The percentage of students passing the math assessment at the Central New York Charter School for Math and Science dropped by 9% between 2001 and 2002.

Data for the 2003 fourth grade math assessment is not yet available. However several aspects are worth remarking upon in anticipating these scores. First, evidence of high levels of student mastery in mathematics would seem to bear special weight in assessing the success of a school that is dedicated, as the name indicates, to preparing students for excellence in math and science in particular. Further, 2003 will be the first year in which the school is able to isolate and report upon the performance of students who have been enrolled in the charter school for two or more years. This data, too, will be especially important. Finally, it is worth noting that the school's present administration took over leadership of the school at the end of the 2002 school year. Thus the 2003 data will present the first information reflecting their performance.

Student Achievement in English Language Arts

In 2001, 26 percent of fourth graders at the Central New York Charter School for Math and Science scored proficient or higher on the New York State 4th Grade ELA Assessment as compared to 39 percent for the Syracuse City School District. Thus the percentage of proficient fourth grade students in the charter school lagged the rate of proficient students in the district in 2001 by 13 percent.

In 2002, 20 percent of fourth graders at the Central New York Charter School for Math and Science scored proficient or higher on the 2002 New York State 4th Grade ELA Assessment as compared to 36 percent for the Syracuse City School District on the same exam. Thus while comparisons between years again present validity challenges, the 2002 data gave cause for concern. Student proficiency rates dropped by more than 6 percent from similar rates on the 2001 assessment. Further, even while that rate of proficiency dropped by 2 percent in the City of Syracuse over the same time period, the percentage of proficient fourth grade students in the charter school lagged the rate of proficient students in the district in 2002 by 16%, with an increase of more than three percent in that discrepancy during the 2002 school year. Again, while no students had yet met the criterion of two full years' enrollment, the scores provided little evidence that students would demonstrate significant levels of achievement within that period and raised the possibility that students were not following a trajectory of improved achievement.

On the 2003 New York State Assessment in English Language Arts, 35 percent of Central New York Charter School for Math and Science students scored proficient or better as compared to 49 percent in Syracuse City School District. These scores, while still significantly below the achievement levels outlined in the Accountability Plan, presented the most promising data to date. The percentage of students scoring at level 1 was cut nearly in half (both in comparison to the previous year and in comparison to the first, baseline year) and the percentage of proficient students increased by 15 percent. This rate of proficiency was 9 percent higher than the rate of proficiency achieved by students in the school's first, baseline year. The discrepancy between the scores of charter school students and district students, while still significant, closed to 14 percent in a year in which students in the district also made gains. The school's analysis, in its forthcoming Accountability Plan Progress Report, of the performance of students who have been enrolled in the school for two or more years will provide an additional important data point and may carry additional weight in light of the relatively high rates of student turnover the school has experienced.

The data points provided to date by the state assessments in ELA and Math over the 2000-2001 to 2002-2003 school years indicate (see next page):

		Performance Level				Percent Proficient
		1	2	3	4	
Grade 4 Math 2001						
Syracuse City School District		16	36	36	13	49
CNYCSMS		31	33	27	9	36
Grade 4 Math 2002						
Syracuse City School District		17	38	36	9	45
CNYCSMS		29	44	26	2	27
Grade 4 Math 2003		Not Yet Available				
Grade 4 ELA 2001						
Syracuse City School District		21	41	30	9	39
CNYCSMS		30	44	22	4	26
Grade 4 ELA 2002						
Syracuse City School District		20	44	29	8	36
CNYCSMS		30	50	20	0	20
Grade 4 ELA 2003						
Syracuse City School District		9	42	37	12	49
CNYCSMS		15	50	29	6	35

Given the amount of data, the scores may warrant some discussion:

There is little doubt that scores achieved by students in the school during its first two years of operation remained far from the levels of performance to which the school aspired, and failed to provide significant evidence of overall success. At the end of its second year, with the school suffering from a dearth of compelling data in support of its effectiveness, the school’s governing Board reacted to these and other concerns by making several changes including the hiring of a new director.

The third year of state assessment data appears to indicate, at least in ELA, that academic performance in the school may have turned in a positive direction. However, as this possible indication is contained in a single data point, it remains a tenuous indication. It would clearly be most significant were it to prove a bellwether and become the first in a series of data points marked by a dramatic and continued upward trend in ELA and Math scores. Such strong and consistent future assessment data would seem to be critical to demonstrating that a successful academic program exists in the school. Such future data may also be enhanced by longitudinal same-student data provided for in the Accountability Plan and discussed in the next section. This value-added data is

especially important given the possibility of a selection effect¹ and given the extensive turnover in the school.

Student Achievement in Social Studies and Science

The school has presented limited data thus far on the achievement of its students in Social Studies and Science.

In Science, the mean score on the multiple choice section of 2002 4th grade State Assessment was 24 at the charter school and the percentage of students scoring above SDL was 26%. By comparison, the mean score on the multiple choice section of the assessment in the Syracuse City School District was 30 with a 53% passing rate. The school has developed rubrics for evaluating the scientific reasoning skills demonstrated by student work at a yearly science fair among as an additional measure of student achievement outlined in the Accountability Plan. An effective presentation of this data has yet to be made as part of the school's accountability reporting. The science fair, held on the morning of our visit, featured a wide variety of projects completed and presented by students. For the most part the students we spoke to were enthusiastic about their projects and about Science more generally. It was harder for us to gauge the degree of knowledge and proficiency gained and we look to the school to address the challenges of effectively measuring and demonstrating the learning inherent in this positive activity in an objective and externally verified manner as part of its relationship with its authorizer.

