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ABSTRACT

This combined report examines the obstacles that Virginia students encounter as they move from high school through college and what colleges and universities might do to facilitate their progress. Part 1 of the report responds to House Joint Resolution No. 211, which asks Virginia's Council of Higher Education to study the transition between high school and college. Programs are discussed that are designed to facilitate the transition, including an Advanced Placement Program, the Virginia Community College System's Dual-Enrollment Program, the International Baccalaureate, and dual-credit courses offered by four-year institutions. Part 2 responds to the Appropriations Act Item 151 that asks the Council to examine the feasibility of a 3-year college degree. It concludes that high school seniors who take advantage of the previously described programs can complete the degree in 3 years. Part 3 responds to the House Joint Resolution No. 142 that addresses barriers to college graduation including elements in the student's background, choices students make, non-academic pressures on students, and the role of decreasing institutional resources. Appendices provide the text of House Joint Resolutions 142 and 211, and the Appropriations Act Item 151. (Contains 14 references.) (GLR)

THE CONTINUUM OF EDUCATION

Response to House Joint Resolution No. 211

Appropriations Act Item 151

House Joint Resolution No. 142

STATE COUNCIL OF HIGHER EDUCATION

November 10, 1992

TABLE OF CONTENTS

EXECUTIVE SUMMARY

In response to House Joint Resolution No. 211 (Delegate Cooper), Appropriations Act Item 151, and House Joint Resolution No. 142 (Delegate Harris), the Council of Higher Education has prepared a combined report on the obstacles that students encounter as they move from high school through college and what colleges and universities might do to facilitate that movement.

Part I

Part I of the report responds to House Joint Resolution No. 211, which asks the Council to study the transition between high school and college. Virginia has a commitment to make that transition as smooth as possible. The major programs that do this are the "tech prep" initiatives, just now being developed, and various programs in which students receive both high school and college credit for courses offered by high schools or colleges: Advanced Placement (AP), the VCCS Dual-Enrollment Program, the International Baccalaureate (IB), and dual-credit courses offered by four-year institutions. After describing and comparing the various dual-credit options, the report makes the following recommendations:

Recommendations

- As many as possible of the various forms of college-credit work should be made available to all high-school students in Virginia.

- Colleges and universities that require a grade higher than three on any AP examination should reexamine that requirement.

- Institutions that do not grant college credit for the successful completion of IB coursework or the IB diploma should reconsider that policy.

- Virginia's community colleges should reexamine the admissions requirements and faculty credential requirements and evaluation processes in their Dual-Enrollment programs to ensure that they correspond to the VCCS guidelines.

- Two- and four-year institutions offering dual-credit courses to high-school students should assess the learning of those students to ensure that it is equivalent to that of matriculated students. Those results should be reported separately in each institution's biennial assessment report. The VCCS should assess the effectiveness of the program system wide. Two- and four-year colleges should cooperate in offering college-credit courses to high-school students when both are interested in doing so in the same area, with the community colleges as the

primary but not necessarily the sole provider and overall coordinator of the higher-education effort.

Part II

Appropriations Act Item 151 asks the Council to examine the feasibility of a three-year college degree. The Council concludes that it is now possible for a student to complete virtually any 120-credit college degree program in three years by taking advantage of the programs described in Part I that grant both high-school and college credits for courses taken in high school.

Part III

House Joint Resolution No. 142 addresses the barriers to graduation that college students might encounter. The report describes the elements of student background that can slow students down or stop them altogether, choices that they often make, and non-academic pressures on them, as well as the role of decreasing institutional resources in reducing the capacities of colleges and universities to respond to student need. It then makes the following recommendations to public institutions of higher education in Virginia:

Recommendations

- All institutions that have not done so should survey students who have stopped or dropped out to determine if they have attained their goals and if not, what has prevented them from doing so.

- All institutions that have not done so should determine which students are most at risk for dropping out on their campuses and provide support services, including on-going academic advising, to them.

- Four-year institutions that have not already done so should develop admissions requirements that ensure that students who matriculate are capable of doing college-level work. Successful completion of the Advanced Studies diploma, a 23-unit program, or its equivalent should be the basic standard for admission, possibly augmented by standards for grade-point average and Scholastic Aptitude Test scores that have been validated as predicting success at each institution.

- Most remediation should be done in the community colleges. Two- and four-year colleges in the same area can develop policies whereby they jointly admit students who, once they have successfully completed any necessary remediation at the two-year college, would then be able to enter the four-year institution. Students whose skill levels are so low as to make it very

The Continuum of Education

House Joint Resolution No. 211
Appropriations Act Item 151
House Joint Resolution No. 142

Introduction

Three actions of the 1992 General Assembly address the topic of the continuum of education offered by Virginia's secondary schools and colleges. House Joint Resolution No. 211, introduced by Delegate Cooper, asked the Council of Higher Education to study the transition between high school and college, particularly with respect to the ease with which students obtain credit for coursework done at each level of instruction. Appropriations Act Item 151 asked the Council to study the feasibility of a three-year degree. And House Joint Resolution No. 142, introduced by Delegate Harris, asked the Council to determine whether there are barriers to timely graduation, an issue of special concern at a time of increasing educational costs.

Because of the interrelationships of these questions, the Council has combined the studies into one. Each of the three parts of the combined analysis addresses one piece of legislation. However, the Council encourages those interested in any one part to read the others, since together they present a more complete picture of a student's progress through Virginia's system of education.

Before describing how student progress through the system might be accelerated, several caveats should be introduced.

The first is that the time it takes to earn the degree in education today is based on an increasingly outdated model: so many hours in a classroom entitle a student to a receipt in the form of a grade, and so many receipts can be redeemed for a credential in the form of a degree. This study presumes and discusses student progress in terms of that model, because it is the one that is in effect today. But the model guarantees little about what the student will know or be able to do, once that degree is in hand. Education today is just beginning to think of shifting the basis of certification from time served to skills and knowledge obtained.

In this new paradigm, some students might take two years to develop what the faculty agreed were baccalaureate-level capacities, and others might take seven. Some of that time would be spent in a classroom, some would be spent in front of a computer or a television, some would be spent in private study, some would be spent in team or individual problem solving, and

some would be spent in conversation with faculty or other students. To make this new model work, education has to come to better agreement about what kinds and levels of capacities it expects for each level of credential, and it has to become more sophisticated about measuring them.

The second caveat is that the study also discusses only the first four years of postsecondary education, which might imply that once students earn the baccalaureate degree, they are finished with education. That is becoming increasingly less true. More adults are returning to formal education, sometimes to obtain credentials but often to pursue interests, gain skills, or keep up with a rapidly evolving knowledge base. This change in the student population has begun to alter the culture of higher education and call into question traditional measures of institutional success. Some of those shifts are discussed in Part III of this report.

The third and final caution is that many students may not want to hasten their education. Right now, many students taking the Governor's diploma in high school have completed all high school requirements except government and English by the time they enter their senior year. The various forms of college-credit work available, described in Part I, make it possible for many of them to, in effect, skip that year. Yet only 11 percent of public high schools surveyed reported that any of their eligible students skipped the senior year, and then only one or two did so. This may be because most students do not consider themselves, nor are thought by their parents or guardians to be, mature or secure enough to skip a grade. A senior year not spent doing college-credit work may permit students to explore their interests, deal with the social pressures of the teenage years, and build confidence and gain maturity for the challenges of college.

It may also be a time to reinforce skills that cannot be learned quickly. It would be a disservice to many students to permit them to substitute one college-level English course for one high-school senior-level and one freshman English course, for example, since the truncated experience will not give them enough time to practice and develop their communications skills. This presumes, of course, that high schools do not use the availability of college-credit work to dilute the rigor and quantity of senior academic courses and that college admissions offices continue to honor rigorous college-preparatory courses. The state needs to provide all students, whether or not they choose to do college-credit work, with challenging learning throughout high school.

Once in college, students may again not choose to shorten the time to the degree. For some, a slower pace will be the way to make possible the employment that permits them to remain in

college. It may also permit them to reap the greatest benefit from their college experience. For some students, taking fewer courses makes it possible for them to do well despite various academic deficiencies or particularly challenging curricula.

Academically stronger students generally use the flexibility provided by college credits earned while in high school not to graduate sooner but to pursue special interests or to do more advanced work than they would otherwise have done. Almost half the students who enter the University of Virginia do so with some college credits, but very few of them -- 20 or so a year -- graduate in fewer than four years. It seems that most students who push themselves in the last year of high school are ambitious not to finish college quickly but to learn. That ambition should be encouraged. It is in Virginia's best interest that its students, when they can, get more education, not less. Since the job prospects awaiting baccalaureate degree holders are not particularly appealing, more advanced skills might serve both their interests and the state's as it attempts to increase the analytic skills of its workforce.

Nevertheless, education costs the state and parents enough that opportunities to accelerate the educational experience ought be made available to all students who want or need to take advantage of them. The challenge of intensification is also just what some students need to keep their intellectual interests alive. For others, college-level coursework done in high school builds the confidence they need to succeed once they enter college. One study of a group of students who had taken Dual-Enrollment courses while in high school found that they felt better prepared for the differences between high school and college than their classmates and less nervous about starting college. In addition, students who had been eased into college in this way felt more willing to attend college full time and more comfortable in seeking out their professors, and they had higher first-year grades than those of the control group or than might have been predicted from their high-school records (Miller).

What follows is a description of the ways in which students move through the educational system, the choices they make, the obstacles they encounter along the way, and the ways in which educational institutions can ease their progress.

PART I: Articulation--House Joint Resolution No. 211

Virginia's education system should, in the words of House Joint Resolution No. 211, provide a "continuum of instruction" that reaches from high school to the community college to the four-year college or university. The House Joint Resolution concentrates on the part of the continuum where high school ends and college begins. It focuses specifically on various 2+2, dual-credit, advanced-placement, and articulation agreements. It asks about difficulties students might have in earning both high school and college credits for college courses taken while in high school, as well as the ease with which they can transfer credits from one institution to another.

After studying the various dual-credit programs, the Council of Higher Education has concluded that some form of coursework for which students may receive both high-school and college credits is available to most students in Virginia. But dual-credit work in all its various forms should be more widely available, since each kind serves a somewhat different purpose and clientele.

At present almost all colleges accept credits from all of these programs. But the Council recommends that institutions requiring a score higher than three on Advanced Placement examinations or not giving college credit for the International Baccalaureate reconsider those policies. In addition, some four-year colleges informally express concerns about the Dual-Enrollment Program and about college courses offered to high-school students by other four-year institutions. The Council recommends that four-year institutions continue to accept the credits earned in those programs, but only if the colleges offering them implement adequate assessment processes to demonstrate their effectiveness. Additionally, the community colleges' Dual-Enrollment programs should conform to the Virginia Community College System's guidelines on student eligibility and faculty credentials.

This section describes the various 2+2 and dual-credit programs, and their availability and cost. It discusses the measures in place to ensure the quality of the student learning in each program and the acceptability of the college credits generated by each dual-credit program. It concludes with a summary of recommendations.

2+2 programs

The Governor's Advisory Committee on Workforce 2000 has recommended that high-school students gain a common set of competencies and knowledge, which has been captured in the Department of Education's proposed Common Core of Learning. The

common core will include disciplinary knowledge, intellectual skills, personal attitudes, teamwork skills, ethics, and aesthetics. Students should have mastered this core of learning by the tenth grade. At that point, they will proceed along one of two paths.

The first path is designed to prepare students for the world of work, either through apprenticeship programs or through the various "2+2" programs reported by almost a third of the public high schools surveyed. Two-plus-two programs go back to the early seventies in Virginia. They are programs -- jointly developed among high schools, regional technical centers, and community colleges -- to prepare students both for entry-level employment after high school and for entry into community-college technical programs. As the name "2+2" implies, these programs provide a smooth articulation between the last two years of high school and a two-year collegiate technical program (although some such programs begin as early as middle school).

