Report on Programs for High School Students Offered by the Public Schools, Community Colleges, Colleges, and Universities

submitted to the

Joint Legislative Education Oversight Committee

by the

Education Cabinet

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Executive Summary

The General Assembly has asked the Education Cabinet to study a series of issues that involve programs which the public schools, community colleges, colleges, and universities offer for high school students [House Bill 1840, Section 9.2.(b)]. In the past, the three sectors have taken different and sometimes conflicting positions on some of the issues. This report describes the programs affected, clarifies the issues, and presents the current thinking of the Education Cabinet on the issues.

For ease of understanding, the primary issues may be grouped into "dropout-related" issues, "topout-related" issues, developmental education issues, and distance learning options.

Dropout-related issues pertain to students who have dropped out of high school and wish to obtain a high school diploma or the equivalent via the Adult High School Diploma Program or the General Educational Development (GED) Program offered by community colleges. The questions here are (a) whether these programs overlap (duplicate or interfere with each other), and if so, which single level of the system and which program should provide services to dropouts, (b) whether students in the Adult High School Diploma Program should be required to take and pass the same examinations that other high school students must take at the end of certain courses and in order to graduate from high school, and (c) whether a there should be a minimum age for students to enter the Adult High School Diploma Program.

(a) While the programs all perform the same general function, they serve students in different kinds of circumstances and thus do not duplicate each other. Where different levels of the education system offer programs that might compete with each other, local education officials have adequate means to resolve the problem.

(b) There are important and valid arguments both for and against requiring students in the Adult High School Diploma Program to take examinations required of other high school students, but the overriding concern of the Education Cabinet is the need to encourage as many adult dropouts as possible to take advantage of programs to further their education. So the Education Cabinet prefers not to institute new examination requirements at this time. After the High School Exit Examination is implemented, the Education Cabinet would like revisit the issue.

(c) While raising the minimum age for enrollment in the Adult High School Diploma Program from the present minimum of sixteen to a minimum of eighteen would protect against inappropriate use of the program by students of high school age, it would also rule out some appropriate uses of the program by 16- and 17-year-olds. Local school district and community college officials have adequate means of minimizing inappropriate use of the program without imposing a system-wide age limit of 18.

Topout-related issues affect high-achieving high school students who are bumping up against the ceiling of the normal high school curriculum and want to extend their education to the college level while still enrolled in high school. Included here are the questions of (a) whether there is inappropriate overlap between the types of courses which the three sectors offer such students, and if so, which single level of the system and which program should provide services to "topouts," (b) whether community colleges and the university should waive tuition for such courses, and (c) whether students should receive weighted credit on their high school transcripts for college level courses taken at community colleges, colleges, or universities.

(a) The variety of courses offered to high-achieving students may seem confusing upon first examination, but each type of course seems distinctively well-suited for certain types of students. Some local school district officials have alleged that Concurrent Enrollment in community college courses undermine their ability to enroll students in sufficient numbers to offer AP courses. But the operating manual for Concurrent Enrollment rules out such competition, and local school districts have adequate means to ensure that this provision of the manual is enforced. Another issue here is the question of whether the state is paying twice for high school students enrolled in community college or university courses. The Education Cabinet believes that while there may be a degree of double payment, eliminating all duplication would probably deprive high-achieving students in small and poor school districts of opportunities available to their counterparts in better funded districts. Such duplication as may exist represents a warranted investment in seamless, equitable access to educational opportunity.

(b) Community colleges now waive tuition for students in both Huskins and Concurrent Enrollment courses, while universities charge tuition to some students in analogous courses. Unless state appropriations were increased to offset the lost revenues, forbidding universities to charge tuition may eliminate important opportunities for many students. Present policies of the two systems offer appropriate incentives for students and their parents to turn first to community colleges, the level of the system which should be their first recourse. The existing policies should remain in place.

(c) It is difficult to justify the current distribution of extra grade points, which awards one extra point for honors courses and two extra points for Advanced Placement and International Baccalaureate courses, but none for community college or university courses. The details of a new policy have not yet been worked out. Input is currently being solicited. Positions on which the education community comes to consensus will be incorporated, and all feedback will be considered carefully. The proposal currently under consideration may be outlined as follows:

- Honors Courses. The preliminary proposal identifies courses that have End-of-Course examinations and would be eligible to earn an extra grade point. To earn the extra point, students would have to meet or exceed a minimum EOC examination

score to be set by the Education Cabinet. There remains disagreement about this, however. Some members of the Education Cabinet believe that weighting also needs to be given for rigorous elective courses, for high level mathematics and science courses, and perhaps for other high level courses for which no EOC examination is currently available. The Education Cabinet will work to accommodate these courses in the final proposal in a manner consistent with the need both to standardize honors courses and to encourage high levels of student performance across all districts and schools.

- Advanced Placement and International Baccalaureate. One extra grade point would be awarded to students for passing an AP or IB course, but a second extra point could be earned by scoring at or above a certain level on AP or IB examinations.
- Community College and University Courses. One extra grade point would be awarded to students who take and pass university or community college courses. Where an appropriate AP exam exists, a student could earn a second point by scoring at or above the same level set for students in high school AP courses.

The particular **developmental education issues** raised by the legislation affect a very narrow range of high school students: those students who need to complete a certain course (or set of courses) that is not available in their high school in order to gain unencumbered admission to a college program. The Education Cabinet believes that when courses that would be considered "developmental" at the community college or university level would serve such high school students, the students should indeed be permitted to take the developmental courses. This would represent a warranted, limited expansion of the Cooperative High School program.

The General Assembly also asked the Education Cabinet to consider whether **distance learning** opportunities might help increase the options available to high school students in various circumstances. Technology-based distance education courses do have great potential to expand opportunities for many high school students, especially in poor and rural districts. But several important questions remain about (a) the availability, quality, and appropriateness of technology-based distance education courses, (b) state level infrastructure to deliver the courses, and (c) local district infrastructure and capacity to implement them well. To address these questions in more detail, the Education Cabinet would like to reconvene the School Technology Task Force which has addressed related issues very effectively in the past, and to return to the General Assembly to report on recommendations made by the Task Force.

The General Assembly has asked the Education Cabinet to study a series of issues that involve programs which the public schools, community colleges, colleges, and universities offer for high school students [House Bill 1840, Section 9.2.(b)]. A copy of the legislation is attached as Appendix A. In the past, the three sectors have taken different and sometimes conflicting positions on some of the issues. This report describes the programs affected, clarifies the issues, and presents the current thinking of the Education Cabinet on the issues.

Grouping of Issues

For ease of understanding, the primary issues may be grouped into "dropout-related" issues, "topout-related" issues, developmental education issues, and distance learning options.

- Dropout-related issues pertain to students who have dropped out of high school and wish to obtain a high school diploma or the equivalent via the Adult High School Diploma Program or the General Educational Development (GED) Program offered by community colleges. The questions here are (a) whether these programs overlap (duplicate or interfere with each other), and if so, which single level of the system and which program should provide services to dropouts, (b) whether students in the Adult High School Diploma Program should be required to take and pass the same examinations that other high school students must take at the end of certain courses and in order to graduate from high school, and (c) whether there should be a minimum age for students to enter the Adult High School Diploma Program.

- Topout-related issues affect high-achieving high school students who are bumping up against the ceiling of the normal high school curriculum and want to extend their education to the college level while still enrolled in high school. Included here are the questions of (a) whether there is inappropriate overlap between the types of courses which the three sectors offer such students, and if so, which single level of the system and which program should provide services to "topouts," (b) whether community colleges and the university should waive tuition for such courses, (c) and whether students should receive weighted credit on their high school transcripts for college level courses taken at community colleges, colleges, or universities.

- The particular developmental education issues raised by the legislation affect a very narrow range of high school students: those students who need to complete a certain course (or set of courses) that is not available in their high school in order to gain unencumbered admission to a college program. For example, suppose a high school student has completed the first semester of her senior year and has been admitted to enroll the following fall in a nursing program in a community college. But her admission is contingent upon completion of a pre-requisite mathematics course that is not offered in

her high school during the spring semester. The course is offered at the community college, but if she waits until fall to take the course as a "developmental" course in the community college, she will fall a step behind her fellow entering students in mathematics. May she take the course at the community college during the final spring semester of high school? At present, she may not, because at the community college level, the course is a "developmental" or remedial course offered mainly to assist the underprepared, and not a true college level course. The Cooperative High School Program covers college level courses only. The specific questions here are whether the Cooperative High School Program under which high school students may take college-level courses at community colleges should be expanded to permit high school students to take remedial or "developmental" courses at community colleges under such circumstances, and if so, who should pay for such courses.

