



E&R Report No. 08.29

February 2009

**NORTH CAROLINA VIRTUAL PUBLIC SCHOOL IN WCPSS
UPDATE FOR FALL 2007, SPRING 2008, AND SUMMER 2008**

Authors: Dina Bulgakov-Cooke, Ph.D., and Nancy Baenen

ABSTRACT

North Carolina Virtual Public School (NCVPS) has changed since summer 2007, with more traditional courses and fewer credit-recovery courses. Total NCVPS initial enrollments of Wake County Public School System (WCPSS) students were much lower in Fall 2007 (139), Spring 2008 (198), and Summer 2008 (430) than in Summer 2007 (1,378). Students were more likely to complete courses after Summer 2007. However, students enrolled in Fall 2007 and Spring 2008 were more likely to drop courses with failure after the deadline than to do so before the cutoff date. Percentages of final enrollments with passing NCVPS course grades increased from 47% in Summer 2007 to 64%, 84%, and 70% in the fall, spring, and summer, respectively. In Summer 2008, pass rates for EOC courses were somewhat lower than for other courses, with relatively low pass rates on EOC tests.

SUMMARY

North Carolina Virtual Public School (NCVPS) is a statewide initiative that offers online learning opportunities to various groups of students interested in virtual learning, accelerated learning, or credit-recovery options. This report is an update of the initial NCVPS study carried out in the summer of 2007 by Wake County Public School System (WCPSS) Evaluation and Research Department (Rhea, 2007). The current report reviews the enrollment and achievement results of WCPSS students who participated in NCVPS during Fall 2007, Spring 2008, and Summer 2008. NCVPS enrollment and achievement results are also compared between Summer 2007 and Summer 2008, and Fall 2007 and Spring 2008.

Key Topics

| | |
|------------------------------|-------|
| Recommendations | p. 3 |
| Background | p. 5 |
| Enrollment Results | p. 9 |
| Academic Outcomes | p. 18 |
| Summary and Discussion | p. 30 |

The authors would like to acknowledge contributions made by WCPSS E&R staff (especially David Holdzkom). Appreciation is extended to the WCPSS Senior Director of Special Projects, NCVPS Regional Director, and NCVPS Curriculum and Instruction Division Director. Special thanks to Fuquay-Varina and Sanderson High School principals and assistant principals, and Enloe, Southeast Raleigh, and Wake Forest High School deans of counseling and deans of students for information on implementation.

Courses Offered

The NCVPS leadership team changed after Summer 2007, and extensive changes and new initiatives were undertaken. Traditional course offerings have been revised and expanded. Summer 2007 credit-recovery courses were discontinued, with two new mastery-based credit-recovery offerings developed and piloted in Summer 2008 (M. Lourcey, personal communication, February 2009).

- A wider variety of NCVPS courses were offered in Fall 2007, Spring 2008, and Summer 2008 than in Summer 2007.
- Only traditional and no credit-recovery courses were available in Fall 2007 and Spring 2008.
- At least 14 credit-recovery options were initially offered in Summer 2007. In Summer 2008, two newly developed mastery-based credit-recovery courses in Algebra I CR and English I CR were offered as pilots.

Enrollment

Course enrollments in WCPSS have decreased since Summer 2007, but students have completed courses at a higher rate.

- Total initial NCVPS enrollments were much lower in Fall 2007 (139), Spring 2008 (198), and Summer 2008 (430) than in Summer 2007 (1,378).
- Final (maintained) enrollments increased from 60% in Summer 2007 to 82% in Fall 2007, 71% in Spring 2008, and 92% in Summer 2008.
- The Summer 2008 credit-recovery courses, Algebra I CR and English I CR, maintained high levels of final enrollments. Algebra I CR had 25 of 26 (96%) and English I CR had 29 of 32 enrollments maintained (91%).

Academic Outcomes

Higher percentages of WCPSS students earned passing grades in NCVPS since Summer 2007. Course pass rates for traditional courses offered in Summer 2008 were somewhat higher than for courses requiring End-of-Course (EOC) tests (70% vs. 64%).

- Percentages of enrollments with passing course grades from NCVPS instructors increased from 47% in Summer 2007 to 64% in Fall 2007, 84% in Spring 2008, and 70% in Summer 2008. Although most course pass rates likely reflected the final grades students will have in their transcripts, course grades for non-credit-recovery EOC subjects were preliminary, since EOC test results also impact final grades given.
- Two-thirds of enrollments in the Summer 2008 credit-recovery courses had passing course grades (64%). However, fewer than half (40%) of the students in final enrollment in EOC courses had passing EOC scores in Summer 2008. Some students in credit-recovery EOC courses did not take the EOC because they did not master the course content.

Recommendations

Results for NCVPS in WCPSS have improved, but some areas of concern remain related to participant selection, success, and technical issues.

- In terms of participation, we recommend continued attention to approving NCVPS enrollment for only the students who match the criteria listed as leading to success (e.g., self-motivated) for NCVPS online opportunities. The decline in course enrollments suggests school staff are being more selective in approving enrollment for NCVPS courses. This may be a contributing factor to improved success rates.
- Schools should also attend to the pass rates for various courses before approving participation, as they were quite variable. Overall, the fact that pass rates have increased from 47% in summer 2007 to 70% in summer 2008 is positive, but pass rates of about 70% are still not as high as the school district goals and expectations. In addition, taking EOC courses through NCVPS may be more beneficial for those students who passed their EOC exam but failed the course previously, rather than for those who had failed both.
- Once students are enrolled in an online course, an NCVPS instructor monitors student progress and communicates with each student individually on a regular basis. The instructor also reports student progress to the school-based DLA. Additional one-on-one monitoring at the local school may also be beneficial for credit-recovery courses, based on at least one WCPSS school's pilot experience in Algebra I. Greater support for other courses through computer lab access, monitoring, and/or academic support is also recommended by NCVPS staff. Depending on the structure, the staff time or monetary cost of such support will need to be considered.
- It is troubling that the proportion of withdrawals after the 10-day deadline in traditional NCVPS courses was higher than the proportion of those dropping before the deadline. One way to address this is through increased and consistent communication with the students before and within the first 10 days of virtual courses about course policies and procedures for drop and grading. Automatic electronic reminders could be built into the NCVPS system to send a message directly to students who have not logged in when the course drop deadline is approaching.
- We also recommend that NCVPS policies and WCPSS procedures for dealing with students who drop the course after the deadline be re-examined. Students in accelerated or traditional virtual courses who withdraw after the 10-day deadline receive an F, while those in credit-recovery courses receive an "NM" for non-mastery of the course work. The NM does not penalize a student unable to complete the course successfully and is not recorded as a failing grade. The policy for traditional courses may discourage students from taking NCVPS courses in the future. This policy seems particularly inappropriate in cases where students were not completing the assignments and could not be reached (perhaps because they transferred to another school or lost access to a computer). Dropping these students without penalty seems more appropriate than giving them an F. At a minimum, extending the period during which a student can be dropped without penalty date is advised.

- The value of NCVPS as a way for WCPSS students to meet graduation requirements through credit-recovery courses has yet to be established, based on Summer 2008 pilot results. Low percentages of students who attempted the course ultimately improved their status by mastering the course and passing the EOC (40%). Based on the Summer 2008 pilot, enrollment in credit-recovery courses was more beneficial for students who had already passed the EOC exam but had not passed the course. It was less beneficial for those who had failed both before attempting the summer course. This should be considered in student selection and student support for credit-recovery courses. NCVPS staff indicate that students who master the credit-recovery course are likely to pass the EOC (M. Lourcey, personal communication, February 2009). Increasing the percentage of students who master the course is therefore an area for emphasis. Future study might focus on the success of NCVPS in helping students recover credits compared to other remediation approaches.
- NCVPS policies and procedures for some credit-recovery courses regarding taking of EOCs are different from those for courses within the school system. NCVPS procedures for the generic remedial course (see NCVPS Web site) are at odds with North Carolina Department of Public Instruction (NCDPI) regulations for EOC courses, which specify that students must retake the EOC if they retake the course (the EOC test must count as at least 25% of the student grades). NCVPS staff received permission from the Accountability staff at NCDPI to offer credit-recovery courses using two codes: one that would and one that would not trigger a requirement of taking the EOC. However, the difference in policy is confusing for district schools. Students who retake a course in WCPSS through NovaNET or a regular course must take the EOC again, and it counts as 25% of their grade, while this is not true for NCVPS students in the generic course. We recommend that for consistency, students be enrolled in the NCVPS course code that triggers the EOC rather than the generic course that does not.
- The process of grading courses with EOC tests is frequently complicated by the fact that students are given an initial course grade that must be adjusted in a student's credit record based on the EOC results after the fact. This delays notifying a student and posting the final grades for transcripts. Assuring this last step takes place is vital.
- We recommend the addition of official student identification numbers (IDs) as well as standard state course codes to NCVPS files provided to districts. That would ease communication issues with school system central and school staff who need to link and assure accuracy of student records, find additional information on students, pass on transcripts to other districts, and evaluate program success. While confidentiality issues must be addressed, it seems NCVPS staff should be able to reach an agreement on this, since they are a sanctioned part of the state's educational network of opportunities.

NORTH CAROLINA VIRTUAL PUBLIC SCHOOL: UPDATE FOR FALL 2007, SPRING 2008, AND SUMMER 2008

INTRODUCTION

This is an updated status report of the initial North Carolina Virtual Public School (NCVPS) study, which presented course offerings, enrollment, and student achievement results in the summer of 2007 (Rhea, 2007). The current report reviews the enrollment of WCPSS students who participated in NCVPS during Fall 2007, Spring 2008, and Summer 2008. It also presents academic outcomes data that include grades received from NCVPS and End-of-Course (EOC) exam results of students who maintained their NCVPS course enrollment.