The most recent version of the 2+2 model is the "tech prep" initiative, a four-year (two in high school and two in an occupational/technical program in a community college) coordinated curriculum with a strong emphasis on academic skills, designed to prepare students for technical occupations. This program originated at the federal level, is supported by the Carl Perkins Act, and has been adopted in Virginia as a cornerstone of the Workforce 2000 initiative. It is just beginning to be implemented in the Commonwealth.

Dual-credit programs

Some technical programs make use of dual-credit agreements to create an overlap between high school and college, so that students who are qualified for advanced technical education can begin that education while still in high school and thus shorten the time it takes them to earn the associate's degree.

The second path that high-school students can take after they have mastered the Common Core of Learning is the collegiate path, in which high-school students do academic work in their junior and senior years. It too has opportunities for creating overlap between high school and college, through dual-credit courses in academic subjects.

The major programs in the Commonwealth offering both high school and college credit are described below.

Advanced Placement (AP)

Advanced Placement is a program of the College Education Examination Board that is available nation-wide. It consists of courses offered by high schools that prepare students to take

national examinations in various academic subjects. Students receive college credit not for taking the courses but for passing examinations at a score acceptable to the college they attend. Students can even prepare for the examinations through independent study, although few do.

Students who take AP courses pay a $65 fee to take the examination. This is cited as a problem for students by some high schools surveyed, although some schools provide financial assistance to needy students and a few pay all fees. A student who is successful on four or five AP examinations representing a full year's coursework can, of course, save a year's tuition, room, and board. But that savings is realized only if the examination is passed at an acceptable level. Students who do not take or do well on the AP examination will have experienced a rigorous academic course, and they and their teachers will be more aware of collegiate expectations, but they will not receive college credit for it.

Dual Enrollment

The Dual-Enrollment Program is a Virginia Community College System program comprised of college courses offered by college or high-school faculty under the aegis of the local community college or, in at least one case (Clinch Valley College), a four-year institution. They may be offered at the high school or at the college campus. Students receive college credit for the courses they take by presenting them as transfer courses to the institution they enter as first-year students. Some of the courses are technical and are granted credit only at two-year institutions; these may be part of the tech prep program. Others are academic and are designed to receive transfer credit at any institution in the Commonwealth.

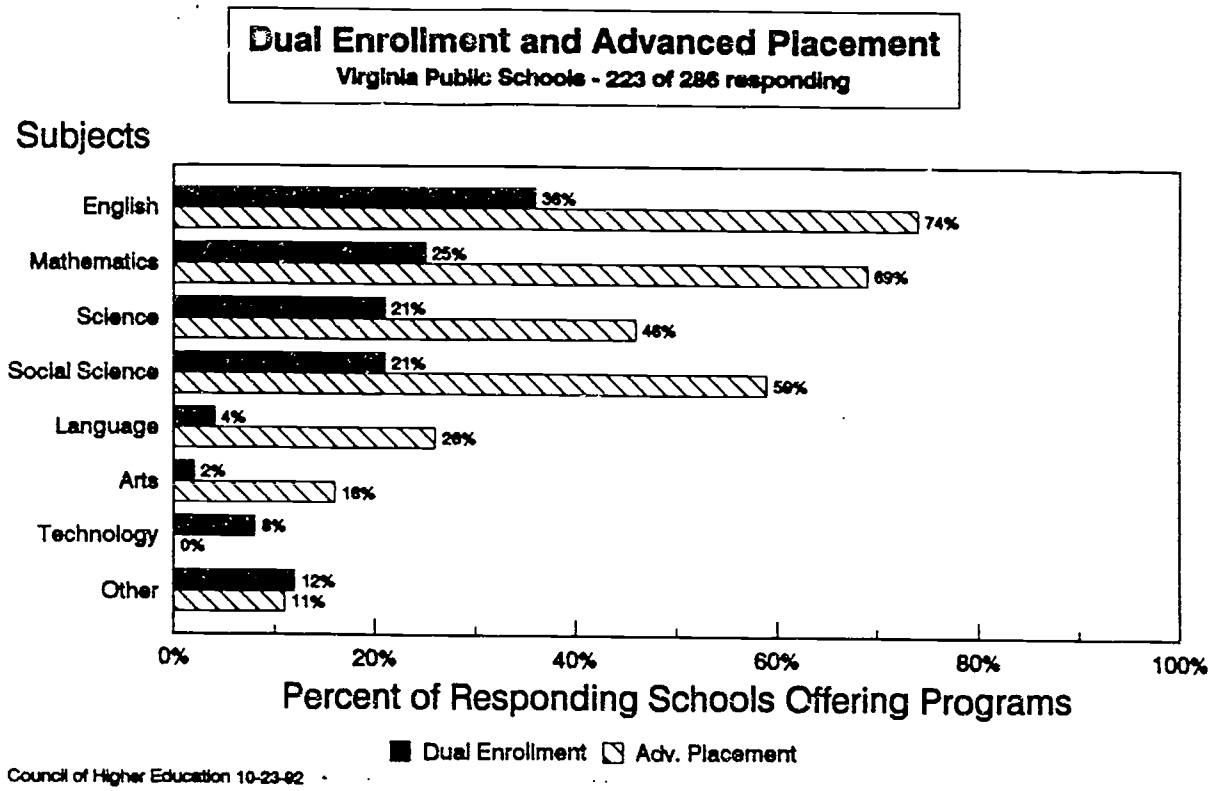
How this program works is illustrated by the Parry McCluer High School in Buena Vista. In cooperation with Dabney Lancaster Community College, Parry McCluer has instituted a program of six Dual-Enrollment courses at the high school. Seniors at Parry McCluer can take college-credit courses during the year that match the most common college general-education requirements, including English, political science, pre-calculus, sociology or psychology (offered alternatively), and biology. Two of the courses satisfy high-school requirements, while the others take the place of high-school electives. Thirty-seven to 59 students each year enroll in at least one Dual-Enrollment class at Parry McCluer.

In the Dual-Enrollment Program, the high schools generally pay the students' college tuition (those that don't report occasional problems for students who have to pay out-of-state tuition). The college then reimburses them for the teachers' time and incidental expenses, but students usually pay for

nothing except the books. This program entails significant cost to the state, which pays both the high schools and the colleges for the student enrollments. The state might want to stop the double payment, now that the program is established.

Advanced Placement and Dual Enrollment compared

The following table gives the percentages of the public high schools surveyed for this study that offer AP and Dual Enrollment courses and in what areas of study.



According to the College Board, Advanced Placement (AP) courses are offered by 298 (two-thirds) of the 454 public and private high schools in Virginia; almost three quarters of the public high schools surveyed reported that they offered at least AP English. The Dual-Enrollment Program is relatively new: the agreement between the VCCS and the Department of Education was signed in 1988, with the first courses offered in 1989. As yet its enrollments are relatively small, with approximately 3700 of 133,000 high-school juniors and seniors state wide participating in fall 1991. This program reaches students primarily in the rural areas of the state. Between them, Danville and Southside

Virginia Community Colleges account for 27 percent of the enrollments in the community-college programs.

Many high schools prefer Dual-Enrollment courses to AP ones, since students who pass the courses receive college credit without the need to pass a national examination. Students who are less confident academically and might not want to face the uncertainties of success on the AP examination are more willing to take such courses. In a Virginia Department of Education study of AP, performance anxiety was the reason principals cited most often for students' unwillingness to take the courses or examinations (Virginia AP Task Force, 1990).

On the other hand, the rigorous certification of students is precisely why Advanced Placement appeals to the more selective colleges, who have confidence in the quality of the product. Students who are planning to go to college out of state can be more sure that their credits will be accepted if they are successful on the AP examinations, since the program has a long and creditable history and almost all colleges have published policies about the acceptability of such credits. Advanced Placement courses also make a student more competitive for college admission, both because of the known rigor of the courses and because grades in such courses are generally "weighted" -- that is, a three or B becomes a four or A on the high-school transcript.

Another difference between AP and Dual Enrollment is the range of courses available in each program. AP has a set of courses geared to its examinations that are largely equivalent to freshman-level collegiate offerings, whereas the Dual-Enrollment Program has courses ranging from data processing to sophomore-level math and science. Students with special interests or particularly advanced skills in some areas may find that community-college courses meet their needs in a way AP cannot, and those courses should be available to them. The great majority of schools that rely on AP or International Baccalaureate (see below) courses for college-credit work send students who want courses like organic chemistry or calculus to a local college for them, although some high schools have reported that scheduling conflicts, transportation difficulties, or communication problems with the community college can make this difficult.

Some concern has been expressed that Dual Enrollment will replace AP in Virginia, but recent history suggests that this is not the trend: between 1990 and 1991, the number and percent of schools offering AP courses in Virginia have increased slightly (from 291 to 298, or from 64 to 66 percent). The Council recommends that high schools make as wide a range of college-credit programs available to students as possible, since each serves somewhat different purposes.

The International Baccalaureate (IB)

The International Baccalaureate (IB) is a dual-credit program presently available only at George Mason High School in Falls Church and, as of this year, Salem High School. The IB is a two-year international high-school program with a common curriculum (English, languages, social sciences, laboratory sciences, mathematics, and an elective -- in George Mason's case computer studies) and an international set of examinations. In order to qualify for the IB diploma, students must successfully complete seven courses, write a 4,000-word essay, and perform 100 hours of community service.

Students may take either individual IB courses or the entire diploma: of the roughly half of George Mason's juniors and seniors who participate to some degree in the program, 11 of this year's 85 graduates completed the diploma, with a 100 percent pass rate on the examinations.

The program is expensive compared to the other options described: between the yearly subscription and examination fees, the George Mason High School pays roughly $20,000 a year for it. On the other hand, George Mason High School students often prefer it to the Dual-Enrollment Program, to which they also have access, because it gives them a prestigious, two-year, integrated course of study at the high school itself. The IB also improves their high-school grade-point average (IB grades, like AP ones, are "weighted") and their competitiveness for college. The high school thinks that the opportunities for students and the effect the program has on the academic level of the entire school are significant enough to warrant the expense.

Four-year-college programs

Finally, several four-year Virginia institutions offer college courses to high-school students for credit that is fully accepted at that institution and presented as transfer credit to other institutions the students may choose to attend instead. In some cases these courses count only towards the college degree, but in some, high schools also grant credit for the work. Some of these courses are offered in the high schools, but for most the high-school students travel to the campus.

At present, the numbers of high-school students enrolled in such programs are very small: colleges reported only 251 students enrolled in such courses state wide in 1991, almost half of them "enrichment" students taking courses unavailable in high school at George Mason. (One institution was unable to provide numbers for its "early admission" students.) But these numbers could grow, as could those in the Dual-Enrollment Program. Since in some cases both two- and four-year colleges are interested in offering college-credit courses in the same area, the Council

recommends that in any given locality, the public schools, the community college, and any four-year institutions that want to provide courses to the high schools work cooperatively to prevent unnecessary duplication among offerings. In this cooperation, the community college should serve as the primary but not necessarily the sole provider and overall coordinator of the higher-education effort.

Quality control and acceptability

House Joint Resolution No. 211 reflects some worry on the part of the General Assembly that there are discrepancies in the acceptability of different kinds of dual credit to the colleges in Virginia. It therefore suggested that "the development of a systematic method for awarding course credits to advanced placement and dual enrolled students . . . would provide some measure of equity, consistency, and uniformity."

The Council's survey of public four-year institutions in Virginia did not reveal any refusal to grant credit for courses taken in high school. This claim is verified by the 85 percent of the high schools surveyed that said there were no problems with their students receiving credit, although nine percent did complain that the transfer of credit "depended on the department and institution" (six percent had other problems, like getting out-of-state institutions to accept the credits). But some colleges and universities informally express more confidence in some programs than in others. The difference in credibility may be because of the quality control mechanisms each program has in place. Uniform acceptance of credits is appropriate only if each program can demonstrate that it produces equally good results.