- The General Assembly also asked the Education Cabinet to consider whether distance learning opportunities might help increase the options available to students in various circumstances.

Principles to Guide Resolution

As a framework to guide resolution of the issues, the Education Cabinet adopted the following principles, some of which are drawn from the legislation charging the Education Cabinet to study the issues:

Access. North Carolinians of all ages should have ready access to high quality educational services appropriate to their needs and capacities. Because students differ in interests, skills, and life circumstances, assuring broad access may require multiple routes, second chances, and use of distance education to give the full array of students appropriate opportunities to obtain a high quality education.

Equity. Access should be fairly and equitably provided, without preference or disadvantage to any student by reason of ethnicity, gender, economic background, language proficiency, or the characteristics of the community where he or she resides (e.g., low wealth, remoteness).

Seamlessness. Movement through the education system should be as seamless as possible, without undue obstacles to movement from one level of the system to the next as a student's knowledge and skills warrant it.

Accountability for Quality. Equitable, seamless access means little unless the educational programs and services provided meet high standards, with accountability for students, teachers, and systems alike.

Program Integrity. Each program should be carefully designed to serve a specific type of student and to meet a specific set of needs. Other students should be allowed access to a program only if they can benefit from it without compromising service to those for whom the program was specifically designed.

Efficiency. Access to high quality, well-designed programs should be provided as efficiently as possible. Efficiency permits the broadest access possible with available resources.

Mission-Appropriateness. Each sector – the public schools, community colleges, colleges, and universities – should provide services that fit its mission. Each sector has both first claim on and first responsibility for students at a certain level of education development.

As a set, these principles compose a policy of broad, equitable access to high quality programs provided as efficiently as possible by the most appropriate component(s) of the education system. They do not dictate a particular resolution to the issues raised by the General Assembly, but they do suggest ways of looking at and of resolving those issues. Now let us turn to each of the three sets of issues in turn.

Dropout-Related Issues

Dropout-related issues involve high schools operated by North Carolina Public Schools and two programs operated by community colleges, the Adult High School Diploma Program and the General Educational Development Program. A little background on each will facilitate understanding of the issues.

High School Diploma Program (NC Public Schools)

By current State Board of Education Policy, a student may earn a high school diploma by completing any of four different courses of study: Career Preparation, College Technical Preparation, College preparation, and the Occupational Course of Study. The first three all require twenty (20) units of credit, plus any additional credits that may be required by the local school district that actually issues the diploma. The fourth -- Occupational -- is intended for certain students with disabilities who have an Individualized Education Plan. The Occupational Course of Study requires twenty two (22) credits. A unit of credit is equivalent to a full academic year of study in some subject.

The State Board issues a Standard Course of Study for each of the required courses and also requires that students take an End-of-Course Examination covering the content in each. Current State Board policy requires that local districts count the student's grade on an End-of-Course Examination for at least 25% of the student's grade in each required course. Districts may, at their own option, give greater weight to the End-of-course Examination grade. Beginning in 2003, a student in the traditional high school diploma program will also be required to pass a new High School Exit Examination in order to earn a diploma.

Adult High School Diploma Program (NC Community Colleges)

The Adult High School Diploma Program is designed to enable adults who have left high school without a diploma to earn one. Students in the program follow the North Carolina Standard Course of Study to complete the same courses which the State Board of Education requires for graduation from a traditional high school.

A premise behind having community colleges offer the program is that it would be awkward and inconvenient for adults beyond high school age to return to high school to complete their high school studies. The program is also tailored to allow these adult students to complete courses at their own pace, often just one course at a time. This feature enables many working adults to fit the program in with the demands of work and family.

Diplomas earned through the program are actually awarded by a local school district with which a community college has a cooperative agreement. At present, however, students in the program are not required to take the End-of-Course examinations required of other students pursuing a North Carolina high school diploma, nor under present policies would they be required to take the High School Exit Examination when that comes on line in 2003.

General Education Development Program

The General Education Development (GED) Program leads not to a North Carolina high school diploma, but to a certificate of high school diploma equivalency. The GED program was developed in 1942 for World War II veterans and opened to civilians in the 1950's.

To obtain a certificate of high school diploma equivalency, a student must pass a battery of tests offered by the GED Testing Service, a unit of the American Council on Education (ACE). ACE is a respected Washington-based higher education association. ACE's interest is in enabling a broader range of students to get ready for further education beyond high school. Nationwide, about 61% of GED graduates attend some form of postsecondary education. According to the UNC General Administration, however, few GED holders enroll at University system campuses. This seems to imply that community college is a more common route for GED students to take.

The GED battery of tests covers five areas: Writing Skills, Interpreting Literature and the Arts, Social Studies, Science, and Mathematics. The General Educational Development Program offered by all 58 of the community colleges is designed to prepare students for the battery of examinations. Unlike the Adult High School Diploma Program, there is no standard course of study – no prescribed set of courses – that student must take before taking the GED tests. A student whose skill levels are close to those required by the examination may require only a little brushing up to prepare for the examination. The amount and kind of preparation students get depends on the levels of knowledge and

skill they bring to the program. GED students may enroll full or part time. Younger students are more likely to go full time, while older students are more likely to take a course or two at a time.

Another feature that distinguishes the GED from the Adult High School Diploma Program is portability. Because the GED is awarded on the basis of a standardized test that is offered nationwide, a student who moves into or out of North Carolina while part way through the program may resume preparation in his or her new home.

Questions

The questions posed by the General Assembly regarding these programs are

> Do these programs overlap?
>
> Should students in the Adult High School Diploma Program be required to take End-of-Course and High School Exit Examinations in order to obtain a diploma?
>
> Should there be a minimum age requirement for students to enroll in the Adult High School Diploma Program?

Overlap

These three programs obviously do overlap in certain respects. Each of them is intended to enable a student to earn a high school diploma or the equivalent.

One way to eliminate overlap would be to insist that anyone who has dropped out of high school but subsequently wishes to earn a diploma must simply enroll in a traditional high school in the local school district where he or she lives. But this option would present major practical and emotional obstacles for many adults and young adults, would probably limit the educational attainment of many, and seems inconsistent with the principle of access to "educational services appropriate to their needs and capacities."

Though the three programs perform the same general function, they serve students in different kinds of circumstances. On first examination, the Adult High School Diploma Program and the General Educational Development Program may seem redundant. But one requires a student to complete all courses prescribed for the high school diploma and leads to the same high school diploma awarded to other students who do so. The other simply offers self-paced, tailored assistance to prepare for a set of examinations. It entails no specific set of courses. Nor does it lead to a diploma – only to a certificate of high school equivalency. So while these programs overlap in terms of the broad function they serve, they perform the function in different ways, appropriate to students in different circumstances.

This brings us to the question of whether these two community college programs – though designed for different purposes – may sometimes compete for students who

would be served more appropriately in the traditional high school program. Consistent with the principle of mission-appropriateness, the position of both the Public Schools and the Community College system is that students of high school age belong in high school. Yet once a student has either finished or dropped out of high school, a community college is obligated by law to serve that student. In North Carolina, people 16 or older may make their own choices about education, but do some high school students drop out in order to use the Adult High School Diploma Program as an easier or quicker route to a high school diploma or the equivalent? More precisely, do differences in the rigor of the programs create incentives for a student to drop out and take one of these other routes?

Some have argued that the Adult High School Diploma does offer a temptation to students who have difficulty in meeting requirements for a traditional high school diploma. Two ways of addressing the concern that some students may be tempted to drop out of a traditional high school specifically in order to enroll in the Adult High School Diploma Program have been suggested: require Adult High School Diploma Program students to take End-of-Course and Exit Examinations, and institute a minimum age requirement for enrollment in the Adult High School Diploma Program.

