

2002-2003



**VOYAGER SUMMER ACADEMY
2002 RESULTS**

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WAKE COUNTY PUBLIC SCHOOL SYSTEM

**VOYAGER SUMMER ACADEMY
2002 RESULTS**

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VOYAGER SUMMER ACADEMY 2002

EXECUTIVE SUMMARY

The Wake County Public School System (WCPSS) provides a comprehensive program of extra support for students in grades K-8 who have not yet reached grade level standards. In the summer of 2002, the Voyager Summer Academy was offered in WCPSS at grades 2-8 to students scoring at Level I or II (below grade level) in reading or math. (The State of North Carolina required a summer intervention at grades 3,5, and 8, and WCPSS offered the program at the other grade levels as well.) WCPSS utilized the Voyager Time Warp series, which is a summer reading intervention program. Designed to decrease summer learning loss and reduce the achievement gap, Voyager Time Warp is based on the premise that lessons generating high student interest, combined with academically challenging material, will increase student motivation and improve student achievement. The Time Warp reading program is a four-hour-a-day, four-week program. WCPSS also adopted Voyager's one-hour-per-day V-Math series for use in combination with the reading intervention.

A variety of methods were used to assess the Voyager program including student, parent, teacher, and site coordinator surveys, a quality assurance checklist, in-depth interviews, and a focus group. Voyager pre/post assessments designed by the publisher and results on pre/post North Carolina End-of-Grade (EOG) tests were also used to evaluate Voyager's effectiveness.

PROGRAM IMPLEMENTATION

Voyager was implemented at 18 regional sites. Prior to implementation, site coordinators and teachers received two to four days of training. The vast majority of staff members rated their Voyager training as excellent. Nearly all of the site coordinators reported that the implementation went well (based on interviews and surveys). Most of the 18 site coordinators surveyed reported that the curriculum materials (89%), training (79%), and ongoing professional development (79%) were helpful resources.

Because student eligibility for the Voyager program was determined by test scores that were not available until the last few days of school, families often had to make considerable adjustments for their child to attend a program that extended from mid-June to mid-July. The extent to which parents would choose to enroll their children and make necessary transportation and childcare arrangements was not known prior to program implementation. Late enrollment requests as well as parents' attempts to enroll ineligible students, overwhelmed staff members at times. Transportation was provided, and routes had to be organized very quickly. While transportation worked smoothly from the beginning in many areas, it was initially problematic for 2 -3 days in some regions.

Parents of approximately 69% of eligible students enrolled their children in Voyager. Of the 3,524 students enrolled, 52% of Voyager students were low-income (based on their free or reduced-price lunch status), 35% were served by special education programs, and 6.6% were classified as Limited English Proficiency (LEP). Seventy-one percent of the Voyager students

were Black, 16% were White, 9% were Hispanic/Latino, 1.5% were Asian, 0.3% were American Indian, and 1.3% were Multiracial.

Program administrators felt that attendance was good, especially given the short notice for many families. Approximately 50% of students attended 19 or 20 days of the 20-day Voyager program; 76% of students attended 17 days or more (80% of the Voyager program); and 86% of students attended 15 days or more (75% or more) of the Voyager program.

CUSTOMER FEEDBACK

Overall, students, parents, staff and site coordinators had very positive views toward the Voyager program.

- Most (75% or more) students reported favorable views toward the Voyager program and its practices. Ninety-one percent of students reported that they “learned a lot” through the Voyager summer program.
- Over 90% of parents gave favorable responses to all five survey questions designed to assess Voyager’s effectiveness.
- Approximately 65% of teachers agreed or strongly agreed that children demonstrated increased learning as a result of their participation in the Voyager program. A greater proportion of elementary school teachers rated Voyager favorably than did their middle school counterparts.
One concern expressed by more than 50% of teachers overall (approximately 57% elementary and 44% of middle) was that the level of the Voyager curriculum was too difficult. A greater percentage of elementary school teachers (60.5%) also reported the pace of the program to be too fast for their students.
- All 18 site coordinators reported that overall, students demonstrated increased learning as a result of their participation in the Voyager program. Ninety percent of site coordinators indicated that Voyager was an effective way to teach and reinforce skills and competencies at their school. Fewer site coordinators (35%) reported the pace of Voyager was too fast, a somewhat different perspective than the teachers.

STUDENT OUTCOMES

Voyager Pre- and Post-Assessment Results

The Voyager summer program includes pre- and post-assessments for all participants. The availability of positive data from other districts was one of the reasons WCPSS chose to implement the Voyager program. As with other districts for which we found data on Voyager’s assessments, *WCPSS students showed statistically significant gains on the Voyager assessments*. Students had the highest average gains in math, followed closely by gains in comprehension. Students experienced the smallest average gains on the vocabulary assessment.

EOG Results

The percentage of WCPSS students reaching grade level standards has been steadily increasing in the last few years (since the 95% achievement goal was adopted and increased assistance has been provided). Since May 2001, for example, 67% of WCPSS students previously scoring below grade level have increased their achievement to at or above grade level performance in reading; 70% of such students reached grade level in math. Because of the large gains already occurring, it is likely that students who were still eligible for Voyager in 2002 presented somewhat more challenging needs than students in prior years.

To analyze the specific impact of Voyager, we analyzed short-term gains shown on the EOG assessments given in May (before summer school) and on the second re-test given after summer school. Because of the nature of the EOG tests, which are not very sensitive to small gains, immediate improvements on EOG level scores were only one criterion of interest. Some scale score growth was expected, however. Analysis of 2003 results (next spring) for these students is recommended to see if the program had a more lasting impact.

Based on North Carolina's EOG tests:

- Voyager students in most (two-thirds) grades showed high growth, based on the State ABCs model.
- Level I students had greater gains than Level II students in both reading and math.
- Both groups had greater average gains in reading than in math. This is not surprising because four hours per day were devoted to reading and one hour was devoted to math.
- Comparisons of students who attended Voyager at their base schools and those attending at sites other than their base schools showed a slight but statistically non-significant benefit for students at their base school.
- Non-special education students showed significantly better EOG growth in the Voyager program than special education students in 9 out of 12 comparisons (reading and math across 6 grades). This may reflect that some groups of students learn at a faster or slower rate than others.
- LEP students showed the same math gains as non-LEP students. Their reading gains, however, were smaller than non-LEP students at three of the six grade levels.

Summer 2001 and 2002 EOG Comparisons

The 2001 Summer Academy program, a two-week targeted intervention geared at preparing students for Retest 2, was used as a comparison to the 2002 Voyager Summer Academy.

Overall, student outcomes were similar for the two years.

- Scale score gains for 2001 Summer Academy students and 2002 Voyager students were similar (by grade and subject), based on regression analyses. The one exception was that middle school students in 2001 had significantly greater reading gains than 2002 Voyager students.
- There was not a significant difference between 2001 and 2002 students in the percentage of Level I or II students (in May) reaching grade level on Reading EOG Retest 2.
- A significantly higher percentage of 2002 students scored at grade level on the Math EOG Retest 2 (22.5% of 2002 Voyager students, compared to 9.4% of 2001 Summer Academy

students). However, the population served in 2001 was different due to the fact that cut scores for Level III were set incorrectly that year, so comparisons of math Retest scores in 2002 and 2001 are problematic.

- Subgroup results revealed that:
 - The percentage of special education students in Voyager who reached grade level in reading was similar in 2001 (18.7%) and 2002 (18%). In math, the percentage was significantly higher in 2002 (17.8%) than 2001 (7.8%).
 - The percentage of non-special education students in Voyager who reached grade level in reading was similar in 2001 (31.7%) and 2002 (30%). A significantly higher percentage of 2002 students moved to grade level in math, 25.1% versus 9.8% in 2001. Again, it is important to remember that the incorrect math cutoffs set by the State influenced participation.
 - The only area in which 2002 gains were different from 2001 gains for special education students was for middle school students in reading, where 2001 students gained more than their 2002 counterparts.
 - LEP students who attended the 2001 Summer Academy experienced slightly higher gains in reading than in 2002 (these differences were statistically significant at grades 6 and 7).

Summer Academy Participants & Non-Participants Comparison

Matched samples of students who participated were compared to students who did not participate in 2002 summer school; these matched comparisons showed statistically similar gains for each group. No information is available on whether non-participants received other forms of assistance.

CONCLUSIONS AND DISCUSSION

Summer school is one element of a comprehensive set of supports for student achievement in WCPSS. The percentage of students reaching grade level has been steadily increasing in the last few years, as increased assistance has been provided. Overall, views of the Voyager program expressed by students and parents were very positive, and the teacher opinions were also positive. Achievement results were similar to the previous year in which Voyager was not used except that Voyager students' reading scale score gains were smaller at the middle school level. Voyager Summer Academy students showed growth, and about one fourth were able to reach grade level performance based on the EOG results.

In terms of implementation, clustering sites and centralizing the registration process contained costs, but this resulted in some disruption. Scheduling students and arranging transportation routes within short time frames was very difficult. Implementation of the actual program went fairly smoothly, with one exception. About half of the teachers thought that the pacing was too fast, and that the curriculum was too difficult. Two factors may have contributed to this perception. The first was that the math curriculum was combined to cover two grade levels, which may have exaggerated the difficulty level for students in the lower of the two grade levels. Second, members of the Curriculum and Instruction staff indicated that Voyager's reading curriculum was better aligned with the North Carolina Standard Course of Study than the math curriculum. While research suggests that students benefit from challenging materials (Planning

for Summer School Programs, 2000), the challenge may be too great in this case, and adjustments in the materials may be warranted.

The results noted in this summary raise many questions about future summer schools.

- Should summer school be offered? What other options are open to us, in view of State policies and regulations?
- What forms of assistance are students receiving who do not attend summer school but who return to take the second EOG retest?
- If summer school is continued, is WCPSS getting the best results we could expect, given the extensive remediation efforts during the year (through the Accelerated Learning Program and other sources)?
- Can personalized education plans be supplied to summer school teachers to help them assess student needs?
- Should the Voyager approach be continued (given the positive feedback from staff) for all subgroups of students? Could the best of the 2001 Summer Academy and 2002 Voyager Summer Academy be somehow blended? (*Voyager uses a more generalized enrichment model which students found motivating and interesting, but which did not target specific skill deficits as closely as the 2001 model.*) Should the 2001 approach replace the Voyager approach for middle school reading, where gains in 2001 exceed 2002?
- Should some students (such as special education, LEP, or students low only in math) be provided a different summer school experience? Should the model be modified to provide more differentiated experiences or more direct learning approaches for some groups? Could special education students be served by certified special education teachers or should instructional assistants be added to some classrooms to help with these students' special needs? Can summer school sites be told in advance of student needs to better plan for them?
- Should the amount of time devoted to reading versus math be adjusted? Should students low only in math be required to participate in the full program? (Voyager in 2002 provided four hours of reading and one hour of math instruction per day.)
- Given that the Voyager curriculum is the same for grades 7 and 8 in reading, and for grades 3 and 4, 5 and 6, and 7 and 8 in math, should the students in the lower of the two grade spans in 2002 be offered a different curriculum in the 2003 Summer Academy?
- What guidance and training can be given to teachers about adapting the Voyager curriculum pacing and difficulty to better match the Standard Course of Study and the specific needs of the students in their classrooms?
- Should summer school be at base schools or regional sites?

These are questions that merit further discussion as soon as possible, so that 2003 summer programs, if implemented, can be even more successful than in the past. Decision makers should keep in mind that re-testing will still be required, regardless of whether a full summer program is provided.

VOYAGER SUMMER ACADEMY 2002

INTRODUCTION

The past three decades of educational research (Cooper, et al., 1996, Entwisle and Alexander, 1992, Heynes, 1978) have shown that the academic progress of students, especially low-income students, is hampered by summer vacation (Borman, et al., 2001). For students struggling to meet promotion standards, extra instructional time is often required. Many school districts have used after-school, weekend, and summer interventions to address summer learning loss.

According to the Department of Education's report *Taking Responsibility for Ending Social Promotion* (1999), summer school is one method districts should employ to provide students their much-needed extra time. According to Cooper's (2000) study on the effects of summer school, summer programs had a positive impact on students' academic progress in both reading and math, but had a greater impact on math achievement. Educational research suggests that students benefit from small classes, creative instruction, longer programs, higher academic expectations, clear academic focus, greater time allotted and care taken in planning, strong links to the regular academic program, and parental involvement (Planning for Summer School Programs, 2000). The Voyager program is structured to address most of the aforementioned factors.

The Voyager Summer Program was selected in response to the less than optimal EOG results following the 2001 Summer Academy—a school-based program with no common curriculum. The Voyager Summer Program was adopted for use in WCPSS's elementary and middle schools during the summer of 2002 to alleviate summer learning loss in students scoring below grade level on EOG tests in grades 3-8 and 2nd graders deemed academically appropriate by their principals. The Voyager Time Warp series, an elementary and middle school summer literacy intervention program developed by reading specialists for students with low academic performance, is designed to decrease summer learning loss and reduce the gap between students who have fallen behind academically and those on grade level. Voyager teaches reading by focusing on different regions of the world (Egypt for grade 2, Rome for grade 3, Greece for grade 4, Africa for grade 5, China for grade 6, and Latin America for grades 7 and 8). Voyager is based on the concept that high student interest combined with academically challenging material will increase student motivation and improve student achievement. The Time Warp program emphasizes student leadership and cooperative learning by putting students into "team leader" positions and pairing students together as "path finders." Students work in two team leader-directed and one teacher-directed learning center in each class.