Quality control is proper and necessary for programs offering college credit to high-school students, not because high schools and colleges are not likely to do good work but because the students in them may or may not be mature enough emotionally or intellectually to benefit from the experience. Furthermore, most dual-credit courses are taught in the high schools. The Council requires institutions to monitor the quality of off-campus instruction through assessing student learning outcomes, in order to ensure that a lack of access to the full range of support services has not had an adverse effect on learning. An additional challenge in teaching college courses in high schools is the difficulty for students and teachers of making the transition from classes in which the culture of the high school shapes expectations and behavior to a one characterized by collegiate expectations and behaviors.

The quality of a program can be inferred from input and demonstrated by output measures. Some of the most common ways of attempting to ensure the quality of a program on the input side are high admissions standards for the program; requirements of

certain credentials for teachers; training of teachers, if they are not regular college faculty; and the equivalency of the curriculum to that of an on-campus course.

But important though input controls may be, in the final analysis it is what students know and are able to do as a result of the course that convinces college faculty and admissions staffs to award credit for the work. Colleges accepting the credits should be assured that high-school students in dual-credit courses have learned as much as have older students in the same courses offered on the college campus. Faculty put a lot of faith in credible assessment of student learning. For example, many institutions award either college credit or advanced standing on the basis of examinations that are not even tied to specific coursework, like the College-Level Examination Program (CLEP).

Advanced Placement quality controls and acceptability

The College Board has no certification procedures in place to approve schools to offer AP courses. Nor does it have formal admissions standards -- theoretically the examinations are open to all students in any grade. But "virtually all" schools have, in fact, some prerequisites for enrollment (Virginia AP Task Force, 1990, p. 5), and students who are willing to face the challenge of an AP course and examination are generally very strong academically.

The College Board sets no teacher-credential requirements, although the great majority of AP teachers in Virginia have master's degrees. The College Board provides voluntary training of teachers (three-quarters of the principals responding to the Department of Education survey indicated a need for more training). The curriculum in most disciplines is set by the College Board and followed, "with some deviations," by most teachers in Virginia (Virginia AP Task Force, 1990, pp. 7,9,8). But Advanced Placement's nation-wide credibility is primarily based on the rigorous, nationally normed examinations that are its major form of output evaluation.

All four-year colleges and universities in Virginia accept various AP examinations for credit. But different institutions, and even different departments within institutions, require different grades on the examinations to award credit. Most publish lists of the courses each test will substitute for and the number of credits each is worth if a student receives the requisite examination grade.

For example, Virginia Commonwealth University and most departments at Virginia Tech (not to mention Harvard) award credit for a score of three, whereas the Virginia Military Institute and most departments at George Mason University and the

University of Virginia require a four or five. The amount of credit given sometimes varies depending on the test score. A score of five on the chemistry examination earns a student eight credits at the College of William and Mary, for example, whereas a four earns only four credits; in other departments advanced standing but no credit is given for certain scores. At Longwood, a score of three usually earns three or four credits, whereas a five earns six or eight credits. The lack of consistency among colleges in accepting AP credits is a major concern to high schools (Virginia AP Task Force, 1990).

High score requirements limit the number of students who can receive college credit for AP courses, or even those who try to obtain it. The College Board does not know what percentage of students who enroll in AP courses state wide take the examination. Only about a fifth of the high schools offering AP courses surveyed in Virginia require that their students take the examinations (Virginia AP Task Force, 1990). At T.C Williams High School, which offers AP courses in 15 or 16 subjects, only 80 of the 142 students enrolled in the English literature and composition course last year took the examination, despite the school's unusually high pass rate.

This much the College Board does know: Almost 14,000 of the almost 133,000 11th and 12th graders in the state took over 22,000 AP examinations in 1991. Of these, 14 percent received a grade of five, 20 percent a four, and 32 percent a grade of three. In other words, over a third of the students who take AP examinations, which may be as few as half the students enrolled in the courses, do not score well enough to receive college credit at those institutions that only require an examination grade of three. Those that require a four reduce the numbers of acceptable scores still further. Only 7600 of the 22,000 tests taken in Virginia in 1991 would have received credit at an institution requiring a score of four.

The College Board has done a study comparing grades on the AP examinations to grades given in comparable college courses. The Board found that a four on an AP examination was comparable on average to an A college grade, a three to a B, and two to a C (Haag). Combined with the small proportion of students who receive college credit for AP coursework and the dampening effect that may have on students in taking and high schools in offering such courses, these findings suggest that institutions requiring more than a three on the AP examination should reexamine the required scores to determine if they are set at reasonable levels. Given that analysis, some variation in acceptable scores is tolerable as long as colleges continue to inform students, through their catalogues, of their standards.

Dual Enrollment quality controls and acceptability

The VCCS developed program guidelines for Dual-Enrollment courses in 1989. The guidelines stipulated that the courses offered under this program were to be as rigorous as those offered to regularly enrolled community-college students. This rigor was not enforced by way of state-level admissions requirements, since all high school juniors and seniors who are at least sixteen are eligible to participate. But individual high schools and colleges were encouraged to find ways to determine that students were prepared for college-level work.

The Virginia Community College System (VCCS) recently surveyed community colleges offering Dual-Enrollment courses and asked, among other things, about student eligibility for the program. In response to finding that some colleges were dissatisfied with their admissions processes, the VCCS concluded that "several colleges need to study and revise their screening procedures, if high school students who are not mature enough to handle dual credit coursework are to be advised not to enroll in college level studies" (Roesler, 1992, p. 6). Enrollment requirements trouble a few high schools, who are worried about access to and adequate enrollments in the courses. But they do help ensure that it will be possible to teach the class at a collegiate level.

The VCCS expected faculty teaching in the program to have the same qualifications required of adjunct faculty at the community colleges. The VCCS study revealed that not all do, and it suggested that all colleges comply with this requirement. The original policy suggested no special training for high-school faculty teaching these courses, but 14 of the 17 community colleges offering dual-credit courses provide formal orientation to the instructors.

Finally, the original policy stipulated that Dual-Enrollment courses be assessed as part of the community colleges' student outcomes assessment programs. But although 14 of the 17 community colleges offering Dual-Enrollment courses indicated that assessment procedures were in place, no results have been reported to date as part of the colleges' biennial assessment reports.

The credibility of the community-college degree has been established by the assessment of the success of transfer students at the four-year institutions. The credibility of the Dual-Enrollment Program will depend on the community colleges demonstrating that the high-school students learn as much or more than matriculated college students in these same courses.

Assessment of the Dual-Enrollment Program should have two parts. At the college level, each course -- including the

curriculum, syllabus, and examinations -- should be carefully monitored by full-time community-college faculty. Course finals, in particular, should be the same as those offered on campus, so that a direct comparison can be made between student learning outcomes in the two venues. In addition, the VCCS notes that only seven of the 17 community colleges with dual-credit enrollments "had viewed, conceptually, the offering of dual credit courses as a 'program.' . . . Ten colleges, therefore, need to develop strategies to assess dual credit instruction, as a whole" (Roesler, 1992, p. 7). Finally, assessment results should be included in the college's biennial student assessment report to the VCCS and the Council of Higher Education. The VCCS suggests that they do so as "an integral part of their evaluation of off-campus instruction" (Roesler, 1992, p. 7).

The VCCS should also verify the quality of the program system wide. To this end, it might have a sample of students who successfully complete Dual-Enrollment courses take nationally normed examinations, where they match well with courses, in order to correlate achievement within the program with a national comparison group. This would permit the system to do, in the words of the VCCS, an "appraisal of the overall strengths and weaknesses of the colleges' efforts to instruct high school students and to document that the students have indeed acquired college level knowledge and skills from their coursework" (Research and Planning [VCCS] 1992, p. 3). Finally, it should track the subsequent performance in college of the Dual-Enrollment students, as compared to a control group, to determine the effect the Dual-Enrollment experience had on that performance.

The four-year colleges now report accepting the credits earned in the Dual-Enrollment Program just as they would any community-college transfer credits, although sometimes requiring a grade of C or better. But any skepticism about the student learning in the program could jeopardize its general acceptance as the program grows. Assessment results demonstrating the comparability between the student learning outcomes in these courses and their on-campus equivalents should ensure continuing acceptance of the credits.

International Baccalaureate quality controls and acceptability

The IB program's credibility rests particularly on the high quality of the work its graduates produce. There are no admissions requirements, but the rigor of the program is such that students, like AP students, self-select. While nearly half of George Mason High School's students took at least one course in the program, it is largely high-achievement students who pursue the diploma. Only eleven of the 85 graduates at George Mason High School actually completed the diploma. Teachers are trained but not required to have any particular credentials --

rather, the school itself must be certified to have the resources necessary to offer the program. All of George Mason's IB teachers have master's degrees. The curriculum is set world wide, and the examinations are graded through a centralized international process.

The IB diploma is known and accepted primarily by the more selective institutions, within Virginia as well as out of state, probably because students who earn its diploma are likely to go to such institutions. Five of George Mason High School's IB diploma recipients went to the University of Virginia this year, four of them as Echols Scholars, where they were awarded up to 18 credits for their work; Virginia Tech awards up to 38 hours for the diploma, the same as its limit on AP credits. Students may also receive credit on a course-by-course basis. They are informed about the transferability of their credits college by college in a booklet the organization publishes yearly. Some students obtain credit with colleges unfamiliar with the program by taking the relevant AP examination for each course. A score of five or above on a high-level IB examination is generally viewed as equivalent to a four or five on the AP test.

Four-year-college program quality controls and acceptability

Almost all of the collegiate work offered to high-school students by the four-year institutions consists of admission to regular on-campus courses, or in some cases courses offered by college faculty in the high schools. No special quality controls are in place for that coursework, aside from generally careful admissions procedures. Students are admitted to the courses through a special application process, which includes a counselor's or principal's recommendation, designed to ensure that the students are capable of performing as well as or better than the matriculated students at the college or university. The high schools determine whether or not high-school credit is given for the work. The credits earned in such courses are treated as regular transfer credits by other institutions in Virginia, which means that they are generally accepted.

In 1991-2, only two four-year institutions offered programs of college-credit courses taught by high-school teachers: Clinch Valley College's pilot Dual-Enrollment program, with 48 students, and Virginia Tech's pilot "Academic Advancement" program, with 14. The Clinch Valley College courses were team-taught by one high-school and one college faculty member to classes comprised of both high-school and college students. The classes were developed by the teams and approved by the appropriate academic departments, and the teams assessed the results and offered suggestions for improvement.

The Academic Advancement pilot was taught by selected high-school teachers trained in workshops offered by Virginia Tech

faculty. The courses were monitored by the faculty, the students completed faculty evaluations, and a random sample of student papers was assessed by the coordinator of a similar program at another institution in another state.

The Council recommends that any four-year institution offering college-credit coursework to high-school students off campus, or in a separate section on campus, assess that coursework in a way similar to community colleges' assessment of the Dual-Enrollment Program.

Recommendations--Part I

- As many as possible of the various forms of college-credit work should be made available to all high-school students in Virginia.

- Colleges and universities that require a grade higher than three on any AP examination should reexamine that requirement.

- Institutions that do not grant college credit for the successful completion of IB coursework or the IB diploma should reconsider that policy.

- Virginia's community colleges should reexamine the admissions requirements and faculty credential requirements and evaluation processes in their Dual-Enrollment programs to ensure that they correspond to the VCCS guidelines.

- Two- and four-year institutions offering dual-credit courses to high-school students should assess the learning of those students to ensure that it is equivalent to that of matriculated students. Those results should be reported separately in each institution's biennial assessment report. The VCCS should assess the effectiveness of the program system wide. Two- and four-year colleges should cooperate in offering college-credit courses to high school students when both are interested in doing so in the same area, with the community colleges as the primary but not necessarily the sole provider and overall coordinator of the higher-education effort.

