Evaluation & Research Department

January 2010 E&R Report No. 09.36

Impact Evaluation

NOVANET 2008-09 EVALUATION

Author: Dina Bulgakov-Cooke, Ph.D.

Question 1: What need does NovaNET address? What are the NovaNET objectives or goals?

NovaNET is an online individualized instructional program. Wake County Public Schools System (WCPSS) utilizes NovaNET as an alternative opportunity for high school students at risk of not meeting graduation requirements to accrue credits.

NovaNET contributes to the WCPSS goal of closing achievement gaps and creating opportunities for all students to graduate on time. The long-term objective of NovaNET is for all students who take a NovaNET course during the school year or in the summer to receive a passing course grade and a course credit. (See Figure 1.)

NovaNET has been used in WCPSS since 1996, when it only served students at risk of failure at Cary and Mary Phillips High Schools. In 1999, the funding for the program was provided through the federal grant called Safe Schools/Healthy Students. With the increased funding, the program expanded from two schools to all high schools and two alternative middle schools. Information on NovaNET implementation in the earlier years can be found on the WCPSS Web site at http://www.wcpss.net/evaluation-research/reports/. After the grant period was over, WCPSS decided to support the program by funding it through local funds. (Continued on p. 2.)

Major Findings

- **Students Served:** There were 1,920 enrollments in the fall and spring of 2008-09 and 763 in the summer of 2009. Students on free or reduced price lunch (FRL) and Black/ African-American students were over-represented compared to WCPSS overall.
- **Courses Offered:** In 2008-09, 38 NovaNET courses were offered districtwide. All high schools offered credit recovery (CR) courses. Six schools offered remediation opportunities, and 11 offered new credits.
- **Achievement:** Based on summer courses, NovaNET had a high success rate in helping students earn credits towards graduation. Nearly all students completed the Summer 2009 courses attempted and high percentages passed the coursework (from 83% to 100%). Pass rates for End of Course (EOC) tests were not high (from 17% to 46%), but overall EOC course pass rates were still high (82% to 100%). CR course pass rates were 24 percentage points higher than for similar North Carolina Virtual Public School (NCVPS) courses.
- **Expenditures:** Total expenditures for Fall and Spring 2008-09 were $1,553,847. Considering the 1,920 enrollments in 2008-09, an average cost per student enrollment was $809 in the fall and spring. With $121,192 in summer salaries and benefits, cost of 763 summer enrollments was lower, at about $159 per student.
- **Recommendations:** Based on high summer pass rates, encourage use of NovaNET to earn course credits. Examine ways to enhance EOC performance. Designate use of NovaNET within course codes, streamline reporting methods, and enhance monitoring of success. Consider expanded use of NovaNET as a supplement for regular courses. Based on cost–effectiveness, expand student access to NovaNET in summer if feasible.

Impact Evaluation reports provide basic evaluative outcomes information on standard indicators. These reports may suggest a need for further study of program efficacy.

WAKE COUNTY PUBLIC SCHOOL SYSTEM

Currently, NovaNET provides alternative academic support to high school students who for various reasons do not succeed in traditional classrooms.[1] In 2008-09, each high school offered semester- or year-long NovaNET courses and summer school with one exception (one school only offered summer school). NovaNET served several purposes:

- **Credit Recovery:** Students could recover credits for courses previously failed in a regular classroom by retaking the courses through NovaNET. (See Figure 1.)
- **Remediation:** Students enrolled in a regular class who were at risk of a course failure could simultaneously take individual modules at the NovaNET lab for remediation (while continuing the course in the regular course).
- **First-Time Credit:** Students could take a NovaNET course for a first-time credit. This was reserved primarily for out-of-state or out-of-county transfer students who were behind on high school credits as an opportunity to catch up on their coursework and graduate on time.
- **Summer School:** NovaNET, along with another online option, NCVPS, offered summer school courses, serving mainly senior and junior students who needed credits for on-time graduation. Underclassmen also took NovaNET summer courses for credit recovery, as space in the NovaNET lab was available.
- **Lesson Supplements:** A few schools used individual lessons in NovaNET to supplement their regular materials.

The anticipated outcomes are illustrated in the logic model in Figure 1. The short-term outcomes of the program are improved understanding of the NovaNET course material and receiving credits necessary for promotion and graduation. Enhancement of the processes is another short-term outcome that relates to student selection, teacher assignment, and credit reporting. NovaNET's intermediate and long-term outcomes are increased number of credits recovered and ultimately for all students taking NovaNET courses to receive passing grades and course credits.

Question 2: How many students were served by NovaNET overall and by purpose in 2008-09?

NovaNET enrollment records during the year were only maintained at the schools and were not provided to the district NovaNET coordinator. Courses were listed using a regular course number, and it is therefore not possible to distinguish courses taken through NovaNET from a regular classroom course, except in the summer. At the evaluator's request, to estimate the number of total NovaNET enrollments in 2008-09, summary enrollment data for fall and spring of 2008-09 were collected from school-based NovaNET coordinators. Individual student data were not available. The data submitted were summarized and showed the following:

- In the fall and spring of 2009, high schools had 1,920 NovaNET enrollments. Because some students may have taken two courses, the total number of NovaNET students was likely to be a little lower than the number of total enrollments.

[1] Only high schools were considered in this report. No data were received from one middle school that has a NovaNET lab.

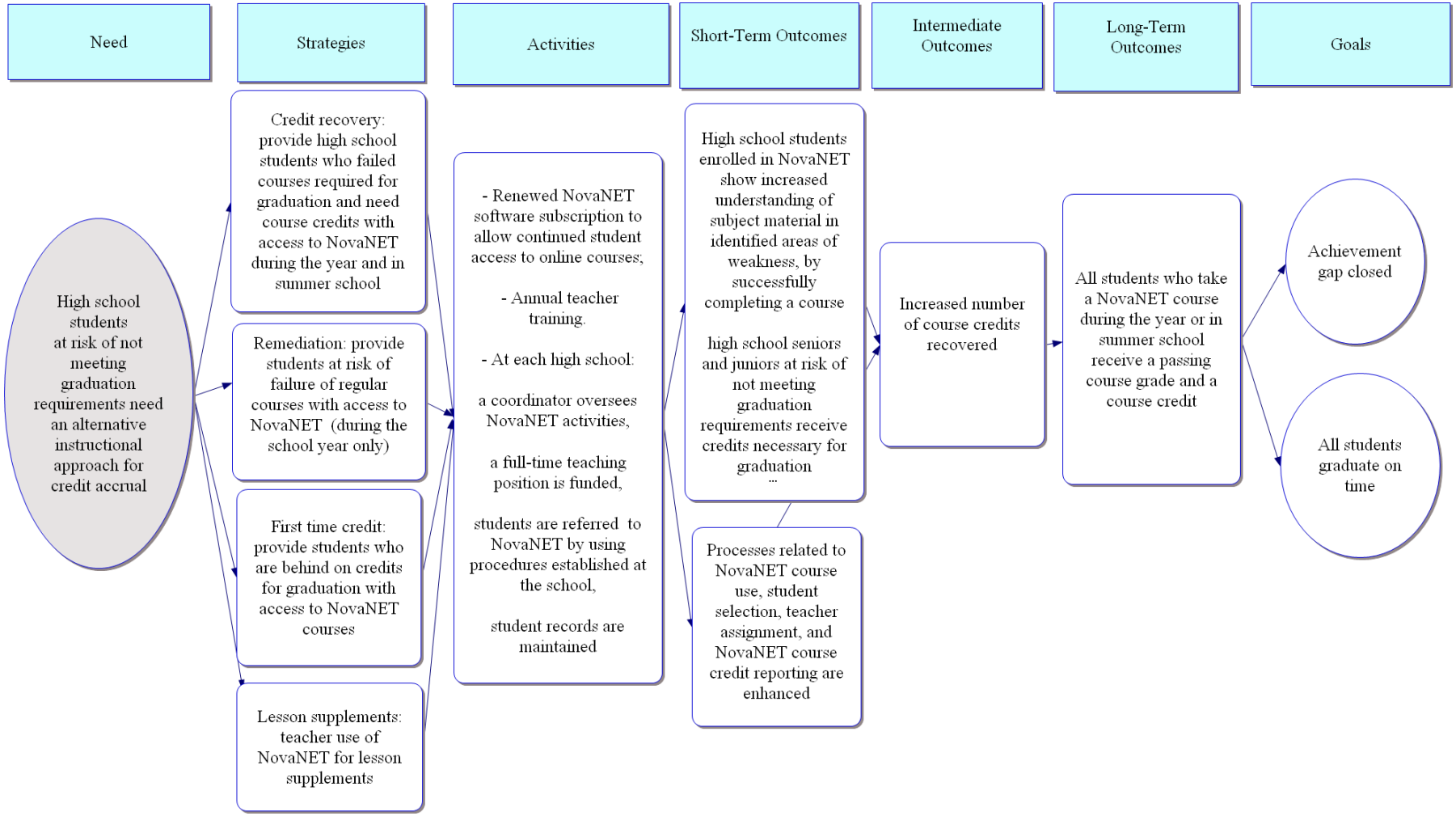
- Most enrollments during the fall and spring of 2008-09 were in credit recovery courses (1,591 enrollments).
- NovaNET was less frequently used for remediation or for gaining a first time credit (123 and 206 enrollments). Two schools were an exception to the general trend and used NovaNET more broadly for remediation and earning new credits (Cary and Fuquay-Varina).