The Voyager Time Warp program is a four-hour-a-day four-week program. Voyager suggests a maximum class size of 18 students. WCPSS also purchased Voyager's one-hour-per-day V-Math series for use in combination with its reading intervention. V-Math groups lessons in two-grade spans: 1 and 2, 3 and 4, 5 and 6, and 7 and 8. In the past two years Voyager has been used in more than 1,000 school districts in 44 states serving over 400,000 students. WCPSS adopted Voyager in a continued effort to bring 95% of Wake County's students to grade level and thereby reach Board Goal 2003—95% of students in grades 3-8 who take the EOG will be on grade level.

This report presents the student, parent, teacher, and site coordinator survey findings; Voyager students' pre/post results and the pre/post assessment results of comparison districts; and EOG results for Voyager participants and several comparison groups (2002 non-participants, 2002 summer school students at the East Wake 21st Century Grant schools, and 2001 Summer Academy students).

METHODS

THE PROGRAM

For WCPSS's Voyager summer school program, 65 elementary and 21 middle schools were clustered into 18 summer school sites.¹ Four additional summer school sites (Hodge, Carver, Lockhart, and Zebulon elementary) utilizing the Voyager summer program also received additional funding and services from the 21st Century grant. These grant schools will not be included in the main Voyager results in this report but are used as a comparison group to assess students' success with Voyager alone versus Voyager plus additional services. Each of the 18 main Voyager summer school sites had a site coordinator located at the site and a Curriculum and Instruction (C&I) liaison at WCPSS's central office. More than 270 teachers and 19 teaching assistants were hired to teach in the Voyager Summer Academy. WCPSS's four-week (20 day) Voyager program consisted of four hours of reading enrichment through the Time Warp series and one hour of V-Math per day. Voyager was staffed with a 15 to 1 student to teacher ratio. Due to the extended day, students were served breakfast and lunch.

POPULATION SERVED

Overall, 3,524 students (69% of eligible students) were served by Voyager Summer Academy. Fifty-two percent of Voyager students were low-income (based on their free or reduced-price lunch status), 35% were served by special education programs, and 6.6% were classified as Limited English Proficiency (LEP). Seventy-one percent of the Voyager students were Black, 16% were White, 9% were Hispanic/Latino, 1.5% were Asian, 0.3% were American Indian, and 1.3% were Multiracial.

MEASUREMENT INSTRUMENTS

A variety of measurement instruments were used to assess the Voyager program—including Voyager's pre/post-assessment; WCPSS's EOG Retest 2; training evaluations; student, parent, teacher, and site coordinator surveys; in-depth interviews with site coordinators; and a site coordinator focus group. Student scores on EOG Retest 2 were assessed primarily in terms of their gains from the May EOG. Retest 1 was given after one week of brief intervention. Retest 2 was given after summer school was completed.

¹ The number of elementary and middle schools does not include the four 21st Century grant elementary schools or year round schools.

Figure 1
EOG Test Dates

Test	2002 Test Dates
2001 EOG	May 2001
2002 EOG	May 2002
EOG Retest 1	Approximately 1 week after 2002 EOG
EOG Retest 2	July 15–July 16

Attendance

Program administrators felt that attendance was good, especially given the short notice for many families. Approximately 50% of students attended 19 or 20 days of the 20-day Voyager program; 76% of students attended 17 days or more (80% of the Voyager program); and 86% of students attended 15 days or more (75% or more) of the Voyager program. Student performance by days in attendance was not evaluated due to a lack of variance created by generally high student attendance.

Assessments

Students' reading (vocabulary and comprehension) and math skills were evaluated by Voyager's pre/post-assessments given to students at the beginning and end of the summer program. Results are expressed in terms of the percent and average answers correct (raw scores). EOG scores were also considered in order to draw comparisons to the 2001 summer program and to students eligible for, but not enrolled in, the 2002 Voyager summer program. The implementation was assessed using a quality assurance checklist filled out by the C&I staff member assigned as a liaison to each site, by the site coordinator, and by the evaluator.

Surveys and Interviews

Voyager training was evaluated using a survey instrument. Voyager staff led training of teachers, site coordinators, and C&I staff members on the first day of the Voyager training session. The vast majority of staff members at Voyager Day 1 training (80%) rated Voyager's training as excellent. Site coordinator-led Voyager training was held on day 2 of the Voyager training session. Nearly all (91%) of those attending the Day 2 site coordinator-led Voyager training rated the training as excellent.

Survey instruments used to assess student, parent, teacher and site coordinator attitudes toward the Voyager summer program were completed by 1,258 Voyager students in grades 3, 5, and 7 and by 767 parents of Voyager students in grades 2, 4, 6, and 8. Every other grade was sampled to minimize the workload at the summer school site level. Additionally, 227 teachers and 18 site

coordinators returned surveys. Teachers had a 90% response rate ranging from 31% to 100% of teachers at a site. The response rate for students was 80% for all sites and ranged from 29% to 100% of students by site. The response rate was 39% for parents for all sites and varied from 16% to 84% by site.² The response rate for site coordinators was 100%. In addition to the quantitative methods, qualitative measurements were used to assess the Voyager summer program. Eight site coordinators (four elementary and four middle) were given an in-depth interview by the program evaluator. Additionally, a focus group with the Voyager Site Coordinators was conducted on September 10.

Observations

The site coordinator observed each class at least once. The C&I staff members visited a sample of classes at their assigned sites. The evaluator visited one class per grade level in a sample of eight sites. The four middle and four elementary schools chosen were geographically diverse to attain a representative sample.

² Bugg Elementary did not turn in survey results. Response rates for all sites included Bugg Elementary; however, the range of response rates by site did not include Bugg Elementary.

RESULTS

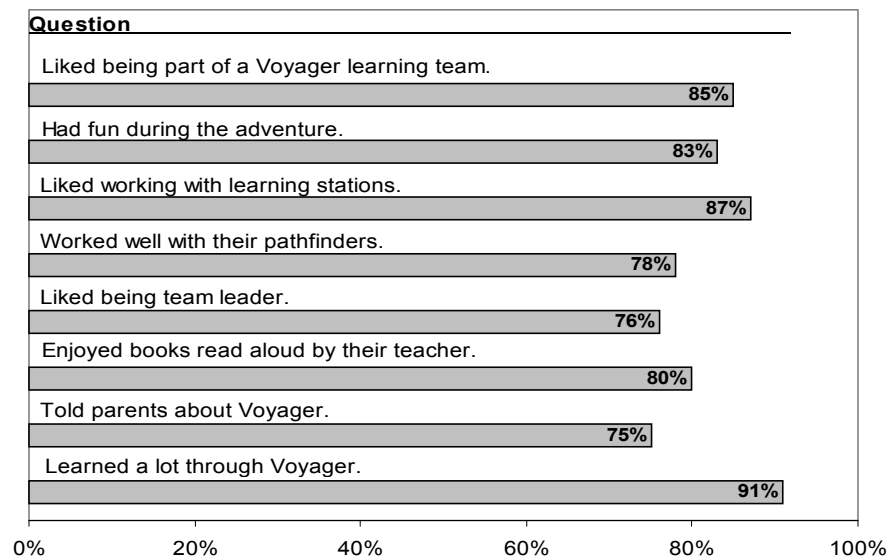
CUSTOMER FEEDBACK

Students, parents, teachers, and site coordinators provided feedback on the Voyager program through written surveys. Overall, student and parent assessments of the Voyager program were very positive. Assessments by teachers and site coordinators were also positive with elementary teachers assessing the program more positively than their middle school counterparts.

Student Survey

Most students had favorable views toward the Voyager program and its practices. Approximately 91% of students reported that they “learned a lot” through the Voyager summer program with more than two thirds of the students reporting that they liked the learning teams, Voyager adventures (assignments/projects), learning stations, working with a pathfinder, being a team leader, and having their teacher read aloud to the class.

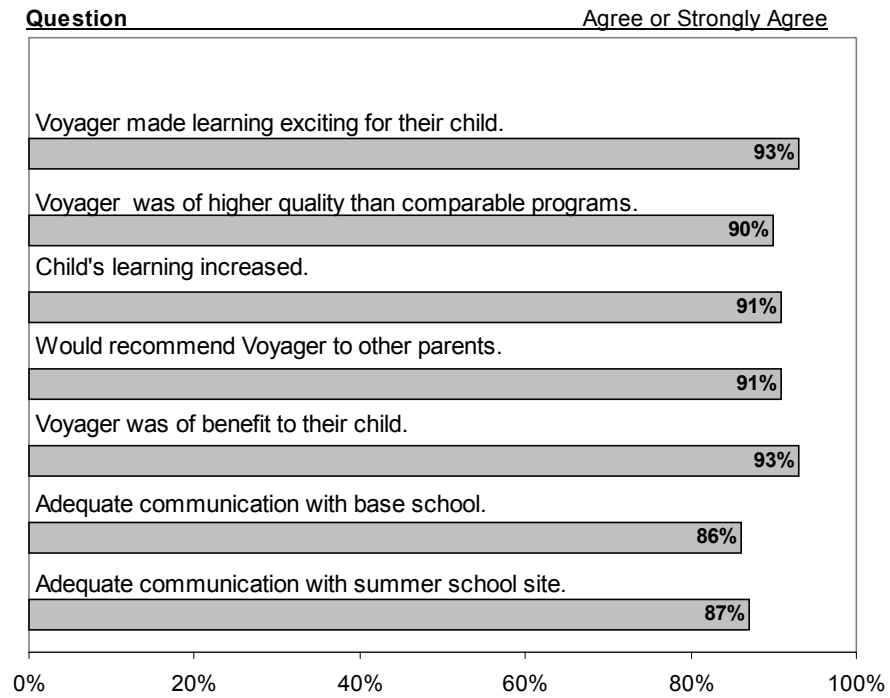
Figure 2
Voyager Student Survey Responses



Parent Survey

Parental assessments of the Voyager program were also very positive—greater than 90% of parents answered favorably to all five survey questions about Voyager’s effectiveness.

Figure 3
Voyager Parent Survey Responses



Teacher Survey

The teacher survey covered the perceived effectiveness of the program, program materials and training, the likelihood of future use, their comfort with and enjoyment of the program, and appropriateness of the program's pace and level. The overall results masked some differences between elementary and middle school teachers in their assessment of the Voyager program. A greater proportion of elementary school teachers rated Voyager favorably (consistent across most items).

Overall results showed that approximately 65% of teachers agreed or strongly agreed that children demonstrated increased learning as a result of their participation in the Voyager program. However, more than two-thirds (76%) of elementary teachers had positive views compared to slightly more than half (54%) of middle school teachers.

At the elementary level, two-thirds or more of the teachers had positive views on all items.

- The highest percentages of teachers (over 90%) agreed that the curriculum guide was well designed, and they felt comfortable with Voyager.
- Lower percentages (66-68%) agreed that the Voyager curriculum was an effective way to teach, and that they would recommend Voyager to other teachers.

Lower percentages of middle school teachers were satisfied with Voyager. The majority agreed on seven items, with less than half agreeing on three items. The pattern of responses was actually quite similar to the elementary level, just lower in terms of percentage in agreement.

- The highest percentages of teachers agreed that the Voyager curriculum guide was well designed, and that the materials were effective (over 70%).
- The lowest percentages of teachers agreed that the Voyager curriculum was an effective way to teach, and that they would recommend it to other teachers (36-37%).

The largest differences in satisfaction of elementary and middle school teachers related to whether they would use Voyager principles in their regular class (82% vs. 51%) and whether they would recommend Voyager to other teachers (68% vs. 36%).

Results seem to suggest that the program was easy to follow, but fewer teachers felt assured their teaching was effective. Most teachers at both levels supplemented the Voyager materials. Pacing and level of difficulty appeared to be issues as well.

The more mixed views of middle school teachers may relate to the fact that Voyager instructional strategies are perhaps a more center-based and active - learning approach than is typical at that level. Yet, middle school students consistently had very positive views.

Figure 4

Voyager Teacher Survey Responses by Level

Question	Elementary	Middle
Perceived effectiveness of the program		
Student learning increased.	76%	54%
Voyager curriculum was an effective way to teach.	66%	37%
Effectiveness of the program materials and training		
Voyager materials were effective.	82%	71%
The curriculum guide was designed well.	97%	79%
Training was a helpful resource.	74%	57%
Professional development was a helpful resource.	68%	53%
Comfort with and enjoyment of the program		
Comfortable with Voyager.	92%	67%
Enjoyed teaching summer school.	71%	44%
Would recommend Voyager to other teachers.	68%	36%
Likelihood of future use		
Plan to use Voyager principles in their regular class.	82%	51%
Need to supplement Voyager Material		
Used additional materials this summer.	64%	71%

Appropriateness of the Program’s Pace

A greater percentage of elementary school teachers reported the pace and the level of the program to be too fast and advanced for their students than middle school teachers.

Fifty-three percent of teachers (approximately 61% of elementary and 51% of middle) felt the pace of the program was too fast.