VIRTUAL SCHOOLS

Virtual schooling is a fast-growing area in K-12 education. During the 2007-08 school year, more than 1.3 million K-12 students nationwide participated in an online course, and more than one-third of public school districts offered some type of virtual learning opportunity (Powell & Patrick, 2007). Many students enroll in online programs to take advanced courses or to accelerate the pace of their study; many others seek credit-recovery courses to earn high school diplomas (Roblyer, 2006). In some programs, students fail or drop virtual courses at much higher rates (60-70%) than they do in face-to-face ones. Other virtual programs have very low dropout and failure rates, and their students post better passing rates than those of traditional school programs (Roblyer, 2006). This may be partially due to the fact that some course managers establish and use a process for checking on levels of participation in the early weeks of each course (Dickson, 2005).

NCVPS

According to the NCVPS Web site, NCVPS supports the State Board of Education's goal "of producing 21st century learners to succeed in a globally competitive world." It is hoped that NCVPS can raise achievement and close learning gaps by providing access to "world-class learning opportunities." NCVPS is to provide the opportunity for students across the state to enroll in courses that are otherwise unavailable at their local school via a "virtual" teaching environment (Guidelines for NCVPS, 2008). The NCVPS Web site also states that "NC Virtual Public School will provide students with expanded academic options, by offering online courses and online services such as test preparation, career planning services, and more at no cost to the student." In addition to academic courses, students may register for SAT or ACT test preparation as well as Advanced Placement (AP) exam reviews. NCVPS assures the school districts that all 72 courses that NCVPS offers will meet the curriculum content standards that are set forth by the NC Department of Public Instruction and the recognized quality assurance standards for e-learning courses (NCVPS Web site).

Based on early findings (Rhea, 2007), NCVPS courses initially offered in Summer 2007 did not appear to promote and support the academic success of most WCPSS students. NCVPS did not positively contribute to on-time graduation for most participants due to high course drop rates and low course pass rates. Because of the initial lack of overall success, according to the NCVPS staff, a number of changes in the way NCVPS operates were implemented after it was first launched in Summer 2007 (A. Renfro, personal communication, December 2008). Various measures were taken by NCVPS to increase course pass rates. One of those included a change in leadership that brought major changes in the philosophy and direction in implementation of the virtual public school. The

new leadership is seeking to ensure that the NCVPS strategic plan closely incorporates the State Board of Education's goals. Curricula changes have been made in all NCVPS courses, which have been rewritten and checked for alignment with the North Carolina Standard Course of Study. Web tools aimed at improving communication and collaboration are being integrated into the NCVPS courses by Lockheed Martin, an NCVPS partner. Other newly established partnerships (such as Blackboard and Pronto Communications) are designed to benefit NCVPS (A. Renfro, personal communication, December 2008). A new mastery-based credit-recovery program that was not offered in the fall of 2007 or the spring of 2008 was piloted with two courses in the summer of 2008. New courses for middle and elementary schools are currently being developed.

NCVPS STUDENTS

The NCVPS Web site lists general categories of students who may benefit from taking virtual courses. This information has not changed since the initial NCVPS report (Rhea, 2007). Students most likely to be interested in taking courses in a virtual learning environment are those who:

- desire to take an AP course the local school does not offer,
- need to complete a remaining requirement for graduation in a particular semester and the course needed at the local school is already full that semester,
- want to graduate from high school in three years,
- are home-bound or hospital-bound due to illness or injury and wish to remain on schedule to graduate on time,
- are transfers, or need to make up a credit,
- already have a full load and wish to take additional courses, or
- have special circumstances that cannot be addressed locally.

The *Guidelines for NCVPS Participation* also list the student characteristics that contribute to successful online learning experiences: commitment, self-motivation, confidence in ability to express thoughts in writing, self-monitoring skills, conscientious time management, strong reading, comprehension, and expressive literacy skills, and good internet access. (NCVPS, 2008; Rhea, 2007).

NCVPS COURSES

NCVPS offers traditional and credit-recovery (CR) courses. Additionally, accelerated (faster paced) versions of courses are offered in summer due to the more limited time available for instruction. They may include courses offered in EOC subject areas or various electives. The credit-recovery courses are designed for students who have recently failed the course and/or the EOC. In Summer 2007, 14 remedial courses were initially offered. However, successful completion rates were disappointing, and the courses were pulled and reworked during the 2007-08 school year. Two new and redesigned CR courses were piloted in the summer of 2008. CR courses in six more subject areas are expected to be available in Spring 2009.

The NCVPS Web site states that online courses it offers are unavailable at schools. Indeed, some NCVPS courses, such as medieval studies, journalism, and Success 101 (offered in Fall 2007, Spring 2008, and Summer 2008), were available only through the virtual environment. At the same time, comparisons of the NCVPS and WCPSS course offerings show that many traditional courses offered

by NCVPS are also available at local schools in the regular classroom setting (e.g., SAT prep, digital communication systems, e-commerce, principles of business, or small business entrepreneurship). Thus, NCVPS may offer more unique opportunities for students in rural counties in North Carolina. The view of NCVPS is that “unavailable” includes courses not offered in *all* schools across the state but also some that may be offered in a school but not at a time convenient to some students (e.g., those wanting to graduate early, homebound students, or those wanting to make up a credit).

Once a student completes an online course, the NCVPS instructor assigns her/him a grade and submits it to the local school. For most courses, this becomes the final grade and part of the student’s academic record. However, as stated in the *Guidelines for NCVPS Participation*, it is the local school’s responsibility to administer any required EOC and/or Career-Technical Education (CTE) tests. All WCPSS students are required to take EOC exams if they were enrolled in and completed Algebra I, Algebra II, Biology, Chemistry, Civics and Economics, English I, Geometry, Physical Science, Physics, and U.S. History. An EOC exam counts as 25% of the student’s final grade in the course by State Board of Education policy. Therefore, in most cases, local schools must use the NCVPS course grade and the EOC or CTE score to compute the final grade for students who enrolled in online EOC courses before they receive credit on their school transcript (Rhea, 2007). In this report, grades reported are those assigned before the EOC is factored into the grade, not the final transcript grade.

NCVPS currently offers two codes for each of the credit-recovery courses that require administration of the EOC exam if a course is taken in a traditional classroom setting. According to the NCVPS Web site, one of the two course codes is generic and its use does not trigger the EOC. The code has been set up specifically for credit-recovery subjects, to allow the local schools to make a decision locally as to whether an EOC exam can be waived and a student can use a previously earned EOC test credit.

The new NCVPS mastery model for credit-recovery courses posits that students should be able to excel in a credit-recovery program by demonstrating prior learning while learning the material not mastered the first time the course was taken. Therefore, students take a pre-assessment at the beginning of the course to determine which modules they have already mastered and which they need to focus on during the course (S. McManus, personal communication, January 2009). The promise of the online credit-recovery program is that a certified instructor provides individualized remediation. Students do not repeat the same course assignments over and over but are presented the material in a different way to allow the students to demonstrate mastery (M. Lourcey, personal communication, February 2009.)

NCVPS EVALUATION

Evaluation Questions

The WCPSS vision is that 100% of WCPSS students will graduate on time prepared for the future. This evaluation focused on whether NCVPS provided opportunities for students to meet WCPSS graduation requirements in terms of earning credits or passing the EOCs in required courses. The key question for this study is whether patterns of success have improved for WCPSS students involved in NCVPS since Summer 2007. To that end, the following data issues were examined.

1. What were the NCVPS course enrollments in WCPSS by semester in Fall 2007, Spring 2008, and Summer 2008, and what are the trends in enrollment and completion rates over time?
2. What were academic outcomes for WCPSS students in NCVPS courses by semester in Fall 2007, Spring 2008, and Summer 2008 (as measured by grades and EOC test results)?

Data Sources and Population

Student data were provided by NCVPS and WCPSS Curriculum and Instruction. EOC test results and student transcripts were made available by WCPSS Evaluation and Research department. Descriptive information on Summer 2008 course enrollment was provided by principals and assistant principals of the high schools participating in the revised credit-recovery courses. Deans of counseling and deans of students of the high schools that had student enrollment in NCVPS were also interviewed. Course codes used by WCPSS were provided by WCPSS Technology Services division. Summer 2008 credit-recovery data was obtained directly from NCVPS. Additionally, some of Fall 2007 and Spring 2008 data were submitted by Florida VPS and Oklahoma VPS because NCVPS contracted with these states for a few courses.

The NCVPS data did not include student IDs or official state course codes. Student IDs had to be retrieved in the process of data collection to aid in retrieving the EOC exam results and student transcripts for some students. EOC scores also had to be looked up individually across several files, because some students in credit-recovery courses had already passed the EOC but had failed the course previously and were not retested. These essential steps delayed the timeline for report production by several weeks. The data set for this report included 671 students enrolled in Fall 2007, Spring 2008, and Summer 2008, composing 767 total enrollments in NCVPS courses.

NCVPS ENROLLMENT RESULTS

Course Offerings

During Summer 2007, 25 remedial and accelerated courses were initially offered to WCPSS students. Only traditional courses were offered in Fall 2007 and Spring 2008; in Summer 2008, completely redesigned accelerated or credit-recovery courses were offered. A greater variety of NCVPS courses were offered in Fall 2007, Spring 2008, and Summer 2008 than in Summer 2007.