Table 1
Number of Enrollments by Purpose in the 2008-09 School Year

High School	Fall and Spring 2008-09 Courses			
	Credit Recovery	Remediation (Grade Repair)	First Time Credit	Total
Apex	96	0	1	97
Athens Drive	93	1	4	98
Broughton	78	2	24	104
Cary	129	21	81	231
Enloe	78	0	0	78
East Wake Schools	135	11	19	165
Fuquay-Varina	35	36	25	96
Garner	77	0	3	80
Green Hope	82	0	0	82
Holly Springs	41	0	0	41
Knightdale	27	0	0	27
Leesville Road	64	0	13	77
Millbrook*	184	0	0	184
Middle Creek	51	0	0	51
Phillips	100	0	18	118
Panther Creek	45	0	3	48
Sanderson	98	2	0	100
Southeast Raleigh	92	0	0	92
Wakefield	80	0	14	94
Wake Forest-Rolesville	56	0	1	57
Wake Early College	0	0	0	0
Total	**1,591**	**123**	**206**	**1,920**

***Only totals for the school were available, so all enrollments were tentatively assigned to credit recovery.**
Note: NovaNET enrollments at the four East Wake High Schools are all listed under East Wake High Schools.

Figure 1
NovaNET Logic Model



Unlike Fall and Spring 2008-09, Summer 2009 NovaNET rosters were centrally maintained.

- Summer 2009 rosters listed 763 enrollments.
- A total of 695 students took NovaNET courses, with 69 students taking two courses and 626 students taking one course.

Table 2 shows the total number of students enrolled in NovaNET courses at each high school in Summer 2009. Number of enrollments ranged from 13 to 64.

Table 2
Summer 2009 NovaNET Enrollments by School

High School	Number of Enrollments	Number of Students Enrolled in Two Courses	Number of Students Enrolled in One Course
Apex	32	6	20
Athens Drive	30	0	30
Broughton	50	7	36
Cary	39	1	37
East Wake School of Health Sciences	16	4	8
East Wake School of Integrated Technology	13	1	11
East Wake School of Arts, Education, and Global Studies	17	5	7
East Wake School of Engineering Systems	16	0	16
Enloe	36	6	24
Fuquay-Varina	27	1	25
Garner	37	8	21
Green Hope	35	8	19
Holly Springs	29	0	29
Knightdale	64	1	62
Leesville Road	32	0	32
Middle Creek	31	0	31
Millbrook	58	10	38
Panther Creek	36	1	34
Phillips	13	1	11
Sanderson	40	2	36
Southeast Raleigh	28	4	20
Wake Early College	13	0	13
Wake Forest-Rolesville	29	1	27
Wakefield	42	1	40
Total	**763**	**69**	**626**

Question 3: What resources were needed to implement the program in 2008-09? Was NovaNET cost effective?

Resources needed to maintain NovaNET included annual renewal of software licenses, NovaNET teacher training costs, and maintaining a full-time position at each school. Considering that the total 2008-09 NovaNET budget excluding summer was $1,553,847, and there were 1,920 enrollments during the year, an average cost per enrollment was $809 during the year. This is comparable with the average cost of a regular course in WCPSS. Based on the 2008-09 district Budget, the cost of a typical course per student in the district was about $803. This calculation was made based on teacher salaries and the cost of instructional materials for an average class size of 22 students.

There were 22 full-time NovaNET positions available for the year plus part-time positions for summer school. NovaNET teachers were funded through at-risk funding, one position per school (the East Wake High Schools shared one position). A single position at some schools was divided between two or three teachers. (See Table 4.) The 2008-09 NovaNET budget showed that teachers' total salaries and benefits, were $1,294,890. This constituted $58,858 per teaching position including benefits.

Based on teacher and software costs, the cost of 763 summer enrollments was much lower than in the fall or spring, at $159 per student, with $121,192 in summer salaries and benefits. (See Table 3.) Clearly, per student cost of a NovaNET course taken in summer was lower than a similar course taken during the year.

Table 3
NovaNET Costs

Description	State Budget	Local Budget	Total
2008-09 NovaNET Teacher Salaries	$ 935,100.97	$ 124,431.13	$1,059,532.10
2008-09 NovaNET Teacher Benefits	$ 193,681.53	$ 41,676.03	$ 235,357.56
2008-09 NovaNET Cost for Ports*	$ 258,958.18	$ -	$ 258,958.18
Total NovaNET	**$1,387,740.68**	**$ 166,107.16**	**$1,553,847.84**
2009 Summer School NovaNET Teacher Salaries	$ 79,658.24	$ 14,269.75	$ 93,927.99
2009 Summer School NovaNET Teacher Benefits	$ 12,162.11	$ 2,193.26	$ 14,355.37
2009 Summer School NovaNET Cost for Ports	$ 12,909.40	$ -	$ 12,909.40
Total 2009 Summer School NovaNET	**$ 104,729.75**	**$ 16,463.01**	**$ 121,192.76**
Expenditure Totals 2008-09	**$1,492,470.43**	**$ 182,570.17**	**$1,675,040.60**

*Data Source: Annual Contract with Pearson, Inc. The amount includes renewal of annual license and support fee (ports) and annual training. Slight variations in costs are possible due to the specifics in tax calculations.