- Nearly one third of teachers (approximately 29% elementary and 39% middle) reported only 25% of their class was able to keep up with the pace of the Voyager program.
- Greater than half of all teachers (approximately 52% elementary and 61% of middle) reported that 50% or less of their class was able to keep up with the pace of the Voyager program.

Appropriateness of the Program’s Level

More than 50% of teachers (approximately 57% elementary and 44% of middle) reported the level of the Voyager curriculum was too difficult. Forty one percent of teachers (43% elementary and 40% middle) reported the level of the program to be “just right.”

- Approximately 36% of teachers (34% elementary and 39% of middle) reported that the level was appropriate for 25% or less of their class.

- Nearly 60% of teachers (58% elementary and 65% middle) reported that the level of Voyager was appropriate for 50% or less of their class. Sixteen percent of elementary and middle school teachers reported that the level of Voyager curriculum was appropriate for 76-100% of their class.
- In terms of adjusting the level of Voyager material, 38% decreased, 23% increased, and 37% of teachers made no change to the level. Nearly 69% of teachers (64% elementary and 71% of middle) used additional materials to enhance the Voyager curriculum.

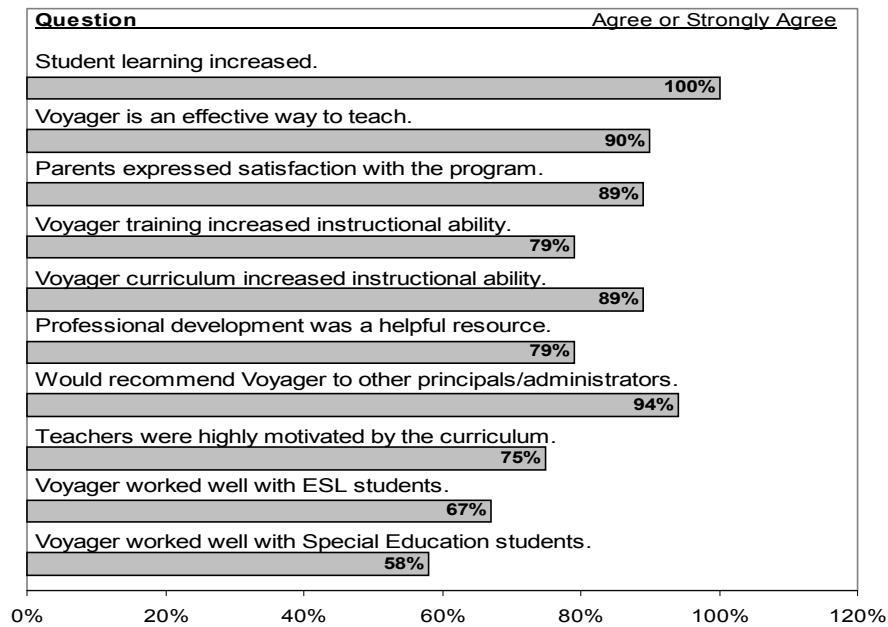
Concerns about the pace and level of the curriculum may at least partly reflect the fact that curriculum was combined for grades 7 and 8 in reading and grades 3 and 4, 5 and 6, and 7 and 8 in math.

Site Coordinator Survey

Site coordinators were also asked to assess the effectiveness of the Voyager program. All of the site coordinators reported that overall, students demonstrated increased learning as a result of their participation in the Voyager program. Ninety percent held that Voyager is an effective way to teach and reinforce skills and competencies at their summer school site. The overwhelming majority of site coordinators reported that the curriculum materials (89%), training (79%), and ongoing professional development (79%) were helpful resources. Only 35% of site coordinators reported that the pace of Voyager was too fast. The majority (60%) reported the pace was just right, and only 1 of the 20 site coordinators interviewed reported the pace as too slow.

Figure 5

Voyager Site Coordinator Survey Responses



VOYAGER PRE- AND POST-ASSESSMENT RESULTS

Voyager designed pre- and post-assessments for instructional purposes to help teachers understand students' strengths and weaknesses. As an evaluation tool, we analyzed overall trends in initial strengths and weakness, growth during summer school, and posttest trends. Results are expressed in terms of raw scores, with no official norm data available for comparison. Voyager students were most competent (highest percentage of correct responses) in vocabulary and least competent in math on their pre-assessment and most competent in comprehension and least so in math on their post-assessment used in Voyager. Students had the highest average growth on Voyager's comprehension assessment followed closely by math. Students experienced the smallest average gains on the vocabulary assessment.

Figure 6
WCPSS Voyager Assessment Pre/Post Results
Average Score
(Percent Correct)

Subject	Pre-Assessment	Post-Assessment	Gain
Comprehension	61%	70%	+9%
Vocabulary	65%	70%	+5%
Math	48%	58%	+10%

Voyager students' vocabulary gains ranged from 2% to 10% by site. Comprehension gains varied from 7% to 14% by site. Math gains ranged from 7% to 15% by site. Patterns of performance in vocabulary tended to be different at the elementary and middle school level. Elementary school students had higher pre- and post-assessment scores and greater average gains than middle school students in vocabulary.

Grade 8 had the lowest gains in both reading areas—2.9% on vocabulary and 6.1% on comprehension. Grade 5 had the greatest gains in reading—9% on vocabulary and 11.7% on comprehension. Math gains by grade showed the opposite pattern, with grade 8 having the greatest gains (11.8%) and grade 5 having the smallest gains (7.5%).

The fact that the reading curriculum combined grades 7 and 8 had little impact on vocabulary scores or gains. In comprehension, 7th graders started slightly lower but gained more than 8th graders (both ending with approximately 70% correct). In math, grades 3 and 4, 5 and 6, and 7 and 8 shared curriculum. Results suggest some possible impact at grades 5 and 7. Students in grades 6 and 8 both showed greater gains than grades 5 and 7. However, 7th graders actually had slightly higher posttest. However, at grades 3 and 4, grade 3 students started considerably lower but gained slightly more than 4th graders.

Figure 7

Gains on Voyager Vocabulary Assessment by Site

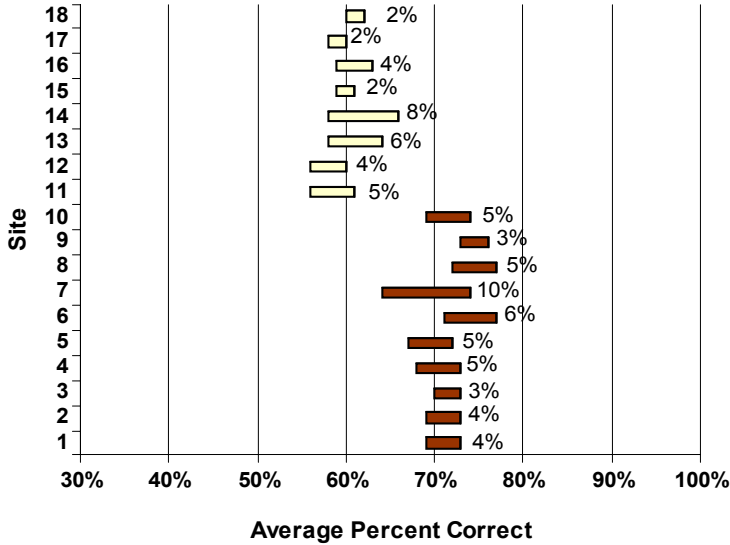


Figure 8

Gains on Voyager Vocabulary Assessment by Grade

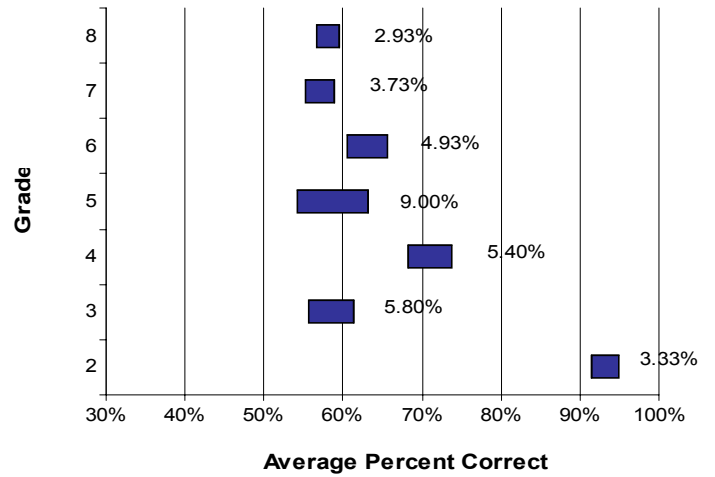


Figure 9

Gains on Voyager Comprehension Assessment by Site

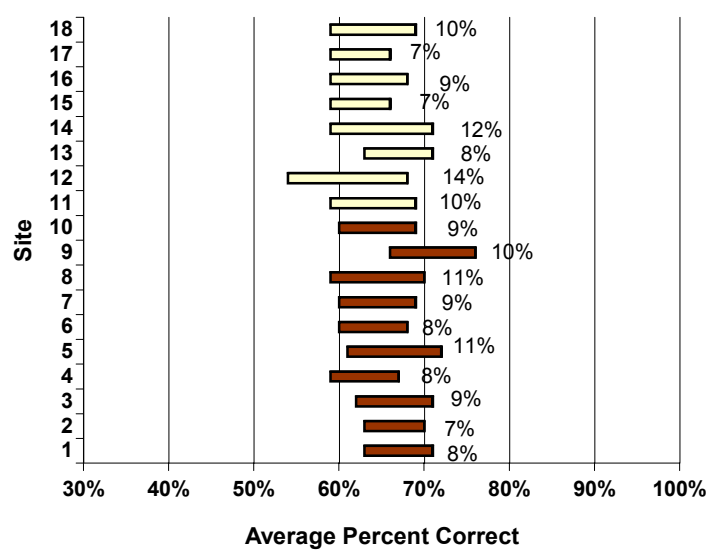


Figure 10

Gains on Voyager Comprehension Assessment by Grade

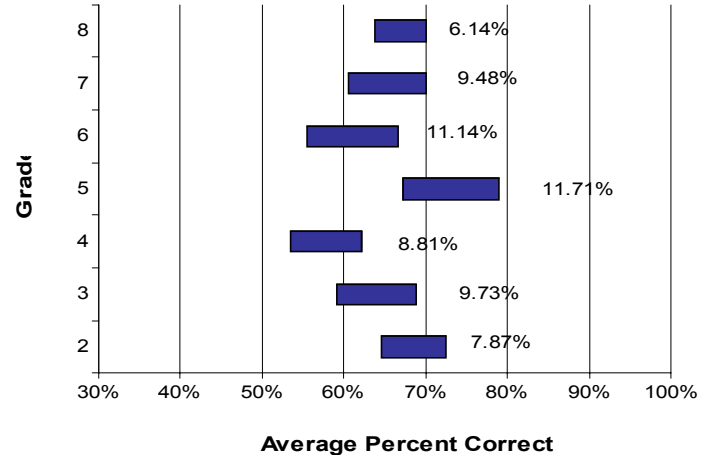


Figure 11

Gains on Voyager Math Assessment by Site

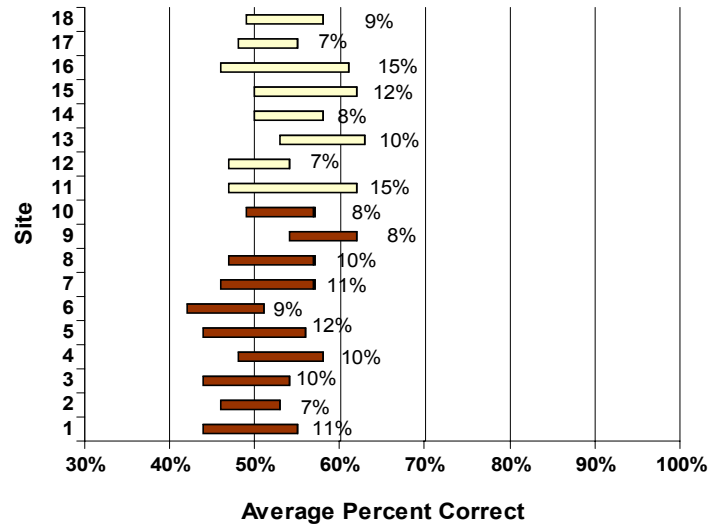
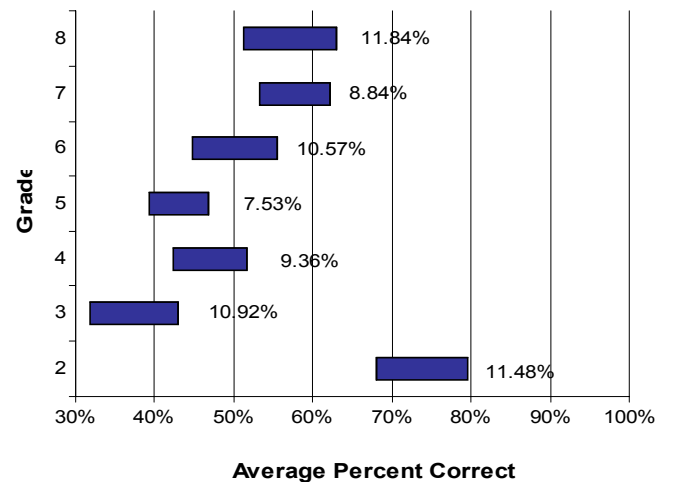


Figure 12

Gains on Voyager Math Assessment by Grade



Other School Districts' Results

Voyager provided information on results for other systems; this data are provided here to create a context for interpreting WCPSS results. Other systems did show gains for students based on the Voyager tests as well as normed instruments, which was one factor in the selection of these materials for use in WCPSS. Milwaukee, Wisconsin, Houston, Texas, Tulsa, Oklahoma, and Columbia, South Carolina, results were provided by Voyager for comparison to WCPSS's results. These school districts are not necessarily demographically similar to WCPSS. Therefore, results are provided primarily for context, and will be compared only in general terms.