End-of-Course and High School Exit Examinations

As indicated above, Adult High School Diploma Program students take the full course of study required for other high school students and may earn a North Carolina high school diploma, but are required neither to take End-of-Course Examinations nor to pass the impending High School Exit Examination in order to obtain the diploma. The General Assembly has asked the Education Cabinet to determine the feasibility, advantages and disadvantages, procedures, and costs for requiring students who participate in the Adult High School Diploma Program to take tests of high school students taking the same courses. We respond to these requests below. The Education Cabinet infers that the underlying question here is whether these examination requirements should be extended to students in the Adult High School Diploma Program, a question we address at the conclusion of this section.

Arguments in Favor of Requiring All Students Enrolled in the AHDP to Take Examinations

It is the local school district that actually awards the diploma to students in the Adult High School Diploma Program, and the diploma is a regular North Carolina High School Diploma indistinguishable from any other such diploma.

Consistent with the equity principle enunciated above, the student accountability standards established in recent years should apply equally to all students who receive the diploma, regardless of age.

Failure to impose accountability standards equitably may offer some students an incentive to drop out of high school and enter the Adult High School Diploma Program in order to evade the End-of-Course and Exit Examinations.

Arguments Against

Requiring adults (18 and older) enrolled in the Adult High School Diploma Program to take End-of-Course examinations and -- when it comes on line --the High School exit Examination might discourage many from enrolling in the program.

Given North Carolina's historically low rates of high school graduation and college enrollment, and given the importance of raising those rates, no new obstacles should be put in the way of adult dropouts' resuming their schooling and earning a diploma.

Such an examination requirement would represent an intrusion of public school authority into a community college program.

Cost and Feasibility Issues

First, how much would it cost to administer the test, and who would pay for the costs of the examinations? The costs would include the costs of the test materials themselves, the costs of proctors, and the costs of scoring the examinations. The simplest way to meet the cost of the tests themselves might be to make a modest addition to the DPI budget. The costs of proctoring would also be modest, and the costs of scoring should be nominal. The school district that is to grant a student's diploma would have the equipment to do the machine scoring and provide a score to the community college.

A second issue is timing. Adult High School Diploma Students do not necessarily complete courses at the end of a semester, as do traditional high school students. Yet if the tests are given three times a year (at the end of each semester and the end of the summer), the longest elapsed time between finishing a course and taking the examination would be about four months, but in most cases the wait would be shorter. The timing of End-of-Course examinations might actually serve as a useful planning device and set of deadlines for Adult High School Diploma Program students. Though a wait might be inconvenient, regularly scheduled examinations impose deadlines and waits for many others throughout the society (e.g., CPA exams, bar exams), and the wait for EoC examinations does not seem unusual or excessive by comparison.

A third issue is test security. Some in the community college system worry that if a community college employee were to compromise the security of an End of Course examination, the community college system would be held liable for the costs of creating a new version of the test. In the public schools, it would be the employee him or herself who would be held liable, not the school district, unless the district is somehow negligent. There seems no reason to treat community college employees any differently, nor to hold the community college system liable for the actions of one of its employees, unless the system is somehow negligent. In any event, DPI officials cannot recall an instance in which a district was held liable for a lapse of test security, nor an instance where the person responsible for compromising security was identified and made to bear the costs of creating a new test.

All in all, it seems feasible to ask Adult High School Program students to take the same examinations that other students pursuing a diploma are required to take.

At present, it does not appear to the Education Cabinet that high school students are dropping out of high school and into the Adult High School Diploma Program specifically to avoid End-of-Course examinations. When the High School Exit Examination is implemented, some students may be tempted to do so. But taking this and the other consideration enumerated above into account, the Education Cabinet would prefer to wait to see whether this problem actually does emerge rather than to institute a new set of requirements to address a problem that may not materialize. The full effects of requiring all students in the Adult High School Diploma Program to take End-of-Course and Exit Examinations – unintended as well as intended -- are impossible to foresee. The Education Cabinet is concerned that such requirements might well discourage many older adults from resuming their education. The Education Cabinet wants to encourage as many of them as possible to return for further education, and prefers not to risk discouraging older students to address a potential but not yet actual problem with younger students. Thus, although it may be <u>feasible</u> to extend examination requirements to Adult High School Diploma Program students, on balance it does not seem <u>desirable</u> to do so at this time.

Minimum Age Requirement

Though the Adult High School Diploma program was created to serve adults who dropped out of high school some time ago and now want a second chance at earning a diploma, many 16- and 17-year-olds do enroll in the program.

This has given rise to two quite different concerns. From the public school side, some have argued that community colleges are actually recruiting high school students into the program in order to increase their enrollments and revenue. Yet on the community college side, college officials report that the presence of 16- and 17-year-olds in Adult High School Diploma Program courses makes many adults students uncomfortable and

may even drive them away from the program. So the principle of program integrity is being abrogated -- the fundamental purpose of the program is being compromised as students other than its intended beneficiaries enter it.

For these reasons, some educators from both the public schools and the community colleges have advocated raising the minimum age for enrollment in the Adult High School Diploma Program to 18. But would establishing a minimum age of 18 eliminate some appropriate uses of the program by 16- and 17-year-olds? Consider the situation of a sixteen year-old who is miserable in high school, failing or doing poorly academically, and who finds a decent-paying job that allows him to gain a sense of competence, learn discipline and good work habits, and contribute to his family economically. He drops out not in order to enter the Adult High School Diploma program, but because on balance, working while attending community college seems to give him some handle on life. Should such a student be forbidden to enroll in one of the community college alternatives to traditional high school?

Forbidding enrollment by such students would seem to violate the access principle, which holds that a variety of possible routes to an adequate education should be available to people in different circumstances. Further, a central role of the community colleges is to give people who are beyond the age of mandatory schooling access to second chance opportunities. So the principle of mission-appropriateness would also seem to argue against raising the minimum age to 18.

In sum, while raising the minimum age for enrollment in the Adult High School Diploma Program to 18 would protect against casual, inappropriate use of the program by 16 and 17 year-olds, it might also rule out some appropriate uses, and might conflict with community colleges' commitment to providing second-chance educational opportunities.

Recommended Approach

If neither of these two approaches to eliminating inappropriate use of the Adult High School Diploma Program is adopted, how can any current or potential abuses of the program be addressed?

The Education Cabinet believes that adequate means of eliminating abuses are already available to local school districts. First, for the first six months after dropping out of high school, a student must have the written, notarized permission of his or her parent or guardian, plus the concurrence of both the local school district and the community college that admission to the program is the best educational option for the student (NC Administrative Code T23: Chapter 2 (C).0305). And second, as indicated earlier, diplomas earned by a student in the Adult High School Diploma Program are actually awarded by the local school district where the student resides.

So if a school district believes a community college is recruiting or accepting students inappropriately, the district can put a stop to the practice by reminding the college that diplomas will not be awarded without the specific concurrence of the local school

district. Local districts are in the best position to judge whether there is a problem, and if so, to deal with it.

What about the problem that some 16- and 17-year-olds create for the main intended beneficiaries of the Adult High School Program -- students who are beyond the normal high school age? A balance must be struck between the interests of the 16-17 year-olds and the interests of the adult students for whom the program is primarily intended. Some individual community colleges have established a minimum age limit of 18 for the program. Other community colleges have found other means of balancing the interests of the two groups of students.

Here again, the Education Cabinet believes that such careful balancing is done better by the educators who know the local circumstances rather than by establishing a state law or system rule that must be followed in all cases. Individual community colleges are in the best position to decide what approach should be taken to striking a sensible balance in their own local circumstances.

Topout-Related Issues

This set of issues concern honors courses offered by high schools, Advanced Placement and International Baccalaureate courses offered by high schools, and community college, college, or university courses offered to high school students whose knowledge and skills equip them for especially challenging coursework in one or more subjects.

As indicated earlier, the questions about these courses include whether the types of courses offered by the three sectors overlap, whether community colleges and the university should waive tuition for such courses, and whether extra grade point weight should be given to some or all of these courses on high school transcripts.

Here again, a little background on the types of courses affected by the issues that the General Assembly has raised will aid understanding and resolution of the issues.