With 15 simultaneous ports available per school and courses offered during three periods, each school could potentially handle as many as 45 students per semester. Student enrollments were only restricted to one NovaNET teacher and the number of computers in the lab. This was especially true in summer when the number of ports was not limited. Analysis of the enrollment in 2008-09 shows that high schools had a median of 93 NovaNET enrollments per year per school (See Table 1). With an exception of four schools, the ports have been fully utilized.

Question 4. How was NovaNET implemented in the WCPSS high schools in the fall and spring of 2008-09 and in the summer of 2009?

Each high school received the same resources: one full-time position to implement NovaNET, 15 simultaneous ports to access the courses, and annual teacher training. Implementation varied somewhat by school. To examine any differences in NovaNET implementation, an open-ended questionnaire was administered to NovaNET coordinators or teachers. Based on the responses from 16 NovaNET coordinators or teachers (66% response rate), some variations in implementation of NovaNET were identified at each high school. The differences were in management, teaching positions, courses offered, and student access to NovaNET.

Coordination and Management

In at least seven of the 16 responding high schools, assistant principals or deans of students served as NovaNET coordinators, i.e., as part of their duties they monitored and coordinated NovaNET implementation. This was especially important at the schools that had the single NovaNET teaching position divided between two or three teachers. Other schools had dedicated NovaNET coordinators, who were full-time NovaNET teachers with no other duties assigned.

Number of teachers

Except for the four small East Wake High Schools that shared one position, one full-time position per school was assigned to NovaNET for the fall and spring semesters. Schools could decide whether to assign one full-time teacher to the position or several teachers to teach a course or two. Seven schools reported assigning one teacher to NovaNET, and eight indicated more than one teacher was assigned—usually two or three (see Table 4).

- At a school with one NovaNET teacher, she/he usually becomes a resident expert who has an in-depth knowledge of how NovaNET works from the perspective of the teacher and the student.
- Using more than one teacher also had its benefits. For example, it allowed expanding use of NovaNET to more than three periods per day and to after-school use. After-school hours were especially beneficial for students who were returning after dropping out of school. As another example, three NovaNET teachers at one of the schools were able to develop supplemental materials for each NovaNET course they taught. Involving more than one teacher also meant each teacher was more likely to have expertise in the subject area of the course. Some additional staff also worked in the NovaNET lab that typically was funded through other sources.

Table 4
Number of NovaNET Teachers per School in Fall and Spring of 2008-09

High Schools	# of NovaNET Teachers Sharing One NovaNET Allotment	Additional NovaNET Staff (Regular Allotments)
Cary	1.5	Several other teachers delivered NovaNET instruction for one period per day.
Holly Springs	1	
East Wake *	1	
Fuquay-Varina	1	Several teachers were assigned NovaNET courses and combined NovaNET with regular teaching.
Wakefield	1	One additional after-school teacher.
Enloe	1	Several additional teachers taught part-time.
Phillips	2	
Leesville	2	
Green Hope	2	
Apex	1.5	
Middle Creek	3	Behavior support specialist taught NovaNET.
Southeast Raleigh	3	
Athens Drive	3	
Garner	1	One teacher taught one block.
Sanderson	1	

*The four East Wake High Schools shared one position.

Courses

The length of courses offered through NovaNET varied by school. Typically, NovaNET courses were semester-long. However, several schools had year-long rather than semester-long courses. One school offered NovaNET only in spring and summer of 2008-09, and another offered only a summer NovaNET.

Other differences were in the choice of available courses. One NovaNET lab offered a number of pre-intervention mathematics courses to prepare students for Algebra I. Another made available initial credit for technical mathematics. While English I, II, and III, as well as Algebra I and II were most frequently offered, the number of Non-EOC NovaNET course offerings varied by school.

Access

Student ability to gain access to NovaNET courses varied in terms of location and time of the day. A number of schools allowed NovaNET access not only from the lab, but from any other location at the school, while others restricted access to certain areas. A number of schools had opportunities for after-school or Saturday access, others had no such opportunities.

Duties of NovaNET Coordinators and Teachers

To gain a better understanding of NovaNET daily operations, the evaluator investigated the duties of NovaNET coordinators and teachers. Generally, NovaNET coordinators oversaw the program, maintained site coordination, and communicated with administrators and counselors. Coordinators who did not teach NovaNET courses guided NovaNET teachers. Typically coordinators:

- discussed student screening and selection to the program,
- coordinated student schedules,
- addressed attendance and discipline issues,
- maintained parent contacts when students were struggling,
- discussed coursework with counselors and students,
- administered diagnostic tests and administered testing for summer school,
- completed summer school report cards and finalized summer school promotions and retentions, and
- coordinated use of NovaNET for homebound students and with special programs.

Some coordinators were NovaNET teachers. Teachers maintained the NovaNET lab and program and provided support to students. They worked with guidance counselors to admit students. They also performed the following duties:

- assigned students to courses/curricula, and assigned modules to students,
- prepared curriculum guides,
- consulted with other teachers for assistance with content area questions,
- addressed attendance and discipline issues,
- interacted with students and assisted students with work and course content,
- helped with questions,
- monitored students and tutored course content,
- ensured that students were on-task and managed behavior,
- tracked student progress through NovaNET reports, and
- recorded grades and calculated final grades.

Number and Types of Courses Offered

In 2008-09, based on data submitted by the coordinators, 38 different courses were offered in WCPSS through NovaNET. EOC courses were offered most frequently. In the fall and spring of 2008-09 and Summer 2009, students were most frequently enrolled in mathematics courses (Algebra I, Algebra II, Geometry, and Technical Math) but English (English I and III), Science (Biology, Earth Science, and Physical Science), and History (US History, and World History) were also frequently taken. Course names and the number of schools offering the courses are listed in Table 5, organized in descending order, from the highest to the lowest number of schools offering the course. In addition to core courses, a number of electives which are less typical for NovaNET were also each offered by a single school (e.g., Journalism, Physics, Advanced Functions, and Digital Communications).

Table 5
NovaNET Courses Offered in 2008-09

Courses Offered	Counts of Schools Offering Courses	
	Fall and Spring 2008-09	Summer 2009
Algebra I (including Algebra part 1 & 2)	20	25
English I	19	16
Biology	18	17
Physical Science	18	17
English III	18	26
U.S. History	17	25
Earth Science	17	15
World History	17	13
Civics & Economics	16	16
Algebra II	15	21
Geometry	15	16
English IV	13	18
Technical Math I	12	6
Intro to Math	10	7
Technical Math II	10	7
English II	8	18
Chemistry	6	5
Healthful Living	6	2
Study Skills	5	3
Environmental Science	4	5
World Civilizations	4	1
Geography	4	1
PreAlgebra	4	1
Career Exploration	3	0
Graduation Elective	3	0
Sociology/Psychology	2	0
Psychology	2	0
Child Development	2	0
Digital Communications	1	0
Print Graphics	0	1
Trigonometry	1	0
Sociology	1	0
Advanced Functions	1	1
Math Elective	1	0
Physics	1	0
Journalism	1	0
Reading	1	0
Computer Science	1	0

Data Source: NovaNET Coordinators' Summary Data

Types of Courses Offered

NovaNET courses were most frequently available for credit recovery, as shown in Table 6 (from 9 to 22 courses per school). Twenty of the 21 high schools reported offering credit recovery offerings. In fact, seven schools exclusively offered credit recovery courses. Eleven offered initial credit, mostly to students who transferred from another county or state and needed credits for graduation. Six schools also provided an opportunity for remediation of a course while taking it in a regular classroom. The total number of courses offered by each school ranged from 10 to 27.