All districts showed gains in all areas. WCPSS pre-assessment results were considerably higher than other school systems in the case of vocabulary at grades 2 and 3 and comprehension at grades 4 and 5, so comparisons are inappropriate. The two best comparisons based on pretest results are WCPSS to Milwaukee for comprehension at grades 2 and 3 and vocabulary in grades 4 and 5. WCPSS gains were smaller than Milwaukee's gains at grades 2 and 3 (1.3 vs. 2.3) and similar in vocabulary at grades 4 and 5 (1.08 vs. 1.10).

Figure 13
Comparison of Districts
Voyager Vocabulary Pre-/Post-Assessment
(Grades 2 and 3)

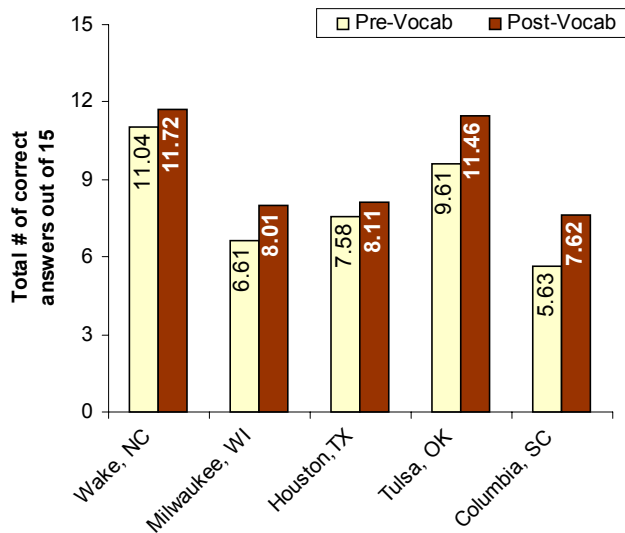


Figure 14
Comparison of Districts
Voyager Comprehension Pre-/Post-Assessment
(Grades 2 and 3)

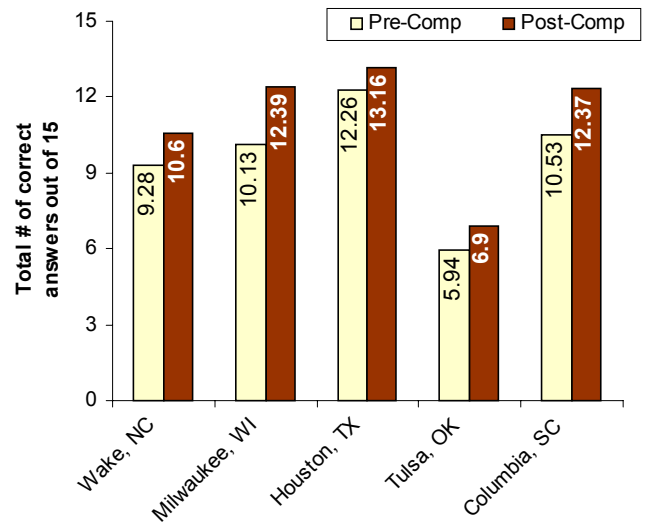


Figure 15
Comparison of Districts
Voyager Vocabulary Pre-/Post-Assessment
(Grades 4 and 5)

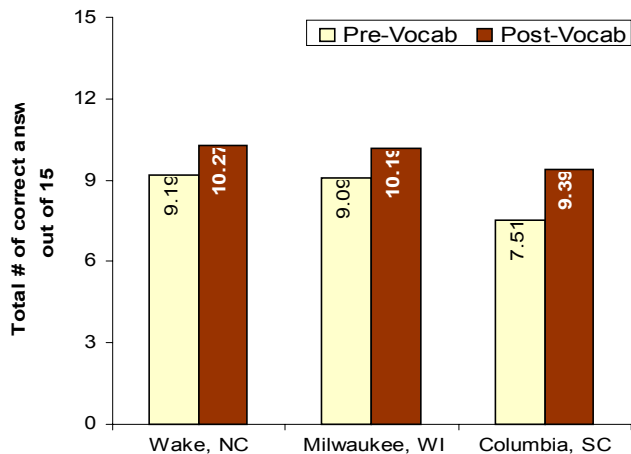
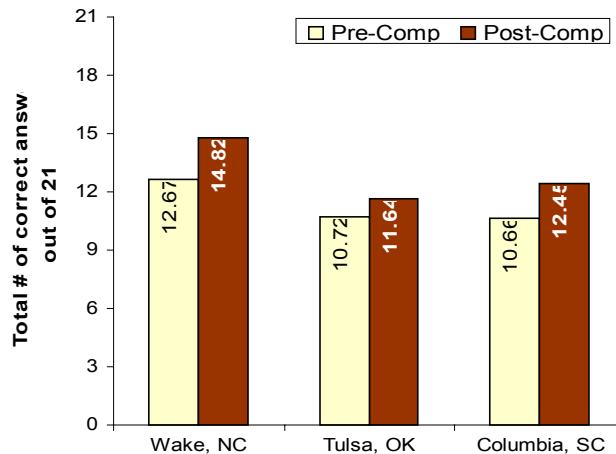


Figure 16
Comparison of Districts
Voyager Comprehension Pre-/Post-Assessment
(Grades 4 and 5)



EOG RESULTS

We examined Voyager students' EOG scores in terms of their scale scores and level gains from May 2002 to Retest 2 (given at the end of Voyager Summer Academy). May 2002 results were used rather than Retest 1 because not all participants in summer school took the 1st retest. In addition to basic summaries of results for all students in Voyager, we also disaggregated results by ethnicity and free-lunch status (our indicator of low income) and compared growth obtained to estimated ABC growth expected for one month of instruction. Analyses of changes in level scores exclude the few students who started the program in Level III since they were not expected to increase their level score. Scale score analyses include these students since they would be expected to show scale score growth. Scale score growth analyses were conducted by grade because growth expectations and the number of students served at each grade vary (therefore results cannot be combined across grades).

Approximately 26% of Voyager students improved to Level III or IV on their EOG Reading Retest 2. These results were similar to 2001 Summer Academy students (27.6%) and similar to 2002 students taking Retest 2 not in Voyager (29.6%). Twenty-two percent of Voyager students improved to grade level on EOG Math Retest 2. The percentage of Voyager students achieving grade level in math was greater than 2001 students (8.8%), but lower than 2002 students not in Voyager (28.5%).³ The percentage of Voyager students reaching Level III or IV on Retest 2 is even closer for Voyager students matched by May EOG score, special education, free- or reduced-lunch, and LEP status to eligible non-participants taking Retest 2. Of matched Voyager

³ Clarification of these results can be found in the Summer Academy 2001/Voyager 2002 Comparison and Voyager Participant/Non-Participant Match sections of this report.

students, 27.5% reached Level III or IV on EOG Reading Retest 2 and 25.9% on EOG Math Retest 2.

Voyager 2002 Overall EOG Results

Voyager Scale Score Gains

Voyager students had greater scale score gains in reading than in math with the exception of grade 5.

- From May EOG to Retest 2 gains ranged from 0.7 to 2.7 scale score points by grade in reading, averaging 1.6 scale score points.
- In math the ranged varied from -0.1 to 1.5 scale score points by grade and averaged 0.9 scale score points (grades 3 and 4 math is an area of concern).
- Students scoring Level I on the May 2002 EOG had higher gains in reading and math than Level II students. Level I students had average reading gains of 4.5 points and math gains of 3.2. Level II students had average reading gains of 1.1 points and 0.6 points in math.
- Based on the state’s ABC regression model, Voyager students exceeded the expected

Figure 17

**EOG Scale Score Gains by Grade
May 2002 to Retest 2**

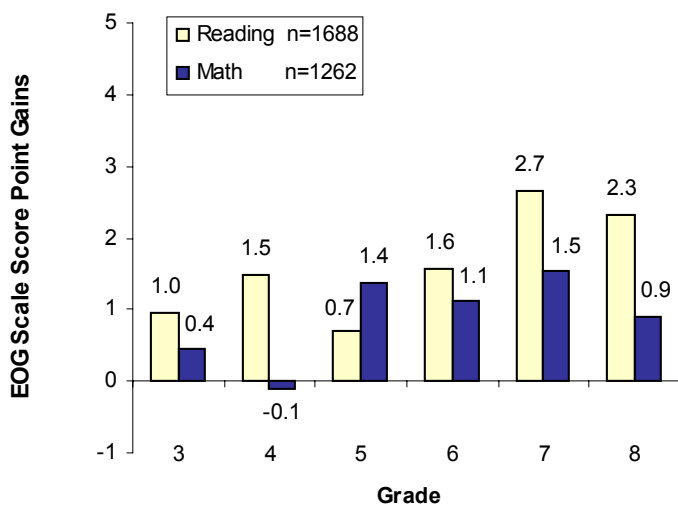
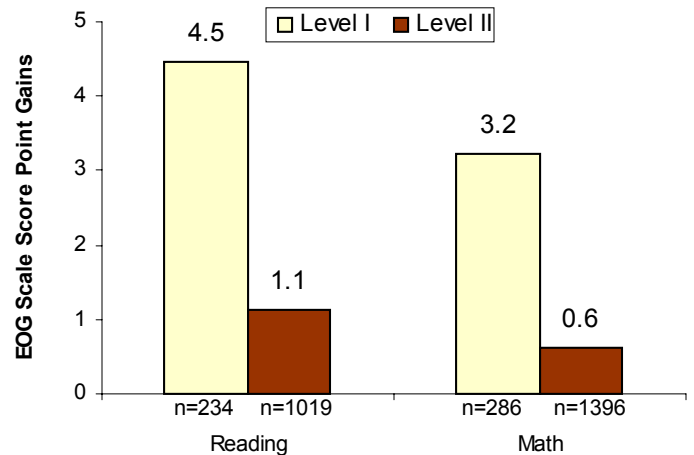


Figure 18

**EOG Scale Score Gains by Level
May 2002 to Retest 2**



growth (and high growth) for two-thirds of the grades in reading (with the exception of grades 3 and 5) and in math (with the exception of grade 3 and 4).

Figure 19
Voyager Expected Versus Actual EOG Scale Score
Growth Reading and Math

Reading				
Grade	Year Expected Growth	1 Month Expected Growth	1 Month High Growth	Actual Voyager Growth
3	10	1.11	1.20	0.96
4	5.4	0.60	0.65	1.48
5	6.6	0.73	0.79	0.70
6	4.5	0.50	0.53	1.57
7	5.1	0.57	0.61	2.66
8	4.1	0.46	0.49	2.31
Math				
3	14.4	1.60	1.77	0.44
4	8.4	0.93	1.02	0.13
5	6.6	0.73	0.82	1.78
6	6.9	0.77	0.84	1.67
7	6	0.67	0.73	2.16
8	4.8	0.53	0.59	1.14

■ Met high growth

In order to make a comparison to ABC expected growth EOG gains were calculated using math scale scores converted to the previous 100 point EOG scale.

Level Scores

Based on Voyager participants starting at Level I and II:

- An examination of percentage at grade level by grade revealed 7th grade had the highest percentage of students reaching grade level (31%) in reading and 6th grade had the highest percentage of students reaching grade level (26%) in math (with grade 7 at 25%).
- There was a fairly tight range in the percentage of students reaching grade level in reading, (22% in grade 5 to 31% in grade 7), while math ranged from 15% in grade 3 to 26% in grade 6.
- A higher percentage of students initially scoring at Level II (29.9%) reached grade level than students initially scoring at Level I (4.6%), as would be expected. It is noteworthy, however, that 59.5% of Level I students improved their Level scores to Level II, III, or IV overall.