In Social Studies, 64% of Central New York Charter School for Math and Science students scored proficient or higher on the 2002 New York State Grade 5 Social Studies Assessment. In 2003 that number was 28%. This represents a decline of 36% in the number of students demonstrating proficiency, a fact that appears to be cause for concern.

Evidence of Academic Achievement from the Site Visit

Observations made during the inspection team's visit to the school added additional, anecdotal data to objective performance data on student achievement. These data suggested that recent efforts to foster academic achievement have been effective in at least some of the school's classrooms, particularly in grades k-3, where many teachers appeared able and where the classroom environment often focused students on learning. In these classrooms anecdotal evidence of student achievement was often evident. In one kindergarten classroom, for example, a teacher meticulously reviewed the spelling her students had used in their writing. She set consistently high standards for correctness and effort, even when written work was strong or advanced by grade-level standards. In a first grade classroom, students in what appeared to be an excellent math lesson were asked to explain complex mathematical relationships such as the expression $95=40+x$. In the case of that expression the student called upon explained, "You have to do 95 take away 40,"

¹ That is, the possibility that the school had not drawn a student body comparable to that of the surrounding school district in fundamental and compelling ways.

suggesting a sophisticated level of mathematical understanding for a student in the 1st grade.

Such a level of rigor was not achieved throughout the school, however, and was most likely to be lacking in the school's 4th-6th grade classrooms. In several classrooms, students were praised for participating when the answers they provided did not reflect mastery, accuracy or in some cases earnest engagement in the topic at hand. In a sixth grade classroom, students filled in a worksheet that required them to round and average numbers, below grade level skills that many appeared to understand but some struggled to do. Several resorted to counting on their fingers to complete addition aspects of the problems. Final student work also raised questions in some cases. Posters outside one fourth grade classroom addressed scientific topics such as precipitation, condensation, and evaporation but much of work was comprised of photocopied materials that had been cut and pasted and reflected little analysis, discussion or summation of concepts by students themselves.

- What progress have students made over time in attaining expected skills and knowledge?

Longitudinal data on student improvement from the *Stanford Achievement Test Series, Ninth Edition, (Stanford 9)*, a nationally-normed assessment of student math and reading skills, provides some indication of how the performance of students has changed over time. In presenting such data it is critical that schools track "cohorts" of students, that is, that they compare the performance of exactly the same group of students at two different times to determine the value added by the school. At present the school has presented limited longitudinal test data. However, this data does not specifically follow cohorts. Thus while this data may provide some indication of the general trend in student learning, it is not yet sufficient to support sound conclusions.

The data that the school has presented reflects student progress during the 2001-2002 school year (i.e. before the arrival of the present administration) and stems from fall and spring² administrations in that year. The data that has been presented, while statistically flawed, indicates that during the 2001-2002 school year students in most grade levels made little progress in the school and, in fact, most likely fell farther behind their peers nationwide, in some cases significantly so. A grade-level-to-grade-level analysis³ (and thus not a cohort-based analysis) provided by the school indicates the following changes in performance over time (see next page):

² Fall-spring administrations are generally considered to be less reliable than Spring-Spring administrations given in subsequent years. Further, longitudinal data sets are most compelling when they reflect consistent trends over several years' time.

³ That is, a comparison of this year's third grade to last year's second grade regardless of the exact students included in the group.

Grade Level	Stanford 9 Math			Stanford 9 Reading		
	Fall 2001 (Mean Percentile Rank)	Spring 2002 (Mean Percentile Rank)	Increase (Decrease) in Percentile Rank	Fall 2001 (Mean Percentile Rank)	Spring 2002 (Mean Percentile Rank)	Increase (Decrease) in Percentile Rank
k	33	34	1	47	53	6
1	60	44	(16)	70	62	(8)
2	30	19	(11)	37	29	(8)
3	29	20	(9)	34	24	(10)
4	44	31	(13)	32	27	(5)
5	28	23	(5)	38	25	(13)
6	38	47	9	41	39	(2)
7	32	36	4	43	39	(4)

As this data shows, the mean National Percentile Rank of classrooms in grades 1-5 declined in mathematics, in comparison to their peers nationwide. In ELA mean student performance appears to have declined relative to peers nationwide at every grade level save for kindergarten. However, given the school's high rates of turnover these trends give only an indication of what may have happened to individual students during the year. Nonetheless they should be cause for serious concern to the administration and underscore--both in their statistical flaws and their indication that students may well have lost ground, perhaps dramatically so, during the 2001-2002 school year--the urgent need, at the end of that school year, for effective data gathering and strong instructional leadership in the school. Since such score declines can not be attributed to students' previous schooling, the possibility, and even likelihood that they occurred in the school would also seem to demand further follow-up and analysis by the school to ensure that staff and administrators know for certain whether they are effectively acquitting themselves of their responsibilities to their students.

Moreover, observers during the site visit noted a significant difference in the learning climate present in the school's K-3 classrooms and its grade 4-6 classrooms. This difference, combined with the fact that current state assessments measure students only after the fourth grade, suggests that careful grade-by-grade cohort analysis is critical to understanding student achievement throughout the entire building.