Table 6
Types of NovaNET Courses Offered by High Schools in Fall and Spring of 2008-09

High School	Number of Credit Recovery Courses	Number of Courses in Remediation	Number of New Courses (Original Credit)	Total
Apex	15	0	1	16
Athens Drive	15	1	4	20
Broughton	15	2	10	27
Cary	11	2	10	23
Enloe	13	0	0	13
East Wake	22	2	3	27
Fuquay-Varina	9	2	0	11
Garner	18	0	3	21
Green Hope	19	0	0	19
Holly Springs	12	0	0	12
Knightdale	13	0	0	13
Leesville Road	12	0	4	16
Millbrook*	18	0	0	18
Middle Creek	10	0	0	10
Phillips	16	0	2	18
Panther Creek	12	0	2	14
Sanderson	16	2	0	18
Southeast Raleigh	15	0	0	15
Wakefield	20	0	2	22
Wake Forest-Rolesville	12	0	1	13
Wake Early College	0	0	0	0

*****Millbrook only provided total number of courses. Thus, all courses were counted as credit recovery.
Courses at East Wake Schools are all listed under East Wake High School.
Interpretation example: Phillips offered credit recovery courses in 16 subject areas, no remediation courses, and new credits in two subject areas.

Question 5. What were characteristics of students selected for NovaNET courses in the summer of 2009?

Demographics

Demographic information was only available for summer participation in NovaNET, because fall and spring 2008-09 rosters had not been maintained centrally. Only the regular course codes were used in NCWise, so students in NovaNET could not be distinguished from those in a course

taught in a traditional manner. Summer rosters, on the other hand, were maintained and readily available to the evaluator. This allowed analysis of the demographics of students participating in NovaNET in summer 2009. Therefore, the demographic characteristics presented in this report represent only summer 2009 NovaNET participants.

Most summer 2009 NovaNET participants were completing juniors. According to NovaNET coordinators, although students in all grades could take NovaNET, a priority in selection was given to upperclassmen, because of the limited number of seats and ports available in NovaNET labs. In actuality, summer data show a high enrollment of 11th graders (40%) and an even distribution of 9th, 10th, and 12th graders.

- More males than females enrolled in NovaNET courses in summer (57% and 43%).
- Six out of 10 students served by NovaNET in summer 2009 were Black /African-American (59%).
- Less than 30% of students who took NovaNET courses in summer were White, and about 10% were Hispanic/Latino.

Overall, compared to district enrollment patterns, Black /African American students were overrepresented, while White and Asian students were underrepresented.

Table 7
Ethnicity and Gender of Summer 2009 NovaNET Participants

	NovaNET		WCPSS High Schools*
Grade	Number	Percent	Percent
9	136	20.2%	31.2%
10	144	21.4%	25.4%
11	262	40.0%	22.0%
12	130	19.3%	21.4%
Gender			
Females	285	42.4%	49.4%
Males	387	57.6%	50.6%
Ethnicity			
Native American	1	0.2%	0.3%
Asian	9	1.3%	5.2%
Black/African American	401	59.7 %	28.5%
Hispanic/Latino	64	9.5%	8.4%
Multiracial	17	2.5%	3.2%
White	180	26.8%	54.5%
Total	**695**	**100.0**%	**100.0**%

***** WCPSS Growth and Planning Department Demographics Report was used for WCPSS percentages.
Note: Nine percent of NovaNET students had missing demographic indicators.

- In 2008-09, a high proportion, more than four out of 10 students taking NovaNET courses in summer 2009, were students who were identified as FRL eligible (42%). At

WCPSS high schools, less than a quarter of students (22%) were identified as FRL eligible.

- Among those who took NovaNET courses, 23% were students with disabilities (SWD), higher than the 13% of students with disabilities in the district high schools overall.
- Students with limited English proficiency (LEP) were also represented among those taking NovaNET courses (7%). Four percent of NovaNET students in the summer of 2009 were English as a Second Language (ESL) program participants. LEP and ESL students were only slightly overrepresented in NovaNET compared to the school district.

Table 8
Summer 2009 NovaNET Students Eligible for FRL, Students with Disabilities (SWD), Students with Limited English Proficiency (LEP) and English as a Second Language Program (ESL) Participants

	NovaNET		WCPSS High Schools
	Number	Percent	Percent
FRL	285	42.4%	21.6%
Not FRL	387	57.6%	78.4%
SWD	152	22.6%	13.3%
Not SWD	520	77.4%	86.7%
LEP	43	6.4%	5.4%
Not LEP	629	93.6%	94.6%
ESL	25	3.7%	2.7%
Not ESL	647	96.2%	97.3%
Total	**672***	**100%**	**100%**

*23 students had missing demographic indicators; total number of NovaNET students was 695.
Data Source: Summer 2009 NovaNET Roster and E&R 2008-09 student roster.

Student Selection

The student selection process was described by NovaNET coordinators or teachers in their responses to the NovaNET open-ended questionnaire. Frequently, but not at all schools, both a counselor and a NovaNET teacher were involved in the process of student selection. Students who had problems with pacing were considered good candidates for online courses. Several student selection patterns were identified across the schools:

- NovaNET labs both during the year 2008-09 and in the summer of 2009 gave a selection priority to seniors or juniors who failed a course needed for graduation. Students were assigned to NovaNET courses by seniority. Underclassmen were allowed to take NovaNET courses based on the number of seats available. The following groups of students generally were assigned to NovaNET courses:
  - Seniors and juniors who needed to recover credit for a course they had previously failed, to increase chances for graduation.
  - Underclassmen who failed a course in the classroom and needed credit for promotion to the next grade level.
  - Students who needed supplemental remediation while in the classroom.
  - Students who transferred from another state or county and needed first time credits.

- At least six schools utilized a student contract or a form signed by students and parents with a listing of academic and behavioral expectations. One school offered expectations counseling rather than a contract. Ten coordinators did not report use of contracts. Coincidentally, three of the 10 coordinators expressed a concern with student behavior (attempting to browse the Internet or to access gaming sites while in the lab).

Question 6: Overall, what were the course completion and pass rates for Summer 2009 NovaNET course participants?

To determine the extent of effectiveness of NovaNET, course completion and pass rates for summer 2008-09 NovaNET course participants were examined. As shown in Table 9, students were fairly successful with NovaNET coursework but not with EOC tests:

- Nearly all students completed both EOC and non-EOC courses attempted (95% or more);
- The percentage of students passing the course work involved varied from 83% (for Algebra I) to 100% (Chemistry);
- Most students took the EOC test at the end of the course (those who passed previously did not have to do so). For those taking an EOC test, pass rates were not high, varying from 17% in Chemistry to 46% in English I. A NovaNET coordinator explained this in part by the fact that many NovaNET students have low reading comprehension levels or have difficulty transitioning from an online course taken at a slower pace to a timed paper and pencil test.
- Course pass rates reflected coursework more than EOCs (which count for 25% of the final grade); 82% to 100% passed the EOC courses, which equaled to the average of 87%.