Figure 20
EOG Reading Level by Grade
May 2002 to Retest 2
n=1690

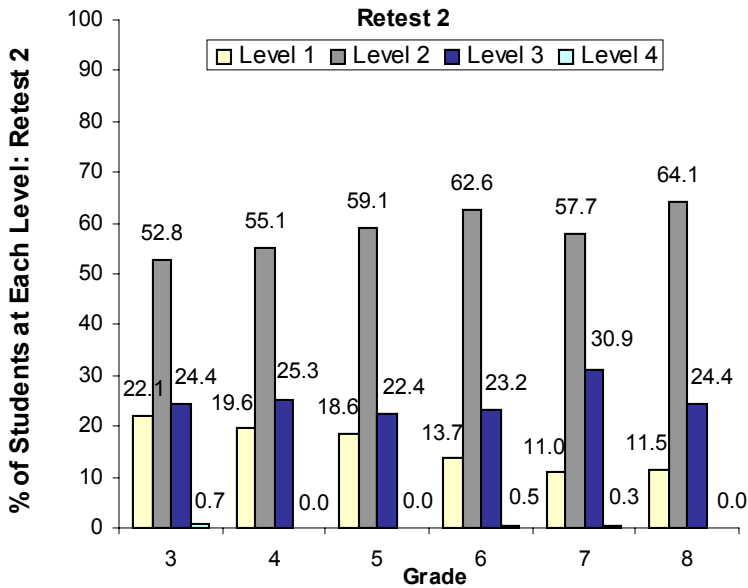
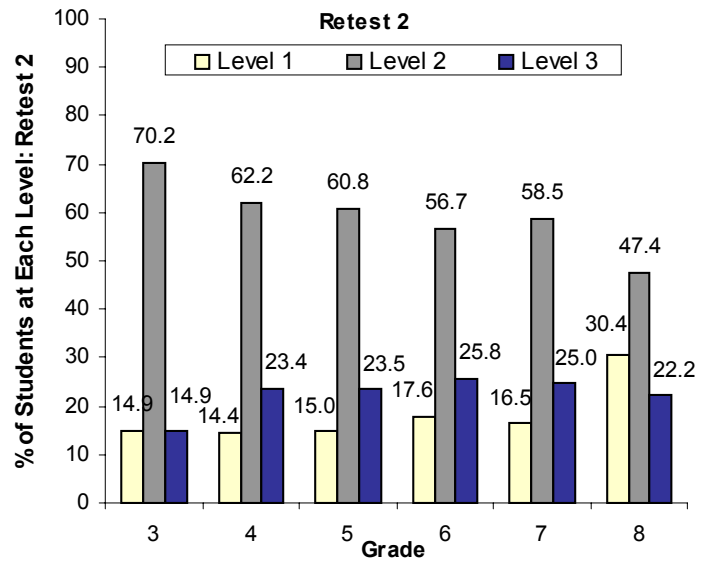


Figure 21
EOG Math Level by Grade
May 2002 to Retest 2
n=1264



Base School/Not at Base School Comparison

Reading and math results for students attending Voyager at their base school and students attending at an alternative school site were not statistically different in the number of Level I and II students (in May) reaching grade level or in scale score gains on Retest 2.

- Of students scoring a Level I or II reading score on their May EOG, 27.7% of students at their base school and 24.7% of students not at their base school scored Level III or IV on Retest 2. For students scoring Level I or II on the Math May EOG, 23.7% of students at their base school and 21.5% of students not at their base school scored Level III or IV on Retest 2.
- An examination of scale score growth demonstrated that base school and non-base school students yielded similar scale score gains in reading from May 2002 to Retest 2. In grades 4, 5, and 7, students at their base school had greater scale score gains while in grades 3, 6, and 8 students not at their base school fared better. Average gains varied by grade from 0.7 to 2.8 for base and 0.6 to 2.5 for non-base attendees.
- In math, between May 2002 and Retest 2 students at their base school had higher gains than those not at their base school—varying by grade 0.4 to 2.0 points for base and -0.1 to 1.3 points for non-base schools.

Figure 22
EOG Reading Level by Base School Status:
May 2002 to Retest 2

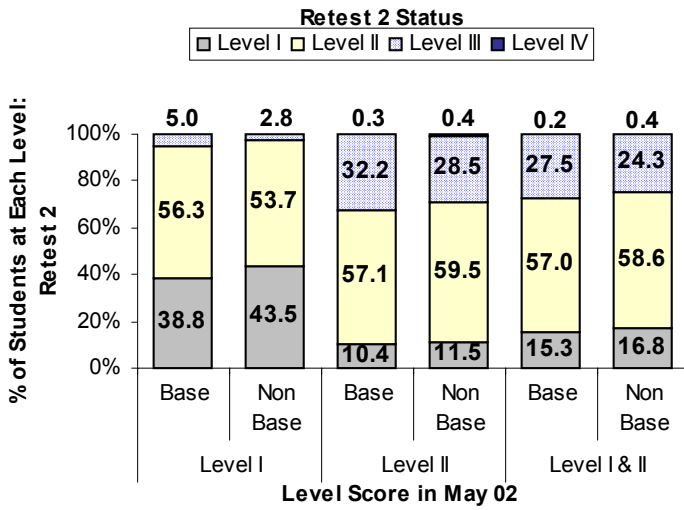


Figure 23
EOG Math Level by Base School Status:
May 2002 to Retest 2

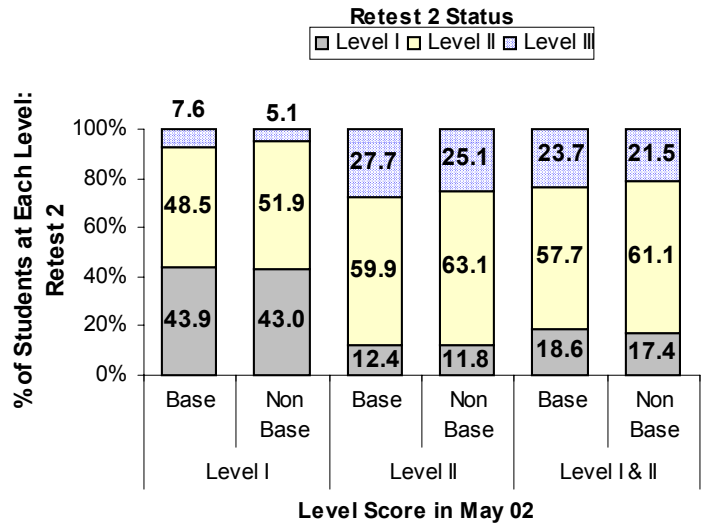


Figure 24
EOG Reading Scale Score Gains
by Base School Status:
May 2002 to Retest 2
N=1611

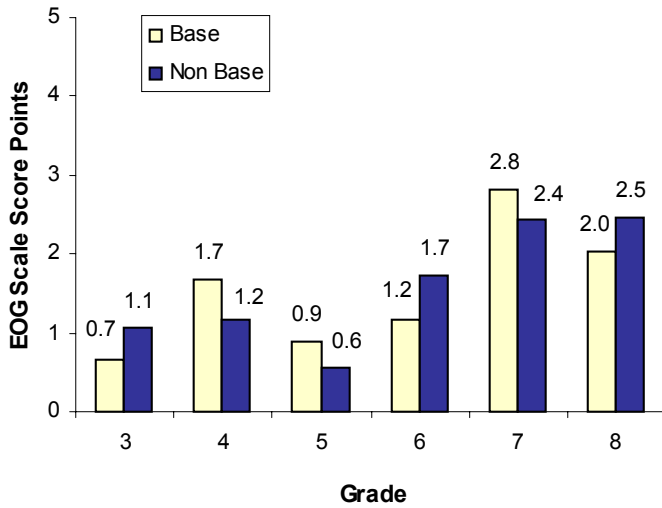
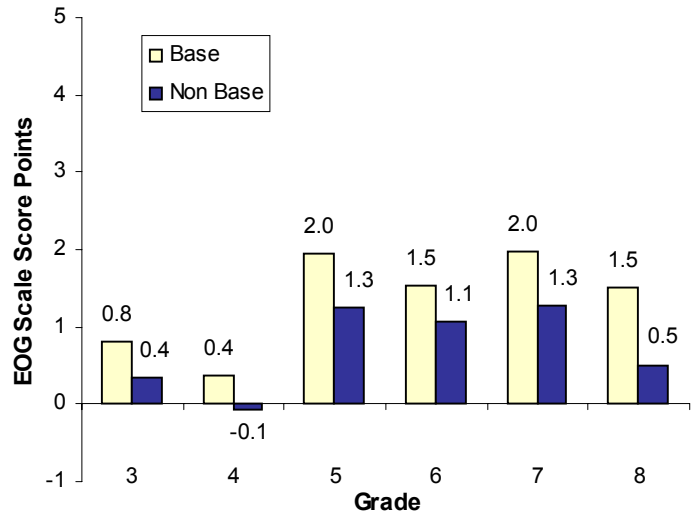


Figure 25
EOG Math Scale Score Gains
by Base School Status:
May 2002 to Retest 2
N=1207



Summer Academy 2001/Voyager 2002 Comparison

We compared results to 2001 Summer Academy students. Overall, student outcomes were similar for the two years.

Scale Scores

Scale score gains for 2001 Summer Academy students and 2002 Voyager students were similar (by grade and subject) based on regression analyses. The one exception was that middle school students in 2001 had significantly higher reading gains than 2002 Voyager students.⁴

- Students attending the 2001 Summer Academy improved 1.9 to 3.5 EOG scale score points (by grade) for reading between the May EOG and EOG Retest 2, whereas students attending Voyager 2002 Summer Academy improved 0.7 to 2.7 EOG scale score points in reading. Thus, Voyager Summer Academy students' mean scale scores gains (by grade) on Retest 2 were 0.7 to 1.4 points lower in reading than their 2001 counterparts.
- In 2001, math scale scores for summer academy participants increased 1.5 to 4.1 scale score points (by grade) between the May EOG and EOG Retest 2 while Voyager students' gains in math ranged from -0.1 to 1.5 EOG scale score points. Voyager Summer Academy students' mean scale scores gains were 1 to 2.6 points lower in math than for those attending 2001 Summer Academy.

Level Scores

There was not a significant difference in the percentage of Level I or II students (in May) reaching grade level on Reading EOG Retest 2 in 2001 and 2002. A significantly higher percentage of 2002 students scored at grade level on the Math EOG Retest 2 (22.5% of 2002 Voyager students compared to 9.4% of 2001 Summer Academy students). The population served in 2001 was different due to the fact that cutoff scores for Level III were set too high that year, so math comparisons to 2001 are problematic. While Level scores were updated, the fact that cutoff scores for Level III were set too low meant that few students were invited to the 2001 summer school purely because of low performance in math.

- A comparison of reading Level scores revealed that 430 or 25.6% of 2002 Voyager students scored Level III or IV, while 702 or 27.6% of 2001 Summer Academy students scored Level III or IV on the Reading EOG Retest 2.
- 273, or 21.7%, of 2002 Voyager students scored Level III or IV on the Math EOG Retest 2, compared to 56, or 8.7%, of 2001 Summer Academy students.⁵

⁴ Attachment 1 shows the significance of scale score gains by grade and subject for 2001 and 2002.

⁵ For math Level scores to be comparable, 2001 Level scores were updated to reflect revised 2002 Level cut-off points. While many of the participants likely had needs in reading and were served in both subjects, this could have exaggerated the difference in the percentage of students reaching grade level between 2001 and 2002.

Figure 26
Summer School 2001 and 2002
EOG Reading Level Results
May to Retest 2

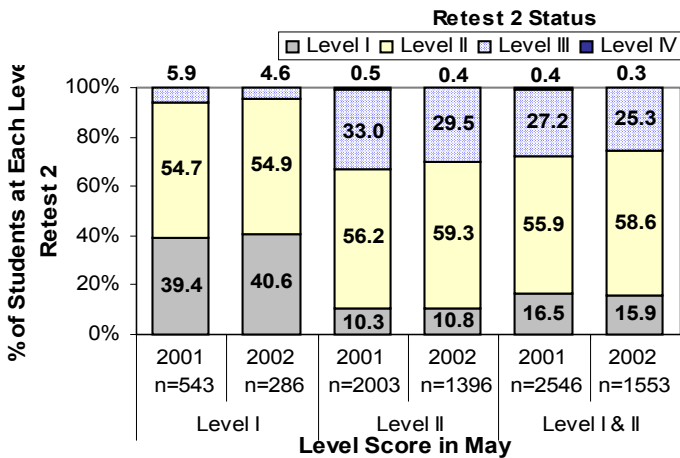
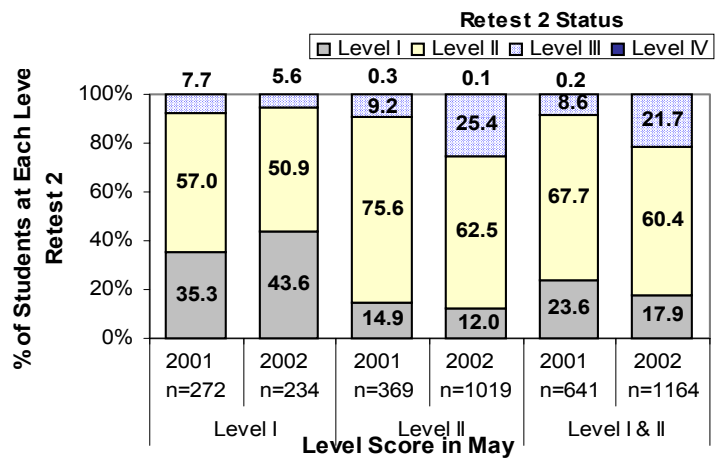


Figure 27
Summer School 2001 and 2002
EOG Math Level Results
May to Retest 2



Special Education Status

Level Scores

Non-special education students were more likely to reach grade level performance than special education students both years. Patterns of performance for non-special education and special education students were similar, with no significant differences across years in reading and differences in favor of the 2002 Voyager program in math (which must be interpreted cautiously given the cut-score issue).