Finally, the school's current administration has candidly acknowledged the lack of effective gathering and reporting of data from previous years on the growth of student skills in reading and math. While the current administration should be sure to present sounder and more robust data as part of its own reporting, the loss of data from previous year nonetheless represents a serious challenge to school's effort to build a case for its success given that the burden of proof lies squarely with the school.

- Does the school's instructional program meet diverse students' needs?

Overall student achievement on the various assessments presented by the Central New York Charter School for Math and Science suggests a low level of student achievement but the school has not provided data attesting to the progress of specific groups or

populations within the school. Inspectors noted little trend from classroom to classroom in terms of the students for whom the program appeared to be working or not working though the high rates of student turnover the school has experienced suggest that some students and their parents perceive their needs to have gone unmet.

More than variation in the success of the program *within* classrooms – i.e. some students succeeding and others languishing – variation *between* classrooms appeared to be noteworthy, and the level of expectation in classrooms varied significantly. This trend may have been exacerbated by the latitude teachers were given to determine not just their own teaching methods but in many cases their approach to issues of school design. At some grade levels, teachers elected to group students by ability for reading and math lessons. At others they chose not to. In both cases the decision to do so or not appeared to have devolved to the teachers themselves. Similarly, each grade level appeared to determine how it would use assistants to support reading instruction. At some grade levels, assistants worked regularly with those students who needed additional instruction. At others they did not. One assistant, who held an advanced degree in instruction, was observed to spend perhaps 15-20 minutes reading intensely with a single student. The student was highly engaged in her efforts to improve both her understanding of what she read and her ability to break down phonemes. This appeared to be a highly effective session. Meanwhile in a nearby classroom, another TA worked with a larger group of students on rhyming words. She interrupted her instruction of the students to ask the lead teacher to help her with the pronunciation of the words, however, an irony that was made more troubling by the teacher's observation that the TA worked with her lowest functioning group of students because she did not feel capable of working with the higher achieving students.

- *Does the school reflect implementation of high academic standards?*

The school's new administration appears to have made significant improvements in establishing a learning environment in much of the school such that it now appears suitable to support rigorous instruction and high levels of student achievement. The establishment of this learning climate was attributed by parents and teachers to the work of Assistant Director Larry Williams in particular. As a result, inspectors observed that in those classrooms where teachers demanded focus and reinforced expectations, students were engaged, curious, and willing to work. Though some teachers were still developing their instructional techniques and had only partially turned the level of engagement into rigorous academic expectations, others were clearly running highly proficient classrooms and the academic climate in such classrooms was clearly promising. In these classrooms, hands were consistently in the air to answer questions, distractions were kept to a minimum and student comments and questions were germane to the lesson. For example a 3rd grade classroom where a language arts lesson was in session, students accomplished a substantial amount of independent written work of high quality during class and, with behavioral expectations clearly in place, the teacher was able to circulate effectively and provide his students with clear and effective guidance on their writing.

Yet even while many teachers had established strong learning environments or demonstrated promise in developing such environments, a significant number of teachers in the school had clearly failed to do so. These teachers appeared unable or unwilling to set and reinforce the behavioral and academic expectations present in other classrooms despite what appeared to be extensive and consistent support in building such a climate from members of the administrative team. Their classes appeared to have few systems to prevent student misbehavior (as opposed to reacting to it) and often appeared to reflect unwillingness on the part of teachers to address behavior clearly and directly themselves and without the help of Mr. Williams and his team.

In one classroom, for example, students talked throughout class or wandered about the room in an unproductive manner. Despite their general lack of effort and productivity many managed to finish a relatively simplistic math worksheet 15 minutes before the end of class, a fact that reflected the lack of substance to the worksheet. Having completed this work, however, students were given no further work and remained idle for the duration of the class or used the time to distract their classmates who had not yet finished the work. In a 5th grade classroom the teacher was interrupted by one of her students even as she was asking the class to desist from distractions during a social studies lesson. The student insisted, "It's important," and proceeded to undercut their teacher's authority and co-opt precious learning time by holding forth on the patriotic origin of the nicknames of professional football teams. The teacher allowed the disruption to run its course without censure and, during the subsequent activity in which students were supposed to read along at their desks while a classmate read aloud, the student continued to discuss the issue loudly with his neighbor. Not surprisingly, in such an environment, just 7 of 19 students, by the inspector's count, appeared to be on the required page and paying attention to the passage they were reading. Such classrooms appeared unlikely to be able to support academic instruction of substance or quality. This notion was in some cases shared by students themselves. One inspector spoke extensively to two intelligent and motivated 5th graders who expressed a frustration that "teachers try to be strict, but there need to be more consequences" and lamented the fact that so much class time was wasted while the teacher attempted to get students to be quiet.

Though there were exceptions to both cases, academic and behavioral expectations were noticeably higher in the school's lower grades than in its upper grades. In the majority of classrooms in the lower grades, students were ready to learn and in many cases appeared to have internalized high expectations for attentiveness and participation. But while younger students had evidently been successful in learning to transition smoothly from activity to activity, to desist from disrupting instruction, to be ready to learn at the beginning of class and to engage in opportunities for learning, older students could often not be said to have done so though the fact that some teachers in those grades had managed to instill these behaviors in their students suggests that it was certainly possible for diligent teachers to have achieved it. This fact underscored the inspectors' concerns (discussed later in this report) that teachers do not appear to undergo regular observation or evaluation by the administration.