Honors Courses

Developed and delivered at the local level, honors courses are designed to engage high-achieving students in challenging study in English, mathematics, science, social studies, foreign languages, and the arts. In general, an honors course may be offered only when a high school offers a standard course in the same subject. Exceptions are made for honors courses offered in schools that serve as magnets in the subject matter to be addressed, and for certain fine arts courses. Current state policy provides that the content in all honors courses must be deeper and more rigorous than the content covered in the standard course, but it leaves broad discretion to local districts in establishing expectations for honors courses.

Advanced Placement and International Baccalaureate Courses

Advanced Placement (AP) courses are designed to provide college level rigor to courses for high school students. Advanced Placement courses were initiated by the Ford Foundation's Fund for the Advancement of Education in the 1950's and are overseen by the College Board. They include 33 college level courses in 19 subject areas. Some 2,900 colleges and universities worldwide grant credit or advanced placement for acceptable scores on examinations based on these courses. In recent years, however, some selective colleges and universities have begun to question whether AP courses actually match the rigor, breadth, and depth of their own courses and have either stopped awarding advanced placement credit or have raised the examination score a student must earn in order to obtain advanced placement for AP courses.

The International Baccalaureate (IB) Diploma Program specifies a rigorous set of pre-university courses designed for highly motivated high school students. The International Baccalaureate Organization, based in Switzerland, was founded in the 1960's to provide a common curriculum and route to college or university entry for students who are geographically mobile. Today some 800 sites in 100 countries offer the Diploma Program, including 17 in North Carolina.

Students enrolled in the program must take courses in six curriculum areas: language one, language two, individuals and societies [history, economics, geography, and information technology], sciences [chemistry, biology, physics, environmental sciences, design technology], mathematics, arts and electives. Students must successfully complete International Baccalaureate requirements and examinations to obtain the IB diploma. Worldwide, about 80% of candidates for the diploma succeed in meeting the requirements and passing the examination.

Community College Courses Offered Through the Cooperative High School Program

The Cooperative High School Program includes Huskins and Concurrent Enrollment courses. The Huskins Bill(House Bill 1044, ratified in 1983) provides opportunities for whole classes of high school students to take courses offered by community colleges. Concurrent Enrollment allows individual high school students to take college level courses at community colleges -- but only courses not available to them at their high school.

The legislation authorizing both Huskins and Concurrent Enrollment courses is largely enabling. That is, the legislation permits but does not require local school districts and community colleges to enter into affiliation agreements. Districts and colleges have broad discretion in setting the terms of the agreements. By agreement of the State Board of Education and the Community College Board, Huskins and Concurrent Enrollment courses may not duplicate high school Advanced Placement courses that are currently being offered or that could feasibly be offered.

College and University Courses

Though there is no specific legislative authorization for them to do so, operating on the basis of their general authorizing legislation, many colleges and most campuses of the University do enroll small numbers of individual high school students in college-level courses, and a few offer college-level courses to whole classes of high school students by agreement with local school districts. In the University system, the latter are referred to as "High School Extension" courses.

Questions

The questions raised by the General Assembly about these "topout-related" courses are

Do the programs overlap? If so, which level of the system should provide them?

- Do some community college, college, or university courses interfere with AP courses offered by high schools?
- Is the state paying twice for students enrolled in community college, college, and university courses?

Should tuition be waived for high school students taking community college and university courses?

Should community college, college, and university courses carry the same level of grade point weight that AP and IB courses carry?

Overlap

At a general level, some of the types of courses described above do seem to overlap. They are all designed to provide a more challenging curriculum to high-achieving high school students than do standard high school courses, thus enabling them to realize their learning potential more fully and to prepare better for college than would a standard high school curriculum.

But the courses also differ in significant ways. Honors and International Baccalaureate courses are more challenging versions of high school courses. (IB is actually keyed to the expectations of European universities, which demand a somewhat higher level of coursework preparation than does the typical college or university in the US.) In contrast, Advanced Placement courses are designed to be college level courses. Community college, college, and university courses offered through concurrent enrollment programs <u>are</u> college level courses, not more rigorous high school courses. The purpose of AP and concurrent enrollment courses is partly to prepare students better for college, but partly to actually give students a head start on college.

In the view of the Education Cabinet, each type of course seems distinctively well-suited to certain types of students. The variety of such courses may seem confusing at first, but a closer look shows that the array of different possibilities enables high-achieving students in different circumstances to find challenging courses to suit their needs.

If we understand the intent of the General Assembly correctly, however, the more specific questions about overlap among the programs are (a) whether some of these programs interfere with courses offered by a more appropriate level of the education system, and (b) whether the state is, in effect, paying twice for services to a given student -- once to the local school district in the form of Average Daily Membership (ADM)-driven allocations, and once to the community college or university in the form of Full Time Equivalent (FTE)- or Student Credit Hour (SCH)-driven allocations.

Interference?

The main instance where interference has been alleged is between community college courses and Advanced Placement courses. That is, some local school district administrators claim that Concurrent Enrollment courses offered by community colleges compete with their own Advanced Placement courses, undermining their ability to enroll students in sufficient numbers to make it practical to offer AP courses.

The Education Cabinet finds this charge somewhat puzzling. The operating manual that governs Concurrent Enrollment -- adopted jointly by the State Board of Education and NC Community Colleges -- specifies that a student may enroll in a community college course only if no similar course is offered by the student's high school – a provision that is clearly consistent with the principle of "mission-appropriateness" defined earlier in this report.

A corollary of that principle is that, "Each sector has both first claim on and first responsibility for students at a certain level of education development." High schools have first claim on and first responsibility for students who are pursuing a high school diploma. Community colleges may supplement the curriculum offered by high schools that cannot or do not offer AP courses. In doing so, community colleges make appropriate, high-quality programs accessible to students from small or poor districts, thus increasing equity in the provision of educational opportunities.

Further, local school districts already have adequate means of ensuring that community colleges do operate within limitations set out in current state policy. The operating manual for Concurrent Enrollment specifies that

> "Cooperative programming is intended to enhance educational choices for high school students and should not be considered a mechanism for shifting responsibility for courses or programs within the accepted mission of one educational agency to the other. Cooperative program agreements between community colleges and high schools must be developed in accordance with this

premise, and the resulting plans for offering courses should reflect this philosophy."

In the view of the Education Cabinet, this means that, if a school district objects to a community college's enrolling high school students who might otherwise take AP courses offered by its high schools, the district can and should rule out the practice by emphasizing in its agreement with the community college that by state policy, no high school student may take a community college course when an equivalent AP course is offered.

In fact, beyond the general prohibition on enrollment in community college courses that compete with courses offered by the high school, there is a second and more specific check on inappropriate recruitment in individual instances. That is, the joint operating manual for Concurrent Enrollment also provides that a student must have the approval of his or her high school principal to enroll in a community college course.

Thus, if high school students in a district are enrolling in community college courses in preference to AP courses, they must be doing so with the approval of the district and its high school principals. Some local school districts may find it difficult at times to resist pressure from parents to permit students to enroll in community college courses in preference to AP courses. But to give in to such pressure violates state current state policy.

It seems difficult to justify imposition of additional state policies to restrict enrollment in community college courses when state guidelines already exist and when local officials (a) already have the power to correct the problem, and (b) are in a better position to make decisions based on a knowledge of individual students and their circumstances than are state level policy makers.

It may also be argued that the possibility that community colleges may offer college courses where no AP courses are offered – whether in smaller districts or larger ones – creates an incentive for local school districts to organize AP courses. If districts do not, they may lose some of their best students for a part of the day, as well as some of their parents' allegiance and support.

In the opinion of the Education Cabinet, community college courses do not now overlap or compete with AP courses in a way that school districts cannot control more effectively than could state level policy makers.

Double Payment?

A second type of concern about overlap among these programs is financial -- whether the state is paying twice for high school students who enroll in community colleges and universities.

Under most circumstances, community colleges and universities do receive state allotments based on Full Time Equivalents or Student Credit Hours for students enrolled in their courses (on a pro-rated basis, of course). And unless a given student is taking more than half of his or her coursework outside the high school, the local school district continues to draw Average Daily Membership-based funds for the student.

The single circumstance when community colleges and universities derive no state revenue from courses offered to high school students is when a course is taught at the high school by a high school teacher who does so under contract to and under the supervision of the community college or university. Community colleges rarely offer such courses, but some campuses of the University have thriving programs that use this approach.