- The percentage of non-special education students at Level I or II in May who scored at grade level on Reading Retest 2 was similar in 2001 (32%) and 2002 (30%). Seventy-two percent of Voyager Level I students moved to Level II or III, versus 65% in 2001.
- In math, a significantly higher percentage of 2002 non-special education students at Level I or II in May moved to grade level on Retest 2—25% in 2002 versus 9% in 2001. Sixty-one percent of 2002 Level I students moved to Level II on Retest 2, versus 66% in 2001.
- The percentage of special education students at Level I or II in May who scored on grade level on Reading Retest 2 were similar in 2001 (19%) and 2002 (17%). Forty-eight percent of Voyager Level I students moved to Level II or III versus 55% in 2001.
- In math a significantly higher percentage of 2002 special education students at Level I or II in May moved to grade level on Retest 2—16% in 2002 versus 7.8% in 2001. Fifty-one percent of Level I students moved to Level II on Retest 2 in 2001 versus 64% in 2002.

Figure 28
Summer School 2001 and 2002
EOG Reading Level: Not Special Education Students
May to Retest 2

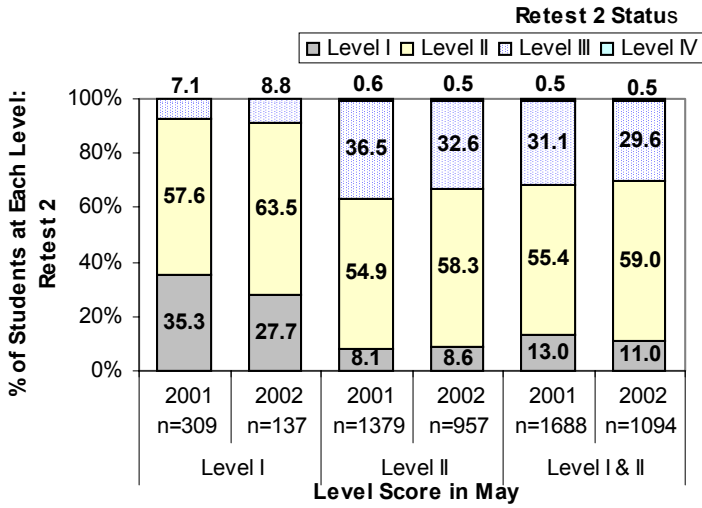


Figure 29
Summer School 2001 and 2002
EOG Math Level: Not Special Education Students
May to Retest 2

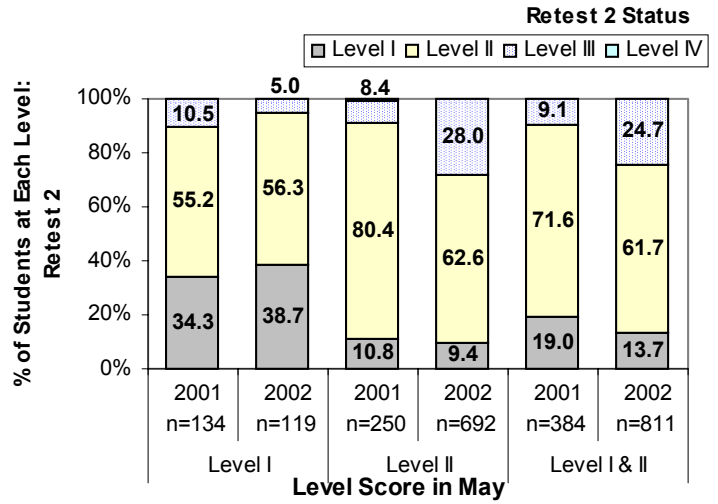


Figure 30
Summer School 2001 and 2002
EOG Reading Level: Special Education Students
May 2002 to Retest 2

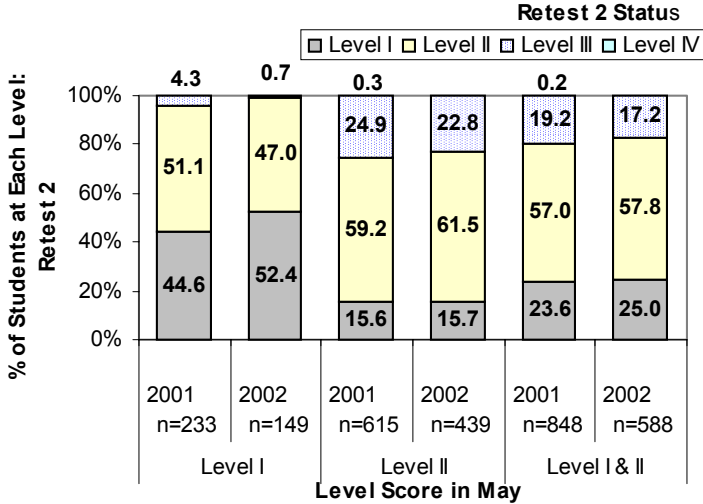
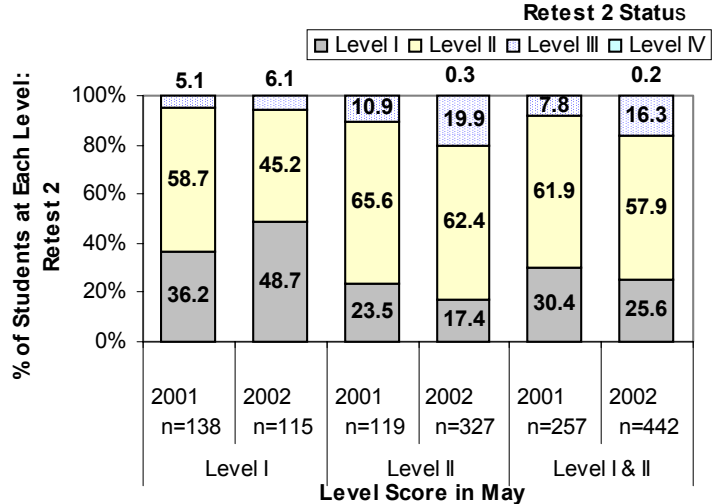


Figure 31
Summer School 2001 and 2002
EOG Math Level: Special Education Students
May 2002 to Retest 2



Scale Scores

An examination of special education status in 2001 and 2002 revealed that non-special education students fared better on Reading Retest 2 than special education students in both years. While in math the pattern was not clear, non-special education students outperformed special education students in 3 of the 6 grades considered.

- Across all grades in 2001 and 2002, the EOG reading scale score gains for non-special education students in Voyager were significantly greater than for special education students.⁶
- In math non-special education students had significantly greater scale score gains than special education students in grades 3, 6, and 8.

Across years some differences emerged. In reading special education students at the middle school level scored better in 2001 than 2002. Special education students scored similarly in elementary reading and in all grade for math.

- While special education students in 2001 and 2002 had similar gains at the elementary level, 2001 middle school students had significantly higher reading gains than their 2002 counterparts. EOG reading growth from May to Retest 2 for special education ranged from 0.6 to 1.4 higher than in 2002 (only significant at grade 6, 7, and 8).
- In math special education students had similar gains in 2001 and 2002. While the math gains for special education students ranged from 1.1 to 4.2 higher in 2001 than in 2002, the difference in gains was not significant.
- The range of EOG reading growth from May to Retest 2 for non-special education ranged from 0.7 to 1.4 higher than in 2002 (significant only in grade 6).
- The math gains for non-special education students ranged from 1.6 to 3.1 higher in 2001 than in 2002 (the difference in gains was not significant).

⁶ Attachment 1 shows the significance of scale score gains by grade and subject for 2001 and 2002.

Figure 32
EOG Reading Growth by Grade 2001 & 2002
(Not Special Education Students)

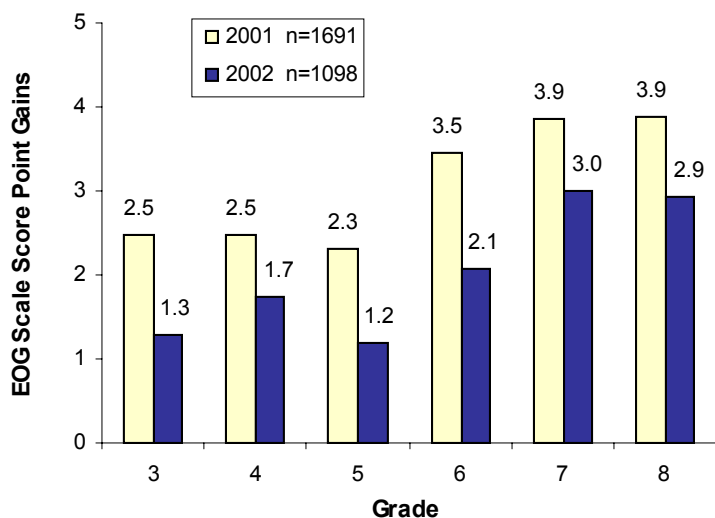


Figure 33
EOG Math Growth by Grade 2001 & 2002
(Not Special Education Students)

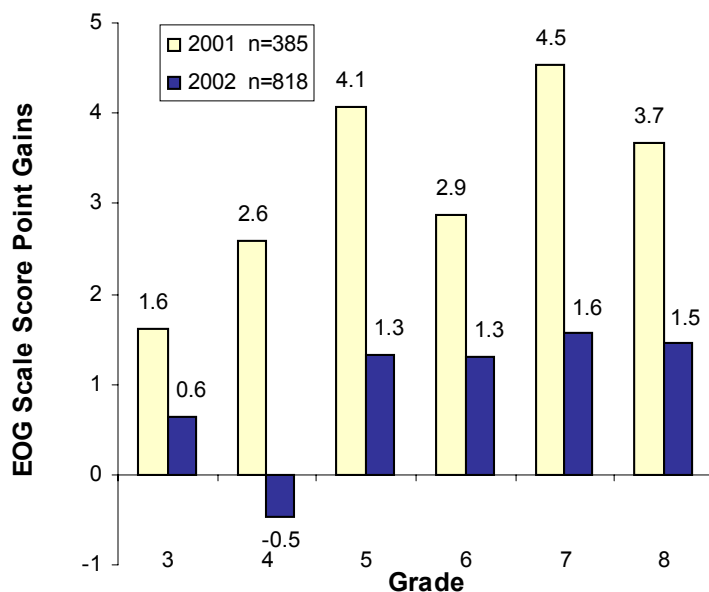


Figure 34
EOG Reading Growth by Grade 2001 & 2002
(Special Education Students)

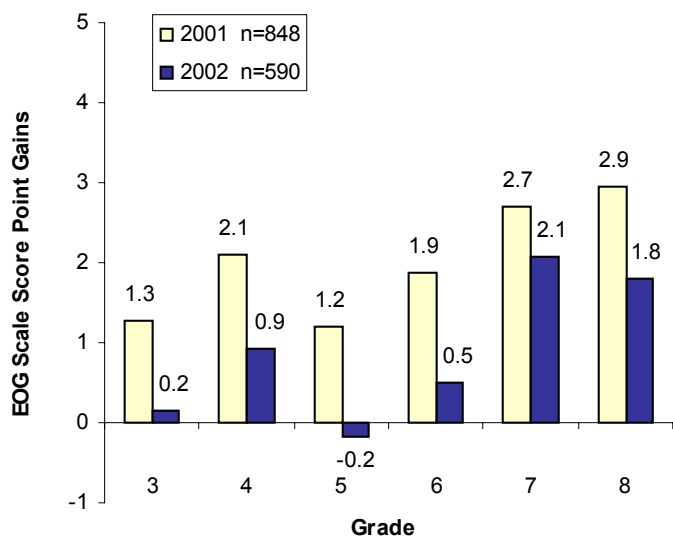
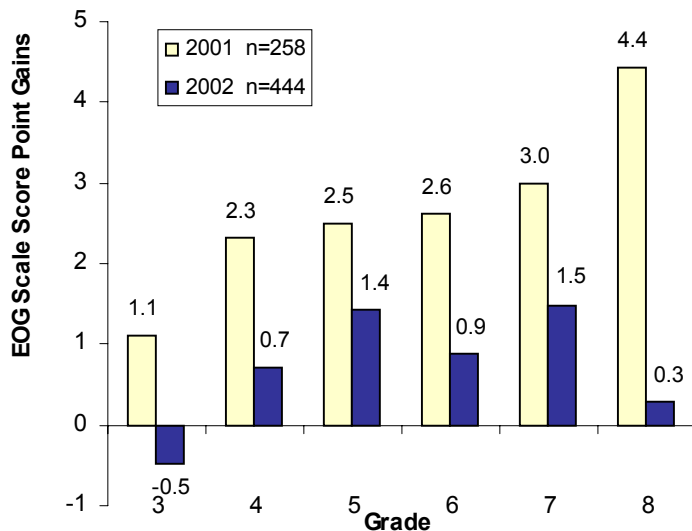


Figure 35
EOG Math Growth by Grade 2001 & 2002
(Special Education Students)



LEP Status

Level Scores

Patterns of students moving to grade level were similar for non-LEP and LEP students, with no significant differences across years in reading and differences in favor of the 2002 Voyager program in math (which must be interpreted cautiously given the cut-score issue).