PART II: Three-Year Degree--Appropriations Act Item 151

As a part of the 1992 Appropriations Act, the Governor and General Assembly asked the Council of Higher Education to study the feasibility of three-year baccalaureate programs at state-supported institutions of higher education.

Three-year collegiate degree programs are feasible in countries that offer them because of a rigorous high-school curriculum, which ensures that the foundation of students' liberal education is firmly in place. The three college years, then, are devoted to the development of more advanced and specialized skills. It is worth noting, however, that as the student population in the French universities has diversified and enrollment pressures have increased, the average time to degree has become longer. The Diplome universitaire d'etudes generales, nominally a two-year degree, now takes on average four years, and the three-year Licence takes on average five (Brett, 1992).

Colleges in Virginia could design degree programs meant to take three years were the final year of high school as rigorous as the final year of European secondary schools. Indeed, the College of William and Mary grants students with the British A-levels or the French baccalaureat up to 30 hours college credit, which in effect makes a three-year degree out of any four-year one.

The usual senior year in America is not, however, a rigorous academic experience. By the time they are seniors, high-school students who are on schedule for the Governor's diploma have only government and English left of their academic requirements. They then have a choice: to take other high school courses, academic or not, or to take advantage of one of the options described in the previous section of this report to gain both high-school and college credit for courses taken in high school.

Those students who choose the latter course can complete virtually any 120-credit degree program in three years. A student who earns high enough scores on five to ten Advanced Placement examinations (depending on whether they represent a semester's or a year's work) can do so. In 1991, more than 1,200 colleges and universities in the country, including 37 public and private institutions in Virginia, had policies to award sophomore standing on the basis of sufficient numbers of Advanced Placement examinations passed at a high enough level. A student who earns the International Baccalaureate diploma or successfully completes ten Dual-Enrollment or ten courses offered by a four-year institution for college credit should also be able to complete a 120-credit college degree in three years. Such opportunities are now widely available in Virginia but should be made universally so, through traditional means and perhaps also through the use of the electronic classroom.

PART III: Barriers to Graduation--House Joint Resolution No. 142

Once they enter college, students may find that various pressures may make it difficult or impossible for them to obtain the baccalaureate degree in four years, particularly if they have not accumulated prior college credits. This is of particular concern at a time when the cost of a college education is making any increase in the time to the degree a matter of considerable financial strain for many families. House Joint Resolution No. 142 therefore requests the State Council of Higher Education "to study the institutional barriers that prevent a student from graduating from college in four years."

In the nation, graduation rates have remained remarkably constant at four-year colleges and universities since 1880: about half the number of students who matriculate graduate (Terenzini, 1987). But the time it takes to earn a college degree has increased significantly since the 60s. Only 53 percent of the full-time freshmen at the institutions surveyed by the National College Athletic Association completed their degrees within six years (Cage, 1992). The situation in Virginia is only slightly better than the national one: 57 percent of students attending Virginia's public four-year colleges complete their degree within six years, and only a third do so within four years (see Appendix 2).

But the fact that students do not complete the degree within a given amount of time can have a variety of causes, only some of which are under institutional control. Students may proceed slowly through or drop or stop out of college because of their personal or academic backgrounds. They may do so from choice. Or academic, financial, or other pressures may slow or stop their progress. Students may also find their course-taking options seriously reduced as institutions come under increasing financial strain. Finally, some institutional practices may impede student progress. This part of the report examines each of those possibilities in turn.

It ends with recommendations to institutions about what they might do to facilitate student progress towards the degree. These include surveying students to find out whether they have attained their goals and if not, what barriers they perceive. They include increasing admissions requirements, where necessary, so that freshmen are able to do collegiate work, as well as offering support to students who are otherwise at risk. And they ask institutions to streamline curricula, expand summer offerings, use technology, redefine the faculty role to put more emphasis on advising, and implement the transfer policy.

Student background

At-risk students

A number of student characteristics affect the capacity to finish college on time or at all. Some that correlate with collegiate persistence are students' socioeconomic level, gender, ethnicity, residential situation, parents' educational level, the emotional and financial support families offer, and students' aspirations and interests (Adams, 1992). Colleges have no control over some of these factors (e.g., gender and ethnicity) and only moderate control over others (e.g., student aspirations and interests). But they can and often do develop profiles of students most at risk of dropping out so as to provide special support services for those students.

Almost all of Virginia's colleges provide at-risk students some kind of support services. They offer transition programs, in which minority students are brought in before their freshman year to acclimatize them to the social and academic environment of the campus. They have special advising programs, to help students who are for one reason or another at risk of failure make the right choices as they proceed through their college careers. And some of the more selective colleges and universities have programs to prepare comparatively weaker students to compete in their rigorous academic environments. All of these programs may support persistence without necessarily adding to the time it takes to earn the degree.

Academic preparation

It is the academic skills that they bring with them that most strongly determine whether students will succeed in college. Put another way, the most effective way to improve the graduation rates and the time to degree of students is to educate students better at the high-school level and then admit only well-prepared freshmen. As an example, since Louisiana State University has replaced its open-admissions policy with a set of required courses and scores, the retention rate of its sophomore class has gone from 67 to 79 percent (Cage, 1992).

Academic skills not only permit students to succeed at the academic tasks in college; they also affect educational aspirations, social integration into college, self-confidence, and the choice of a more selective and prestigious institution, all of which correlate with persistence (Adams, 1992). Students are aware of the connection. In a survey of Virginia Tech students conducted as part of its study of student progress towards the degree, the university's research office found that 43 percent of students who would not complete their degrees in the time described in the catalogue attributed the delay in part

to their academic preparation in high school (Factors, 1992).

Fourteen percent of Virginia's public-high-school graduates attending colleges in the state lack the skills necessary to do college-level work, according to a Council study. To them, the community colleges and a number of four-year institutions offer remedial education. Remedial coursework, which does not count toward the degree, adds time to the degree. In addition, underprepared students are often advised to take a lighter course load, in order to give them more time to devote to each class. This is one reason why at present a typical student course load nationally is about 13 credits a semester, which "makes it impossible to complete a bachelor's degree in four years" (Cage, 1992, p. A29) without summer attendance. In 1991-92, Virginia's in-state, first-time freshmen took an average of 25 credits a year, with only 28 percent of them taking a full-time load of 30 hours or more. Most students in the Virginia Tech study who reported taking lighter course loads did so in order to succeed better with difficult courses (Factors, 1992).

Effective remedial programs can make students as successful as their more academically advantaged classmates. But they may not be effective. All public institutions in Virginia must assess the results of any remedial programs they may have. This includes evaluating whether incoming students are prepared to do college-level work, as defined by the report of the State Council of Higher Education/Virginia Community College System joint task force on remediation; evaluating whether remedial coursework has brought the skills of underprepared students up to the required level; and tracking their subsequent performance in college courses, as compared to the performance of students who have not been remediated. Results show that some programs are effective, while others have needed to be significantly revised.

In doing this assessment, J. Sargeant Reynolds Community College decided that such programs, however good, may not work for students whose skills levels are so low as to require an attention that the college cannot give them without significant extra resources and without time that few students are willing to take. That college has been funded by the Council, through its Funds for Excellence program, to determine at what level students are not generally able to benefit from being admitted to college. The results of this study will lead, in the next biennium, to recommendations about the skill level below which students should not be admitted even to "open-admissions" institutions. The federal government has a parallel concern about providing student aid to students who are not able to benefit from postsecondary work. Its attempts to determine how to identify such students might be useful to Virginia.

The other public-policy issue raised by remediation is where it should be done. The 1992 General Assembly may have answered

that question when it moved the differential between the funding for remedial education and lower-division courses from general to non-general fund at all but two of the senior institutions. It signalled thereby that most remediation should be done at the community colleges, a move encouraged as well by the joint State Council of Higher Education/Virginia Community College System committee on remedial education. The next logical step is that students be admitted to senior institutions only when they are fully prepared to do college-level work.

The Council recommended in its 1987 study of admissions policies that

> minimum standards for admissibility should be established. To the extent possible, they should be defined in terms of Virginia's high school diploma requirements. At a minimum, the institutions of higher education should adopt the Advanced Studies diploma as a requirement for admission. While justifiable exceptions can be made, students not meeting this requirement should remove deficiencies through enrollment in the community college system.

While the Council does not determine the admissions standards of colleges in Virginia, it suggests that it may be time to differentiate more clearly between the missions of Virginia's two- and four-year colleges. It may be time to stop expecting the community colleges to graduate large numbers of students, in a traditional timeframe if at all. At the same time, it recommends that Virginia's public four-year colleges admit only those students who are prepared to do college-level work and who are able academically to complete their degree in a reasonable amount of time.

This might be signalled by successful completion of the Advanced Studies diploma or what might become its equivalent as the Common Core of Learning evolves, possibly in combination with a minimum grade-point average and Scholastic Aptitude Test scores. These standards should be derived from current studies of student performance in each college, since there is no universal rule about what grade-point average or SAT score is appropriate for all colleges. Each institution can call on organizations like the Educational Testing Service to validate statistically what combination of grades and scores predict success on its campus.

Such a policy would send a signal to all students that entry to a four-year college is not an entitlement but something that needs to be worked for. These higher expectations should increase students' motivation to do solid academic work in secondary school, through courses made available as part of the Department of Education's "world-class education" initiative. The entire system of education in Virginia would benefit by

colleges' having higher expectations of the students they admit.

Student choice--two-year colleges

One route to the baccalaureate is to begin at a two-year institution, then transfer to a four-year institution after earning a transfer degree. What are some choices students make that decrease their chances of earning a baccalaureate through this means?

Few students who begin college at a community college earn an associate's degree. This fact has caused the community colleges to be concerned that this route may contain obstacles that the community colleges need to remove. Virginia's community colleges have therefore studied their non-completers as part of their student outcomes assessment programs. Some of what they discovered is relevant to all institutions, some is relevant to those that serve large numbers of non-traditional students, and some is particular to the community-college nature and mission.

What Virginia Western Community College found out about its non-completers is typical. Almost half of the students who had left the college prior to obtaining a degree had never intended to complete one (1991), even though they may have been registered in degree programs. This finding is confirmed by a 1989 Council survey of community-college students, in which only 49 percent of the respondents said that they definitely planned to complete a degree program.

This conclusion about community-college students' intentions is supported by at least one national study, based on the U.S Department of Education's in-depth research of over 22,000 students who graduated from high school in 1972. The study concluded that community colleges satisfy students' desire "to engage in learning on their own terms, and in their own time." The students surveyed for this study indicated that "they were more interested in learning or testing their tolerance for higher education than in degrees" (Adelman, 1992, pp. v-vi). Once students have tested that tolerance, the community colleges' non-completers surveys show that many of them transfer to another college before completing the degree, in Virginia as elsewhere. These students, though technically dropouts, should be counted as community- college successes.

Student choice--four year colleges and universities

Other students begin their collegiate experience at four-year institutions. Student intention plays a role in slow progress toward the degree at these institutions as well. Some institutions in the Commonwealth, particularly those in urban

areas, are increasingly serving a population that regards baccalaureate-granting institutions much as they might community colleges: as places to pursue their interests or develop their skills but not necessarily to earn a college degree.

These students are increasingly redefining academic culture as we know it, including notions of the "normal" time to degree or the granting of a degree as a mark of institutional success. One researcher has suggested the term "attainers" to apply to students who do not earn degrees but who do reach their personal goals before leaving an institution (Terenzini, 1987, p. 22). Those four-year institutions that have not done so, particularly those serving a large number of non-traditional students, should survey their stop- and drop-outs to determine what proportion of them are attainers.

More traditional students make choices as well. "Commitment to college" and clarity about personal and career goals are two of the most important causes of student persistence (Adams, 1992, p. 29). In the Virginia Tech study, the institutional research office found that Tech students who were not on time to the degree "were more likely to believe that it is not important to graduate in catalog time than students in the on-time group" (Factors, 1992, p. 1).