In the view of the Education Cabinet, there seems little question that when community college or university faculty teach courses to high school students, the colleges and universities should receive state funds for serving high school students in their courses. After all, they do provide the instructional service in these cases.

Further, when an individual student here or there takes a college course rather than a high school course, the local school district's costs are not actually reduced significantly. Many fixed costs remain exactly the same. Nor are schools generally able to save on personnel or classroom costs by offering fewer classes. So it would seem unfair to cut allocations to local school districts for students who take only a course or two through Concurrent Enrollment.

In the case of Huskins classes that are taught by community college faculty, the situation is a little different. By teaching a Huskins course, a community college does relieve the local school district of the personnel costs of offering a whole class. But most Huskins classes of this type are organized specifically because a local school district cannot afford or identify appropriate teachers to offer AP courses. Would it really be sensible to cut ADM-based revenues to districts that need the assistance of community colleges in order to make appropriately challenging courses available to their high-achieving students, when these districts are already strapped for funds?

The Education Cabinet thinks not. If ADM were withheld from local school districts or local school districts were required to reimburse community colleges whenever they collaborate with community colleges to organize Huskins courses, it seems likely that the poorest districts would be strongly tempted to terminate the agreements that make these courses available to their students. This would represent a step backward for cooperation across levels of the education system. It would reduce rather than increasing seamlessness in the system. Nor could poor districts afford to offer AP courses instead of the community college courses. If a school district had the resources to offer an AP course, then presumably it would do so in the first place.

So the net effect of withholding ADM in these cases would be to reduce rather than to increase equity in educational opportunity – students from small and poor districts would

lose opportunities, while students from larger and wealthier districts would continue to profit from the AP courses their districts can offer.

Thus, while there may be some degree of "double payment" in current arrangements, the Education Cabinet believes that the revenues thus provided represent a warranted investment in ensuring seamless access to challenging courses on an equitable basis.

Tuition Waivers

At present, community colleges do waive tuition for high school students in both Huskins and Concurrent Enrollment courses. It may be plausibly argued that they lose money in the bargain. That is, the Community College system estimates that it costs a community college about $4,000 to offer a Full Time Equivalent in coursework. Community colleges receive about $3,300 from the state for each FTE. Ordinarily, they make up the balance (about $700+) by charging tuition. They receive no tuition from high school students. So they are losing over $700 per FTE of coursework for high school students. They generally make up the "loss" from dollars that would otherwise revert to the state at the end of a budget year. As budgets tighten, that margin grows narrower.

Campuses of the University charge tuition both to individual students and to whole classes enrolled through High School Extension. Campuses of the University and school districts generally make scholarship assistance available to students who cannot afford to pay tuition. Three campuses with special High School Extension programs offer virtually all of these courses. The great majority of high school student enrollments in University courses come through these programs, which are actually taught by high school faculty who are selected, trained, and supervised by university faculty members. As indicated earlier, such courses generate no SCH-driven allocations from the state. So tuition is the sole source of revenue available to underwrite the costs of offering these programs -- the costs of selecting, training, and supervising the high school teachers, along with the costs of administering the program.

At present, the University is prohibited from waiving tuition except in instances that are expressly authorized by statute, and there appears to be no such statutory authorization to waive tuition for high school students. The position of the University is that tuition should not be waived. The University relies on tuition to defray a substantial share (about 20%) of the costs of offering a course. And if tuition were waived, these costs would have to be covered by revenue from some other source, the most obvious possibility being an increase in the state appropriation.

In the view of the Education Cabinet, existing arrangements -- in which Community Colleges waive tuition but the University does not -- create an appropriate set of incentives. That is, the financial incentive is for high school students who wish to take college courses to turn first to community colleges, and to have recourse to University campuses only when there is a reason that is sufficiently compelling to offset the financial incentive. It seems appropriate for community colleges to be the first option in

such situations. University campuses have traditionally yielded to community colleges in situations of actual or potential conflict. Current policy regarding tuition seems consistent with this tradition, as well as with the principle of mission-appropriateness.

So the position of the Education Cabinet is that community colleges should continue to waive tuition for high school students, while campuses of the University should continue to charge tuition, with appropriate scholarship assistance available for students who cannot afford to pay tuition.

Grade Point Weighting

State policy concerning grade point weighting for honors, Advanced Placement, and International Baccalaureate courses developed in response to 1992 legislation calling upon the DPI to create a standardized transcript, with the grade point average to be "calculated by a standard method to be devised by the institutions of higher education." The current policy, recommended by a committee of college, university, community college, and public school representatives and instituted by the State Board of Education in 1994, provides that students in honors courses earn one extra grade point and students in AP and IB courses receive two extra grade points beyond the points that a standard course would carry.

Thus, a grade of D ordinarily earns one point, a C two points, a B three points, and an A, 4 points. But under current state policy, a student who makes a C in an honors course would earn one extra grade point, bringing the points earned to three, or the equivalent of a B in a standard course. Advanced Placement and International Baccalaureate courses receive two extra grade points. So a student who makes a C in an AP or IB course would earn four points, the equivalent of an A in a standard course.

The policy does not call for any additional grade points to be awarded for community college, college, or university coursework.

Some additional issues concerning fine arts and magnet school honors courses were worked out after adoption of the 1994 policy, but for several years the sectors have not been able to reach full agreement on a series of other issues, including the weighting of community college, college, or university courses. The most recent effort to do so was made by the joint committee of community college and public school representatives which submitted its recommendations last April. Uncertainty about some of those recommendations – including but not limited to the recommendations about the weighted grade point average – prompted the Joint Education Oversight Committee to ask the Education Cabinet for the present study.

There are two distinctly different considerations to take into account when making decisions about policy on grade point weighting for unusually challenging courses. One is the need to encourage high-achieving students to take such courses in preference to standard courses, where they might make better grades with less effort. Grade point weighting provides an incentive to take challenging courses -- or at least reduces the

disincentive to take such courses. But a second factor must also be considered. Extra grade points also give some students an advantage in gaining admission to selective colleges and universities. To assure that the extra points are actually and equally justified in each instance -- in keeping with the principles of accountability for quality and of equity or fairness to all students -- effective quality controls of some type must be in place.

There are at least five ways that policy makers might assure that each type of course reviewed here really is sufficiently challenging in practice to warrant additional grade points:

(1) establish pre-requisite levels of knowledge and skill for students to be admitted to a course

(2) specify the higher level of content (knowledge and skill) to be taught in the course

(3) set special requirements for teachers qualified to teach the course

(4) require special professional development or training to teach the course, and

(5) impose and external examination to ensure that students have actually mastered the content specified for the course.

Below we consider the degree to which the five approaches to quality assurance are now in effect for each type of course.

Honors Courses

At present, while local school districts may set policies to assure that honors courses are indeed challenging, no specific state level policies are in place to assure high and uniform quality in the honors courses offered by school districts across the state. No State Board policies establish prerequisites for students to enroll in such courses. The DPI does not offer a Standard Course of Study specifically designed for honors courses, nor End-of-Course examinations designed to measure the higher levels of knowledge and skill they are intended to cultivate. Local districts often report that they assign their best teachers to teach such courses, and though there is little reason to doubt these reports, there are no specific State Board or other statewide requirements concerning preparation, experience, or special training for teachers of honors courses. In the absence of state policy to assure quality in these ways, the rigor of honors courses may vary widely across schools and districts.

Advanced Placement Courses

No state policy currently establishes pre-requisites for enrollment in AP courses. For each AP course, the College Board distributes a packet of materials that outlines the content to be covered in the course and suggests materials including textbooks and ancillary materials. Through the Educational Testing Service, the College Board offers a standardized examination for AP courses. While a student must earn a certain grade on the examination to obtain advanced placement credit at colleges and universities, students are not required to pass nor even to take the examination in order to gain the two additional grade points that an AP course carries in North Carolina. There are no special preparation requirements (e.g., coursework or degrees) for teachers of AP courses. Special training is required, but the training may be for as little as one day.

International Baccalaureate Courses

As with AP, in North Carolina, no state policies establish pre-requisites for enrollment in an International Baccalaureate course. The International Baccalaureate Organization does specify the content of such courses, and does offer examinations that a student must pass in order to get credit for a course . The IB Organization also sets requirements for teachers to teach in the program, requires special training for them to do so, and carries out an on-site accreditation review for each program.

