



The Florida Senate

Interim Project Report 2001-013

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Committee on Education

Senator Anna Cowin, Chairman

ARTICULATION AMONG WORKFORCE DEVELOPMENT EDUCATION PROGRAMS

SUMMARY

In the language of education, articulation means the movement of students through the sectors of the education system, connected by flexible joints. A joint that functions smoothly is almost invisible, and students pass through it without breaking their stride. Probably the best-functioning joint in the nation's body of education is Florida's Associate in Arts degree, which guarantees student admission to one of the state universities without the need to repeat courses or lose credit hours. Recently the Legislature required the education system to try to replicate this statewide articulation with workforce development education programs.¹ The efforts are in their first months of implementation.

This report is a review of the local and state level articulation agreements for workforce development education. Many local agreements suffer from long disuse, while the statewide agreements have stress fractures from overwork.

Unfortunately, they are not overworked by students but by the education systems and the Legislature. The structures required to support workforce articulation have grown cumbersome through much mending and patching – notable among these crutches are the Common Course Numbering System, the leveling process, the requirement of common program lengths and occupational completion points, and especially the attempt to identify programs that articulate by giving them a new name.

In the past year, new certificate and degree titles have appeared like fragments of cartilage in a knee -- a result of abrasion and intended to give students more choices, they actually increase abrasion and cause confusion.

Most students who enroll in workforce education programs do not intend to continue their education when they complete; rather they start and stop programs and intersperse their education with periods of full-time employment. Institutions have difficulty interpreting the educational records of these students, and in the past they have had little motivation to do so. These motivational factors will be changing dramatically, as the new funding formula rewards the institution from which students complete a program rather than the one that enrolls them the longest.

Programs should be selected for statewide agreement because articulation has great promise or historical success for students, and not all programs should be designed to promote articulation. Students do not benefit from having programs forced into an articulation pattern if very few of them actually progress to the next level.

Because most of the changes reviewed in this report are provisional or in process, the major recommendations are for continued monitoring. The review process should continue through the Articulation Coordinating Committee and its Program Length and Articulation Subcommittee.

BACKGROUND

Florida has recognized the need for improved articulation of workforce education programs since the late 1970s, when it became evident that a program for the same occupation could have a very different curriculum in various regions of the state. The same occupation could be taught as a degree-level program and as a certificate-level program within the same region, with little difference in the student's employment opportunities. The state addressed these problems by developing curriculum frameworks and standards for courses in all programs, by working with the Common Course Numbering system, and by

¹In the Florida Statutes, the terms "workforce development education," "vocational, technical, or occupational education," and "career education" have the same meaning.

enforcing the tedious “leveling process” to require the same level of degree or certificate for each program.

The 1997 and 1998 Legislatures made great changes in the state’s workforce development programs by creating a separate program fund and by requiring statewide articulation among programs offered by school district technical centers, community colleges, and state universities. The three public education sectors responded to this mandate and authorized 12 Applied Technology Diploma (ATD) programs that articulate into associate degree programs and five Associate in Science Degree (AS) programs that articulate into the upper division of a baccalaureate-degree-level program (AS-to-BS articulation). Educational agencies may offer these programs for student enrollment for the first time in the 2000-2001 school year.

Barriers

The most visible barrier to student transfers among workforce education programs is accreditation, with the requirements of the various occupational regulatory boards a close second. The biggest barrier is invisible – the motivation of students and administrators of educational institutions.

The accreditation barrier exists because accrediting associations have different requirements for faculty credentials and student admission. These associations provide a variety of ways to grant exceptions to their own regulations, and Florida is attempting to take advantage of these exceptions. It should be noted that the Southern Association of Colleges and Schools (SACS), the accrediting agency of state universities and community colleges, is undergoing significant revision and will produce new standards within the year. A public hearing on the proposed standards will be held in Orlando on October 9, 2000. The association that accredits public technical centers, the Council of Occupational Education (COE), was formerly a branch of SACS.

Applied Technology Diploma

To allow the certificate-level ATD² programs to be converted to college credit when a student transfers, the

² The ATDs are: Medical Clinical Lab Technician, Respiratory Care Technician, Coder Specialist, Medical Records Transcribing, Aircraft Airframe & Powerplant Mechanic, Customer Service Technology, Travel and Tourism Management, Emergency Medical Technician, Turf Equipment Technology, Pest Control Operations, Unit Treatment and Rehabilitation, and Health Care

barriers were that vocational students are not traditionally required to have a high school diploma or pass an entry-level test, and instructors do not always have a college degree. However, SACS-accredited, degree-granting institutions must assure that all or some majority of the student body and the faculty have their diplomas and degrees. These problems were technically overcome by requiring students in an ATD program to get a GED if they do not have a diploma and by authorizing college credit to be granted in a “block” when a student completes an ATD, rather than granting college credit on a course-by-course basis.

In addition, an individual community college may review the credentials of ATD instructors and has the right to disapprove of any exceptions, even though the exceptions have been reviewed and approved by a state committee familiar with SACS requirements. As of this date, community colleges have not made all the required determinations, and it is uncertain whether it will be possible to implement some of the ATD programs. Only five of the 12 will be offered anywhere in the state in fall of 2000.

The faculty-credential issue is not yet resolved, including the issue of what SACS actually requires. According to a position paper presented to the National Advisory Committee on Institutional Quality and Integrity, “Some colleges and universities interpret their accrediting agency’s policies more strictly than they were intended, or use the accrediting agency’s policies as an excuse to turn away students.”³ Recently, SACS was forced by a lawsuit to reverse its restrictive prohibitions against credit transfer from non SACS-accredited institutions.⁴

Associate in Science Degree

For the AS-to-BS articulation agreement, the problems were similar. Until recently, students in AS-degree programs completed general education courses tailored to an occupation rather than to academic standards for the college level, and faculty did not necessarily meet SACS criteria for baccalaureate-degree instructors. Some of the technical courses are so advanced that they

Services.