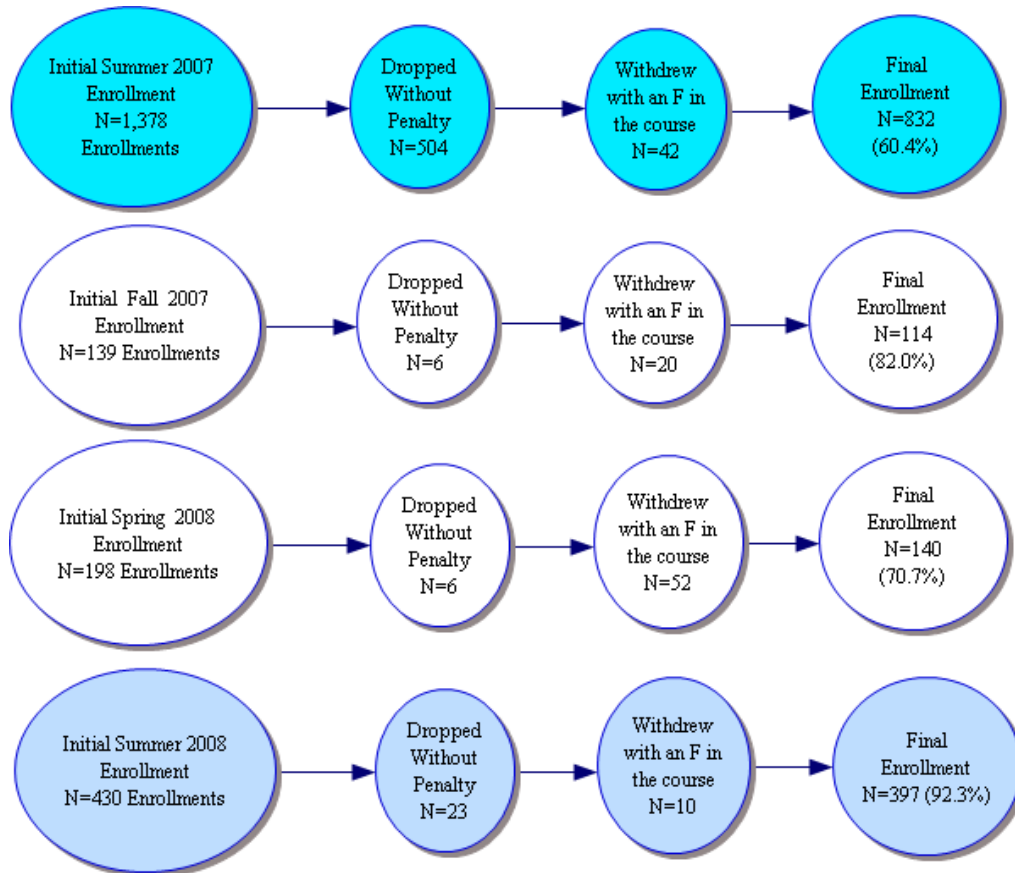
Total NCVPS Enrollment by Semester

In Summer 2007, more WCPSS students enrolled for initial remediation than acceleration opportunities, and students demonstrated limited academic success in both. The number of students enrolled each semester since Summer 2007 was considerably lower during all three sessions. Total enrollment in Summer 2008 was higher than Fall 2007 or Spring 2008, although still considerably lower than in Summer 2007. The best comparisons are Summer 2007 and Summer 2008 (since students were only enrolled in NCVPS) and Fall 2007 and Spring 2008 (when students also had a regular course load). Patterns revealed that:

- During Summers 2007 and 2008, credit-recovery and accelerated courses were offered. The courses were completely redesigned in Summer 2008. The number of enrollments in Summer 2008 (430) was about one-third of those in Summer 2007 (1,378). (See Figure 1.)
- In contrast, only traditional courses were offered in Fall 2007 and Spring 2008. The number of initial enrollments in fall and spring was considerably lower than either summer, at 139 in Fall 2007 and 198 in Spring 2008.
- A higher percentage of students maintained their course enrollment in Fall 2007, Spring 2008, and in Summer 2008 than in Summer 2007.
 - ▶ During Summer 2007, more than one-third of initial enrollments were dropped by the 10-day deadline. Only 5% of enrollments were dropped by the deadline in Summer 2008. A similar percentage of enrollments were dropped with failure during Summer 2007 and Summer 2008 (2-3%).
 - ▶ Although the number of initial and final enrollments in Spring 2008 was higher than in Fall 2007 (198 vs. 139), the percentage of enrollments dropped with failure was higher in the spring than in the fall (26.3% vs. 14.4%), resulting in a lower final enrollment percentage in the spring (70.7% vs. 82%).

The overall percentage of WCPSS enrollments that were dropped decreased since Summer 2007. However, the proportion withdrawn after the 10-day deadline (meaning the students were given an F in the course) increased.

Figure 1
Total NCVPS Enrollment by Semester
(Summer 2007, Fall 2007, Spring 2008, and Summer 2008)



Number of WCPSS Students Enrolled in One or More NCVPS Courses

Table 1 provides comparisons of Summer 2007 NCVPS enrollment to enrollments from Fall 2007 to Summer 2008. From Fall 2007 to Summer 2008, there were a total of 767 individual enrollments in NCVPS courses, compared to 1,378 enrollments in Summer 2007 alone.

Table 1 also displays the number of courses in which each student enrolled. The majority of the students enrolled in NCVPS since Summer 2007 took only one course (578 students or 86%). A smaller number of students were enrolled in two or more courses (93 students or 14%). Enrollment in two or more courses was more common during the summer sessions than in courses conducted during the school year.

Table 1
Number of WCPSS Students Enrolled in NCVPS Courses in
Fall 2007, Spring 2008, and Summer 2008

| | Total Enrollments* | Number of Students Enrolled in | | | |
|------------------------------------|--------------------|--------------------------------|-------------------|-----------------|-------------------|
| | | 1 Course | 2 Courses | 3 Courses | 4 or More Courses |
| Summer 2007 | 1,378 | 663 | 297 | 26 | 9 |
| Fall 2007 | 139 | 129 | 5 | 0 | 0 |
| Spring 2008 | 198 | 147 | 22 | 1 | 1 |
| Summer 2008 | 430 | 302 | 63 | 1 | 0 |
| Total (Fall through Summer) | 767 | 578 (86.1%) | 90 (13.4%) | 2 (0.3%) | 1 (0.1%) |

*In this column, some students are counted more than once if they are enrolled in two or more courses.

Interpretation example: During Spring 2008, there were a total of 198 WCPSS enrollments: 147 students were enrolled in one course, 22 students were enrolled in two courses (a total of 44 enrollments), one student was enrolled in three courses (a total of three enrollments), and one student was enrolled in four courses (four enrollments).

Course Enrollment by Semester

The following two tables illustrate WCPSS course enrollment and completion patterns for each session separately.

Enrollments by course in Summer 2007 are referenced from the previous NCVPS report (Rhea, 2007) and are presented in Tables 2 and 3. The total Summer 2007 enrollment had been built into two tables: one describing credit-recovery (CR) and one presenting accelerated courses (ACC). Table comparisons show that overall, in Summer 2007, there were considerably more enrollments in credit-recovery than in accelerated courses. Summer 2007 was characterized by a high drop rate: approximately 39% of enrollments were dropped from credit-recovery courses and 44% dropped from accelerated courses. Almost half of the enrollments (48%) were in courses with EOC exams.

Table 2
Credit-Recovery Course Enrollment in Summer 2007

| | Course | Enrolled | Dropped | Withdrew/F | Maintained |
|--|------------------|--------------|--------------------|------------------|--------------------|
| High School Exit Standards EOCs | Algebra I | 144 | 31.9% | 1.4% | 66.7% |
| | C&E | 65 | 32.3% | 4.6% | 63.1% |
| | English I | 96 | 31.3% | 9.4% | 59.4% |
| | U.S. History | 70 | 42.9% | 8.6% | 48.6% |
| EOCs | Algebra II | 96 | 39.6% | 0.0% | 60.4% |
| | Geometry | 131 | 27.5% | 2.3% | 70.2% |
| Electives/Other | English II | 84 | 34.5% | 1.2% | 64.3% |
| | English III | 103 | 32.0% | 6.8% | 61.2% |
| | English IV | 58 | 32.8% | 0.0% | 67.2% |
| | Physical Science | 46 | 45.7% | 6.5% | 47.8% |
| | Spanish I | 60 | 38.3% | 3.3% | 58.3% |
| | Spanish II | 39 | 74.4% | 0.0% | 25.6% |
| | World History | 104 | 33.7% | 1.9% | 64.4% |
| | Health and PE | 37 | 24.3% | 0.0% | 75.7% |
| | Total | 1,133 | 399 (35.2%) | 38 (3.4%) | 696 (61.4%) |

Source: Rhea, 2007.

Interpretation example: Of 144 students initially enrolled in the Algebra I course, 31.9% dropped the course before the deadline, 1.4% withdrew after the deadline, and 66.7% maintained the course enrollment.

Table 3
Accelerated Course Enrollment in Summer 2007

| | Course | Enrolled | Dropped | Withdrew/F | Maintained |
|---------------------------------------|---------------------------------|------------|--------------------|-----------------|--------------------|
| High School Exit Standards EOC | Algebra I | 20 | 50.0% | 0.0% | 50.0% |
| EOC | Algebra II | 23 | 52.2% | 0.0% | 47.8% |
| | Geometry | 22 | 31.8% | 0.0% | 68.2% |
| Career-Tech | Digital Communications | 29 | 44.8% | 0.0% | 55.2% |
| | Parenting and Child Development | 20 | 30.0% | 0.0% | 70.0% |
| Electives/Other | Psychology | 9 | 77.8% | 0.0% | 22.2% |
| | Sociology | 13 | 30.8% | 0.0% | 69.2% |
| | Health and PE | 17 | 29.4% | 0.0% | 70.6% |
| | Music Appreciation | 17 | 35.3% | 0.0% | 64.7% |
| | SAT Prep | 29 | 44.8% | 0.0% | 55.2% |
| | Success 101 | 46 | 47.8% | 8.7% | 43.5% |
| | Total | 245 | 105 (42.9%) | 4 (1.6%) | 136 (55.5%) |

Source: Rhea, 2007.