Community College Courses

The prerequisites for Huskins and concurrent enrollment courses include having reached a certain grade or age (grade 9-12 for Huskins, age 16 for concurrent enrollment) and having both adequate academic ability and social maturity to do college level work, as judged by the high school principal and confirmed by the district superintendent and community college president. (In practice, principals, superintendents, and presidents often delegate the judgment to a counselor or other staff member familiar with the student, but they bear ultimate responsibility for enrollment decisions on a student-by-student basis.)

Content for Huskins and Concurrent Enrollment courses is specified in a brief paragraph in the Common Course Library, the Community Colleges' chief mechanism for ensuring standardization of courses across all colleges in the system.

No external examinations are required for courses offered through the Huskins or Concurrent Enrollment programs. To teach these courses, an instructor must have at least thirty hours of graduate coursework (beyond the bachelor's degree), eighteen of which must be in the subject matter to be taught. No additional special training is required.

College and University Courses

Traditionally, the rigor of college and university courses is assured largely through policies of the individual campuses concerning review of course content by faculty curriculum committees and concerning faculty qualifications. Campus-level controls of this sort are reinforced by accrediting bodies, including the Southern Association of Colleges and Schools.

In summary, none of the especially challenging courses for high school students makes use of all five types of quality controls. Controls seem weakest for honors courses. The others rely strongly on one type of control but either have weak versions of the other controls or do not use them at all.

It has been argued the best evidence concerning the relative quality of AP courses compared with community college courses would be data on how students who have taken the two types of courses subsequently fare in college. The suggestion that the relative rigor of the two sets of courses could be tested empirically is an intriguing one, but it presents some major research design challenges. For the later college performance of students who have taken the two types of courses to be regarded as good evidence concerning the quality of the courses themselves, one would have to be assured that differences in the students' college performance resulted from the quality or rigor of the courses, and not from other causes, such as initial differences in family background, quality of prior education, or motivation between the two sets of students. Unless the study could control for these differences, it could not produce convincing evidence concerning the relative rigor of AP versus community college courses. A study that did control for such differences would be difficult to design properly, difficult to develop data for, expensive, and time-consuming.

In the absence of evidence from a sound study, it seems difficult to justify the differential treatment of AP and community college courses included in the Articulation Agreement. Each can make certain claims to quality assurance that the other cannot. Neither seems to have a clear advantage when it comes to pre-requisites. AP courses have well-developed syllabi and course material recommendations, while the content for community college courses is not set out in such detail or subjected to the same level of review and refinement. AP courses have a reputation for rigor, while community college courses have been recognized as acceptable through the Articulation Agreement. The required preparation for community college course instructors is stronger than that for AP courses. AP teachers are required to have special training, but the training is often no more than a single day's worth. Neither AP courses nor community college courses now require an external examination, though one is available for all AP courses.

In light of the review presented above, it seems difficult to justify the present distribution of grade points. Accordingly, the Education Cabinet has reached consensus that the current policy on grade point weighting should be revised to improve accountability for quality and increase equity while preserving the incentive for students

to take challenging courses. The details of a new policy have not yet been worked out. Input is currently being solicited. Positions on which the education community comes to consensus will be incorporated, and all feedback will be considered carefully. The proposal currently under consideration may be outlined as follows:

- Honors Courses. The preliminary proposal identifies courses that have End-of-Course examinations and would be eligible to earn an extra grade point. To earn the extra point, students would have to meet or exceed a minimum EOC examination score to be set by the Education Cabinet. There remains disagreement about this, however. Some members of the Education Cabinet believe that weighting also needs to be given for rigorous elective courses, for high level mathematics and science courses, and perhaps for other high level courses for which no EOC examination is currently available. The Education Cabinet will work to accommodate these courses in the final proposal in a manner consistent with the need both to standardize honors courses and to encourage high levels of student performance across all districts and schools.

- Advanced Placement and International Baccalaureate Courses. For taking and passing an AP or IB course, a student would earn one additional grade point. Students who take and pass and AP or IB examination with a certain minimum score would earn an additional grade point. Offering a single extra point for taking an AP or IB course should be sufficient to offset the extra demands and risks that taking such a course places upon a student. A second extra point would reward a high level of performance -- the same high level across all districts and schools.

  It is essential to note that equitable implementation of the examination requirement would require state funding of AP and IB examinations -- at least for those students whose families cannot afford them.

- Community College, College, and University Courses. As with AP and IB courses, students would earn a single extra grade point for taking and passing a college level course offered by a community college, college, or university. (In the case of community college courses, these include only those courses included in the Joint Articulation Agreement with the University.) Where an appropriate AP exam exists for such a course, a student could earn a second extra point by taking and passing the examination at the same minimum level required for students who take AP courses and wish to earn a second extra point.

This configuration of requirements for extra grade points would strengthen the controls on quality and the incentives for high-achieving students not simply to take but also to work hard in especially challenging courses. It would apply the principle of accountability for quality in an even-handed, equitable way across all sectors of the education system. It would also provide more equitable access for students. Students from small, poor

districts could earn the same level of extra points through community colleges that students from more advantaged districts can earn through AP courses.

There are, of course, challenges to such a policy direction. Many details remain to be worked out. It is far from perfect, but offers the promise of a substantial improvement over the current policy.

Developmental Courses

In its April, 2000 report to the General Assembly, the Joint Task Force on the Cooperative High School Program recommended that the scope of the Cooperative High School Program be expanded to permit high school students to take so-called "developmental" courses at community colleges.

It is important to stress that the expansion would extend to developmental courses only under certain very limited circumstances. Students who are still in high school would not be permitted to enroll in community college courses simply to make up deficiencies in their skills resulting from poor performance in high school courses. The community colleges do not wish to become general-purpose providers of developmental or remedial coursework for high school students. Nor would such a function be appropriate to their mission. Rather, enrollment by high school students in developmental courses at community colleges would be restricted to cases in which the high school student needs to take a certain course before he or she may begin a regular college level course of study, and that course is not available at his or her high school.

In the view of the Education Cabinet, expansion of the Cooperative High School Program to this specific circumstance seems consistent with the principle of seamlessness without compromising in any way the principle of mission-appropriateness. That is, students would be able to use the resources of the next level of the system (community college) while also respecting the high schools' first responsibility for their education and first claim on them as clients. But this should not be construed as a precedent for opening the door wider to other uses of developmental community college courses by high school students.

Distance Learning Options

In addition to issues affecting the three types of courses discussed above, the General Assembly also directed the Education Cabinet to "Consider distance learning options." To do so systematically, we must address three main questions:

> What is the potential of distance education to increase the educational opportunities available to dropouts and "topouts"?
>
> To what extent is that potential now being exploited?
>
> What should be done to exploit the potential more fully?

At this point, the Education Cabinet has only partial answers to these questions. What we know is summarized below, along with some of the remaining puzzles and gaps in our knowledge. This discussion provides a framework for the next step in specifying how the potential of distance learning technologies can be realized more fully for students who are at risk of dropping out or have already dropped out, and for the high-achieving high school students we refer to as "topouts."

Potential

We assume that the primary distance learning options to be considered are modern telecommunications and information technologies, including

- broadcast television, often delivered via one-way satellite-based transmission, sometimes supplemented by two-way audio to permit learners to pose or respond to questions

- interactive television, generally delivered via some form of compressed video technology, with two-way video as well as audio, and

- the World Wide Web, delivered via the Internet.

The potential of these technologies to expand learning opportunities for most students, including dropouts and topouts, is enormous. But it in thinking about the applications of the technologies, it is essential to bear in mind that education is not simply a matter of presenting or providing access to information. Obviously, learning cannot occur without information that is new to the learner, and good presentation is essential. These media offer exciting new capabilities to represent information in ways that support learning. But no matter how clear or compelling the presentation is, for real learning to occur, the learner must process the information -- must reconstruct or assimilate it, must make it his or her own, must transform it into knowledge and skills that he or she can use in a variety of contexts. Some learners may be capable of processing new material in order to learn strictly on their own, but most of the time, most of us need help in organizing our learning, in making sense of the material, in clearing up confusions, in knowing how to use new ideas and new skills to understand more complex phenomena and solve new problems. This is especially true of most dropouts, but when it comes to really challenging coursework, it is probably true of the ablest and best-motivated students, as well.