A final note about the level of academic expectation in the school: though the level of expectations varied among teachers from excellent to poor, the school's operational systems often did not communicate the message that academic learning time was the highest priority. Some teachers were still only beginning instruction as late as 9:15 AM, and students often walked from class to class taking attendance, both interrupting those lessons and missing their own. Classroom phones repeatedly rang and were answered by teachers during instructional time and in some classes instructional time was spent in a manner that did not reflect an emphasis on learning and achievement, as demonstrated by the schedule on the board in one classroom, which noted: "3:15-4:00 PM: Get Ready to Go!!!" It's worth noting that the time allotted in this room to getting ready to go home was roughly equal to the amount of time spent on mathematics.

II. ORGANIZATIONAL VIABILITY

During their visit, inspectors concluded that the school appeared to be effectively and soundly run from an operations perspective. Parents found the school easier to contact and communicate with when necessary, safety and security procedures had been improved, and even the arrival of school buses, while not flawless, suggested an effective and far more intentional approach to the challenges of running a large organization than indicated by previous inspections and visits by the authorizer.

In addition, the school has, under its present leadership, significantly improved its Accountability Plan as well as its collection of and openness with information, policies and data regarding program effectiveness. This increased level of transparency makes the school more likely to avoid future organizational pitfalls and may enhance the validity of arguments it makes for its own effectiveness as part of the Accountability Progress Report.

- Is enrollment stable and sufficient to provide the financial foundation for the school?

The school reports that it presently enrolls 517 students, an increase of approximately 115 students over enrollment at the same time last year. This increase has occurred despite the school's decision to eliminate its program at the 7th and 8th grade level. 95% of students enrolled come from the Syracuse City School District. Such enrollment levels suggest that families continue to have a strong interest in the school and that the need for alternative schooling options remains strong in Syracuse. In short, the school's programs do not appear to be at risk of contraction due to student enrollment.

The persistence of enrollment has historically been less robust than overall enrollment levels, however, and turnover rates have been significant. For example the school reported in July of last year that of 402 students slated to begin the current school year, 307 were returning students. The 95 new enrollees represent about 24% of the student body. This fact poses challenges to the school in terms of its management and analysis of academic data- i.e. it makes it more challenging and more important to follow the progress of students who have been consistently enrolled. It also suggests possible cause for analysis in its own right, especially given that it occurred in a year when the school

was contracting the number of grades it served, and the administration should continue tracking not only enrollment but the rate at which parents re-re-enroll their children as a marker of the school's performance and progress.

- Does the school's financial management serve the needs of the students?

The school is housed in two large buildings near the center of downtown Syracuse with fenced grounds and an easily supervised play area. With the current administration having made improvements to the facilities and their maintenance, the school now enjoys a building that is brightly lit, spacious and well-suited to its use. In the opinion of inspectors it appears highly conducive to the provision of an effective educational program. As the school is likely to be able to inhabit this site for the foreseeable future, this accomplishment suggests effective financial management by the Board and administration. Further, while some teachers in individual interviews lamented a lack of available curricular resources, most classrooms seemed well supplied with necessary materials. Most, if not all, had functioning computers with internet connections that students were observed to use and, in one classroom, students participated in a multi-media lesson in which their teachers downloaded web-based audio-visual materials and presented them to the class via projector during their lesson.

An analysis of the school's financial practices and statements was not part of this inspection and, as noted above, evidence on the ground suggests that effective management of financial resources is present in the school to at least a reasonable degree. However, inspectors were surprised and struck by one aspect of the school's financial operations in particular.

As noted later in this report, the school's relationship with its management partner, Chancellor Beacon Academies (CBA), may be, and has been at various times in the school's existence been, strained at least according to a variety of individuals inspectors spoke to during their visit. Given this fact, inspectors were surprised when an individual of importance in the school's governance structure noted that the school would be unable to withhold payment in cases when they felt promised services had not been delivered by virtue of the fact that CBA controls the operations of the school's business office and therefore can ensure the prompt payment of fees even over the school's objections. Inspectors did not have time, on their visit, to investigate the validity of this assertion, nor the nature of payment procedures and signatory authority in the school, but they note that this structure, or even the belief on the part of responsible parties that such a structure exists, does not appear likely to maximize vendor accountability.

- Are students and parents satisfied with the work of the school?

Inspectors met with 6-8 parents from the school's parent organization as part of the visit and spoke with other parents as opportunities presented themselves during the visit. Inspectors also reviewed parent survey data provided by the school.

During interviews, parents consistently expressed happiness with and support for the school as well as a belief in its continued progress. Many had specific concerns or complaints but almost all felt these were soluble problems and those whose students had been enrolled for some time alluded to past problems that had been worked out satisfactorily. Parents almost universally cited the school's strong partnership with families and the positive welcoming environment for parents as being among its strongest assets. One father noted that while he had struggled to be able to observe his child's classroom even once at her previous school, he had been continually welcomed by administration and teachers alike at Central New York Charter School for Math and Science. Parents valued the weekly reports sent home to parents informing them of classroom activities and the topics on which their students are receiving instruction and cited such programs as indicative of the sorts of highly responsive programs the school provided that their previous schools did not. Parents sampled felt that the school was superior academically to other local options (including, in several cases, parochial schools) and many were particularly appreciative of the school's emphasis on values and behavior. Parents praised the efforts and commitment of the school's teachers in meeting their children's needs and in communicating with them directly and individually when necessary. Parents also noted approvingly that the school assigned homework every night and that their children enjoyed the school and were eager about attending it.