Fall 2007 Enrollment

Table 4 presents enrollment data for NCVPS courses in Fall 2007, including the number and percentage of WCPSS enrollments that were dropped without penalty, dropped late (withdrawn with failure), and maintained. All offerings were traditional.

- Overall initial enrollment was much lower compared to Summer 2007 (139 vs. 1,378 enrollments).
- Of the 37 courses students selected, only 11 had five or more students enrolled. The most popular NCVPS course choices were Geometry (an EOC subject) and electives: Earth Science and Earth Science Honors, and Medieval Studies.
- Of all enrollments, only 13% (18 of 139) were in courses with EOC tests.
- The great majority of initial enrollments were maintained (82%).
- Of all initial enrollments, 19% were not completed. A small number of courses were dropped without penalty by the deadline (4.3%). Twenty enrollments (14.4%) were withdrawn with failure after the deadline.
- Of the courses with five or more students enrolled, all students completed Geometry, Earth Science, Journalism, and Latin I. On the other hand, only one-third of the students completed Digital Communications Systems and Sociology, and most of those who dropped withdrew after the 10th day and therefore received an F.

**Table 4
Course Enrollment in Fall 2007**

| | Course | Enrolled | Dropped | Withdrew/F | Maintained |
|--|---------------------------------|-----------------|-----------------|-------------------|--------------------|
| High School Exit Standards EOCs | Algebra I | 1 | 0 | 1 | 0 |
| | Civics & Economics | 1 | 0 | 0 | 1 |
| | U.S. History | 4 | 1 | 0 | 3 |
| EOCs | Algebra II | 1 | 0 | 0 | 1 |
| | Geometry | 11 | 0 | 0 | 11 |
| Electives | English III | 3 | 0 | 1 | 2 |
| | English IV | 5 | 0 | 1 | 4 |
| | AP Courses | 11 | 0 | 2 | 9 |
| | Art I Drawing & Design | 2 | 0 | 0 | 2 |
| | Digital Communications Systems | 10 | 1 | 6 | 3 |
| | Earth Science & Earth Science H | 17 | 0 | 0 | 17 |
| | Environmental Science H | 2 | 0 | 1 | 1 |
| | Journalism | 5 | 0 | 0 | 5 |
| | Latin I | 8 | 0 | 0 | 8 |
| | Latin II | 2 | 0 | 0 | 2 |
| | Latin III H | 3 | 0 | 0 | 3 |
| | Medieval Studies | 13 | 0 | 1 | 12 |
| | Music Appreciation | 9 | 0 | 1 | 8 |
| | Pre-Calculus H | 1 | 0 | 0 | 1 |
| | Principles of Business | 3 | 0 | 0 | 3 |
| | Psychology | 4 | 0 | 2 | 2 |
| | SAT Prep | 7 | 0 | 1 | 6 |
| | Sociology | 6 | 1 | 2 | 3 |
| | Spanish II | 1 | 0 | 0 | 1 |
| | Spanish IV H | 1 | 0 | 0 | 1 |
| | E-Commerce | 3 | 0 | 0 | 3 |
| | German II | 2 | 2 | 0 | 0 |
| | German III | 3 | 1 | 0 | 2 |
| | Total | 139 | 6 (4.3%) | 20 (14.4%) | 114 (82.0%) |

Note 1: AP courses had enrollment of one student each.

Note 2: H equals Honors.

Note 3: Percentages by course are not given because of low course enrollments.

Spring 2008 Enrollment

Enrollment data for Spring 2008 NCVPS courses are presented in Table 5, including the number and percentage of WCPSS enrollments that were dropped without penalty, dropped late (withdrawn with failure), and maintained. All offerings were traditional.

- The total initial enrollment in the spring of 2008 was slightly higher than in Fall 2007, but overall still low (198 enrollments).
- The number of students enrolled per course ranged from 1 to 28. Of the 41 courses offered, only 11 had five or more students enrolled. The most popular NCVPS course choices were Success 101, Geometry, and Latin II.
- During both semesters, with the exception of Geometry, there was an extremely low enrollment in subjects that involved taking EOC exams and in AP courses that had one or two enrollments each.
- As with Fall 2007 data, of all enrollments, only 16% (31 of 198) were in courses with EOC exams. Almost three-fourth of initial enrollments were maintained (71%). The percentage for Spring 2008 was lower than Fall 2007 (81%).
- A small number of enrollments were dropped without penalty by the deadline (3.0%).
- Of all initial enrollments, 29% were not completed. About one-fourth (52 or 26%) were withdrawn with failure after the deadline. That is higher than in the previous semester, Fall 2007 (20 or 14%).
- Of the courses with five or more students enrolled, Digital Communications had high dropout rates (over 85%). Students were most likely to remain in such courses as Geometry, Latin II and III, Spanish I, Small Business Entrepreneurship, and Success 101.

**Table 5
Course Enrollment in Spring 2008**

| | Course | Enrolled | Dropped | Withdrew/F | Maintained | |
|--|-----------------------------------|--------------|------------|-----------------|-------------------|--------------------|
| High School Exit Standards EOCs | Algebra I | 3 | 0 | 2 | 1 | |
| | Civics & Economics | 2 | 0 | 2 | 0 | |
| | U.S. History | 2 | 0 | 0 | 2 | |
| | English I | 1 | 0 | 0 | 1 | |
| EOCs | Algebra II | 3 | 0 | 0 | 3 | |
| | Geometry | 19 | 1 | 0 | 18 | |
| | Physical Science | 1 | 0 | 0 | 1 | |
| Electives | AP Courses | 7 | 0 | 2 | 5 | |
| | Advanced Functions and Modeling | 3 | 0 | 1 | 2 | |
| | Art I Drawing & Design | 8 | 0 | 3 | 5 | |
| | Computer Programming I | 1 | 0 | 1 | 0 | |
| | Digital Communications | 7 | 0 | 6 | 1 | |
| | Earth Science and Earth Science H | 5 | 0 | 2 | 3 | |
| | English II | 3 | 1 | 2 | 0 | |
| | English III | 3 | 0 | 3 | 0 | |
| | English IV | 8 | 0 | 0 | 8 | |
| | Environmental Science H | 1 | 0 | 1 | 0 | |
| | German | 1 | 0 | 0 | 1 | |
| | Journalism | 5 | 0 | 2 | 3 | |
| | Latin I | 6 | 0 | 0 | 6 | |
| | Latin II | 18 | 0 | 0 | 18 | |
| | Latin III H | 6 | 0 | 0 | 6 | |
| | Medieval Studies | 2 | 0 | 1 | 1 | |
| | Music Appreciation | 6 | 0 | 3 | 3 | |
| | Principles of Business | 4 | 1 | 1 | 2 | |
| | Psychology | 7 | 0 | 3 | 4 | |
| | SAT Prep | 8 | 1 | 4 | 3 | |
| | Small Business Entrepreneurship | 7 | 0 | 1 | 6 | |
| | Spanish I | 6 | 0 | 1 | 5 | |
| | Spanish II | 2 | | 0 | 2 | |
| | Spanish III H | 2 | 0 | 0 | 2 | |
| | Spanish IV H | 1 | 0 | 1 | 0 | |
| | Success 101 | 28 | 1 | 10 | 17 | |
| | E-Commerce | 2 | 1 | 0 | 1 | |
| | World History and World History H | 10 | 0 | 0 | 10 | |
| | | Total | 198 | 6 (3.0%) | 52 (26.3%) | 140 (70.7%) |

Note: H equals Honors.

Summer 2008 Enrollment

In Summer 2008, two credit-recovery courses were added to the offerings of NCVPS as a pilot. Fuquay-Varina High School was the pilot site for WCPSS, and Knightdale and Sanderson also enrolled some students. NCVPS intended to use credit-recovery course content for those who previously passed the EOC but failed the course or failed both the course and the exam. Two course codes were provided by NCVPS for each credit-recovery course. Schools were given an opportunity to use a generic course code for the credit-recovery course enrollment, which would not trigger a new EOC or a regular course code that would. The three pilot schools used the opportunity to use a generic credit-recovery course code that was different from the official Algebra I course code and could be used with any credit-recovery course area. At least one school used the NCVPS grade as a final grade, if a student had taken the EOC before the course. If an EOC was taken in summer after the course, the score was used to compute the final grade.

As Table 6 illustrates, enrollment data for accelerated and credit-recovery courses in Summer 2008 varied from the prior summer.

- The total number of initial Summer 2008 enrollments was lower compared to Summer 2007 (430, or about one-third of the 1,378 Summer 2007 enrollment).
- Credit-recovery Algebra I and English I pilot final enrollments were considerably lower than in the previous summer (26 and 32 vs. 144 and 96, respectively).
- Overall, more than 90% of all Summer 2008 enrollments were maintained in WCPSS (92.3%), which was a much higher rate than in Summer 2007 (60%). The course drop rate was low. A very small number of individual enrollments in Summer 2008 were dropped without penalty (23, or 5%) and a very small number of individual enrollments (only 10 of 430, or 2%) were withdrawn with failure in the course.
- Overall, 31% (132 of 430) enrollments were in courses with an EOC exam, considerably lower than in Summer 2007 (48%).
- Less than a half of final (maintained) enrollments in EOC courses passed the EOC tests (40%). Only 37% of final enrollments in EOC Credit-recovery (CR) and 43% in non-credit-recovery courses received a passing grade on EOC exams.
- Of the 22 courses students selected, only 17 had five or more students enrolled. The Digital Communications course remained a popular selection in Summer 2008 and showed an increase in the final enrollment percentage, up to 88% from 55% in Summer 2007.
- Even though English II, English III, and English IV had a lower enrollment than in the previous summer, these courses had a relatively high initial enrollment and also maintained a higher percentage of final enrollments than in the previous summer.