Table 9
Percent of Students Passing EOC Exams and NovaNET Courses in Summer 2009

Course	Number Took the Course	Completed the Course		Passed the Coursework*		Number Took EOC After the Course	Number Passed EOC After the Course	EOC Pass Rate	Passed the Course	
EOC Courses										
Algebra I	89	88	98.9%	74	83.1%	69	21	30.4%	74	83.1%
Algebra II	44	43	97.7%	40	90.9%	36	14	38.9%	40	90.9%
Biology	38	36	94.7%	33	86.8%	26	5	19.2%	31	81.6%
Chemistry	7	7	100.0%	7	100.0%	6	1	16.7%	7	100.0%
Civics & Economics	36	35	97.2%	32	88.9%	27	10	37.0%	32	88.9%
English I	45	43	95.6%	40	88.9%	26	12	46.2%	40	88.9%
Geometry	50	49	98.0%	44	88.0%	42	12	28.6%	43	86.0%
Physical Science	39	38	97.4%	33	84.6%	26	9	34.6%	32	82.1%
US History	81	78	96.3%	71	87.7%	59	10	16.9%	72	88.9%
Non-EOC Courses										
Advanced Functions	1	1		1						
Algebra I p1 or A	7	7		7						
Comp. Intervention	1	1		1						
Earth Science	40	38	95.0%	37	92.5%					
English II	48	48	100%	45	93.8%					
English III	126	124	98.4%	116	92.1%					
English IV	42	42	100%	37	88.1%					
Environmental Science	4	4		4						
Geography	1	1		1						
Healthful Living	3	3		3						
Introductory Mathematics	8	8		8						
Print Graphics II	1	1		1						
Study Skills	3	3		3						
Tech. Math I	8	8		8						
Tech. Math II	10	9		8						
World Civ.	1	1		1						
World Geography	3	3		2						
World History	26	26	100%	23	88.5%					

*Note: Percentages were not calculated for courses with low enrollment.

Question 7. How did the NovaNET course pass rates compare to the NCVPS course pass rates for students enrolled in summer credit recovery courses?

Schools and students had choices regarding online learning and credit recovery. NCVPS and NovaNET both offered some credit recovery options during the school year and in the summer. A question of interest was whether students in these two online opportunities had similar success in passing the courses and therefore earning a high school credit. We could only analyze summer results, since the actual student enrollment data during the year were not available.

First, we examined whether different types of students were recommended to take one type of online course or the other. The demographic characteristics were compared for both groups. As illustrated in Table 10, the groups were roughly demographically similar. NovaNET in fact included slightly more students than NCVPS in groups that historically show lower achievement, including Black/African-American students and students on FRL.

Table 10
Comparisons of NovaNET and NCVPS Summer School Student Demographics, Summer 2009

Demographics	NovaNET N=695		NCVPS N=327	
Gender				
Female	387	(57.6%)	147	(45.9%)
Male	285	(42.4%)	173	(54.1%)
Ethnicity				
Black /African American	401	(59.7%)	168	(52.5%)
American Indian/Native American	1	(0.1%)	2	(0.6%)
Asian	9	(1.3%)	5	(1.6%)
Hispanic/Latino	64	(9.5%)	28	(8.8%)
White	180	(26.8%)	101	(31.6%)
Multiracial	17	(2.5%)	16	(5.0%)
Academic Risk				
FRL	285	(42.4%)	120	(37.5%)
SWD	152	(22.6%)	61	(19.1%)
LEP	43	(6.4%)	12	(3.8%)
ESL	25	(3.7%)	9	(2.8%)

Data source: Evaluation &Research Department 2008-09 student roster.

As illustrated in Table 11, EOC pass rates before entering the course were also statistically significantly higher for students in NCVPS. Statistical significance was calculated using χ^2 (1, N = 594) = 6.72, p = .05. However, neither group had high pass rates on the EOC prior to participation.

Table 11
Comparison of NovaNET and NCVPS Student EOC Pass Rates Before Summer School, 2009

EOC Course	NovaNET			NCVPS		
	Took EOC	Passed EOC		Took EOC	Passed EOC	
Algebra I	83	7	(8.4%)	42	6	(14.3%)
Algebra II	35	6	(17.1%)	21	7	(33.3%)
Biology	32	5	(15.6%)	n/a		n/a
Civics and Economics	33	6	(18.2%)	43	20	(46.5%)
English I	43	14	(32.6%)	24	9	(37.5%)
Geometry	47	9	(19.1%)	40	2	(5.0 %)
Physical Science	32	6	(18.8%)	11	1	(9.1 %)
US History	71	9	(12.7%)	31	8	(25.8%)
Total EOC	**382**	**63**	**(16.5%)**	**212**	**53**	**(25.0%)**

Data source: Evaluation &Research Department 2008-09 student roster.

Next we compared the summer 2009 coursework pass rates and EOC pass rates for students who participated in NovaNET and NCVPS credit recovery courses. Comparison of the two groups showed that coursework pass rates for EOC courses were statistically significantly higher (by 24 percentage points) for NovaNET than for NCVPS $\chi^2(1, N = 668) = 5.58, p = .05$.

EOCs pass rates for NovaNET and NCVPS were also analyzed and found to be similar for both (30% and 34%). NovaNET did not show any advantage over NCVPS in the EOC pass rates, although rates varied by course. The evaluator could not compare final grades, as the NCVPS report prepared by NCVPS contained only instructor assigned grades. Unfortunately, there is currently no standard districtwide system that would allow filling in final grades for NCVPS courses with EOC scores factored in.

Why coursework pass rates would be considerably higher for NovaNET than NCVPS but not EOC test pass rates is a topic for further investigation. More structured work times and closer supervision for NovaNET could play a role in coursework mastery as well as the difficulty of the material.

Table 12
Comparison of Coursework and EOC Pass Rates for Summer 2009
NovaNET and NCVPS Credit Recovery Courses

Course	NovaNET			NCVPS*		
	Took Course	Passed Coursework	Pass Rates for EOC Taken After the Course	Took Course	Passed Coursework	Pass Rates for EOC Taken After the Course
Algebra I	89	74 (83.1%)	30.4%	47	26 (55.3%)	9.5%
Algebra II	44	40 (90.9%)	38.9%	25	15 (60.0%)	56.3%
Biology	38	33 (86.8%)	19.2%	n/a	n/a	n/a
Civics & Economics	36	32 (88.9%)	37.0%	45	31 (68.9%)	46.2%
English I	45	40 (88.9%)	46.2%	25	19 (76.0%)	36.4%
Physical Science	39	33 (84.6%)	34.6%	11	6 (54.5%)	33.3%
U.S. History	81	71 (87.7%)	16.9%	38	24 (63.2%)	38.9%
Geometry	50	44 (88.0%)	28.6%	48	30 (62.5%)	25.8%
Chemistry	7	7 (100.0%)	16.7%	n/a	n/a	n/a
Total	**429**	**373 (86.9%)**	**29.7%**	**239**	**152 (63.2%)**	**34.1%**

* NCVPS report only included four dropped enrollments out of total 378. It is unknown if the actual course drop rates were higher.

Question 8: What are the students' and teachers' perceptions of the benefits of NovaNET?

Both students and coordinators were asked to provide input on perceived NovaNET benefits.

Student Perceptions

To examine perceptions of benefits of NovaNET, eight randomly selected NovaNET coordinators or teachers were asked to administer a student questionnaire to one class period of students enrolled in NovaNET in Fall 2009. The two question questionnaire addressed the benefits of NovaNET and asked for suggestions for its improvement. The evaluator received 84

responses from current NovaNET students in grades 9 through 12. Half of the respondents were seniors (41 students or 49%).