- The percentage of non-LEP students at Level I or II in May who scored at grade level on Reading Retest 2 was similar in 2001 (28%) and 2002 (26%).
- In math, a significantly higher percentage of 2002 non-LEP students at Level I or II in May moved to grade level on Retest 2—22% in 2002 versus 9% in 2001.
- The percentage of LEP education students at Level I or II in May who scored on grade level on Reading Retest 2 were similar in 2001 (15%) and 2002 (12%).
- In math, the percentage of LEP students at Level I or II in May who moved to grade level on Retest 2 was similar—18% in 2002 and 7% in 2001.

Figure 36
EOG Reading Level Results 2001 & 2002
May to Retest 2
(Non-LEP Students)

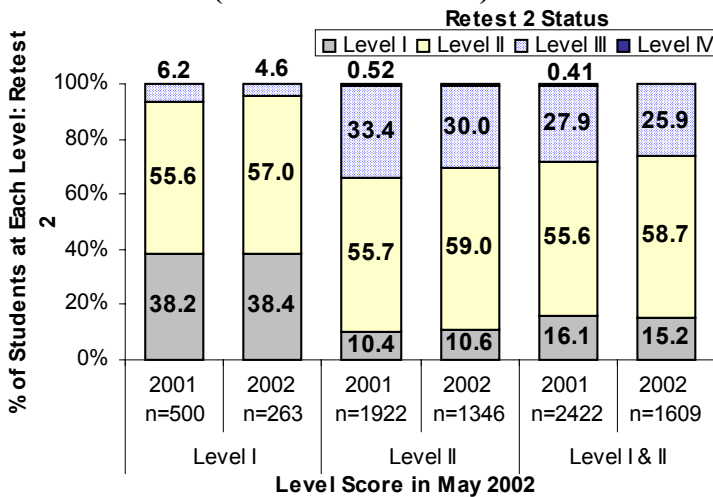


Figure 37
EOG Math Level Results 2001 & 2002
May to Retest 2
(Non-LEP Students)

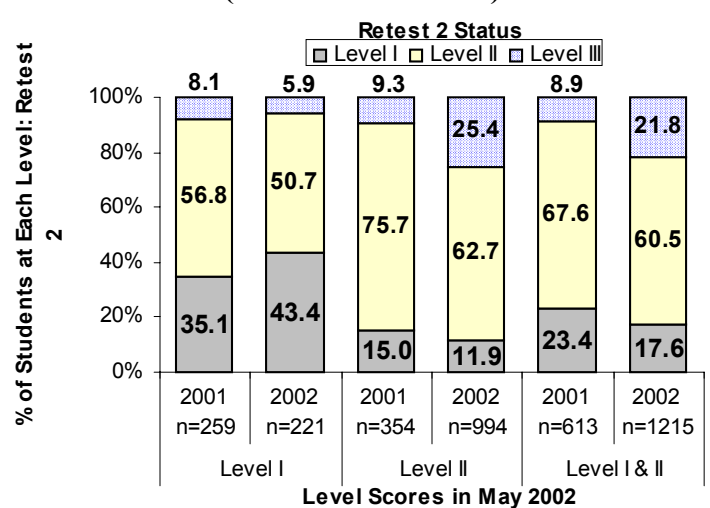


Figure 38
EOG Reading Level Results 2001 & 2002
May to Retest 2
(LEP Students)

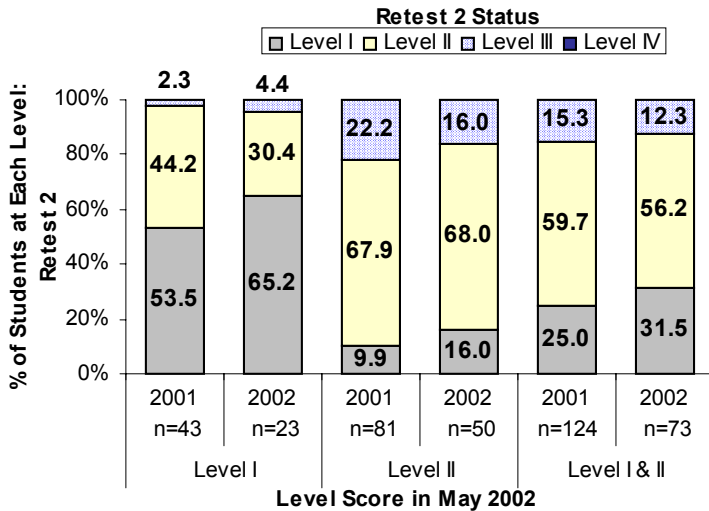
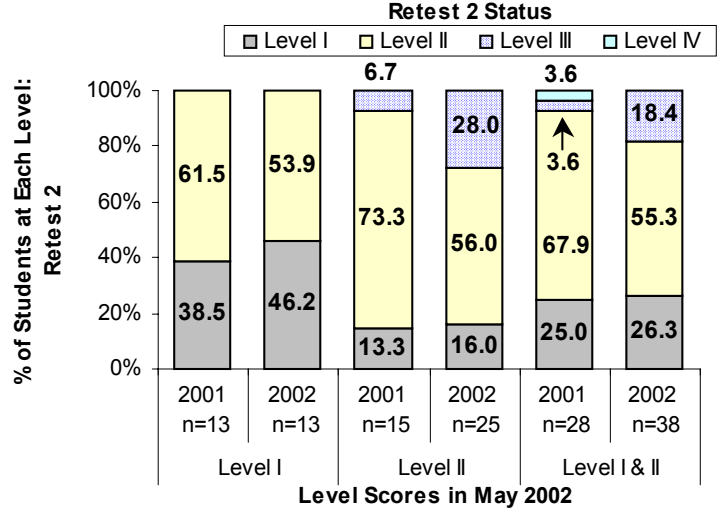


Figure 39
EOG Math Level Results 2001 & 2002
May to Retest 2
(LEP Students)



Scale Scores

In reading, WCPSS LEP students in grades 4, 6, and 7 did not perform as well as non-LEP students. In 2 of 6 grades (grades 6 and 7), LEP students who attended 2001 Summer Academy experienced slightly greater (statistical significant) gains in reading than in 2002. Math gains in 2001 and 2002 were similar for LEP and non-LEP students.⁷

⁷ Attachment 1 shows the significance of scale score gains by grade and subject for 2001 and 2002.

Figure 40
EOG Reading Gains 2001 & 2002
May to Retest 2
(LEP Students)

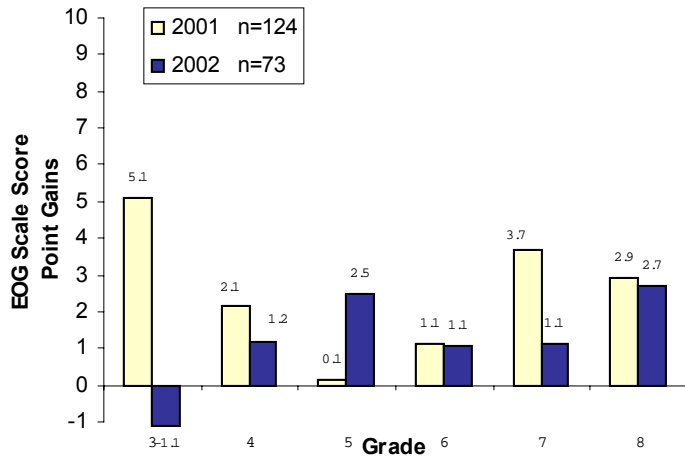


Figure 41
EOG Math Gains 2001 & 2002:
May to Retest 2
(LEP Students)

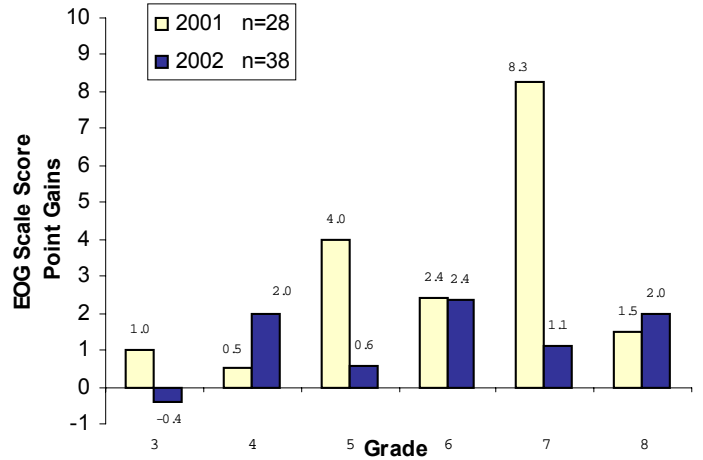


Figure 42
EOG Reading Gains 2001 & 2002
May to Retest 2
(Non-LEP Students)

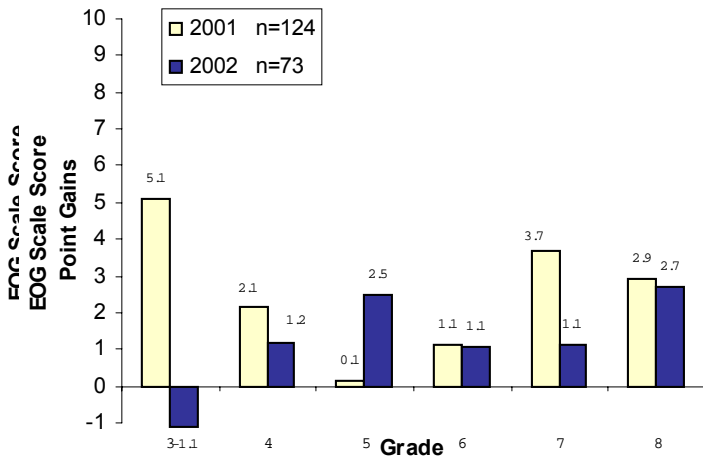
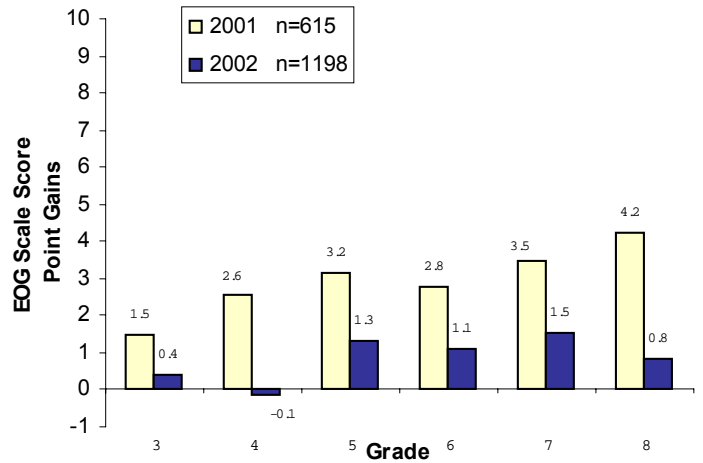


Figure 43
EOG Math Gains 2001 & 2002:
May to Retest 2
(Non-LEP Students)



Voyager Participant/Non-Participant Match

Only a small group of students (225) taking EOG Reading Retest 2 and (182) EOG Math Retest 2 were non-participants. To ensure the comparison to Voyager students was reasonable, 408 students (204 Voyager participants and 204 non-participants) were matched by their May 2002 EOG reading score and their LEP, special education, and free/reduced lunch status. Additionally, 332 students (116 Voyager participants and 116 non-participants) were matched by their May 2002 EOG math score and their LEP, special education, and free/reduced lunch status. Figures 42 through 47 display the comparison of EOG retest scores between matched students attending Voyager 2002 Summer Academy and those who did not attend Voyager. Information on whether non-participants received other forms of assistance or perhaps had artificially low scores in May was not available.

Level Scores

Voyager participants and non-participants scoring Level I or II on May 2002 Reading and Math EOG had similar results.

- In reading 27.5% of Voyager participants moved from Level I or II to grade level on Retest 2 compared to 29.5% of non-participants.
- In math 25.9% of Voyager participants compared to 28.5% of non-participants moved from Level I or II to grade level on Retest 2.

Scale Scores

The scale score gains between May and Retest 2 for non-participants and Voyager participants were not significantly different.

- Voyager students had greater gains than non-participants in two-thirds of the grades in reading while non-participants out performed Voyager students in two-thirds of the grades in math.
- Students attending the Voyager 2002 Summer Academy gained from 1 to 3.4 EOG scale score points (by grade) for reading between the May EOG and EOG Retest 2. Whereas, students not attending Voyager ranged from a 0.3 point decline to a 3.5 gain (by grade) in their EOG scale score.
- For students attending Voyager 2002 Summer Academy changes in math scale score between the May EOG and Retest 2 ranged from a decrease of 0.4 points to a gain of 2.4 points (by grade). Those students not attending Voyager ranged from -2.1 points to a 3.1 gain (by grade).