Though generally positive about the school, parents noted several areas of dissatisfaction. Most common among these were the lack of substantial emphasis on math and science (parents noted that this was improving but still did not meet their expectations), the inaccessibility of the Board (parents noted that Board meetings were held at a difficult time for working parents and in an inconvenient location), the school's lack of structures and systems (such as, said one parent, a way of checking on his daughter's homework directly) and some concerns over the effectiveness of the school's relationship with Chancellor Beacon.

Parent surveys also showed an overwhelming support of the school and its teachers. However, this data represents only 200 surveys out of a possible 500 or so families enrolled in the school (assuming one survey per child) – a response rate of just 40%. Further, the data was universally positive to a degree that did not necessarily jibe with the comments of the parents with whom inspectors spoke and in some cases with what they observed in the school. For example, in the data reported by the school, 100 parents agreed with the statement, "I am satisfied with the quality of instruction my child receives," and 0 disagreed. While such findings are obviously extremely encouraging, inspectors wondered why there were only 100 respondents included in the reporting among the 200 who have filled out the survey and the 500 in the school. To best provide evidence necessary to support such overwhelmingly positive and encouraging indications, the school should be sure, in reporting data to the Charter Schools Institute at the close of the year, to include actual survey responses from all parents as an appendix and to attempt to achieve a higher response rate such that the findings at least represent the opinion of the majority of parents in the school.

- Are systems in place to promote the efficient operation of school functions?

As noted elsewhere in this report, general school operations appear to be improved in their efficiency and efficacy. Tutoring and enrichment programs have been enhanced, an after-school program has been made available to parents, special events such as a yearly science fair appear to be effectively organized and implemented, and professional development appears to be more accessible to teachers now than previously. Further, communication with parents is strong and regular and systems and protocols appear to be in place for aspects of school operations such as restricting access to the school buildings, signing in visitors, running fire drills, and ensuring that meals are served on time, etc. These systems did not appear to exist consistently before the current administration took over.

However, while the school's current administration deserves credit for effectively developing and implementing the functions of a large organization, one critical aspect of efficient and effective operations has not been developed. Its absence was both noteworthy to inspectors and, they believe, a critical piece of the school's effort to increasing its effectiveness. This aspect is the observation and evaluation of teachers.

Presently, teachers are neither formally evaluated nor coached in their instructional effectiveness in a systematic way by the school's administration. The administration, which took over near the end of the previous school year, has never, by its own report, dismissed or demanded explicit measurable improvement from a teacher as a condition of employment even though there were teachers in the school who appeared worthy of such tough medicine. Given the nature of the available data on student performance at the school, the urgency of the school's need for improvement and the readily apparent differences in quality of, and expectations among, teachers, this fact was difficult for inspectors to reconcile.

Instructional leadership – which is to say developing and evaluating faculty -- is generally considered to be perhaps the single most important aspect of the administration's role in building a high performing school. Even in the finest schools it is a critical piece of building and sustaining excellence. And while some aspects of teacher development can be delegated, only one person in the building can ultimately be responsible for setting and defending standards of quality. Therefore it is difficult to believe that the teaching staff at Central New York Charter School of Math and Science would not benefit and improve by virtue of their being regularly observed, coached, developed and evaluated by the school's instructional leader. This would seem to be among the fundamental responsibilities of school leadership and one that can hardly be left idly for long without dire consequences.

As it is, teachers in the school clearly demonstrated a lack of accountability for performance, in the eyes of inspectors, whether it was those teachers who operated ineffective classrooms and failed to support their colleagues in setting expectations for student behavior, or the school's motivated and able teachers who were treated the same as their less effective colleagues in the eyes of the administration. Some of these teachers

noted frustration over the ease with which some colleagues shirked their part of shared responsibilities.

Further, beyond the need for evaluation and accountability for performance, the school is full of young teachers of promise. In many cases they have often built classroom environments that are ready to support or are already supporting rigorous instruction. Regular formal or informal coaching and evaluation via classroom visits would, inspectors believe, lead to rapid improvements among such teachers, especially if feedback was offered them by the administration and included pragmatic and straightforward techniques of teaching such as asking questions of specific students instead of whole classes to avoid having students call out answers.

Finally, given the degree to which those teachers who are ineffective and who have not been held accountable for their performance sap the resources of the school's disciplinary and behavioral staff, the current policy on evaluation appears to be expensive in terms of resources for the school.

Again, developing skill and capacity in all teachers as well as ultimately separating excellence from mediocrity would seem to be critical to assembling and keeping a first rate teaching staff and therefore highly necessary to the ultimate efficacy of the school. Obviously, under the basic premise of charter schools, the school is free to develop and design its own policies and procedures in this and other regards. Nonetheless, the fact that these aspects of school operations do not exist at the Central New York Charter School for Math and Science given current conditions and the urgency of the task ahead for the school, inspectors were unable to conclude that all systems necessary to an effective school were yet in place.