Table 6
Course Enrollment in Summer 2008

| | Course | Enrolled | Dropped | Withdrew/F | Maintained |
|--|---------------------------------|------------|------------------|------------------|--------------------|
| High School Exit Standards EOCs | Algebra I ACC | 11 | 0 0.0% | 0 0.0% | 11 100% |
| | Algebra I CR | 26 | 1 3.8% | 0 0.0% | 25 96.2% |
| | English I ACC | 13 | 0 0.0% | 0 0.0% | 13 100% |
| | English I CR | 32 | 3 9.4% | 0 0.0% | 29 90.6% |
| EOCs | Algebra II | 25 | 1 4.0% | 1 4.0% | 23 92.0% |
| | Geometry | 25 | 3 12.0% | 1 4.0% | 21 84.0% |
| Electives | English II | 23 | 0 0.0% | 0 0.0% | 23 100% |
| | English III | 25 | 2 8.0% | 0 0.0% | 23 92.0% |
| | English IV | 27 | 0 0.0% | 0 0.0% | 27 100% |
| | French III H | 2 | 0 | 0 | 2 |
| | French IV H | 2 | 0 | 0 | 2 |
| | German | 3 | 2 | 0 | 1 |
| | Spanish III H | 9 | 2 22.2% | 0 0.0% | 7 77.8% |
| | Spanish IV H | 2 | 0 | 0 | 2 |
| | Digital Communications | 43 | 3 7.0% | 2 4.7% | 38 88.3% |
| | Latin III H | 1 | 0 | 0 | 1 |
| | Medieval Studies | 16 | 0 0.0% | 0 0.0% | 16 100% |
| | Music Appreciation | 12 | 0 0.0% | 1 8.3% | 11 91.7% |
| | Principles of Business | 30 | 2 6.7% | 1 3.3% | 27 90.0% |
| | SAT Prep | 20 | 0 0.0% | 0 0.0% | 20 100% |
| | Small Business Entrepreneurship | 44 | 4 9.1% | 4 9.1% | 36 81.8% |
| Success 101 | 39 | 0 0.0% | 0 0.0% | 39 100% | |
| | Total | 430 | 23 (5.3%) | 10 (2.3%) | 397 (92.3%) |

NCVPS ACADEMIC OUTCOMES

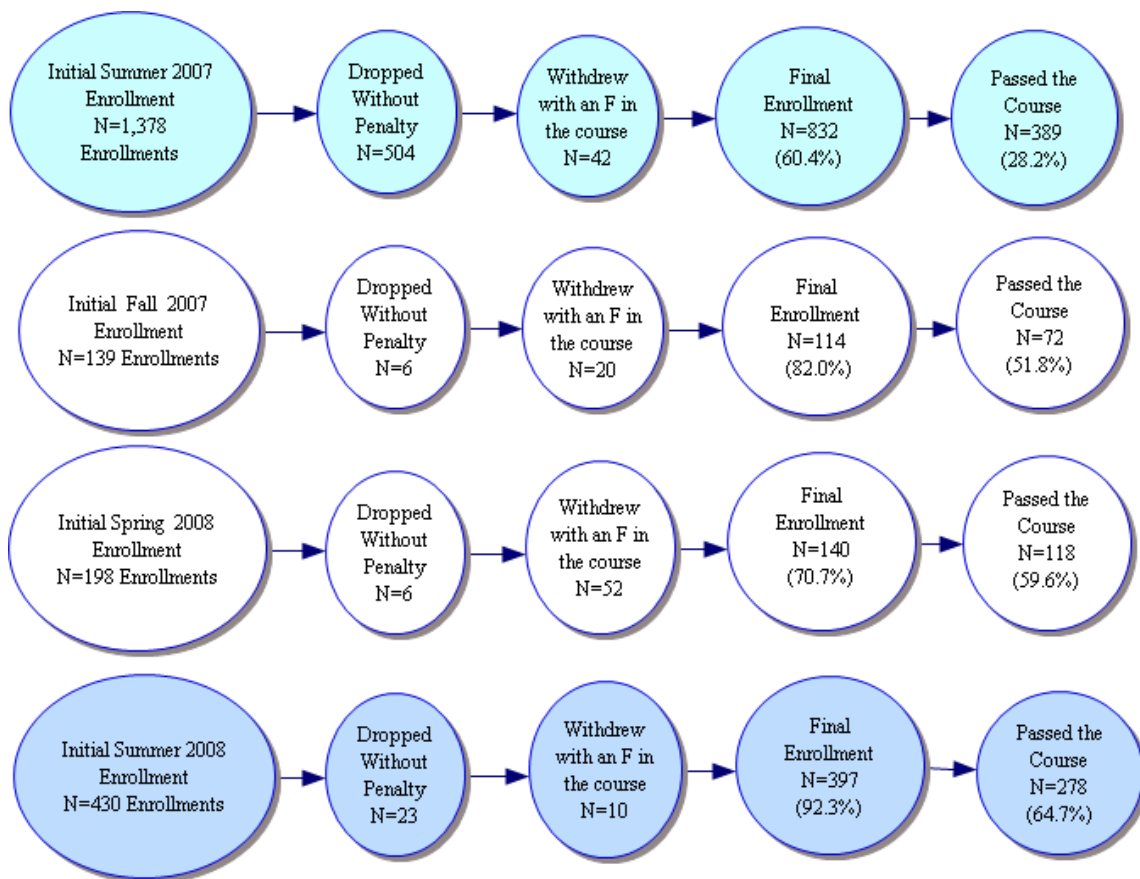
Achievement results by NCVPS session follow. Readers are reminded that the grades listed for courses with EOCs are the ones assigned by the NCVPS instructors. EOC results must count as 25% of the grade (some exceptions were made in CR courses), and scores are not known when these grades are given by course instructors. School-based staff, assistant principals, deans of counseling, or deans of students acting as distance learning advisors (DLAs) were responsible for final calculation of grades and posting them to student records.

Success percentages are computed in this report in two ways. In this section, percentages of enrollments successfully passing the course are first computed based on the initial enrollment to illustrate the extent to which those who tried NCVPS ultimately benefited by passing a course. (See Figure 2.) Subsequent figures by session (in Tables 9, 10, and 11) calculate pass rates based on the final enrollment to represent success for those who completed the courses. These percentages are higher, because they exclude those who dropped the course. NCVPS staff also calculate success percentages in EOC courses based on those who have successfully mastered the course (M. Lourcey, personal communication, February 2009), but this limited subset is too restricted to truly address the

WCPSS need to determine whether NCVPS represents a good opportunity for WCPSS students to earn credits and meet EOC graduation requirements.

In Summer 2007, only 28% of students (just over one in four) who initially attempted an NCVPS course successfully completed it with a passing grade. Fall 2007 and Spring 2008 course pass rates were considerably higher, over 50%, meaning that one of two students initially enrolled in NCVPS courses received a passing grade from the NCVPS instructor. Summer 2008 pass rates were even higher, with an increase from 28% in Summer 2007 to 65% in Summer 2008 (two in three students).

Figure 2
NCVPS Academic Outcomes by Semester (Summer 2007, Fall 2007, Spring 2008, and Summer 2008)



Summer 2007

Tables 7 and 8, recreated from the original NCVPS report (Rhea, 2007), presented academic outcomes in the NCVPS courses in Summer 2007 separately for the credit-recovery courses and accelerated courses. The two tables illustrate the percentages of the final (maintained) enrollments that received passing course NCVPS grades from the NCVPS teachers and the percentage with proficient EOC exams.

Based on final enrollment in credit-recovery courses in Summer 2008, only 43% of courses that WCPSS students attempted were successfully completed (301 of 696). A higher percentage of enrollments in accelerated courses than in credit-recovery courses received a passing grade in Summer 2007 (65% vs. 43%). The final pass rate for courses with EOC tests was even lower, because few students passed the EOC exam (14% to 28%). The EOC grade is further used as 25% of the final grade.

Table 7
Credit-recovery Course Achievement Results for Summer 2007

| | Course | Final Enrollment | Earned a Passing NCVPS Course Grade* | Passed EOC Exam* |
|--|------------------|--------------------|--------------------------------------|-------------------|
| High School Exit Standards EOCs | Algebra I | 96 | 28.1% | 19.8% |
| | C&E | 41 | 41.5% | 19.5% |
| | English I | 57 | 40.4% | 28.1% |
| | U.S. History | 34 | 52.9% | 20.6% |
| EOCs | Algebra II | 58 | 48.3% | 22.4% |
| | Geometry | 92 | 56.5% | 14.1% |
| Electives/Other | English II | 54 | 29.6% | na |
| | English III | 63 | 58.7% | na |
| | English IV | 39 | 38.5% | na |
| | Physical Science | 22 | 31.8% | na |
| | Spanish I | 35 | 34.3% | na |
| | Spanish II | 10 | 60.0% | na |
| | World History | 67 | 55.2% | na |
| | Health and PE | 28 | 21.4% | na |
| | Total | 696 (61.4%) | 301 (43.2%) | 76 (20.1%) |

Source: Rhea, 2007.

*Figured as a percentage of final enrollments.