Table 13
Student Responses by Grade Level, Fall 2009

Grade	# of Responses
12	41
11	19
10	15
9	9
Total	**84**

When asked about benefits of NovaNET, students responded that it was easier for them to learn in the NovaNET lab than in a regular classroom. They learned more through NovaNET because the courses were very descriptive, "had everything broken down in sections," and provided many details and examples. Students valued the fact that they could work at their own pace, and could either take more time to learn, or get things done more quickly. Students could also go back and review the sections they did not understand and retake the tests and quizzes more than once. Students reported that they were focused better and stayed on task in the NovaNET lab. Some noted that they preferred to work independently. A few students stated that NovaNET was beneficial in many ways. Out of 84 respondents, only four felt NovaNET was not beneficial.

Table 14
Students' Perceptions of Benefits of NovaNET

Benefits	Number of Responses
Understand better, easier to learn	31
Move/work at own pace (faster/slower)	27
Can review material and retake tests and quizzes	12
Can focus better, have less distractions	6
Like to work independently	3
Beneficial in many ways	3
Gain credit	2
Can use teacher's help	2
Not beneficial	4

Coordinators' Perceptions of NovaNET Benefits

NovaNET coordinators were also asked an open-ended question about their perceptions of the benefits of the program for students. (See Table 15.) They believed that factors such as an opportunity to earn credit, the individualized approach, the learning environment, and flexibility were among the benefits of NovaNET.

Credits. The coordinators believed that the most obvious benefit of taking NovaNET courses was that students had an opportunity to earn credits for a course taken and failed in a regular classroom. "Taking a NovaNET course gives students an opportunity to recover a credit without repeating the course in the traditional setting." "Through obtaining credits for classes needed for graduation, NovaNET gives an opportunity for most students to be promoted to the next grade or to catch up with the sequence of courses in which they had fallen behind."

Individualized approach. Students can work independently and at their own pace, and are able to finish their assignments and move on. "The pre-test/post-test system creates a prescription-based instruction that concentrates on student weaknesses, so that they can learn and complete a course faster." "There are options embedded in the courses for students to review, work, and study specific concepts and objectives." "Students are able to receive immediate feedback whenever they need assistance."

The learning environment. According to the NovaNET coordinators, NovaNET offers a different setting, a quiet environment where students can focus better and receive individual one-on-one attention. "Many students benefit from a NovaNET course because the regular classroom environment may have been impeding their ability to move forward due to behavior issues or other concerns." "Many students work better in this atmosphere, where they have a teacher to assist with coursework if needed." For example, when having a mathematics teacher to teach and coordinate the NovaNET lab, students can get help with any level of mathematics: from introduction to mathematics, to pre-Algebra, to Advanced Functions." It should be noted that teachers who cover multiple classes may be more able to provide students with stronger content support in some subjects over others.

Flexibility. NovaNET gives students the flexibility to complete a course if they are unable to follow a regular schedule. "It allows students to pick up where they left off and gives a way to not get behind in the subject matter even if they fall behind in attendance." "Some students may have various and demanding schedules out of school." Others may miss school because of chronic health conditions. "The NovaNET setting allows students to progress without homework requirements that they are sometimes unable to meet."

Table 15
Coordinators' Perceptions of Benefits of NovaNET

NovaNET Benefits for Students	Number of Responses
Earn credits for graduation or promotion, pass courses, pass EOC, catch up with course sequence	9
Work at own pace (faster/slower)	5
The setting/environment is different from the regular classroom	3
Teacher is available to help	3
Can focus better	2
Can go back, review material, and retake tests and quizzes	2
One-on-one attention	2
No homework	2
Opportunity to learn	1
Extra time outside class to complete assignments	1
Opportunity to work independently	1
Immediate feedback	1
Can use when missing school, having health issues	1

Question 9: What were the challenges of NovaNET use in 2008-09 and how could use of NovaNET be improved?

Fifteen NovaNET coordinators or teachers addressed the challenges they or their students experienced with NovaNET by responding to a coordinator questionnaire. Viewpoints of the former NovaNET Program Coordinator and the Pearson trainer shared during face-to-face interviews are also included.

Student reading ability. Five NovaNET coordinators felt that one of the challenges was students' reading level. "The level of content presentation seems too difficult for the students with lower reading and comprehension levels." "Weak readers have a difficult time achieving success in NovaNET: they try to skip or not read all the information and, as a result, do not understand the content."

Student motivation. Another challenge mentioned by four coordinators was keeping students motivated for the entire class time. "NovaNET requires a lot of reading and answering questions." "Its content-related audio and video components are very dry, while many students taking NovaNET courses need engaging activities." "The lack of an interactive element was not a problem for the 'get it done' type of students, but presented a challenge for less motivated students who do not like to sit, read, and answer questions." "Combining in-school-suspension

and NovaNET in one room made NovaNET less effective."..Since some schools do not require contracts, some "immature students were enrolled in NovaNET courses who were characterized by lack of study skills, behavioral problems, or lack of independence."

Managing the instructional time. According to five coordinators, since students move at their own pace, "making sure there is enough content for a full time credit, while at the same time trying to ensure the students would have enough time to finish, was a challenge." "Some courses are too easily completed by energetic students and leave them idle for hours." "Enrollment of students with attendance issues is related to the ability to complete the course in time." For other students, "it is sometimes a challenge to finish the curriculum in the allotted time and understand the material when self-taught."

Managing several content areas. NovaNET can be challenging for the teacher, as some students need constant one-on-one attention, according to four NovaNET coordinators. "When up to 5 to 7 courses are administered simultaneously, it becomes difficult to provide individual assistance."

Connectivity and access to Internet. Maintaining connectivity was at times a challenge for three coordinators. "When the school network goes down for 30 minutes or more during student work sessions, no work gets done." "This happens about 5% of the time." "Open Internet access, access to gaming**,** students' ability to go to other Internet sites were counterproductive" for three coordinators.

Intensive Summer Session. Two of the coordinators believed the summer session was too short, 20 days only, with daily three and a half hour sessions. "This time constraint presents a real challenge for some students to complete the class on time." "Most students are not able to maintain focus on a computer course in one sitting."

Use of NovaNET with EOC courses. For one coordinator "the disparity between EOC content and course content" was an issue. She believed NovaNET alone may not prepare students for the EOCs. "Such EOC courses as Civics and US History are content-heavy (fact-based) but cannot supplement the other activities that students may be engaged in in a regular classroom, for example, applying and synthesizing information."

Staffing. Overall lack of staffing at the school level has been a concern for one school.

"Effective use of NovaNET ports decreased in 2008-09 while the school had to cover the subjects and sections that needed to be covered, with increased student numbers and overall decreased instructional staff. The NovaNET lab operated three periods per day rather than four. This was not the year for improving what has been done before, but rather for trying to keep a semblance of the good things done in the past."

The NovaNET coordinator expressed a concern that the lab lost continuity. "There was no consistency in how students were served, and the academic support provided by the NovaNET lab felt more like patchwork."

Input from other sources. In addition to NovaNET teachers or coordinators at the schools, input on program challenges was also solicited from the former NovaNET Coordinator and the Pearson trainer. The former NovaNET program coordinator touched upon an issue of a limited number of ports. She also believed that the need for installation of computer software onto individual computers led to the limitation of the number of locations from which NovaNET courses could be accessed.