- Are systems in place to monitor the effectiveness of the academic program and modify as needed?

The school's recent significant improvement in student performance on the 4th grade New York State Assessment in Language Arts represents the strongest signal of school effectiveness to date. Inspectors noted that the higher levels of achievement were reached in large part thanks to the effective use of an internal diagnostic assessment (the CSAT) provided by the school's management partner, Chancellor Beacon Academies. While this effective use of interim data on student mastery to guide instruction and support is an example of the effective use of best-practices in and by the school inspectors also noted that the school did not yet appear to have replicated it throughout the organization. That is, while one might expect to see such evidence of the potential effectiveness of an assessment technique lead to its wider use in, say, math classes and/or in English classes at other grade levels, the school has not yet done so.

Thus inspectors conclude that some systems are in place to monitor the effectiveness of the academic program but they are not universally implemented. Further, while the school has begun to gather and assess other forms of performance data (such as its scores on the Stanford-9) in a more sophisticated manner, and while this is surely a positive development, much remains to be done and it is hard to fathom how a school that

partners with an educational management organization with the resources and experience of Chancellor Beacon Academies could have taken *three years* to begin following same-student cohorts of students on the Stanford 9.

Perhaps one reason for this may lie in the school's relationship with Chancellor Beacon. While inspectors certainly lack enough evidence to determine the context and accuracy of the opinions expressed, they were struck by the frequency with which board members, administrators, teachers, and even parents described their frustrations regarding the partner and the school's relationship with it

At the very least, inspectors noted a perception within the school that a lack of clear division of roles and responsibilities existed among the Board, the administration and the management partner. Often more than one of these three groups described their frustration with the others for not addressing an issue. As a result, addressing challenges within the school appeared likely to require discussion among the parties as to whose responsibility it was and only then movement towards solution. Given the urgency of the task ahead and the importance of the school's success to all parties involved, a clear resolution of these sources of tension and the clarification of areas of responsibility would seem to be important. Nonetheless, while the school has every right to expect CBA to fulfill its contractual obligations, its Board of Trustees and administration are ultimately responsible for ensuring student achievement, whether that goal is achieved through the contracting of management services or through some other means.

III. UNIQUE PROGRAMMATIC AREAS

- Is the school's mission and vision clear to all stakeholders?

The school's mission is, "To use a partnership between educators, families and community members to create a school where students learn by doing and achieve at levels that exceed the New York State Performance Standards. Students will learn 21st Century Workplace Skills including Digital Age Literacy, Inventive Thinking, Effective Communication, and High Productivity."

While the school's mission is clear and ambitious and framed in clear, measurable outcomes, many of the stakeholders with whom inspectors spoke described a somewhat different mission, often one that was idiosyncratic to their own perspective. Even the school's focus on math and science was not mentioned in the depiction of the school's purpose offered by some stakeholders, including several members of the Board of Trustees. For example, while the Board chair noted that the school was designed to address the lack of adequate preparation in math and science by local schools, particularly as noted by local employers, others mentioned a wide array of goals such as developing good citizens and lifelong learners, maximizing potential, and building a diverse community. These goals, while in many ways worthy, are not central to the school's espoused mission. Similarly reasonable and well-intentioned responses were expressed by many teachers and parents, but a universal consensus that the school's core purpose was to develop strong student achievement in math and science was not always

noted. As the Board should be prepared to provide clear guidance to the administration in making hard choices about potential uses of resources, and as teachers and parents can best support this mission when fully cognizant of it, inspectors believe that arriving at a more consistent interpretation of the school's mission throughout the school community may be a worthwhile effort.

- Is the school effective in addressing its unique programmatic areas?

The school has made strides to enhance the programs and enrichments that it offers, particularly in the area of science. These efforts are encouraging and may provide great additional value to students when coupled with evidence of strong academic achievement in Math, Science, Reading and Writing. Meanwhile the school has limited its accountability in specific and unique programmatic areas to the development of its staff in the Education By Design program, which encourages hands-on learning and higher order thinking in classrooms. Inspectors encourage the school to continue focusing on core academic programs and the development of improved teacher capacity. Many members of the staff, they note, appear ready to take full advantage of additional investment in their skills and knowledge. At the same time, they encourage the school to find ways to measure, and hold itself accountable for, the effectiveness of teachers in putting their techniques into practice to improve student performance.

PART II: SCHOOL ACCOUNTABILITY PLAN: ASSESSMENT AND RECOMMENDATIONS

The team conducting the third year site visit of the Central New York Charter School for Math and Science commends the school and its administration for the high standards of performance and of measurement outlined in the school's Accountability Plan. However, inspectors found the school's *Accountability Plan Progress Report* to be lacking. As the 2002-2003 school year represents the first full year of the present administration's authority, it represents an important opportunity for the school to reshape the nature and enhance the quality of its progress reporting to the Charter Schools Institute.

I. ACADEMIC GOALS

The school's previous administration failed to gather important sets of data from the 2000-2001 and 2001-2002 school years and this omission is undeniably significant. In light of this fact, effective presentation and analysis of future data is critical for the current administration, especially given the school's burden of proof and ultimate responsibility for its performance past and future. In presenting its 2002-2003 data at the close of this year, the school should be sure to follow cohorts rigorously and should consider tracking *both* student progress over the most recent year (to isolate performance under the new administrative team) and over two-years time for maximum reliability.