Interpretation Example: Of the 144 students initially enrolled in Algebra I, 96 completed the course (final enrollment). Of these 96 students, 28.1% earned a passing NCVPS course grade and 19.8% passed the EOC exam.

**Table 8
Accelerated Course Achievement Results for Summer 2007**

| | Course | Final Enrollment | Earned a Passing Course Grade | Passed EOC Exam |
|---------------------------------------|-------------------------------|-------------------------|--------------------------------------|------------------------|
| High School Exit Standards EOC | Algebra I | 10 | 40.0% | 30.0% |
| EOC | Algebra II | 11 | 81.8% | 72.7% |
| | Geometry | 15 | 53.3% | 20.0% |
| Career-Tech | Digital Communications | 16 | 68.8% | 0.0% |
| | Parenting & Child Development | 14 | 50.0% | 0.0% |
| Electives/Other | Psychology | 2 | * | * |
| | Sociology | 9 | 77.8% | 0.0% |
| | Health and PE | 12 | 75.0% | 0.0% |
| | Music Appreciation | 11 | 90.9% | 0.0% |
| | SAT Prep | 16 | 43.8% | 0.0% |
| | Success 101 | 20 | 70.0% | 0.0% |
| | Total | 136 (55.5%) | 88 (64.7%) | 14 (38.9%) |

Source: Rhea, 2007.

Note: * means percentage was not computed, due to enrollment of fewer than five students.

Fall 2007 and Spring 2008

Fall 2007 and Spring 2008 enrollments and passing rates are presented in Tables 9 and 10. Overall, the course pass rates went up from Summer 2007. In Spring 2008, higher percentages of final enrollments received passing course grades from NCVPS teachers more than (three-fourths, or 84%) than in Fall 2007 (about two-thirds, or 64%).

Fall and Spring Comparisons by Course

- The courses with relatively high enrollments more than 10) were Geometry, Earth Science, and Medieval Studies in the fall and Geometry, Latin II, and Success 101 in the spring.
- Few students signed up for courses involving EOC exams (except Geometry).
- Geometry was offered via Florida VPS, which allowed students to enroll any time during the fall semester. (See Table 10.) EOC exams in Geometry were administered only in the spring.
- Compared to Fall 2007, Spring 2008 had a higher overall course pass rate (84% vs. 64%).

**Table 9
Fall 2007 Course Achievement Results**

| | Course | Final Enrollment | Earned a Passing Course Grade | Passed EOC Exam |
|--|---|-------------------------|--------------------------------------|------------------------|
| High School Exit Standards EOCs | Algebra I | 0 | 0 | na |
| | Civics & Economics | 1 | 0 | no score |
| | U.S. History | 3 | 2 | 2 |
| EOCs | Algebra II | 1 | 1 | 1 |
| | Geometry | 11 | 10 | no scores * |
| Electives | English III | 2 | 1 | na |
| | English IV | 4 | 2 | na |
| | AP Courses | 9 | 8 | na |
| | Art I Drawing & Design | 2 | 2 | na |
| | Digital Communications | 3 | 0 | na |
| | Earth Science and Earth Science H | 17 | 2 | na |
| | Environmental Science and Environmental Science H | 1 | 1 | na |
| | Journalism | 5 | 2 | na |
| | Latin I | 8 | 4 | na |
| | Latin II | 2 | 1 | na |
| | Latin III H | 3 | 2 | na |
| | Medieval Studies | 12 | 7 | na |
| | Music Appreciation | 8 | 8 | na |
| | Pre-Calculus H | 1 | 1 | na |
| | Principles of Business | 3 | 3 | na |
| | Psychology | 2 | 2 | na |
| | SAT Prep | 6 | 3 | na |
| | Sociology | 3 | 1 | na |
| | Spanish II | 1 | 1 | na |
| | Spanish IV H | 1 | 1 | na |
| E-Commerce | 3 | 3 | na | |
| German II | 0 | 0 | na | |
| German III | 2 | 2 | na | |
| | Total | 114 | 72 (63.7%) | 3 |

Note 1: *These students continued their Geometry course enrollment in the spring and took the EOC exams after completing the course.

Note 2: H equals Honors.

**Table 10
Spring 2008 Course Achievement Results**

| | Course | Final Enrollment | Earned a Passing Course Grade | Passed EOC Exam | |
|--|-----------------------------------|------------------|-------------------------------|--------------------|-------------------|
| High School Exit Standards EOCs | Algebra I | 1 | 1 | no score | |
| | Civics & Economics | 0 | 0 | na | |
| | U.S. History | 2 | 2 | 2 | |
| | English I | 1 | 0 | no score | |
| EOCs | Algebra II | 3 | 3 | 3 | |
| | Geometry | 18 | 17 | 15 | |
| | Physical Science | 1 | 1 | 1 | |
| Electives | Adv. Functions & Modeling | 2 | 1 | na | |
| | AP Courses | 5 | 5 | na | |
| | Art I Drawing & Design | 5 | 5 | na | |
| | Computer Programming I | 0 | 0 | na | |
| | Digital Communication Systems | 1 | 0 | na | |
| | Earth Science and Earth Science H | 3 | 3 | na | |
| | English II | 0 | 0 | na | |
| | English III | 0 | 0 | na | |
| | English IV | 8 | 6 | na | |
| | Environmental Science H | 0 | 0 | na | |
| | German | 1 | 1 | na | |
| | Journalism | 3 | 3 | na | |
| | Latin I | 6 | 6 | na | |
| | Latin II | 18 | 14 | na | |
| | Latin III H | 6 | 6 | na | |
| | Medieval Studies | 1 | 1 | na | |
| | Music Appreciation | 3 | 2 | na | |
| | Principles of Business | 2 | 2 | na | |
| | Psychology | 4 | 4 | na | |
| | SAT Prep | 3 | 2 | na | |
| | Small Business Entrepreneurship | 6 | 5 | na | |
| | Spanish I | 5 | 3 | na | |
| | Spanish II | 2 | 2 | na | |
| | Spanish III H | 2 | 2 | na | |
| | Spanish IV | 0 | 0 | na | |
| | Success 101 | 17 | 15 | na | |
| | E-Commerce | 1 | 1 | na | |
| | World History and World History H | 10 | 5 | na | |
| | | Total | 140 | 118 (84.3%) | 21 (80.8%) |

Note: H stands for Honors.

Summer 2008

Final enrollment and course pass rates in Summer 2008 NCVPS courses are presented in Table 11.

- Unlike Summer 2007, the majority of Summer 2008 enrollments were in traditional rather than credit-recovery courses. Only two credit-recovery courses were piloted in Summer 2008: Algebra I and English I.
- Even though final enrollment numbers in Summer 2008 decreased from 832 in the previous summer to 397, final enrollment percentages increased from 60% (832 of 1,378) to 92% (397 of 430).
- Based on grades assigned by NCVPS instructors, course pass rates averaged 70%. The EOC courses had a lower course pass rate (64%).
- Four EOC courses had course pass rates below 70%: Algebra I CR, Algebra I ACC, English I CR, and Geometry. Three non-EOC courses with low course pass rates were Digital Communications, Medieval Studies, and Principles of Business.

Table 11 also displays EOC exam pass rates based on final enrollments. Analyzing EOC test results is less straightforward for credit-recovery courses than for other EOC courses because not all students in CR courses took the EOC in the summer session. The evaluation policy question was whether the NCVPS experience helped students meet graduation requirements for passing EOC courses and tests. It was decided a fair way to answer this question was to determine the percentage of students in final enrollment who were able to pass the EOC exams and therefore meet the EOC exam graduation requirement. For CR courses, we included all passing EOC scores earned either before or after the summer school course. However, given our question of interest, 14 students who did not master the CR course content, and who were therefore not given the opportunity to take the EOC, could not be counted as passing the exam.

Overall, EOC test pass rates were relatively low, averaging 40% of final enrollment. Credit recovery pass rates were 44% and 31% for Algebra I and English I, respectively. For other EOC courses, test pass rates were still quite low, ranging from 33% in Geometry to 52% in Algebra II (even though almost all students took the exam).

EOC pass rates for credit recovery can obviously be calculated in different ways to answer different questions. The NCVPS Curriculum and Instruction Division Director for the Credit-recovery Program (M. Lourcey, personal communication, February 2009), believes the percentage should be calculated using only those who passed the course in the denominator. However, this excludes a large portion of those who attempted the course and therefore does not answer our question of interest.

The next section provides more detail on the EOC test results from Summer 2008.