The other student decision that significantly affects the time to degree at four-year institutions is choice of major. Students in the Virginia Tech study gave as the chief reason for slow progress towards the degree changes in their majors "caused by a poor understanding of career interests and aptitudes," (Factors, 1992, p. 1). Similarly, of the students Adams studied, those who started undecided or who changed their major were less apt to complete their degrees on time. Since about three-quarters of college students change majors at least once (Kalsner, 1991), this uncertainty and exploration -- understandable and even to be encouraged in students, particularly those in late adolescence -- is likely to have significant effect on the overall figures on student time to degree.

In addition, some programs are unusually difficult academically, causing some students, particularly the weaker ones, to take reduced course loads in order to get better grades (Factors, 1992). Adams found that among the students he studied, those who took longer to get the degree were more apt to believe that students are under pressure to get high grades (1992).

Pressures on students at two-year colleges

In the community colleges' non-completer surveys, factors students mention most often in explaining the decision to leave

school are job responsibilities or personal or financial problems. Job responsibilities loom very large. Of the respondents to the 1989 Council community-college survey, 79 percent were employed, and 65 percent of those worked full time.

Not only job responsibilities but personal and financial commitments generally increase with age, and Virginia's students are getting older. In the community colleges, 55 percent of the students are older than 24. And the older the students, the less likely they were to re-enroll the following semester, the Council's survey of community colleges discovered. Older students are also less likely to plan to complete a degree program. In the Council's survey, 51 percent of students in the 17-21 and 22-34 years age brackets definitely intended to complete a degree, whereas 44 percent of students 35 and older did. This may be partly because the older students go to community colleges for less pragmatic reasons than younger ones do. The 17-to-24 year-olds want most to prepare for an occupation; the 22-to-34-year-olds do too but to a lesser degree than their younger classmates; and those 35 and older are attending college primarily for a sense of personal accomplishment.

Between half and three-quarters of students who drop out plan to return to college eventually. But the discovery that many students cannot successfully juggle personal and job and full-time academic responsibilities has led some community colleges to encourage more students to think about part-time study. This will lengthen the time to the degree, possibly discouraging students from completing it. The 1989 Council study suggests that part-time students are less likely than full-time students to re-enroll from one semester to the next and have less commitment to completion than do full-time students. But the option of going part time could prevent some students from giving up altogether.

Pressures on students at four-year colleges

Thirty-two percent of students in the four-year colleges and universities are older than 24, and many of the pressures described above apply to them as well. But even for traditional-aged students, financial pressures contribute to slow progress towards the degree. The most frequently cited reason for the increasing time to the degree is the growing proportion of federal financial aid that takes the form of loans rather than grants, since grants are strongly correlated with student persistence (Kalsner, 1991). And while federal grants have decreased, tuition has dramatically increased.

Virginia, like many states, has made a public-policy

decision to fund higher education increasingly through tuition and fees. Virginia's public senior colleges and universities raised their tuition and fees by an average of 14.9 percent in 1992-93. To some degree tuition increases in Virginia have been offset by additional financial aid: the General Assembly appropriated $24 million in general fund to institutions for student financial aid in 1992-94, and there have been some institutional reallocations of tuition dollars to financial aid. But the Council of Higher Education estimated students would need $84 million in new financial aid to pay for tuition and books without relying on loans. So students are contributing more to their education, since the available aid does not offset all increases.

The increasing financial pressure interferes with persistence by causing anxiety about debt repayment and by making it necessary for many students to work part- or full-time. The Tech researchers found that those taking longer to complete the degree were more apt to have worked and worked longer hours than those progressing on schedule (Factors, 1992). Forty-three percent of the students in the Virginia Tech study who were behind schedule attributed the delay in part to their working while taking classes. Indeed, eighty-nine percent of students who were on time to the degree in the Virginia Tech study had taken an average credit load of 15 hours or more per semester, whereas only two-thirds of the ones who were not on time had done so (Factors, 1992).

The role of decreasing institutional resources

House Joint Resolution No. 142 raises the possibility that the combination of reduction in state funding and the growing demand for education has led to a decrease in the number of courses available to students. This is becoming an issue at most of the nation's state-supported colleges and universities. In an article on course shortages and tuition hikes at San Diego State University, The Wall Street Journal notes that "public higher education -- one of the few areas where America still ranks supreme -- is being pounded by state spending cuts, producing many young victims" (Nazario, 1992, p. B1).

The Council of Higher Education was aware of the problems of increasing the number of students at a time when resources were diminishing. Consequently it held approved institutional enrollments steady for the 1992-94 biennium. The General Assembly subsequently appropriated additional funds to the Virginia Community College System for 2300 additional students, and the enrollment projections for the system were adjusted accordingly.

The Council has also studied the effect of the reduction of state funding on institutional budgets. That reduction was

severe: the 1992-94 general-fund appropriations for the educational and general programs of Virginia's public colleges and universities are $413 million less than those originally proposed for the 1990-92 biennium. But institutions took advantage of the 1992 General Assembly authorization to raise their tuition rates significantly to offset the reduction in state funding. Consequently they have been able to replace about 80 percent of the loss, after new financial commitments and inflation for 1992-94 are taken into account.

To find out the extent to which these increased non-general-fund resources have been used to provide additional classes, the Council asked institutions to track course availability from fall 1988 to fall 1991. The results of that survey suggest that the community colleges absorbed a 21 percent increase in enrollments though a combination of increased sections and, primarily, larger class size. But their capacity to offer very large classes was, in many cases, limited by the few spaces on most community-college campuses that accommodate large numbers of students. So they are less able than four-year institutions to balance some small sections with very large ones.

The classrooms the community colleges do have are generally filled to capacity. While some community colleges could fit a few more workstations into their classrooms, some are already over the limit that can be comfortably accommodated and almost all are squeezing too many students into their laboratories already.

At about half the four-year institutions section and seat availability has increased, while at half they have decreased. In almost no institutions has the average class size changed significantly, however, which suggests that the increases and decreases have corresponded to enrollment fluctuations at the individual institutions.

But judging by student complaints, course shortages and overcrowding are a perennial and perhaps an increasing problem. Well over half the students in the Tech study thought that an inability to get courses they needed made it harder to graduate on time, although that reason ranked in importance third or fourth overall, behind "changing majors" and "course difficulty" and vying with "cost and the need to work" (Factors, 1992, pp. 23, 31). The fact that the Tech students who complained most about course availability were actually on schedule suggests that the problem is not fatal, but it is of concern.

The problem may be less a matter of the numbers than of the kinds of courses available. Both two- and four-year institutions judged general-education courses to be in shortest supply. Those most frequently mentioned were courses that are especially popular or appropriate for a variety of majors, such

as psychology, math, or economics; those that require small course size for pedagogical reasons, like developmental English or mathematics, composition, speech, or foreign languages; or those that require specialized space or equipment, such as laboratory or computer sciences or non-lecture technical courses. Under particular pressure are courses that fit into more than one of these categories.

Patterns of student interest, which change far more rapidly than faculty expertise or staffing patterns, have changed the demand for some courses. Spanish was mentioned by several institutions as an increasingly popular foreign language for which they do not have sufficient faculty. A recent surge in interest in health sciences has put pressure on introductory chemistry and biology, as well as on more advanced clinical and laboratory courses. Courses eliminated as non-essential by some institutions, like physical education, may still be in demand by students. Adjunct faculty have traditionally handled shifts in student interest, but many institutions are finding some kinds of adjuncts difficult to find, to find at times convenient to students, or to afford.

Very few of the students surveyed by Adams at a four-year institution in the state found faculty outside their majors helpful or supportive (1992). This may be explained by the size of introductory courses in many departments, about which students on a number of campuses complain. This dissatisfaction may also reflect the heavy reliance on adjuncts and, at research institutions, graduate students to teach introductory courses; faculty members' lack of interest in students who will not be studying in their field; or some combination. But most students who do not persist are lost by the end of the first year: in the 1991-92 school year, 14 percent of first-time freshmen in Virginia did not return for the second semester. So freshman dissatisfaction with their interaction with faculty is something that institutions need to address.

Though institutions were most apt to describe course pressures as being at the introductory level, almost half the students in the Tech study reported difficulties getting into courses in their majors, more than reported problems with core curriculum courses. Virtually all institutions agreed that student interest has put pressure on some majors, both to handle their own students and to offer advanced courses to other majors. Psychology is frequently mentioned as overloaded, primarily due to the restructuring of teacher education and the shift of many prospective elementary school teachers to that major. And computer science and accounting departments on some campuses are hard pressed to respond to the interest of non-majors in their courses. In the demand for upper-division courses at the four-year institutions, both outside of and within their majors, transfer students are the hardest hit, since at most institutions

they are the last to register. This should be corrected if transfer from the community colleges is to become an option increasingly used by students because of cost.

What institutions can do

Curriculum review

The difficulties in providing instruction where students want and need it in an institution with very little staffing flexibility should not be underestimated. Nevertheless, there are some steps institutions can take to reduce curricular barriers to graduation.

The consistency with which institutions identify general education as a problem suggests that attention should be paid to the first two years of the curriculum. Almost all institutions have developed learning goals for general education as part of their student assessment programs, and some have gone on to revise their requirements to better help students meet those goals. Where the faculty has not gone through that process, it should. Where it has, it should place the highest priority on teaching those courses identified as crucial to the liberal education of its students.

Moreover, those courses should not be entrusted primarily to adjunct faculty or graduate students. A close personal relationship with a faculty member is one of the most important factors in student progress towards the degree. And given the particular vulnerability of first-year students, integration into the institution should begin in the freshman year. The highest priority of every program should be on teaching the courses that introduce students to its discipline.

Not only in general education but in the majors, institutions should make sure that all of their academic requirements serve an educational purpose. Curricula tend to build in sedimentary layers, with one requirement added on top of another without any analysis of the entire structure. This sometimes leads to undergraduate degrees that are not only requirement-laden but also go beyond the 120 credits that permit a full-time student taking 15 credits a semester to graduate in four years or the 60 hours that permit that student to complete an associate's degree in two years. On the other hand, clearly some requirements are not arbitrary "barriers" but performance standards that ought not be relaxed if the degree is to have real meaning and value. Some too are driven by accreditation standards over which the institution has no control.

The Council therefore recommends that programs examine all requirements to determine whether they contribute to what the faculty have decided students should know and be able to do when

they graduate from each program. Institutions are also encouraged to review any associate program requiring more than 60 credits or baccalaureate program requiring more than 120, in order to determine whether the extra hours are needed to accomplish the learning objectives of the program. Programs that do not have strong justification for the extra hours should not require them. Programs that exceed the 60- or 120-credit limit should publish in the institution's catalogue the expected time it will take a full-time student to earn the degree and why the extra time is educationally necessary. A similar review and justification should be undertaken for master's and doctoral degree programs.

While faculty may add requirements, they do not necessarily want to teach them any more than they do general-education courses, often preferring specialized courses whose content is closer to their scholarly interests. But once requirements in the major are identified, departments should give priority to offering sufficient sections of them, even if they must reduce the number of electives. Students complain about recent decreases in electives, which reduces the flexibility of the curriculum and their ability to pursue special interests. But that demand can be met only after more fundamental needs, as defined by the faculty, are attended to. Institutions within the same area may be able to cooperate in offering courses to expand the range of offerings.

Scheduling

Courses need not only to be available, but required courses particularly need to be available at times convenient to students, many of whom have other job and family responsibilities. In the community colleges' non-completer studies, course scheduling is far from the main reason students leave school: only 11 to 34 percent of non-completers give it as a motivation to quit. But it is generally identified as the most important reason under the institution's control that they do so. Consequently some community colleges are re-examining their course scheduling and taking actions like expanding their evening offerings. All four-year institutions should do the same.