Goal 1: All students at the Central New York Charter School for Math and Science will demonstrate competency in, and understanding and application of, mathematical computation and problem solving.

Measure 1: Each cohort of CNYCS for Math and Science students will achieve an average of a 4 point percentile rank improvement per year on the total math score on the Stanford-9.

Measure 2: Seventy-five percent of students enrolled at CNYCS for Math and Science for two or more years will perform at or above Level 3 on the New York State Math Assessment.

Measure 3: A greater percentage of CNYCS for Math and Science students enrolled in the school for two or more years will perform at or above Level 3 on the New York State Math Assessment than will students in the Syracuse City School District.

Goal 2: All students at the Central New York Charter School for Math and Science will demonstrate competency in the understanding and application of scientific reasoning.

Measure 1: Seventy-five percent of students enrolled at CNYCS for Math and Science for two or more years will perform at or above Level 3 on the New York State Science Assessment.

Measure 2: A greater percentage of CNYCS for Math and Science students enrolled in the school for two or more years will perform at or above Level 3 on the New York State Science Assessment than will students in the Syracuse City School District.

Measure 3: Seventy-five percent of students enrolled in the CNYCS for Math and Science in grade 5 and above will demonstrate the 21st Century Skills of Inventive Thinking, Effective Communication, and High Productivity through their participation in the Annual Science Fair. Student work will be evaluated through a rubric created by staff. The rubric will be developed and submitted as an attachment to the Accountability Plan by May 1, 2002.

Goal 3: All students at the Central New York Charter School for Math and Science will become proficient readers and writers of the English language.

Measure 1: Each cohort of CNYCS for Math and Science students will achieve an average of a 4 point percentile rank improvement per year on the total reading score on the Stanford-9.

Measure 2: Seventy-five percent of students enrolled at CNYCS for Math and Science for two or more years will perform at or above Level 3 on the New York State English Language Arts Assessment.

Measure 3: A greater percentage of CNYCS for Math and Science students enrolled in the school for two or more years will perform at or above Level 3 on the New York State English Language Arts Assessment than will students in the Syracuse City School District.

Goal 4: All students at the Central New York Charter School for Math and Science will demonstrate competency in the understanding and application of social, geographical, civic and world studies.

Measure 1: Seventy-five percent of students enrolled at CNYCS for Math and Science for two or more years will perform at or above Level 3 on the New York State Social Studies Assessment, administered to 5th grade students every year.

Measure 2: A greater percentage of CNYCS for Math and Science students enrolled in the school for two or more years will perform at or above Level 3 on the New York State Social Studies Assessment than will students in the Syracuse City School District.

Measure 3: Ninety-five percent of 4th, 5th, and 6th grade enrolled in the school for two or more years will participate in three school-based and/or work-based school-to career activities during the 2002-03 school year. (e.g. "I Can Make a Difference", Career Wax Museum, Career Investigation Activity)

ACADEMIC PROGRAM GOALS -- RECOMMENDATIONS

Math: The school's performance standards for student achievement in mathematics are exceptionally rigorous, measurable and clear. Inspectors believe that achievement of such goals or clear indication that the school was on course to achieve such goals in good time would be compelling evidence of the school's effectiveness. They also believe that partial achievement of such rigorous goals could, in the eyes of the authorizer, be compelling as well, assuming that the school had presented strong evidence of achievement and progress.

Inspectors note that while the school's new administration, the authors of the current Accountability Plan, deserve credit for dramatically improving the school's goals and measures, the lack of data from previous years continues to hamper the school significantly in creating a compelling argument for its success. Thus the school should be sure to enhance its reporting going forward. In the past, including 2001-2002, Accountability Progress Reports submitted by the school have been unimpressive in their

synthesis and analysis of data and therefore represent a missed opportunity. The school should be sure to seize the opportunity to provide thorough and compelling data in this and all future years, and, in particular, should remain aware of the criteria within its plan that track same-student cohorts over time and that assess students who have been enrolled in the school for two or more years. These forms of data, particularly data from the Stanford 9 may prove especially important given that the school has now eliminated its 7th and 8th grade programs. A decision that, while made for sound reasons, has had the result of leaving the school's without state assessment results related to student performance after the 5th grade.

Science: The school's performance standards for student achievement in the sciences are rigorous, measurable and clear and inspectors were able to note a strong degree of participation in the school's annual science fair on the day of their visit. Inspectors were not in a position to effectively judge the achievement of "21st Century Skills" inherent in the presentations, however, and look to the school to provide fuller data in the *Accountability Progress Report* and to ensure that the promised rubric has indeed been filed with and approved by the authorizer. Generally, inspectors note that this data would be most compelling and perhaps extremely powerful, if it were objective and externally verified. That is, if the school were able to arrange for outside experts rather than students' own teachers to evaluate presentations according to the rubric then the weight of successful scores would be far more powerful. Inspectors note that, given the Board's connections, enlisting members of the science faculties at area colleges and universities and/or members of the local business community who dealt with applied scientific concepts in their work, would not be impossible to arrange.

Finally, inspectors note that the new York State Assessment in Science, which has changed its form and structure several times in recent years, is now graded on a scale different from that used on other state assessments and on the school's Accountability Plan. The school may therefore wish to amend their current Accountability Plan in the interest of clarity.