**Table 11
Summer 2008 Outcomes**

| | Course | Final Enrollment | Earned a Passing Course Grade | Passed the EOC (% of Final Enrollment)* |
|--|---------------------------------|-------------------------|--------------------------------------|--|
| High School Exit Standards EOCs | Algebra I CR | 25 | 16 64.0% | 11 44.0% |
| | English I CR | 29 | 16 55.2% | 9 31.0 % |
| | Algebra I ACC | 11 | 6 54.5% | 5 45.5% |
| | English I ACC | 13 | 11 84.6% | 5 38.5% |
| EOCs | Algebra II | 23 | 20 87.0% | 12 52.2% |
| | Geometry | 21 | 9 42.9% | 7 33.0% |
| | EOC Subtotal | 122 | 78 63.9% | 49 40.2% |
| Electives | English II | 23 | 19 82.6% | na |
| | English III | 23 | 17 73.9% | na |
| | English IV | 27 | 21 77.8% | na |
| | French III H | 2 | 2 | na |
| | French IV H | 2 | 2 | na |
| | German | 1 | 1 | na |
| | Spanish III H | 7 | 7 100% | na |
| | Spanish IV H | 2 | 0 | na |
| | Digital Communications | 38 | 26 68.4% | na |
| | Latin III H | 1 | 0 | na |
| | Medieval Studies | 16 | 11 68.8% | na |
| | Music Appreciation | 11 | 8 72.7% | na |
| | Principles of Business | 27 | 13 48.1% | na |
| | SAT Prep | 20 | 16 80.0% | na |
| | Small Business Entrepreneurship | 36 | 29 80.6% | na |
| Success 101 | 39 | 28 71.8% | na | |
| | Non-EOC Subtotal | 275 | 200 72.7% | na |
| | Total | 397 | 278 70.0% | 49 40.2% |

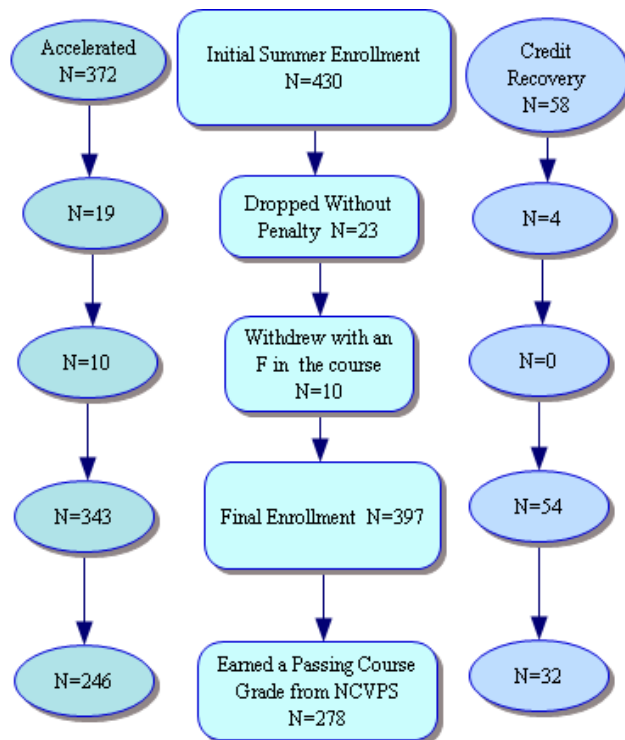
Note: *Percentages of passing EOCs are calculated based on final course enrollments. All students who passed EOCs before or after taking the course are included. Students who are not included either did not pass the test or failed the course and did not take the test.

Comparison of Accelerated and Credit-Recovery Summer 2008 Courses

Only two credit-recovery courses were piloted by WCPSS in Summer 2008: Algebra I CR and English I CR. More accelerated courses were offered, and initial enrollment in accelerated courses in Summer 2008 was higher than enrollment in credit-recovery courses. (See Figure 2.) Additionally, when accelerated and credit-recovery courses are compared, a higher percentage of enrollments in accelerated courses earned a passing grade than in credit-recovery courses. When

comparing initial enrollments, 246 of 372 (66%), vs. 32 of 58 (55%) earned a passing grade. When comparing final enrollments, 246 of 343 (71%), vs. 32 of 54 (59%) successfully passed the courses.

Figure 2
Enrollments in Accelerated and Credit-Recovery Summer 2008 Courses



Those enrolled in accelerated EOC courses should have and generally did take the EOC exams even if they failed the NCVPS course. There were a few exceptions: four students who failed Geometry, two students who failed Algebra I and English I, and one student who failed Algebra II did not take the EOC exams. Some of those students withdrew from the base school after enrolling in a NCVPS course and transferred to another school. At least two students taking Geometry were not communicating with the instructor because they had phones disconnected and were still assigned non-passing course grades. A quick glance at the instructors’ comments shows that along with “hard-working” and “responsible” students who were “determined to do well,” or “did an awesome job,” there were also students who did not submit all assignments and may have needed additional monitoring or support. For example, in Algebra II, of the 25 students who were initially enrolled, three did not complete all assignments and failed the course, and five dropped the course without completing it.

NCVPS credit-recovery EOC courses were offered to those students who had previously failed an EOC course in a traditional school setting but had passed an EOC exam, or to those who failed both the course and the exam. After approval from the DPI Accountability team, NCVPS gave the schools an option of using one of the two codes for CR courses: a regular or a generic course code. A generic code was to be used for those students who had previously passed the EOC test and needed only to retake the previously failed course. According to the NCVPS Web site, use of the generic code “did not trigger” the EOC test. Those who did not master the CR course content

received a non-mastery grade (NM). It is not clear how well they did in the course, since a non-numerical grade was assigned. Those students who received an NM grade were generally not required to take the EOC exam. For example, 45% (13 of 29) of those taking English I CR did not pass the course and did not take the EOC. Two students who failed the Algebra I CR course were an exception to this rule, as they did take the EOC exam. At least one high school (Fuquay-Varina) designated a school-based teacher to support the progress of students who were enrolled in the CR Algebra I course. All of the students enrolled in the course received passing course grades.

As previously reported in Table 11, based on final enrollments, 64% of Algebra I CR enrollments and 55% of English I CR enrollments had a passing course grade. A further breakdown of EOC test taking patterns is provided in Table 12 to illustrate whether students took the EOC test. Three separate files had to be checked to determine students' test-taking status, and scores were verified with the schools.

One-third of those enrolled in a CR course had taken an EOC test before they enrolled in a CR course (36% of Algebra I enrollments and 35% of English I enrollments). Most had passed the EOCs before they took the CR course and therefore did not have the goal of meeting the test graduation requirement. Few students improved their status on meeting the EOC test requirement after participation in NCVPS.

Table 12
Summer 2008 EOC Exam Status for Credit-Recovery Courses

| | Algebra I CR | | English I CR | |
|-------------------------------|--------------|---------|--------------|---------|
| | Number | Percent | Number | Percent |
| Final enrollment | 25 | 100% | 29 | 100% |
| Earned a passing course grade | 16 | 64.0% | 16 | 55.2% |
| <i>EOC Exam Status</i> | | | | |
| Took EOC in summer | 9 | 36.0% | 6 | 20.7% |
| Took EOC previously | 9 | 36.0% | 10 | 34.5% |
| No record found of EOC | 7 | 28.0% | 13 | 44.8% |
| <i>EOC Pass Rates</i> | | | | |
| Passed EOC in summer | 3 | 12.0% | 3 | 10.3% |
| Passed EOC previously | 8 | 32.0% | 6 | 20.7% |
| Total passing EOC | 11 | 44.0% | 9 | 31.0% |

Note: Percentages are calculated based on the final course enrollment.

All of the students who passed the summer EOC course also passed the EOC test, either in summer or before summer. If a student was failing an EOC course, she or he tended not to take the EOC test. In Summer 2008, of 78 enrollments with passing EOC course grades, 52 took the EOC in summer after taking the EOC course (67%), and 26 had taken the appropriate EOC test only before taking the course (33%). Of 44 enrollments with failing course grades, 12 took the EOC in summer (27%), five had taken EOC before taking the course (11%), and 27 had no EOC scores (61%). (See Table 13.)

Table 13
Course Pass/Fail Numbers and EOC Exam Periods

| Time When EOC was Taken | Algebra I | | English I | | Algebra II | | Geometry | | Total | |
|-------------------------|-----------|-----------|-----------|-----------|------------|----------|----------|-----------|-----------|-----------|
| | Pass | Fail | Pass | Fail | Pass | Fail | Pass | Fail | Pass | Fail |
| Totals | 22 | 14 | 27 | 15 | 20 | 3 | 9 | 12 | 78 | 44 |
| Summer | 12 | 4 | 17 | 0 | 16 | 2 | 7 | 6 | 52 | 12 |
| Before Summer | 10 | 1 | 10 | 2 | 4 | 0 | 2 | 2 | 26 | 5 |
| No Score | 0 | 9 | 0 | 13 | 0 | 1 | 0 | 4 | 0 | 27 |

Students who failed the course were unlikely to pass the EOC exam. (See Table 14.) Of the 44 enrollments with failing EOC course grades, only 4 had passing scores (9%), 11 had non-passing EOC scores (25%), and 27 had no scores (61%). This shows that the majority of those who failed an EOC course did not take the EOC test. Students who passed EOC courses were somewhat more likely to pass than to fail the EOC exam. Specifically, 78 enrollments with passing course grades had 45 EOC passing scores (58%) and 33 non-passing EOC scores (42%).

Table 14
Course Pass/Fail Rates and EOC Levels

| EOC Exam Level | Course | |
|----------------|-------------|-------------|
| | n=44 Failed | n=78 Passed |
| I | 7 | 12 |
| II | 6 | 21 |
| III | 3 | 34 |
| IV | 1 | 11 |
| No Score | 27 | 0 |

Note: The courses include Algebra I, Algebra I CR, Algebra II, Geometry, and English I.

Based on the sample of 31 students who had taken an EOC before the summer course, those who had passed an EOC exam before taking a summer EOC course had a somewhat higher chance of passing the course than those who had failed the EOC exam. Of the 19 students who entered the summer school with a passing EOC score, 89.5% passed the course. Of the 12 students who entered the summer school with a failing EOC score, 75% passed the course.

Table 15
Course Pass/Fail Rate by EOC Status

| EOC Taken before Summer | Course Pass Rate | |
|-------------------------|------------------|------------|
| | <70 | ≥70 |
| Passed (n=19) | 2 (10.5%) | 17 (89.5%) |
| Failed (n=12) | 3 (25.0%) | 9 (75.0%) |

Comparisons of ACC and CR course pass rates in Summer 2007 and Summer 2008 are presented in Table 16. They show the following trends:

- Final course enrollment percentages increased from 62.7% to 95.1%.
- Percentage of enrollments with passing course grades increased from 33.1% to 62.8%.