Figure 44
EOG Reading Level
May 2002 to Retest 2 (n=408)

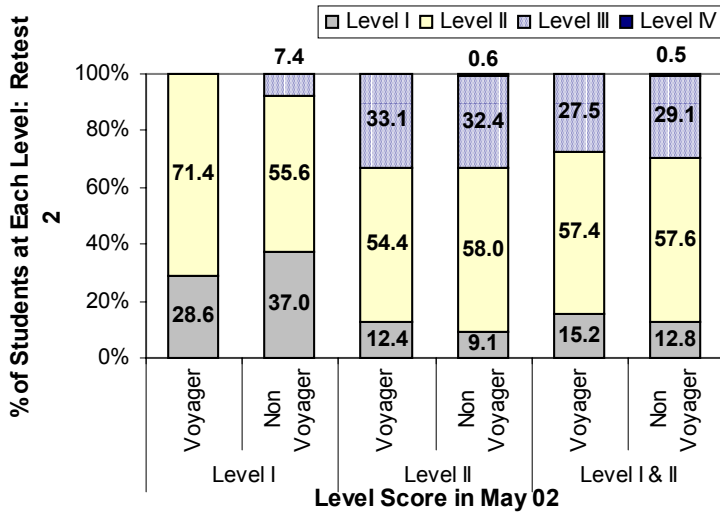


Figure 45
EOG Math Level
May 2002 to Retest 2 (n=332)

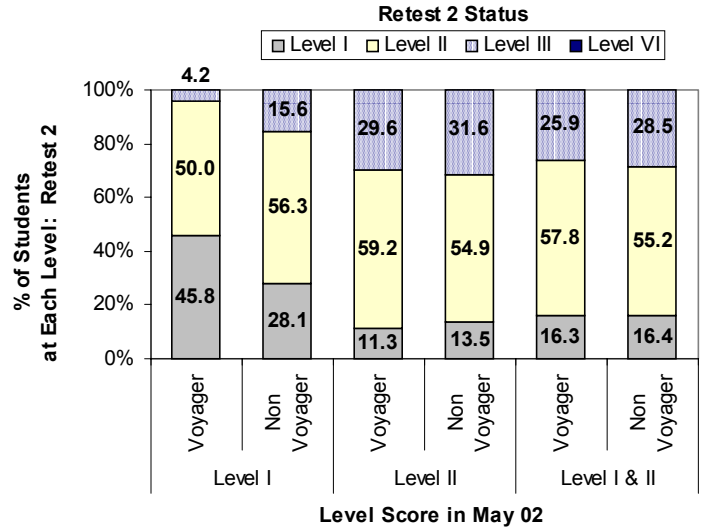


Figure 46
EOG Reading
May 2002 to Retest 2 (n=408)

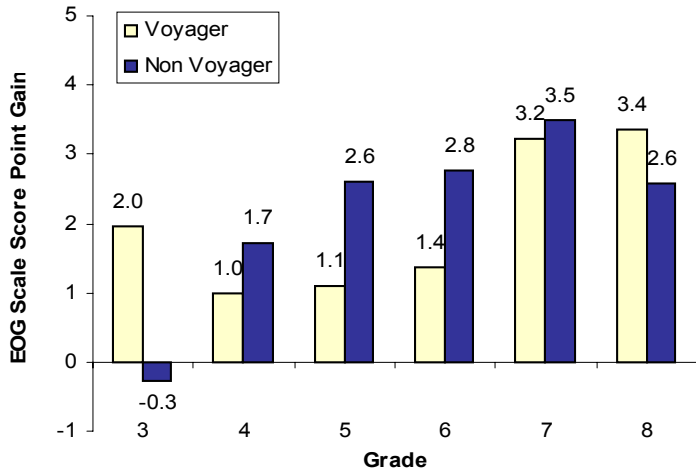
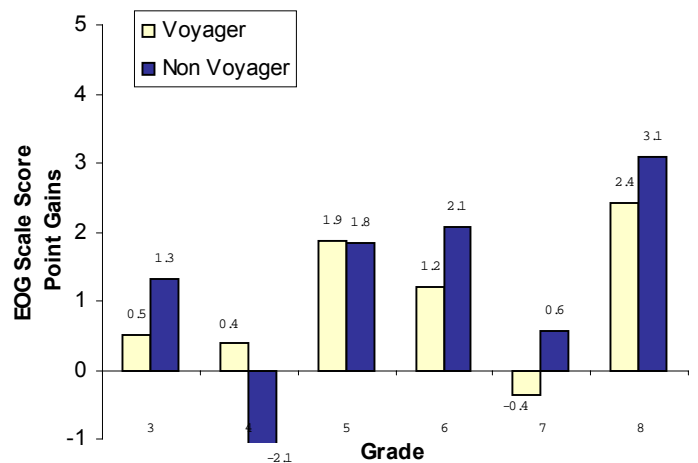


Figure 47
EOG Math
May 2002 to Retest 2 (n=332)



21st Century Grant Schools/Voyager Comparison

We compared the results of Summer Academy students attending East Wake 21st Century Grant schools (Hodge, Carver, Lockhart, and Zebulon elementary) to Voyager Summer Academy students. Grant schools used the Voyager program, but had additional funds to enhance the basic Voyager program. Schools had flexibility in use of these funds.

Scale Score

Overall, between the May EOG and Retest 2, the grant students had similar gains to Voyager students.

- Voyager student gains ranged from 1.1 to 2.7 points (by grade) in reading and from 1.4 to 2.6 points in math while grant students had gains ranging from -0.2 to 2.9 points in reading and -0.1 to 1 point in math.

Level Score

Approximately the same percentage of Voyager 2002 Summer Academy students moved to grade level in reading as grant students, but for math a greater (although not statistically significant) percentage of Voyager students moved to grade level.

- A comparison of reading Level scores revealed that 25.9% of 2002 Voyager students scored Level III or IV while 23.5% of grant students scored Level III or IV on the Reading EOG Retest 2.
- 23.9% of 2002 Voyager students scored Level III or IV on the Math EOG Retest 2, compared to 13.8% of grant students.

Figure 48
EOG Reading Level Results
May 2002 to Retest 2

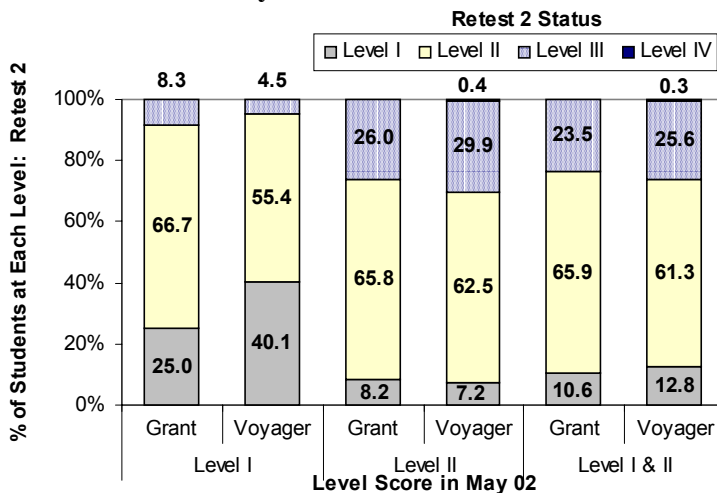
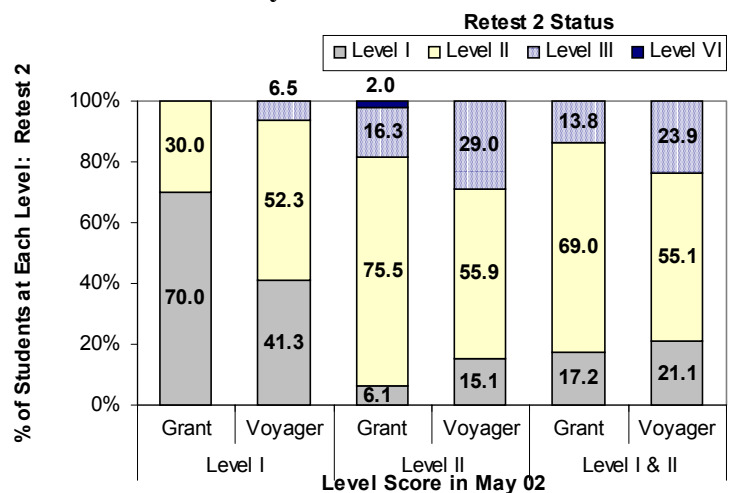


Figure 49
EOG Math Level Results
May 2002 to Retest 2



EOG Trends

Summer school is one element of a comprehensive set of supports for student achievement in WCPSS. *Through the combination of a brief intervention immediately following the May EOG, Summer Academy, and ALP, many students (67% in reading and 70% in math) below grade level on their May 2001 EOG have reached grade level by 2002's Retest 2.* The percentage of students reaching grade level has been steadily increasing in the last few years, as increased assistance has been provided. The math 2001 Retest 1 and Retest 2 results are based on the original 2001 Level scores updated to reflect the revised 2002 Level cut-off points. The EOG trend line may have been suppressed at those two points because fewer students took Retest 1 and Retest 2 in 2001.

Figure 50
Reading EOG
Percentage of Students Moving to Grade Level
Spring 2001-Summer 2002

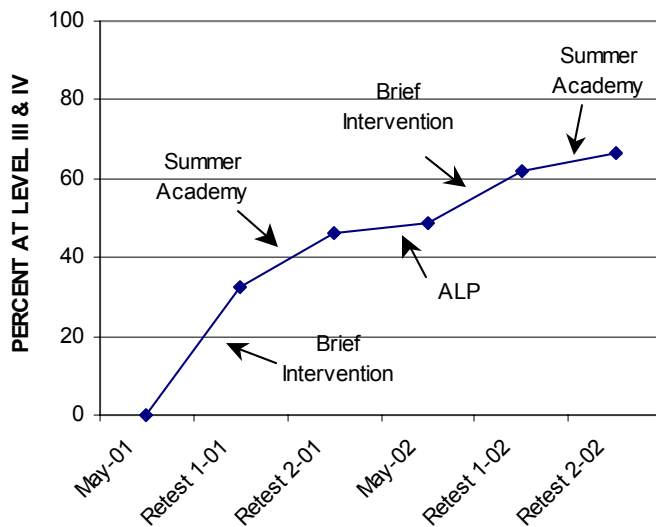
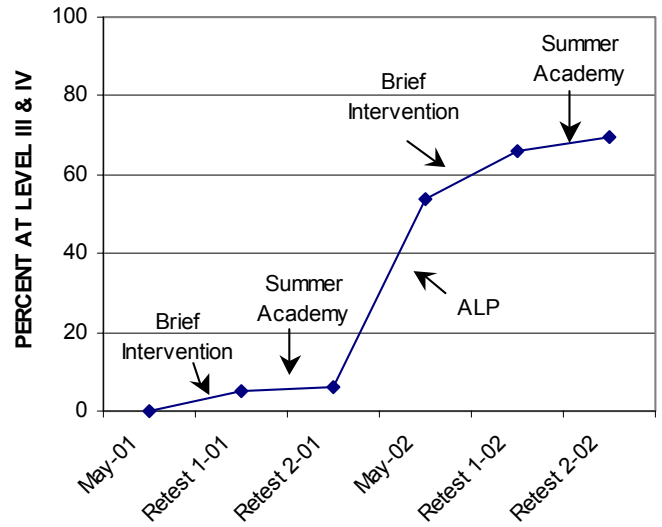


Figure 51
Math EOG
Percentage of Students Moving to Grade Level
Spring 2001-Summer 2002



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Attachment 1
How End-of-Grade Reading and Math Scores Were Affected by Dissaggregation of the
Summer Academy 2001 and 2002 Data

Reading						
Explanatory Variables	Grade					
	3	4	5	6	7	8
Pre-test Reading Scale	.58**	.55**	.59**	.61**	.61**	.65**
Disaggregate Groups						
2001 vs. 2002	-.71	-.43	-.76	-.93**	-.68*	-1.42**
Special Education	-1.86**	-1.12**	-1.74**	-2.58**	-2.10**	-1.95**
LEP	1.53	-2.43*	-2.29	-3.46**	-2.11*	-1.95
Free or Reduced Lunch	-.02	-.54	-.31	-1.04**	-.07	.37
Race: White vs. African American	-1.33*	-.93	-.65	-1.49**	-.28	-.64
Hispanic	-2.68*	1.01	.67	-.88	-1.20	.01
Intercept	60.60**	65.98**	62.67**	62.35**	63.14**	58.74**
Sample Size	759	770	503	1001	688	386
Explained Variation	20%	20%	22%	35%	36%	35%
F Value	26	28	20	77	55	29

^ Table shows unstandardized coefficients from ordinary least squares regression models. Values reflect differences in scales score points.

*p<.05

**p<.01

Math						
Explanatory Variables	Grade					
	3	4	5	6	7	8
Pre-test Reading Scale	.70**	-.17	.47**	.32**	.36**	.13
Disaggregate Groups						
2001 vs. 2002	-.46	.65	.90	.46	-.13	.11
Special Education	-1.12**	-.64	-.06	-1.48*	-.97	-2.17**
LEP	-1.37	-1.68	-2.50	-.28	.53	-2.36
Free or Reduced Lunch	-.15	.08	-1.35*	.06	.24	-1.17
Race: White vs. African American	-.62	-1.24	.53	-.96	-1.68	-1.06
Hispanic	.51	-.52	2.17	-.64	-1.04	-.77
Intercept	73.34**	283.23	129.21**	171.80**	165.37**	225.78**
Sample Size	632	153	177	325	255	317
Explained Variation	33%	1%	21%	11%	9%	9%
F Value	43	.2	7	5	3	4

^ Table shows unstandardized coefficients from ordinary least squares regression models. Values reflect differences in scales score points.

*p<.05

**p<.01

VOYAGER SUMMER ACADEMY 2002 RESULTS

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