English Language Arts: The school's performance standards for student achievement in English Language Arts are, like performance standards in other subject areas, rigorous, measurable and clear. Comments made under goal 1 above regarding the importance of Accountability Progress Reports and analysis going forward of specific cohorts apply equally to this section of the school's Accountability Plan as well.

Social Studies: The school's goals and measures for Social Studies are clear, measurable and rigorous. Like other data from state assessments, the data on student achievement in Social Studies is gathered at grade levels that may not represent the school's best work, and therefore underscore the critical importance to the school of achieving both a rigorous and urgent focus on student achievement in core academic areas and a focus on achieving consistency of quality and expectations throughout the school. Finally, the third measure, while effective in demonstrating student participation in activities, could be improved by measuring the outcomes of that participation in terms of student skills and knowledge.

II. ORGANIZATIONAL VIABILITY GOALS

Goal 1: The CNYCS for Math and Science will maintain strong organizational viability by building strong parent and community support and commitment to the school.

Measure 1: In a yearly survey distributed to all CNYCS for Math and Science parents/guardians, 80 percent of all parents will report that the effectiveness of the school's academic program, communication, and child's progress is good or excellent (on a scale of excellent, good, satisfactory, poor).

Measure 2: During the school year, the CNYCS for Math and Science will maintain an enrollment level equal to or exceeding 85 percent capacity and a waitlist equal to or exceeding 15 percent of the school's population.

Measure 3: Each year, the average daily attendance rate of all CNYCS for Math and Science students will exceed the Syracuse City School District.

Measure 4: Each year an average of 15 community businesses will participate in School-to-Career activities with the school. (e.g. career investigations, workplace simulations, workplace field trips, etc) This will be recorded on our "Wall of Fame" for community involvement.

Goal 2: The CNYCS for Math and Science will maintain strong organizational viability by demonstrating sound financial practices and effective, responsible decision-making.

Measure 1: Actual and proposed budgets for each year will show effective allocation of resources to ensure effective school programs.

Measure 2: Yearly balance sheets will show that the school is fiscally sound and maintains cash reserves.

Measure 3: Yearly submissions of audited financial statements will demonstrate that the school is responsible and prudent with public resources.

ORGANIZATIONAL VIABILITY GOALS -- RECOMMENDATIONS

In general, the goal and measures in this section of the Accountability Plan are well designed. The school might improve them by:

- Setting a goal for the response rate achieved on parents surveys
- Including the raw data in appendix when submitting to the *Accountability Progress Report*.

In light of student turnover rates, which have been high despite strong enrollment, the school may wish to monitor and discuss its improvement in this area as part of its

progress reporting. It may elect to do this, if it so desires, without amending the Accountability Plan, as nothing prevents the school from submitting additional relevant and rigorous data in support of its effectiveness.

III. UNIQUE PROGRAMMATIC AREAS

One of the goals of the CNYCS for Math and Science is to prepare our students to learn 21st Workplace Skills. These skills include Digital Age Literacy, Inventive Thinking, Effective Communication, and High Productivity.

The instructional model to be implemented is the “Education by Design/The Critical Skills” Program. The “Education by Design” (EBD) model is an approach to learning developed over 15 years through the classroom experiences and action research of hundreds of teachers in New England and New York.

Outcomes from the implementation of the “Education by Design/The Critical Skills” Program include:

- Turning curriculum into challenging “problems-to-solve” through which students achieve the New York State Learning Standards,
- Developing student capacity in the lifelong “Critical Skills” needed for success in the school, community, and work-place,
- Assessing both the product and processes of student learning,
- Making learning engaging and meaningful for students of all learning styles and intelligences,
- Addressing the issues of honesty, integrity, and work ethic in a “real-world” context,
- Making connections between learning in school and life in the community,
- Transforming classrooms and schools into places “safe” for learning.

Goal 1: The CNYCS for Math and Science staff will receive initial training in the “Education by Design/The Critical Skills” (EBD) Program during the spring and summer of 2002.

Measure 1: 100% of the CNYCS for Math and Science staff will participate in a three and a half hour “introduction” workshop of EBD by May 31, 2002

Measure 2: 100% of the CNYCS for Math and Science will participate in a five day workshop of EBD during the months of August, 2002.

Measure 3: 100% of the CNYCS for Math and Science staff will begin the 2002-03 school year demonstrating “novice” level competency in the EBD instructional model.

Measure 4: Each student will participate in two EBD “challenges” during the months of September through December, 2002 and during the months of January through June, 2003.

UNIQUE PROGRAMMATIC AREA GOALS -- RECOMMENDATIONS

The school earned praise from instructors for limiting the unique elements of its program for which it wishes to be held accountable to those explicitly involving rigorous teaching in core academic areas, especially math and science. They also note that the measures of the goals are predominantly based upon inputs regarding professional development. While professional development is critical, of course, inspectors urge the school to consider finding ways to gauge the effectiveness with which teachers use the array of techniques at their disposal.

CONCLUSION: The Board, administration, and staff at the Central New York Charter School for Math and Science appear to be taking the first steps towards improving the academic program at the school. Continuation of this improvement trend will be critical: previous data is disorganized and sometimes poorly constructed but appears to reflect poorly upon the school’s performance during its first two years. The school’s administration should understand the urgent need for strong growth in academic performance in the years to come as well as the need for a greatly enhanced system of analyzing and reporting data to the authorizer.