The great strength of broadcast television is presentation – making solid and well-presented information available to large numbers of students at affordable costs. But even with telephone and/or Internet connections back to instructors, interaction between broadcast television instructors and students is severely limited. Many argue that teacher-student and carefully guided student-student interaction are essential to helping students process the information they are presented – to learn it effectively.

Teachers or facilitators in receiving classrooms can supplement the instruction provided via broadcast television, but to do the job well, they must be well-versed in the content and how to communicate it effectively. The better prepared they are to supplement broadcast instruction, the more expensive teachers or facilitators become. And if they were very well-prepared to teach the course themselves, it is not clear why the broadcast television instruction would be needed. At the very least, there is a question about how instruction centered on broadcast course presentations can provide adequate interaction to support learning by any but the most highly motivated and independent learners.

Two-way interactive television offers greater potential to support interaction, but cannot serve such large numbers of students, and is thus more expensive on a per-student basis. That is, most two-way interactive television facilities connect no more than five classrooms – the originating classroom and four remote classrooms. And most teachers who have used such systems agree that five sites is probably the upper limit on their own instructional capacity, anyway. Thus, while two-way interactive television can extend the reach of a good instructor, there are limitations on that reach.

Web-based coursework has strengths and limitations of its own. In principle, it has greater reach than broadcast television. As the power of computers grows and Internet speeds increase, Web-based courses can make use of animation, audio and video clips, and other presentational devices in addition to textual material. It can also support teacher-student and student-student interaction, though here as with interactive two-way television, there are limits on any instructor's capacity to interact with students, and while two-way audio and compressed video interaction is possible, most interactions are currently limited to typed messages.

Having spoken briefly to the potential and limitations of the technologies, we turn to the question of current use in North Carolina.

Current Use

Broadcast Television Courses

The oldest and most widely used of the communications technologies is broadcast television. In North Carolina, the principal provider of satellite-based courses for high school students is the United Star Distance Learning Consortium. The United Star Distance Learning Consortium – sometimes called StarNet -- is a nonprofit educational consortium funded by the US Department of Education and composed of five state departments of education – North Carolina, Florida, Illinois, New Mexico, and Texas. StarNet is designed to broaden access to and improve instruction in mathematics, science, and foreign languages, as well as other subjects such as literacy skills and vocational education. StarNet also provides professional development opportunities for K-12 teachers and administrators.

StarNet enables many students across North Carolina to take advanced courses in subjects otherwise unavailable in their high school. During the 1998-99 school year, fifty-two high schools in thirty counties used StarNet credit courses for their students. Forty-six of these schools had students enrolled in Latin classes. Other courses included Spanish, German, French, Marine Sciences, Calculus, Physics, Anatomy/Physiology, Sociology, Psychology, Music History, and Web Mastering. Because these are generally designed for high-achieving students, some local districts designate StarNet courses as honors courses.

StarNet also offers three Advanced Placement courses: AP Literature and Composition, AP Calculus, and AP Psychology. In 1999,the NC Department of Public Instruction paid tuition for up to 1,300 StarNet students and maintenance fees for a maximum of 189 sites. Participating local school districts provide a classroom facilitator, phone, and Internet access to support use of StarNet courses.

Broadcast television has and continues to provide many high-achieving students with learning opportunities not otherwise available to them. The great strength of broadcast television is the capacity to provide broad access to information. But as we pointed out earlier, the presentation of information is only part of the task of education. Helping students process the information into knowledge and skills may be the greater challenge. Telephone and Internet connections enable some students to pose questions or respond to StarNet instructors, but knowledgeable observers say that these interactive capabilities are severely limited. Some local facilitators are able to answer students' questions or even to provide supplementary instruction, but others are limited to such tasks as making sure the technology is working properly and that students are in place and paying attention.

Interactive Television Courses

According to knowledgeable observers, the second most widely-used of the communications technologies is two-way interactive television, which in North Carolina is delivered principally through the North Carolina Information Highway. No comprehensive figures are readily available on exactly how many North Carolina students now take courses via interactive two-way television.

The General Assembly initiated the North Carolina Information Highway in 1994. The Information Highway is a fiber optic network capable of transmitting two-way audio and two-way full motion video. Its primary purpose was to reduce the financial and curricular inequities of educational opportunities in the state. Currently, the Information Highway has over 140 sites connecting many state agencies, high schools, community colleges, colleges, and universities.

The North Carolina School of Science and Math (NCSSM) is one of the original and most respected providers of courses via the North Carolina Information Highway. NCSSM provides advanced math courses, such as Pre-Calculus, Advanced Calculus, and AP Statistics, and other advanced courses including Science of the Mind and AP US History.

In addition, NCSSM offers content-specific short enrichment experiences that can be related to regular course work. At each remote site utilizing a NCSSM course, an adult facilitator partners with the course teacher.

Several local school districts also offer coursework via the Information Highway. A common arrangement is for a teacher in one site to teach students in up to four additional sites, as well. Some classes reach across local district boundaries to involve students from several cooperating districts.

While local school districts use the Information Highway, institutions of higher education tend to rely primarily on the North Carolina Research and Education Network (NC-REN), operated by NCMC (formerly the North Carolina Microcomputing Center), a located in Research Triangle Park. The NC-REN Video Network is a multi-site, multi-channel, interactive network connecting over 19 universities, medical schools, and research organizations in North Carolina. The network operates analog video and audio used for face-to-face communications in credit coursework, continuing education collaborative conferences, interactive seminars, and workshops. Participating institutions manage more than 50 interactive video facilities across NC-REN. The network interfaces with the North Carolina Information Highway, and thus could be used to deliver two-way interactive courses to schools that have connections to that network.

Although the Information Highway has expanded opportunities for high-achieving topouts in some districts and schools, the costs of the technology required to use the system has proven too expensive for many of the poorest and more remote districts in the state. Thus, many of the students to whom the Information Highway was intended to extend greater opportunities have yet to profit from it. Whether further investment in the Information Highway would be the best way to make opportunities more widely available seems to be controversial. Its supporters remain convinced of the power and promise of the technologies chosen by the Information Highway. Others argue that other, cheaper technologies could do the job adequately and broaden access greatly. In the view of the Education Cabinet, the best way to expand and improve instruction via interactive two-way television is not clear at this point.

Web-Based Courses

According to knowledgeable observers, Web-based courses are the newest and thus the least-used of the new technologies, both in North Carolina and across the country. Because the courses are so new and because they are used on such a dispersed basis, no one knows exactly how many North Carolina students are now taking courses via the Web.

There are several providers of Web-based courses, both within North Carolina and in other states. Perhaps the most familiar to North Carolinians is the Web Academy. The Web Academy was developed in 1998 to provide on-line Internet-based distance learning for Cumberland County students in summer school and students who had been suspended from school for an extended period, wanted to graduate early, needed

additional credits, or needed remedial work. The Web Academy (www.ccswebacademy.net) offers approximately 70 courses in Cumberland County and has provided courses to other North Carolina school districts including Brunswick, Cabarrus, Caldwell, Carteret, Catawba, Chapel Hill/Carrboro, Chatham, Clinton City, Craven, Edenton/Chowan, Forsyth, Greene, Guilford, Harnett, Hoke, Iredell/Statesville, Johnston, Kannapolis City, Kings Mountain, Lincoln, Moore, Nash-Rocky Mount, New Hanover, Northampton, Orange, Pamlico, Pender, Richmond, Roanoke Rapids City, Robeson, Union, Wake, Watauga, Wayne, Wilkes, and Wilson. Web Academy faculty are trained to facilitate or conduct courses. While there is no cost for Cumberland County students, a $400 per semester course cost is assessed for each out-of-district student. Participation varies from semester to semester. Approximately 400 students enrolled in the Web Academy in the Fall of 2000. The Web Academy offers courses ranging from basic mathematics and reading competence to honors and AP courses. The seven AP courses offered are AP Biology, AP Chemistry, AP Physics, AP Language and Composition, AP Literature and Composition, AP U.S. History, and AP European History. Since AP courses are two semester or full year courses, the cost for each student outside of Cumberland County is $800.00.