The pressure to make courses convenient to students does conflict with other goods. For instance, the best way to ensure that students will have courses available when they want them is to build redundancy into the schedule, a strategy that becomes more difficult as resources diminish. Space limitations also have a role to play: During many of the most popular hours, classrooms are all being used. This pressure is particularly acute for specialized spaces, such as laboratories. Courses that institutions offer at less popular hours, in an attempt to make the fullest use of their facilities, may not fill. Finally, some

attention must be given to faculty schedules as well, so that faculty members are not teaching one class at 8 a.m. and another at 7 p.m. on the same day. And adjunct faculty, many of whom have other jobs, may not be available at the institutions' convenience.

Nevertheless, it is important for institutions to know the extent to which course scheduling and availability problems are actually interfering with students' capacity to finish their degrees. This problem may be particularly acute for adult students, who have to fit education into already full lives. The Council therefore recommends that institutions continue to monitor registration data. They should be particularly attentive to required courses that close early in registration and courses normally taken in the freshman year that are filled by returning students before freshmen register. And institutions that have not already done so should include in their assessment surveys questions about the extent to which required courses are available and offered at a convenient times. If significant student dissatisfaction is expressed, institutions should take steps to improve their scheduling of those courses.

Summer schedules

Institutions should also make every attempt to use their facilities fully, not only throughout the day but year-round. This would not reduce the amount of time a student needs to spend in the classroom. It would, however, shorten the time elapsed between matriculation and graduation for students willing to make use of the summer semester.

To the degree that summer courses are available, students make use of them now to shorten the time to degree. Significantly, 65 percent of students in the Tech study who were on schedule had gone to summer school in order to graduate on time or early, compared to 53 percent of students who were delayed (Factors, 1992).

Programs in the summer are not popular with students, whose experience of the educational calendar has made them count on summer for earning money or rest. A change in students' assumptions in this regard would be facilitated by more summer schoolwork in the earlier grades. Summer programs also create difficulties for institutions, among them the need to equalize the pay of faculty teaching in the fall and spring semesters and the summer, or the need to move faculty to 12-month contracts, and the need to supply support services for summer students. These difficulties may entail a need for extra money to institute summer programs, although in the long term the costs should even out. But if, by using the summer months, institutions can better use their facilities, reduce class size during the traditional

semesters, and provide more scheduling options for students, it will be worth the expense to the state, as well as the considerable effort involved on the part of the institutions.

Technology

Finally, technology has the capacity to free courses from the constraints of time and, to some degree, space. Software is available and constantly being developed to introduce students to everything from the principles of public speaking to statistics. That software can be plugged into a computer anytime, anywhere. Videotapes and pay-for-view television make it possible to view material at the user's convenience.

Institutions have reason to be reluctant to spend scarce resources on technology. It is likely to be expensive, particularly in the start-up phase. In the past, it has been used primarily to improve the quality rather than the productivity of teaching. And faculty worry that substituting machines for people will lead to inferior education.

While appreciating these concerns, the Council suggests that the use of technology may be a most promising way for institutions to stretch their teaching resources significantly. It therefore recommends that every institution examine ways in which computer-based and televised instruction can supplement traditional course offerings and ease course scheduling and availability pressures. It also advises institutions to carefully monitor students' learning to ensure that the quality of instruction is not compromised. The graduate engineering programs offered interactively by television, for instance, are regularly evaluated by comparing the performance of students who participate on site and remotely, as well as by student surveys.

Institutions also need to generate the software to make technology-based instruction possible. The Council suggests that in redesigning their faculty reward systems, institutions acknowledge faculty for software development and testing as they do now for research and scholarship.

Advising

One possible barrier to graduation mentioned in House Joint Resolution No. 142 is that "ineffective counseling and lack of course planning can lead to changing majors and enrollment in an inadequate number of credit hours per semester." It is true that students change majors for a number of good reasons. It is also true that financial pressures and academic underpreparation account for a good deal of part-time enrollment. Moreover, many students either do not seek out their advisors or make

unrealistic choices -- for instance, taking technical courses in a community college and then expecting them to transfer to a four-year institution. And advisors work within a given structure of requirements and course scheduling that limits their capacity to expedite student progress.

But poor academic advising can certainly contribute to a student's floundering rather than progressing purposefully through an academic degree program. Indeed advising is something about which students in the nation and in Virginia consistently complain. The Council's study of career planning and placement centers in 1986 uncovered this dissatisfaction, which was reiterated in the student surveys that many institutions have instituted as part of their assessment programs. As a consequence the Council, in its 1988-90 Funds for Excellence program, funded four institutions to improve their advising programs, and in 1990 those programs held a state-wide conference to disseminate the results of their activities.

The correlation between advising and progress toward the degree was made explicit by the students surveyed in the Virginia Tech study. The most common recommendation they gave for improving time to graduation was to improve advising, and one-third of the delayed students thought that academic advisement had caused some or a major delay in their progress towards the degree (Factors, 1992).

Almost all senior institutions in the Commonwealth report that at least freshmen, and often sophomores and transfer students, are required to see an academic advisor prior to course registration. Usually the advising of those students, as well as that of undeclared majors, is done by a special office. In some cases that office is staffed by special personnel trained to advise students prior to their declaring a major, but usually it uses faculty, who often receive training -- and at four institutions small stipends -- for work that is considered beyond the call of duty. In the community colleges, entering and undeclared students are generally either encouraged or, in some cases, required to see a counselor.

Advising of majors, on the other hand, is seen as a part of the normal duties of a faculty member at virtually all four-year and most two-year institutions. But training for that advisement, if it exists, is generally limited to being given an advising manual, possibly attending workshops for new advisors, or talking to one's colleagues. And explicit evaluation of advisement ranges from unsystematic and informal to non-existent. The impression that advising is not considered among the most important professorial duties is reinforced by the results of a survey of faculty commissioned by the Council and done by the Survey Research Laboratory at Virginia Commonwealth University, in which faculty reported spending on average only four percent

of their time on academic advising.

The best way to improve the quality and quantity of time spent on advising is to make it a valued part of the professorial role. The Council recommends that all institutions, most of which are now revising their expectations of faculty and the system of faculty rewards, include academic advising as an explicit part of a faculty member's responsibilities. While not underestimating the difficulty of evaluating advising, the Council further recommends that they devise ways to do so and that they reward those faculty members who are particularly good advisors. Institutions that have been funded in the 1992-94 biennium for centers for effective teaching should also be encouraged to make the training of academic advisors one of the missions of those centers.

Again, technology can help make advising more effective. The community colleges have access to a tracking system that is part of the VCCS's student information system. Almost all the four-year institutions in the Commonwealth have implemented or are planning to implement computerized degree audits, in which an advisor can call up a student's record on a computer and see a list of those requirements yet to be fulfilled. This should reduce the factual errors students complain about and free faculty members to explore the larger issue that a mentor needs to address in order to offer a student good guidance: not only what the student is taking but why.

Articulation

In addition to the barriers to graduation mentioned in the resolution, other factors under the colleges' control may make it difficult or impossible for students to graduate on time. One is the difficulty students may have in transferring between a two- and four-year college without loss of credit hours.

In late 1991, the Virginia Community College System (VCCS) and the Council of Higher Education adopted the State Policy on Transfer. That policy states that graduates of VCCS transfer programs (A.A., A.S., and A.A.&S.) should be accepted in senior institutions with junior status and be considered to have met lower-division general-education requirements at the senior institutions. Students who take a technical degree at a community college and then transfer to a four-year program must not expect that all of their courses will transfer. Hence they must accept that their change of direction may lead to a longer time to the degree.

The transfer policy also asks that each senior institution submit its policy on transfer students by November 1992. During the following months, the joint Council/VCCS transfer committee

will analyze the transfer policies. In 1993-1994 it will monitor the implementation of the institutional transfer policies and the numbers of students admitted, the latter through the Council's new student-identifiable data base.

In addition, Virginia Commonwealth University received a 1992-1994 Funds for Excellence grant to sponsor meetings of faculty within various disciplines to facilitate transfer and a conference for transfer coordinators to share their successes and identify remaining problems. During 1992-1993, the transfer committee will explore other forms of cooperation between two- and four-year institutions.

It also will work with the Virginia Community College System to develop a mechanism for marking transcripts of transfer students who have successfully completed a 35-credit group of courses identified in the State Policy on Transfer as the transfer module. It will identify the mathematics courses for the transfer module this year. Finally, the transfer committee will begin to develop specifications for up-to-date transfer guides available in electronic format.

Recommendations for Part III

- All institutions that have not done so should survey students who have stopped or dropped out to determine if they have attained their goals and if not, what has prevented them from doing so.

- All institutions that have not done so should determine which students are most at risk for dropping out on their campuses and provide support services, including on-going academic advising, to them. Institutions should not admit at-risk students to whom they cannot offer appropriate support.

- Four-year institutions that have not already done so should develop admissions requirements that ensure that students who matriculate are capable of doing college-level work. They might consider the successful completion of the Advanced Studies diploma, a 23-unit program, or its equivalent as a basic standard for admission, possibly with the addition of standards for grade-point average and Scholastic Aptitude Test scores that have been validated as predicting success at each institution.

- Most remediation should be done in the community colleges. Two- and four-year colleges in the same area might develop policies whereby they jointly admit students who, once they have successfully completed any necessary remediation at the two-year college, would then be able to enter the four-year institution. Students whose skill levels are so low as to make it very unlikely that they have the ability to benefit from a college

education should not be admitted even by two-year institutions.

- Institutions should review their curricula in general education and the majors in order to determine whether all requirements are designed to help students reach the learning goals established by the faculty. Where they do, top priority should be given to offering sufficient numbers of those courses. Full-time faculty should take major responsibility for offering courses that introduce students to the problems and methods of inquiry of their disciplines.

- Four-year institutions are encouraged to review all baccalaureate programs that require more than 120 student credit hours for graduation to determine whether the extra hours are needed to accomplish the learning objectives of the program. Programs that do not have strong justification for the extra hours should not continue to require them. Two-year institutions should do a similar review of associate degrees that exceed 60 hours. Programs that exceed the 120- or 60-credit limit should publish in the institution's catalogue the expected time it will take a full-time student to earn the degree and why the extra time is educationally necessary.

- Institutions should survey students to determine whether course scheduling is a significant problem and adjust their offerings if necessary.

- Institutions should expand their summer offerings, until the summer is viewed by students and faculty as a third term.

- Institutions should use technology to lend flexibility to the curriculum, as well as acknowledge in their faculty evaluation and reward systems the contributions of faculty who develop and use such technology.

- In redefining the faculty reward structures, institutions should explicitly identify academic advising as a faculty responsibility and evaluate and reward faculty on the quantity and quality of their advising activities.

- All four-year institutions should implement the transfer policy and continue to develop cooperative arrangements with community colleges to ease the difficulties of transfer.

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Appendix 1

Text of: House Joint Resolution No. 211

Appropriations Act Item 151

House Joint Resolution No. 142

LD4276160

HOUSE JOINT RESOLUTION NO. 211

AMENDMENT IN THE NATURE OF A SUBSTITUTE

(Proposed by the House Committee on Rules
on February 7, 1992)

(Patron Prior to Substitute—Senator Cooper)

Requesting the State Council of Higher Education to study college transfer credits and articulation agreements.

WHEREAS, Virginia's many fine institutions of higher education provide a quality system of higher education in Virginia; and

WHEREAS, the system provides for the dual enrollment of advanced and gifted high school students, a continuum of instruction through the 2+2 programs, and other articulation agreements between high schools, two- and four-year institutions; and

WHEREAS, many students enrolled in college in Virginia, including those who are enrolled through advanced placement, dual enrollment, and articulation agreements, have experienced difficulty when seeking to obtain credit for work completed or to transfer course credits; and

WHEREAS, acknowledging the institution's perogatives to govern course credits, and the transfer and acceptance of such credits, the development of a systematic method for awarding course credits to advanced placement and dual enrolled students, and guidelines governing the transfer of course credits between institutions would provide some measure of equity, consis- ncy, and uniformity; and

WHEREAS, the spiraling costs of college education has made college attendance prohibitive for some students; and

WHEREAS, given the dire economic condition and its impact on students and their families, students should be afforded fairness in such processes; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the State Council of Higher Education be requested to study college transfer credits and articulation agreements.