A NovaNET trainer from Pearson felt frequent change of NovaNET staff was an issue. Newly hired NovaNET teachers and coordinators who needed training did not always seek training. Indeed, from 2008-09 to 2009-10, NovaNET staff changed at a number of schools. Due to budget restrictions, at least two of the schools were not able to rehire the NovaNET coordinators who were retired teachers. In 2009-10, NovaNET positions at those schools were divided between regular classroom teachers.

The NovaNET trainer also noted that there was no limit in how many students could participate in the NovaNET courses in the summer of 2009, but the schools were restricted by a single funded position and a limited number of computers available in each NovaNET lab.

Suggestions for Program Improvement

Suggestions for NovaNET improvement were provided by students and NovaNET coordinators and teachers. Coordinator and teacher comments were quite insightful. Over 20 recommendations were given by the NovaNET coordinators and teachers regarding ways to improve NovaNET implementation. They are all grouped by topic and listed below.

Expanding Use of NovaNET. Four coordinators who had the NovaNET lab open for three periods only felt it would be beneficial to use it either for an additional period or after school. "Many schools offer before/after-school programs for students to complete NovaNET classes. This can be expanded and modified." "An after-school lab would benefit students who are not able to attend classes during the regular school day and would provide students with further opportunities to recoup credits." "Having the NovaNET lab open for all periods in the day would be beneficial."

Suggestions were made to expand use of NovaNET in regular classrooms as a supplement to the textbooks and increase number of seats for NovaNET during the year and over the summer session to accommodate more students.

Daily Lab Management. These responses were provided by four coordinators. "NovaNET is less effective when combined with in-school suspension." "A NovaNET teacher needs to have a classroom (not have to travel to another campus)." "Supplemental materials for NovaNET facilitators may need to be put together by each school for students to complete when they have finished their lessons." "NovaNET teachers should be provided with Internet management software such as Lanschool, to restrict students from browsing the Internet."

NovaNET Curricula. Five coordinators discussed course content. "The curricula need to be more aligned, to make the NovaNET courses more like the courses offered during the regular school year." "Have teachers be the students in the NovaNET course of their expertise to give state standards feedback." "Better audio and video components are needed for the courses." "NovaNET questions are sometimes confusing, and students submit answers without getting the correct answer."

Student Selection. Two coordinators believed that "it would be helpful for more teachers to be informed about NovaNET to more effectively recommend prospective students to guidance

counselors. Better screening of students can ensure proper placement for students with reading problems, attention deficit, maturity, behavior, etc."

Training. "NovaNET training needs to be made available to new teachers later during the year, for example, in December." "Teachers should receive district and state statistics on the program."

Technology and Improved Access. One coordinator felt maintaining connectivity and up-to-date software was important. Another suggested "making NovaNET access more available to bus riders by offering activity bus service at least four days per week."

Students' Recommendations for Improvements

Thirty out of 84 (36%) students did not offer any recommendations for improving NovaNET. Others stated they would "change nothing" (26 responses or 31%). Twenty five students (30%) gave suggestions for improvement, with comments ranging from the content of the material to the way NovaNET instruction is offered. Students' comments included the following:

Table 16
Fall 2009 Students' Recommendations for NovaNET Improvement

Comments	# of Responses
Provide more visuals, graphs, make it more interactive, bigger print.	8
Allow access outside the classroom to have more things done.	4
Allow use of NovaNET to all who want to genuinely understand, not only when failing the class.	3
Have teacher to help/explain when needed.	3
Update the content, give more content information.	2
Give grades on quizzes and tests, not how far along a student is.	2
Have NovaNET tell students how much work has been done.	1
Have more practice quizzes.	1
Provide instruction for NovaNET use for beginning users.	1

DISCUSSION

Online learning is expanding. In the past five to 10 years, the growth in online courses and the numbers of students learning online have been explosive (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004; Watson, 2005). Although online learning has never been expected to replace the regular classroom, it has given many students greater access to academic courses and an additional opportunity to gain credits for those courses. Nationwide, online options for credit recovery as an alternative to traditional ways of getting struggling high school students back on track have also been expanding (Trotter, 2008; SREB, 2006). NovaNET is one of online options used in WCPSS.

NovaNET contributes to the district goal. NovaNET is an online individualized instructional program that allows WCPSS students to earn much needed credits. By serving large numbers of students who need credits for on-time graduation or promotion, NovaNET contributes to the school district's long-term goal of closing the achievement gap and increasing graduation rates. In 2008-09 alone, the total number of NovaNET enrollments exceeded 2,600. Based on summer 2009 results, NovaNET course completion rates for students at risk of academic failure were high, between 95% and 100%. Course pass rates for previously failed EOC courses were also at reasonably high levels (between 82% to 100% or an average of 87%).

NovaNET has many benefits. According to NovaNET coordinators, NovaNET offers an opportunity for students to gain credit for a previously failed course, to work at their own pace, in an environment different from a regular classroom, and to receive one-on-one help when necessary. Additional flexibility of offering NovaNET courses before or after school serves the needs of students who have attendance problems (health-related or other) or have responsibilities outside the school.

Previous WCPSS research and lessons learned. Prior WCPSS studies on NovaNET (Harlow and Baenen, 2002; Harlow and Baenen, 2003) found NovaNET students decreased the number of Fs and increased their GPA compared to the prior year. Compared to a matched group of similar students, the number of Fs received was significantly lower for NovaNET students in the 2002 study but not in the 2003 study. Variation was found in success rates by subject and school, with several strategies making a positive difference in the schools with the greatest increase in GPAs compared to those with the least: individualizing coursework, supplemental counseling and behavior modification, selecting the most appropriate students, requiring students to sign a contract promising to complete a course, and giving offline assignments to supplement NovaNET (Harlow and Baenen, 2003).

It appears a number of current NovaNET programs have adopted the strategy of signing a contract up front. At least six of 16 NovaNET coordinators who responded to the questionnaire mentioned that they utilized student contracts. A contract seems to make a difference in student behavior. Another school used student counseling in selecting NovaNET participants.

EOC results and course pass rates. The study revealed that NovaNET coursework pass rates were high, between 82% and 100%. However, NovaNET was less successful in preparing students for EOC exams than in passing the course work: EOC pass rates after completing the NovaNET courses were between 17% and 46%. Why EOC results were low is a topic for further

investigation. According to a NovaNET coordinator, NovaNET provides an EOC test practice for each course. However, the EOC exams may present an additional difficulty for NovaNET students who generally have lower reading comprehension levels and may also experience problems taking an EOC test that is timed, after successfully completing a course that is self-paced. To promote higher EOC pass rates, supplemental assignments might be created by NovaNET teachers to focus on higher order thinking skills, application, and points emphasized in North Carolina Standard Course of Study (NCSCS). A few inconsistencies in grading practices were found when students with the same coursework pass rates at some schools but not in others were able to pass the course.

Comparisons to NCVPS. To provide a point of reference, NovaNET summer student outcomes were compared to NCVPS results, since both programs regularly offer credit recovery courses. Based on lower EOC pass rates before taking the summer course, NovaNET students were generally less well prepared than those who took an NCVPS summer offering. However, when 2009 summer school results were compared, coursework pass rates for EOC courses were 24 percentage points higher for NovaNET than NCVPS (87% vs. 63%). More structured work times and closer supervision for NovaNET could promote coursework mastery. This is an especially positive outcome, because the NovaNET group included more students from the NCLB subgroups that historically under-perform on standardized testing.