North Carolina students are also taking Web-based courses offered by other providers, including the Concord Consortium Virtual High School and APEX On-line.

Based in New England, the Concord Consortium Virtual High School (VHS) is a collaborative among high schools across the United States and abroad. VHS (http://vhs.concord.org) allows schools to participate in the consortium in exchange for contributing teaching time. Each school can enroll up to 20 students for each course a teacher contributes. VHS offers 55 courses in all curriculum areas. Additionally, there are three AP courses available: AP Statistics, AP European History, and AP Economics. VHS has expanded from 28 schools in 1996 to approximately 200 schools in 2000-2001. There are 32 states, the District of Columbia, and 19 international sites in the VHS network. In North Carolina, the following school districts participate in this consortium: Catawba, Durham, Weldon City, Mecklenburg, Northampton, Onslow, Orange, Robeson, Washington, and Wayne.

Five North Carolina districts (Dare, Charlotte-Mecklenburg, Newton-Conover, Onslow, and Rowan-Salisbury) have also contracted with APEX On-Line, a commercial vendor of Web-based courses. APEX On-Line (http://www.apex.netu.com) was begun in the Pacific Northwest in 1997 for profit and offers on-line courses, tutorials, teacher training, and support for AP courses. Currently, APEX offers 7 two-semester courses and 3 one-semester courses. Each on-line course includes instructor support, on-line resources, and practice exams. The courses are $395 per semester per student. Additionally, APEX has an Exam Review that includes diagnostic assessments, personalized study plans, multimedia tutorials, and study sessions.

An interesting model for North Carolina to consider is the Florida On-Line High School. The Florida On-Line High School (FOHS) [http://fhs.net] was developed in 1996 as a collaborative initiative between two school districts. FOHS serves over 5,000 students

across the state of Florida free of charge. The virtual high school offers more than 50 courses in the areas of: business and computer technology, computer education, family and consumer sciences, foreign language, language arts, mathematics, physical education, research and critical thinking, science, and social studies. The high school currently offers Advanced Placement courses in Biology and Calculus and has additional AP courses under development. Originally, course development costs at FOHS ranged from $50,000 - $150,000 per course. The Florida Legislature has provided at least $9 million to support course development and operation of the On-Line High School.

Future Steps

The Education Cabinet itself has limited capacity to work out the specifics of technology applications, including the use of distance learning technologies to provide expanded learning opportunities to dropouts and topouts. But one of the first major actions of the Education Cabinet was to support the first School Technology Users' Task Force in 1995. The report of that Task Force, issued in October of that year, called for development of a State Technology Plan and creation of the School Technology Trust Fund. A five year technology plan was developed, and local school districts were required to develop their own local plans within guidelines provided by the state plan. A second State Technology Plan was completed last year (2000). The School Technology Trust Fund was first funded in 1996. Though funding has not been provided at levels originally envisioned by the Cabinet, local districts have received a total of approximately $137 million, and much of the credit for the recent progress in putting technology into place should go to the Trust Fund.

A second School Technology Users' Task Force, focused principally on teacher preparation and professional development, was convened in February of 1999. The report of the second Task Force led to a $1.5 million federal grant, with matching funds from The University of North Carolina and SAS Institute, to improve the capacity of university faculty to train teachers in effective uses of information technologies.

Given the success of the two prior School Technology Users' Task Forces, the Education Cabinet plans to convene a third Task Force to recommend what specific steps the state should take to assure fuller realization of the potential of distance learning technologies in the state, with a special focus on the needs of high school dropouts and topouts.

There are three major requirements for effective utilization of distance education technologies: (1) availability of appropriate, affordable, high quality courses, (2) state level infrastructure to deliver courses, and (3) local district infrastructure and capacity to use them well, including personnel and organizational arrangements as well as technology infrastructure.

Accordingly, the Education Cabinet would like to ask the third School Technology Task Force to address the following questions:

Course Availability

- Is an adequate supply of affordable, high quality courses for dropouts and topouts already available? Are they well-aligned with appropriate content standards? Are there gaps in the current supply of courses?

- To what extent should the state invest in the development of new distance learning courses, and to what extent should we use courses available from existing sources within the state (e.g., The Web Academy), from other states (e.g., Florida), from private non-profits (e.g., The Concord Consortium), or for-profit vendors (e.g., APEX Online)?

- What mechanisms should be put in place to assure that distance education courses are of high quality and are aligned with appropriate standards (e.g., NC Standard Course of Study, Advanced Placement Examinations)?

- More specifically, should the state use a similar approach to the approach that it uses to review and adopt textbooks?

State Level Infrastructure

- What mix of satellite broadcast, interactive television, and Web-based coursework should the state support?

- What are the principal unmet needs for technology infrastructure required to support distance learning for high school students – especially for dropouts and topouts?

- What steps should be taken to meet these needs most effectively, and what would it cost to take each step?

- How might these steps be distributed over time – can they be taken in a series of practical, affordable steps?

Local District Infrastructure and Capacity

- Given your responses to the questions about state level infrastructure, what are the principal unmet needs for infrastructure and capacity to support distance learning in local districts – including personnel and organizational arrangements as well as technology infrastructure?

- More specifically, what configurations of teachers or facilitators should be used to assure that students in distance learning courses have appropriate technical and instructional support? How should appropriate training be assured for them?

- How should student learning be assessed in distance education courses – especially those for which no End-of-Course or Advanced Placement Examinations exist?

- How can we assure that poor and remote rural districts can both afford and successfully implement distance learning approaches?

If the General Assembly concurs, the Education Cabinet will convene a third School Technology Users' task Force to address these questions, and will report back on the recommendations developed by the Task Force.

APPENDIX A

submitted. The State Board shall submit the performance report for the 1999-2000 school year to the Joint Legislative Education Oversight Committee by December 15, 2000. Subsequent performance reports shall be submitted to the Joint Legislative Education Oversight Committee on an annual basis by October 1."

Section 9.2.(b) The General Assembly believes educational programs for high school students should provide student accountability, program accountability, access, and efficiency. Therefore, the Education Cabinet, created under G.S. 116C-1, shall study public school, community college, and university programs offered to high school students. These programs include the cooperative high school program, the adult high school diploma program, advanced placement courses, honors courses, and university courses offered to high school students. The Cabinet shall do the following:

(1) Examine these programs for overlap.
(2) Consider which education entity is the most appropriate one to offer each program.
(3) Consider distance learning options.
(4) Examine whether there should be tuition waivers for high school students who take courses at community colleges or universities.
(5) Determine whether there should be a minimum age for participation in the adult high school program.
(6) Determine the feasibility, advantages and disadvantages, procedures, and costs for requiring students who participate in the adult high school program to take tests required of high school students taking the same courses.
(7) Evaluate the recent recommendations concerning the cooperative high school program that were made to the Joint Legislative Education Oversight Committee by the State Board of Education and the State Board of Community Colleges. In particular, the Cabinet shall determine whether students should receive weighted credit on their high school transcripts for college level courses taken at community colleges, universities, or colleges, and whether this program is an appropriate venue for developmental courses.

The Cabinet shall report its findings, including any recommendations, to the Joint Legislative Education Oversight Committee by January 8, 2001.

Section 9.2.(c) This section is effective when it becomes law.

Requested by: Representatives Boyd-McIntyre, Oldham, Rogers, Easterling, Redwine, Senators Lee, Dalton, Plyler, Perdue, Odom

BUDGET REALIGNMENT TO IMPLEMENT REORGANIZATION AUTHORIZED

Section 9.3. Notwithstanding G.S. 143-23 or any other provision of law, the State Board of Community Colleges may transfer funds within the budget of the Community Colleges System Office to the extent necessary to implement the departmental reorganization plan recommended by the President of the North Carolina Community College System and adopted by the State Board in September 1999.

The State Board of Community Colleges shall report on its implementation of this section to the Joint Legislative Education Oversight Committee, the chairs of the Education Appropriations Subcommittees of the House of Representatives and the Senate, and the Fiscal Research Division within 30 days of completion of the budget realignment.

Requested by: Representatives Boyd-McIntyre, Oldham, Rogers, Easterling, Redwine, Senators Lee, Dalton, Plyler, Perdue, Odom