The Council shall review current advanced placement, dual enrollment, and articulation agreements between high schools and institutions of higher education in Virginia; determine any problems in the operation of and obstacles to the effectiveness of such arrangements; and review the transfer policies of institutions for the transfer of course credit and determine whether such policies unfairly penalize students.

All agencies of the Commonwealth shall provide assistance upon request in the manner deemed necessary by the Council.

The Council shall complete its work in time to submit its findings and recommendations to the Governor and the 1993 General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Official Use By Clerks	
Agreed to By The House of Delegates	**Agreed to By The Senate**
without amendment ☐	without amendment ☐
with amendment ☐	with amendment ☐
substitute ☐	substitute ☐
substitute w/amdt ☐	substitute w/amdt ☐
Date: _____	Date: _____
Clerk of the House of Delegates	Clerk of the Senate

Item	Item Details($) First Year	Item Details($) Second Year	Appropriations($) First Year	Appropriations($) Second Year

A. The amounts for Academic Planning and Review include $138,750 each year to support an affiliation agreement between George Mason University and the Shenandoah Conservatory whereby George Mason students can participate in the educational opportunities offered by the Conservatory and not more than $100,000 each year for contracts and special projects with private institutions of higher education.

B. It is the intent of the General Assembly that direct general fund support of special purpose research centers and projects in higher education not be continued indefinitely, and that institutions of higher education move as quickly as possible to secure sponsored support of such activities. The State Council of Higher Education shall identify all instances where general fund support is provided for such centers and projects, shall evaluate the effectiveness and productivity of such centers in furthering state interests and objectives, and shall recommend to the Governor and the General Assembly such modifications in appropriations and funding policies as it deems appropriate.

C. The State Council of Higher Education, in cooperation with the Virginia Community College System, Norfolk State University and Old Dominion University, shall review the program and facility requirements for vocational and remedial education programs in the city of Norfolk. In developing its recommendations, the Council should work to minimize duplication of services and programs offered by Norfolk State University and Old Dominion University. The Council shall report to the Governor and the General Assembly on its findings and recommendations by November, 1995.

D. The State Council of Higher Education shall study the advantages, disadvantages, and feasibility of implementation of three-year baccalaureate degree programs at state-supported institutions of higher education. The Council shall report its findings by November 1, 1992 to the Governor and the General Assembly.

E. By December 15, 1992, the State Council of Higher Education shall report to the Chairmen of the House Appropriations and Senate Finance Committees, on the costs and benefits of contracting with independent, not-for-profit colleges and universities in Virginia to provide higher education services to Virginia residents.

F. It is the intent of the General Assembly that Virginia's public institutions of higher education shall begin to effect long-term changes in the structure of higher education to minimize costs, as well as to prepare for the demands of projected enrollment increases. To accelerate this process, the Council of Higher Education, in conjunction with the colleges and universities, is directed to pursue opportunities to restructure in the following areas:

1) Staffing Productivity: This area shall include, but not be limited to, the revision of staffing guidelines to include minimum workload measures for faculty, adjusted for the type of institution, program, and the recognition of research conducted by faculty. This review should also include the development of incentives to reward and encourage teaching. In its review of the guidelines, the Council and the institutions of higher education shall explore means to reduce levels of administrative support positions, with the intent of converting these positions to teaching positions.

2) Curricular Change: As a coordinating board, the Council is

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1992 SESSION
ENGROSSED

HOUSE JOINT RESOLUTION NO. 142

AMENDMENT IN THE NATURE OF A SUBSTITUTE

(Proposed by the House Committee on Rules)

(Patron Prior to Substitute—Delegate Harris)

House Amendments in [ ] - February 9, 1992

Requesting the State Council on Higher Education to study institutional barriers for graduation from a college or university in four years.

WHEREAS, the cost of a college education continues to escalate beyond the means of many middle-class families; and

WHEREAS, graduation in four years is desirable but not always possible because of barriers beyond the student's control; and

WHEREAS, scheduling conflicts and nonavailability of classes can slow the student's progress toward completion of degree requirements; and

WHEREAS, ineffective counseling and lack of course planning can lead to changing majors and enrollment in an inadequate number of credit hours per semester; and

[WHEREAS, a sharp reduction in state funding in recent years amid a growing demand for education at public institutions of higher learning has diminished the number of courses available to students; and]

WHEREAS, in tight fiscal times and in competition for resources, colleges may not encourage graduation in four years; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the State Council on Higher Education be requested to study the institutional barriers that prevent a student from graduating from college in four years.

The Council shall submit its findings and recommendations to the Governor and the 1993 Session of the General Assembly in accordance with the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Official Use By Clerks	
Agreed to By The House of Delegates	**Agreed to By The Senate**
without amendment ☐	without amendment ☐
with amendment ☐	with amendment ☐
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substitute w/amdt ☐	substitute w/amdt ☐
Date: _____	Date: _____
Clerk of the House of Delegates	Clerk of the Senate

Appendix 2

SCHEV Report on Student Persistence

COMMONWEALTH of VIRGINIA

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New Study: One-Out-of-Three Virginia College Students Graduates Within Four-Years

RICHMOND, Oct. 15, 1992--One-out-of-three students at Virginia's four-year, state-supported colleges and universities graduates within four years, according to a new study by the State Council of Higher Education for Virginia.

The seven-year study tracked progress of a group of 20,000 first-time freshman who entered Virginia's four-year public colleges and universities and 12,000 first-time freshman who entered Virginia's two-year colleges in 1983. Of the four-year group, about one-third graduated within four years. Of the two-year group, 7.6 percent graduated within two years.

Approximately one-half of the four-year study group graduated within five years at the four-year institutions. Approximately 15 percent of the two-year group received a degree within four years. About two-out-of-three graduated from a four-year college, and about one-out-of-five earned a degree from a two-year institution within seven years.

The study did not track students who transferred from one institution to another. Nor did it report what happened to students who did not graduate within seven years.

Four-year graduation rates at the four-year institutions range from that of 6.1 percent at Virginia State University to that of 78 percent at the University of Virginia.

Two-year graduation rates at two-year institutions, which include the Virignia Community College System and Richard Bland College, range from that of 2.5 percent at Tidewater Community College to that of 32.3 percent at Southside Virginia Community College.

"One conclusion that the study suggests," says State Council Finance Coordinator Peter A. Blake, the author of the report, "is that the 'traditional' college student--one who matriculates for four consecutive years at the same college and leaves with a bachelor's degree--is giving way to the 'transitional' student--the student who graduates in five or more years, transfers to another institution before graduating, or leaves higher education entirely before earning a degree."

Virginia's graduation rates reflect the national average, Blake said.

"Students do not graduate for dozens of reasons, only some of which are under the control of the institution," Blake said. He cited academic, financial and social barriers, among others. Blake said the State Council will report on these factors later this year.

Blake cautioned that the graduation rates reported in this study are "entirely quantitative," and that graduation rates "in isolation cannot justify the existence or define the quality of an institution."

Persistence Rates of Virginia College Students

Virginia college students who attend selective, residential colleges outside the state's urban corridor are more likely to earn a degree from those institutions than students who attend urban, largely commuter colleges with more open admission policies, according to a recent study of 32,000 first-year students.

One conclusion the data suggest is that the "traditional" college student -- one who matriculates for four consecutive years at the same college and leaves with a bachelor's degree -- is giving way to the "transitional" student -- the student who graduates in five or more years, transfers to another institution before graduation, or leaves higher education entirely before earning a degree.

This report of persistence rates -- so called because they measure how many students "persist" to graduation -- is based on a study of a cohort group composed of Fall 1983 first-time freshmen at Virginia's public colleges and universities. The study followed the progress of 20,000 students at four-year institutions and 12,000 students at two-year colleges for seven years. It did not track students who transferred from one institution to another. It also collected no information on what happened to students who did not graduate within the seven-year period.

In November, the Council will receive a report on specific academic, financial, and personal factors that affect persistence rates in Virginia.

Students attend college to improve specific skills, to prepare for a professional career, to mature socially and intellectually, and for a host of other less tangible reasons. Not all students attend college with the intention of earning a degree. A recent Department of Education study of enrollment patterns at two-year colleges (Clifford Adelman, The Way We Are: The Community College as American Thermometer, 1992) suggests that students tend to place a higher priority on learning, acquiring skills, and completing basic education. This conclusion applies equally well to many students who attend four-year institutions.

In Virginia, one-third of the students in four-year colleges who began as freshmen in 1983 graduated in four years from the same institution. After seven years, 58 percent of the students received a degree from the same institution. The rates at various institutions followed patterns of geographic location, admission standards, and academic preparation of students.

The urban institutions, which have a more transient student

population, have persistence rates that are roughly half those of residential institutions. George Mason University, Virginia Commonwealth University, and Old Dominion University, for example, have lower persistence rates than Mary Washington College or Radford University.

Institutions that have open admission policies and provide educational opportunities to virtually all who apply have lower persistence rates than institutions that have higher admission standards. The Virginia Community College System, Clinch Valley College, and Norfolk State University graduate a smaller percentage of their students than James Madison University and Virginia Military Institute.

Institutions within Virginia's system of higher education require varying levels of academic preparation for admission. Persistence rates are closely correlated to these academic requirements. The University of Virginia and the College of William and Mary, which have among the highest academic standards, have higher persistence rates than all other colleges and universities in the state. This is consistent with the Department of Education study that found that "to the extent to which we acquired strong academic background in the course of our compulsory schooling, we are more likely to complete postcompulsory schooling...."

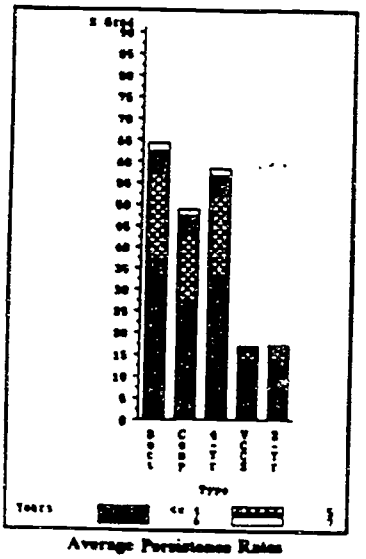
The percentage of people nationwide who graduate -- about half of those who start -- has not changed this century. Recent national studies suggest that Virginia's persistence rate of 58 percent is close to the national rate. The Department of Education study used a freshman cohort from 1972 and found that 62 percent of the entering freshmen graduated in 7.5 years. A recent report from the National Collegiate Athletic Association of 297 Division I institutions concluded that 53 percent of the students who entered as freshmen in 1984 graduated from the same institution in six or fewer years. The six-year rate in Virginia was 56 percent.

Graduation rates in isolation do not define the quality of an institution. They do, however, indicate certain patterns and should be addressed in an institution's assessment of student learning. The Council is continuing to track student persistence rates. Data from a study following the freshman class of 1985 will be available in 1993. New measures for tracking student persistence will be in place in subsequent years. Finally, the Council will be asking institutions to explain the factors contributing to their persistence rates and to undertake efforts to increase the percentage of students who earn degrees.