- Percentages of EOC exam pass rates also increased from 23.3% to 38.5%, but were still low.

Table 16
Comparisons of CR and ACC Course Pass Rates in Summer 2007 and Summer 2008

| | Initial Enrollment | Final Enrollment | Earned a Passing Course Grade* | Passed EOC Exam |
|--------------------|---------------------------|-------------------------|---------------------------------------|------------------------|
| <i>Summer 2007</i> | | | | |
| CR Algebra I | 144 | 96 (66.7%) | 27 (28.1%) | 19 (19.8%) |
| CR English I | 96 | 57 (59.4%) | 23 (40.4%) | 16 (28.1%) |
| ACC Algebra I | 20 | 10 (50.0%) | 4 (40.0%) | 3 (30.0%) |
| Totals | 260 | 163 (62.7%) | 54 (33.1%)* | 38 (23.3%) |
| <i>Summer 2008</i> | | | | |
| CR Algebra I | 26 | 25 (96.2%) | 16 (64.0%) | 11 (44.0%) |
| CR English I | 32 | 29 (90.6%) | 16 (55.2%) | 9 (31.0%) |
| ACC Algebra I | 11 | 11 (100%) | 6 (54.5%) | 5 (45.5%) |
| ACC English I | 13 | 13 (100%) | 11 (84.6%) | 5 (38.5%) |
| Totals | 82 | 78 (95.1%) | 49 (62.8%) | 30 (38.5%) |

* Percentages are based on final enrollment.

Phone interviews with distance learning advisors and principals at the schools participating in the Summer 2008 pilot of the NCVPS credit-recovery courses revealed that purposeful selection of students who had a potential to benefit the most from the virtual experience was of importance. Those who had previously taken and passed the EOC exam but failed the traditional course were most likely to pass the online CR course. It is also noteworthy that two schools structured online experiences by providing additional one-on-one teacher support at the local school.

Cost

Political and philosophical discussions have surrounded virtual schools and involved issues of funding, credit, and certification (Roblyer, 2006). North Carolina State Board of Education is also reviewing proposed funding formulas for NCVPS. The State Board of Education reviewed the proposed funding formula options for NCVPS. The requested funding options include (a) a full funding from the General Assembly (\$30 million), (b) charging a fee for a course, (c) treating NCVPS as a local education agency (LEA) with its own ADM, or (d) a combination of any options. NCVPS estimates that the cost per NCVPS course in 2007-08 was \$629.50, with 15,099 students taking courses. A projected cost for 2008-09 is at \$717.20, with 15,929 students taking courses. NCVPS states that this cost is lower than the state average. It is not clear whether the NCVPS estimate includes any calculations of the course curricula development, for which teachers are compensated at the rate of \$1,500 per team member. This estimate does not include the time of school-based deans of students, deans of counseling, or assistant principals who wear an additional hat by offering their services as distance learning advisors (DLAs), or any other school-based support provided by teachers to students taking online courses. At least one WCPSS school compensated a mathematics teacher to support students enrolled in NCVPS for Algebra I. Such

school-based support is currently being considered by WCPSS for students taking online courses through NCVPS. If such support is used in the future, it would clearly increase the staff time or monetary cost.

SUMMARY AND DISCUSSION

Comparisons of Summer 2007 NCVPS enrollment trends and academic outcomes from Fall 2007, Spring 2008, and Summer 2008 show the trends described below.

WCPSS Enrollment

After Summer 2007, courses were revised and more traditional courses were offered in NCVPS. There has been a pattern of higher enrollment in elective courses compared to courses involving EOC exams. The credit-recovery model for courses was changed, with no offerings of this type in fall or spring of 2007-08, and two offered in the Summer 2008 session as a pilot.

The first semester of implementation of NCVPS in Summer 2007 was characterized by high initial enrollment and high drop rates. In the subsequent semesters, both student enrollment levels and course drop rates showed a steady decrease. Course drop rates without penalty decreased, but there was an increase in percentages of withdrawals with failure. Overall, there was also a pattern of increase in final enrollment percentages during each semester after Summer 2007 (from 60% to 81%, 71%, and 92%). Credit-recovery courses piloted in Summer 2008 showed high levels of enrollment that were maintained (54 out of 58 enrollments were completed).

WCPSS Academic Outcomes

After Summer 2007, percentages of enrollments with passing grades fluctuated between 64% in Fall 2007, 84% in Spring 2008, and 70% in Summer 2008. These percentages were a considerable improvement over Summer 2007 (with 43% passing credit-recovery courses and 65% passing accelerated courses). Certain courses showed low levels of course pass rates relative to their final enrollments. There were very few enrollments in courses involving EOC exams in Fall 2007 and Spring 2008 (a total of 16 and 26 enrollments). Small enrollment levels in courses involving EOC exams also characterized Summer 2008 (a total of 122 enrollments).

Discussion

Overall, results for NCVPS have improved, which is encouraging. Decline in WCPSS course enrollments may be a positive phenomenon, as success rates have increased. School staff are being more selective in approving enrollment for NCVPS courses, based on student characteristics similar to those listed on the NCVPS Web site (e.g., self-motivated) needed to succeed in the online environment.

The fact that pass rates have increased from 47% in Summer 2007 is also positive, although pass rates of about 70% were still not as high as the school district goals and expectations. However, pass rates also varied considerably by course, so local school staff may want to check particular course success rates before enrolling more students and consider other opportunities.

One concern is that the proportion of withdrawals after the 10-day deadline was higher than the proportion of those dropping before the deadline. Better communication with the students before and within the first 10 days of enrollment about course drop and grading policies and procedures needs to be maintained both by the NCVPS and local schools, and should be even more consistent across schools. Guidelines for withdrawal with an F after the deadline should consider those students who never logged on and students who have transferred to another school. Automatic electronic reminders could be built into the NCVPS system to directly message the students when the course drop deadline is approaching. Extending the drop without penalty period to 15 days may be an option.

Taking EOC courses through NCVPS may be more beneficial for those who have passed their EOC exam but failed the course, than for those who had failed both. NCVPS stipulates that even though an online credit-recovery course instructor is expected to work with each student one-on-one at least once a week, additional support at the school level is recommended. In the feedback provided, NCVPS staff commented on the increased success rate in mastering the content of the credit-recovery courses in some pilot sites when additional school level support is provided to the student. The support model could vary. If a student works in the school computer lab, it could be a lab facilitator who ensures that a student stays focused and discusses progress in the course as provided by the course instructor. When a student works from home, someone at the school might monitor a student's progress weekly and stay in contact with the student and parents about progress made, based on information provided by the course instructor (M. Lourcey, personal communication, February 2009). Based on the experience of at least one of the pilot schools in WCPSS, a student's personal interaction with the school-based teaching staff and support in addition to communication with the NCVPS instructor in the virtual environment may be beneficial in improving students' chances for passing the course, as shown in the Algebra I credit-recovery course. WCPSS is exploring support options.

The process of grading in courses with EOC tests is complicated by the fact that students are given an initial course grade, which then must be adjusted based on the EOC results after the fact. This delays notifying the student and posting the final grades for transcripts. Assuring this last step takes place is vital.

NCVPS policies and WCPSS procedures for dealing with students who drop the course after the deadline need to be re-examined. Students in accelerated or a traditional virtual courses who withdraw after the 10-day deadline receive an F, while those in credit-recovery courses receive an "NM" for non-mastery of the course work. The NM does not penalize a student unable to complete the course successfully and is not recorded as a failing grade. The policy for traditional virtual courses may discourage students from taking NCVPS courses in the future. This policy seems particularly inappropriate in cases where students were not completing the assignments and could not be reached (perhaps because they transferred to another school or lost access to a computer). Dropping these students without penalty seems more appropriate than giving them an F. At a minimum, extending the period during which a student can be dropped without penalty date is advised.

Additions of official student identification numbers (IDs) and state course codes to NCVPS files would help school staff, state staff, and evaluation staff to assure accuracy of student records and to more quickly and accurately evaluate success.

According to NCVPS staff, “NC WISE provided the generic course code and directions for a “work-around” so that school districts could entitle the course English I or Algebra I. (M. Lourcey, personal communication, February 2009). However, at least one principal was not clear about how to accomplish the course code change and whether or not to factor in the prior EOC. Otherwise, use of the NCVPS course code that triggers the EOC rather than the generic course is recommended.

Based on the limited data available at this time, NCVPS courses may be a good option for students who have the characteristics listed by NCVPS: those who are self-motivated and have continuous access to the computer. Taking EOC CR courses through NCVPS may be especially beneficial for those who have already passed the EOC exam but need to repeat the course to meet a graduation requirement. At the same time, because success rates for most EOC courses are still not high, students taking EOC courses should consider all options available (e.g., NovaNET or retaking the full course).

REFERENCES

- Dickson, W. (2005). Toward a deeper understanding of student performance in virtual high school courses: Using quantitative analyses and data visualization to inform decision making. In R. Smith, T. Clark, & B. Blomeyer (Eds.), *A synthesis of new research in K–12 online learning* (pp. 21–23). Naperville, IL: Learning Point Associates.
- Guidelines for North Carolina Virtual Public School*. Retrieved in December 2008 from <http://www.ncvps.org/operations/>.
- Powell, A. & Patrick, S. (2007). Focus on effective teaching in a virtual classroom. *Educational Research Service*.
- Rhea, A. (2007). *North Carolina virtual public schools review of summer school 2007*. Raleigh, NC: Wake County Public School System. Web site: <http://www.wcpss.net/evaluation-research>.
- Roblyer, M. (2006). Virtually successful: Defeating the dropout problem through online school programs. *Phi Delta Kappan*, 88 (1), 31-36.