Cost effectiveness. During the school year, the cost of a NovaNET course ($809) is about the same as a traditional course ($803)**.** Summer school NovaNET courses were less expensive than fall and spring, with $158 cost per enrollment. Summer participation was accompanied by fairly consistent high course pass rates (ranging from 82% to 100%). Based on a combination of high course pass rates and fully utilized ports, it appears that summer NovaNET successfully helped most participants earn credits towards graduation and accomplished this at a reasonable cost, particularly in the summer offerings. Summer data suggests that NovaNET benefits outweigh the costs associated with the program. The success of NovaNET during the school year needs further exploration, especially given its higher cost (which requires provision of data on student outcomes not available for the current study).

One cost analysis that was possible for us to make was of NCVPS versus NovaNET. However, we had to limit the analysis to credit recovery efforts in the summer school setting, due to data availability and differences in the focus of the two programs. We have to keep in mind that while both NovaNET and NCVPS are online options that offer credit recovery, there are some major differences between the two. NCVPS focuses more on advanced courses and electives that may not be available at a particular school. The main focus of NovaNET is on credit recovery, with some remediation, a few new credit opportunities, and use of NovaNET as a resource for some teachers. For comparison of credit recovery course enrollments for both, summer NovaNET listed 763 enrollments, while NCVPS listed half of that number, only 377 enrollments.

Table 17
Comparative Focus of NCVPS and NovaNET

Approach	Courses		
	Credit Recovery	Remediation	New Courses
NovaNET	Many	Some	Few
NCVPS	Some	None	Many

There are also differences between the two in the level of student support and flexibility of access to the courses. Another key difference is the structure and support provided by the two approaches, which is another variable to consider in addition to costs. Focusing on the common element, the credit recovery function of both programs, we compared their costs and benefits. We compared direct costs to WCPSS only. WCPSS does have indirect costs for both programs, related to student monitoring at the school site and central office coordination, but we assumed these were similar (it is not possible to quantify differences in these costs presently). Results revealed that:

- NCVPS is currently slightly less expensive to WCPSS than NovaNET, with the state resources covering the direct costs.
- At the same time, NCVPS benefits in terms of credit recovery are also more limited.

Given the small difference in the cost of providing credit recovery in the summer, it appears NovaNET may be the more cost effective for most students. However, NCVPS may still be the most appropriate option for some students in the summer depending on learning styles and ability to work independently.

The North Carolina legislature is currently considering funding formulas for NCVPS that may mean WCPSS would pay for these courses. While both programs can play a role based on student needs and work habits, the cost and potential benefits of these offerings for credit recovery in the summer should be revisited if NCVPS costs increase due to State Board action.

Table 18
Comparisons of Costs and Benefits of NovaNET and NCVPS Credit Recovery

Approach		Costs		Benefits
	Functions	**Direct WCPSS Cost**	**Other WCPSS Costs**	**Coursework Pass Rates for EOC Courses**
NovaNET	Emphasis on CR, a few were remediation courses and new credits.	Per pupil expenditure of $159 in Summer 2009	Assistant principals or counselors supervise NovaNET coursework completion and grading	Summer 2009 – 87% pass rate.
NCVPS	Emphasis on new courses, but a few courses were offered for CR.	$0.0 per pupil	Distance Learning Advisors supervise enrollment & coursework completion; school-based tutor support	Summer 2008 - 64% and summer 2009 - 63% pass rate.

Satisfaction with the program. Generally, students and coordinators demonstrate satisfaction with the NovaNET program. A number of students felt they would not change anything about NovaNET. Students had better understanding of the NovaNET course content compared to the course taken in the regular classroom, as it includes many examples and explanations and allows reviewing of the material they did not understand as well as retaking quizzes and tests more than once if needed.

Suggestions made for program improvement. Many suggestions made for program improvement showed genuine interest of the NovaNET coordinators in improving and expanding the program further to increase its effectiveness in serving students. Several suggestions were related to expanding NovaNET use to four rather than three periods a day or increasing the

number of seats available for use before and after school. Keeping the course content updated and including more interactive audio and video components to improve student motivation levels were also considered important.

Record keeping. Recording NovaNET participation is currently a manual process. We have to rely on schools to provide student enrollment data. The district NovaNET Coordinator collects individual databases from individual schools, which leads to some incomplete records and inaccuracies in student EOC scores or grades. The lack of a way to distinguish in NCWise NovaNET course participation from regular course participation hampers the speed and ease of program evaluation. In some cases students may not be receiving their final course grades in a timely manner, may not have EOCs reported, or may have final grades computed incorrectly. Technology Services should be asked to help automate and improve this process.

RECOMMENDATIONS

Recording program participation needs work from a systems standpoint. It is too manual a process at present. Course codes should designate the format of a NovaNET course using an extra digit to allow comparisons of the success of different methods. Technology Services could assist with this and also create error lists of students who do not have EOC or final grades entered or whose final grade appears to have been calculated incorrectly. This would be a help to evaluation and to individual students in ensuring accuracy of their student transcripts.

Many of the strategies offered by the previous NovaNET evaluations may still be a valuable way to enhance the program. Careful student selection by a counselor and a coordinator and signing of contracts is still an optimal solution for ensuring success in the NovaNET course. Individualizing coursework and giving offline assignments to supplement NovaNET may prove to be effective for students who need support with better time management and preparing for EOCs.

High course NovaNET pass rates that are accompanied with low EOC results should become an issue for further investigation. Ways of enhancing EOC results by offering teacher developed supplements to the course that would focus on developing analytical, generalization, and application skills based on information acquired through the course, may be one of such options.

If funding becomes available, expanding NovaNET opportunities in the summer to accommodate students on the waiting lists should be considered, given the costs and benefits. School year outcomes should be studied before considering expansion, with access to NovaNET outside of the school day as possibilities mentioned by NovaNET contacts. Use of NovaNET for remediation of the courses simultaneously taken in the regular classroom as well as using NovaNET by teachers as a supplement for regular courses seems to be underutilized and should also be considered for expansion.

The evaluation showed that schools lost some of their 2008-09 NovaNET coordinators due to budget issues, and several NovaNET coordinators in 2009-10 were new. Mentoring and training of NovaNET coordinators/teachers to maintain student success rates should be ensured.

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APPENDIX

NovaNET Coordinator Questionnaire

Dear NovaNET Coordinators,

Please respond to the questions about the use of NovaNET at your school **in 2008-09 and in summer 2009**. Your timely and specific input is important for the evaluation to be complete and accurate. Based on your input I will summarize the patterns of NovaNET lab use across the district. Thank you for providing this information. I will look forward to your emailed responses.

1. What subject area and type of NovaNET courses (CR, remedial, new, etc.) were offered at your school during the year (2008-09) and in summer?

2. What were characteristics of students selected for NovaNET courses during the year and in summer 2009? (freshmen, seniors; who was given a priority; was there a contract?)

3. What were your major duties as a NovaNET coordinator? If you are not a NovaNET teacher, what were the duties of NovaNET teachers (helping with content, managing the lab, etc.)?

4. How many NovaNET teachers do you have at your school? Were teachers assigned full time to NovaNET only or did they combine teaching NovaNET courses with regular classroom teaching and other duties during the year (2008-09) and in summer?

5. What training for NovaNET did you and NovaNET teachers receive/provide and when?

6. What were major benefits of NovaNET courses for students who took them during the year (2008-09) and in summer? What were the challenges?

7. How can use of NovaNET at your school be improved?