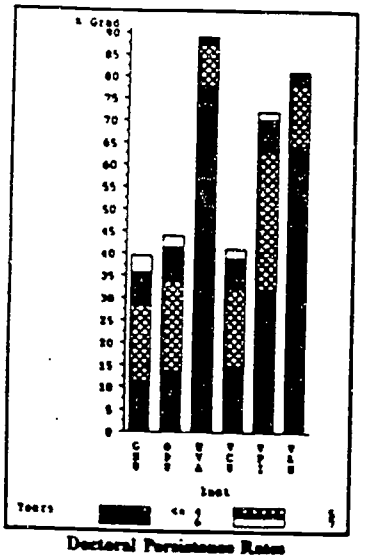
SCHEV Research Note

Gordon K. Davies, Director

Persistence of Students in Earning a Degree at Virginia's State-Supported Institutions



Average Persistence Rates
Figure 1



Doctoral Persistence Rates
Figure 2

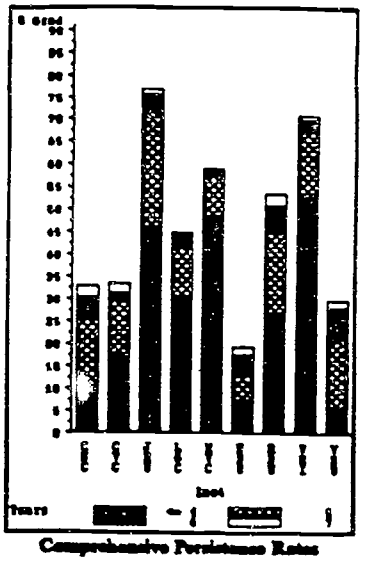
In a recent study conducted by the State Council of Higher Education, persistence rates were found to vary by the type of institution, the characteristics of the first-time freshmen cohort group, and the geographic location of the institution. Selective institutions located outside of urban areas had the highest persistence rates, while institutions which accepted a larger share of first-time freshmen applicants, or which were located within urban areas, were found to have much lower persistence rates. Geographic location and selectivity appeared to be the most important indicators of the final persistence rates at the doctoral institutions. The full-time/part-time status of the entering freshmen class was somewhat significant in relation to the persistence rates at the comprehensive institutions and very significant at the two-year institutions. All institutions located in the urban areas of Northern Virginia, Richmond, and Hampton Roads/Tidewater had much lower persistence rates than similar institutions outside of these regions.

The study collected information concerning the length of time required by groups of students to complete a first undergraduate degree program, and followed a cohort group composed of Fall 1983, first-time freshmen for seven years. The U.S. Department of Education is planning a similar study to be conducted in 1993. The federal study will collect information for a period equal to 150 percent of the standard program length which is six years at the four-year institutions and three years at the two-year institutions. All persistence rate figures contained in the following text represent the percentage of the cohort group who had received a degree from the institution at which they were originally enrolled within a period of 150 percent of the standard program length. The study did not follow students who transferred to another institution.

The doctoral institutions had the highest average persistence rates (figure 1). Of the doctoral institutions, those institutions which were very selective in the first-time freshmen they accepted and which were located outside of urban areas had the highest persistence rates. The urban institutions, which are less selective, and have a more transient student population, were found to have persistence rates that were roughly half that of the residential, doctoral institutions. Although the percentage of the cohort group who originally enrolled full-time was lower at the urban institutions, the difference was not significant. The lowest percentage of full-time freshmen was at George Mason University -- over 95 percent, and the highest was at College of William and Mary, where almost all of the freshmen were enrolled full-time. The University of Virginia and the College of William and Mary were the most selective doctoral institutions in Fall 1983, and they also had the highest (88.5 percent) and second highest (80.7 percent) six year persistence rates, respectively (figure 2). The persistence rate at George Mason University was the lowest of the doctoral institutions (35.7 percent).

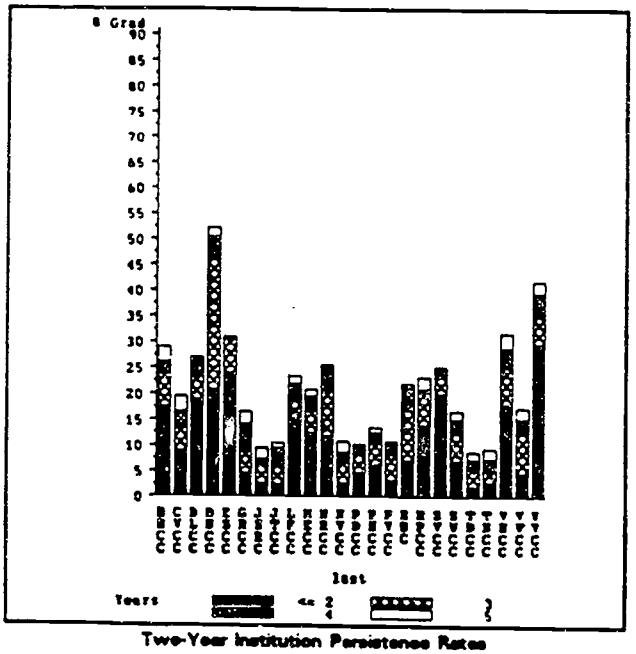
Persistence rates at the comprehensive institutions were also linked to Fall 1983 acceptance rates, and geographic location. James Madison University had the highest six year persistence rate of the comprehensive institutions -- 75.8 percent (figure 3) and also had the lowest Fall 1983 acceptance rate of any state-supported institution -- 36 percent. Both Virginia Military Institute and Mary Washington College had acceptance rates of 59 percent; these institutions also had the second and third highest persistence rates of the comprehensive institutions, Virginia Military Institute -- 69.8 percent and Mary Washington College -- 58.3 percent. The lowest persistence rate at a four-year institution was at Norfolk State University (17.4 percent), an urban institution which

accepted 98 percent of all first-time freshmen applicants in Fall 1983. Clinch Valley College accepted 97 percent of the first-time freshmen who applied in Fall 1983, and of those who enrolled, only 80 percent were full-time students. Clinch Valley College also had the lowest persistence rate of any four-year institution outside of an urban area – 31.4 percent. Christopher Newport College had an acceptance rate of 89 percent and 89 percent of the first-time freshmen were enrolled full-time. The persistence rate at Christopher Newport College was 30.5 percent. The percentage of full-time students at the other comprehensive institutions was greater than 97 percent.



Comprehensive Persistence Rates
Figure 3

The two-year institutions had persistence rates which were much lower than the persistence rates at the four-year institutions (figure 4). The total persistence rate for the VCCS after three years (150 percent of the standard two-year program length) was 12.4 percent, while the four-year institutions after six years (150 percent of the standard four-year program length) had a total persistence rate of 56.5 percent. The VCCS institutions accepted nearly all first-time freshmen who applied. Persistence rates at the VCCS institutions also followed a geographic pattern. Those institutions located within urban areas had lower persistence rates than those institutions outside the urban areas. Tidewater, Thomas Nelson, J. Sargeant Reynolds, John Tyler and Northern Virginia Community Colleges all had persistence rates of less than seven percent. Higher persistence rates were found at institutions located in the more rural areas such as Danville (46.2 percent), Wytheville (35.8 percent), Eastern Shore (31.0 percent), Virginia Highlands (25.3 percent), and Blue Ridge (26.4 percent). Richard Bland College, the only two-year institution which is not part of the VCCS, had a persistence rate of 18.1 percent.



Two-Year Institution Persistence Rates
Figure 4

The two-year institutions located within an urban area also had a lower percentage of full-time, first-time freshmen. The two-year institutions with relatively high persistence rates and which were located outside of urban areas had a relatively high percentage of full-time, first-time freshmen. Danville Community College had the highest percentage of full-time, first-time freshmen at a two-year institution (93.3 percent) and also had the highest persistence rate of any two-year institution. Tidewater Community College had the lowest percentage of full-time, first-time freshmen (43.2 percent) and the lowest persistence rate of any state-supported institution.

Sources: Persistence - Fall 1990 SCHEV J1 dataset; Admissions - Fall 1983 SCHEV 88 dataset; Full-Time/Part-Time - Fall 1983 NCES 2300-2.3 dataset

Questions regarding this SCHEV Research Note should be directed to Trer Ott at (804) 225-2630.

State Council of Higher Education - Research Section 101 North Fourteenth Street Richmond, Virginia 23219

Percentage of Entering Freshmen
Graduating in 2, 3, 4, 5, 6, and 7 Years

	Graduates in <= 2 Years	Graduates in <= 3 Years	Graduates in <= 4 Years	Graduates in <= 5 Years	Graduates in <= 6 Years	Graduates in <= 7 Years
George Mason			11.8%	28.4%	35.7%	39.5%
Old Dominion			18.9%	34.2%	41.4%	44.0%
Univ. of Virginia			76.0%	87.1%	88.8%	89.0%
Va. Commonwealth			16.0%	32.9%	38.8%	41.0%
Virginia Tech			62.9%	69.4%	70.9%	71.8%
William and Mary			64.9%	78.4%	80.7%	81.2%
Doctoral Total			37.0%	56.8%	62.4%	64.1%
Christopher Newport			10.7%	25.6%	30.8%	32.9%
Clinch Valley			18.0%	29.4%	31.4%	33.5%
James Madison			46.3%	72.1%	75.8%	76.8%
Longwood			30.8%	41.7%	44.6%	44.8%
Mary Washington			48.7%	57.5%	58.3%	59.0%
Norfolk State			7.6%	13.1%	17.4%	19.2%
Radford			27.1%	44.7%	51.0%	53.4%
Va. Military Inst			53.8%	67.1%	69.8%	70.7%
Virginia State			6.1%	20.9%	28.1%	29.6%
Comprehensive Total			27.7%	42.7%	47.0%	48.6%
Four-year Total			33.4%	51.5%	56.5%	58.2%
Blue Ridge	19.8%	26.4%	28.4%	31.2%	32.4%	33.2%
Central Virginia	9.0%	13.4%	16.4%	19.4%	19.4%	20.9%
Dabney S. Lancaster	25.2%	29.4%	32.5%	33.1%	34.4%	35.0%
Danville	21.0%	46.2%	50.3%	52.1%	52.4%	52.8%
Eastern Shore	24.1%	31.0%	31.0%	31.0%	31.0%	31.0%
Germanna	4.6%	9.1%	14.2%	16.4%	16.4%	16.3%
J. Sargeant Reynolds	3.0%	6.3%	7.5%	9.6%	10.6%	11.1%
John Tyler	2.6%	6.4%	9.7%	10.6%	11.2%	11.6%
Lord Fairfax	18.6%	20.5%	23.3%	24.8%	24.8%	26.0%
Mountain Empire	18.6%	20.9%	23.2%	24.4%	24.8%	25.0%
New River	12.8%	21.5%	25.6%	26.3%	27.2%	27.2%
Northern Virginia	3.2%	6.9%	8.6%	10.9%	12.2%	12.9%
Patrick Henry	6.9%	10.7%	12.6%	13.6%	14.9%	15.5%
Paul D. Camp	5.0%	6.6%	10.0%	10.4%	10.6%	11.5%
Piedmont Virginia	3.6%	6.4%	10.5%	10.9%	12.0%	12.5%
Rappahannock	15.6%	22.3%	22.6%	25.0%	27.2%	27.7%
Southside Virginia	32.3%	36.2%	37.1%	37.6%	37.6%	38.9%
Southwest Virginia	7.6%	13.7%	15.4%	17.1%	17.9%	18.5%
Thomas Nelson	3.0%	5.4%	7.6%	9.5%	10.7%	10.7%
Tidewater	2.5%	5.5%	7.9%	9.2%	10.4%	11.0%
Virginia Highlands	18.2%	25.3%	29.0%	31.6%	32.4%	32.7%
Virginia Western	4.9%	12.6%	15.3%	17.3%	17.3%	17.6%
Wytheville	30.6%	35.6%	40.3%	42.5%	43.3%	44.0%
VCCS Total	7.6%	12.4%	14.6%	16.4%	17.2%	17.6%
Richard Bland	7.2%	18.1%	21.4%	22.0%	23.7%	23.7%
Two-Year Total	7.6%	12.6%	14.9%	16.5%	17.4%	17.9%

Source: State Council of Higher Education for Virginia