³ Florida State Board of Independent Colleges and Universities, Sandra Knight, Deputy Director, May 25, 2000.

⁴ Examples of reputable accrediting associations for workforce development education include the Commission on Occupational Education, the Accrediting Commission of Career Schools and Colleges of Technology, and the Accrediting Commission on Continuing Education and Training.

are part of the upper division of a baccalaureate degree program, and SACS has reportedly encouraged upper-division coursework to be granted by the university that grants the baccalaureate degree. For these reasons, only five AS programs are protected under a true articulation agreement. These are Radiography, Nursing, Hospitality and Tourism Management, Electronics Engineering Technology, and Business Administration. Students who earn one of the many other AS degrees are granted admission to a state university but not course-by-course credit. This latter arrangement is called an interdisciplinary “capstone” agreement and a “career ladder” agreement.

In response to these agreements, community colleges have required that all Associate in Science-degree programs must have “transferable” general education courses. The general education courses must be college-level and must be taught by an instructor who has a credential recognized by SACS for academic degree-level instruction. In practice, this requirement means that most colleges are no longer allowed to call their existing programs Associate in Science programs.

Only three community colleges have assured that all of their former AS-degree programs meet the new criteria. The rest have changed the names of some or all of their programs to Associate in Applied Science (AAS) Programs. The AAS program is identical to the AS program except that a student may take a lower level math course or may be instructed in a technical course by someone who does not have a college degree. The college catalogues inform students that if they earn an AAS degree, “its transferability cannot be guaranteed,” although transferability is never guaranteed until an articulation agreement is complete.

In addition, the colleges have established a credential called the College Credit Certificate, which is reported in college catalogues to be the first year of an AS- or AAS-degree program. Although only 16 College Credit Certificate programs are recognized by the Articulation Coordinating Committee, many colleges are giving out certificates for a number of other groups of courses and calling them College Credit Certificates.

Laws and Rules

The following laws govern workforce development programs and require articulation:

- s. 229.551, F.S., which governs the Articulation Coordinating Committee and requires the maintenance of vocational education courses in the Common Course Numbering System;

- s. 240.116, F.S., which requires articulation to be accelerated between high school and postsecondary education, including vocational education at the postsecondary level;
- s. 240.1161, F.S., which requires each school district to develop an articulation agreement with its community college to include the promotion of “tech prep” programs that lead students from vocational programs in high school into “terminal” vocational programs at the postsecondary level;
- s. 239.115, F.S., which creates the Workforce Development Education Fund and requires the Applied Technology Diploma. That law authorizes both technical centers and community colleges to award the ATD to students to signify completion of a substantial portion of an AS-degree program or an AAS-degree program; and
- s. 240.115, F.S., the Articulation Agreement, which requires the articulation of courses within AS-degree programs to baccalaureate-degree programs.

The rule that governs the statewide articulation agreement and contains the requirements for the ATD is Rule 6A-10.024, FAC.

Other official documents that regulate important parts of the articulation system are the reports of the Common Course Numbering System, the annual Course Code Directory, and the Statewide Articulation Manual. As of this date, that manual, which governs delivery of the five approved AS-to-BS programs and the 12 ATD programs, is available only in draft form.

Another important document is the publication of *Standard Program Lengths And Occupational Completion Points*. These standards identify the competencies that mean a student has attained marketable skills. Without these standards, statewide agreement would be impossible.

METHODOLOGY

All college occupational deans and technical center local directors were surveyed and asked to identify the prevalence of newly authorized program levels, unique courses, local articulation agreements, and student transfers both within the same program and up to the next level. Selected sites were interviewed by telephone to seek a local perspective on the need for changes. College catalogues and documents produced by the Articulation Coordinating Committee and the Program Length and Articulation Committee were reviewed. Reports generated by the Florida Education

and Training Placement Information Program were analyzed to document actual articulation patterns.

FINDINGS

Statewide Articulation Overview

Florida is the most thoroughly articulated state in the nation. Most other states have institutional articulation agreements that guarantee acceptance of credit by at least one higher-level institution, but none has statewide agreements to match Florida's. To date, all public community college graduates with an AA degree have been accepted into the state university of their first choice, although the Articulation Agreement guarantees admission only to a state university and not to one's first choice. A recent study found that almost 20 percent of students who said they were seeking an AA degree transferred to a state university within 5 years, and 75 percent who actually earned the AA degree did.

In contrast, only 16.3 percent of students seeking an AS-degree earned the degree in 5 years. Of those who earned an AS-degree in 1997-1998, only 5.3 percent subsequently enrolled in a state university.⁵

Tech Prep Articulation

"Tech Prep" is the *least* successful articulation program, if success is defined as accomplishing the intended outcome. Tech prep allows a student to complete a substantial part of a postsecondary technical program in high school, to be completed at a technical center or community college. By law, each school district must have an articulation agreement with its community college and technical center so that high school credit will count toward an identified "terminal" program. ("Terminal" means that the program does not generate credit toward an academic degree but to a vocational certificate or degree.) In the past 9 years, the federal government has spent almost \$44 million promoting this form of articulation in Florida. Yet only 6.1 percent of high school students who completed a tech prep program enrolled in any form of technical education at the postsecondary level. Only 2.4 percent of them enrolled in an AS-degree program, although the local articulation agreements provide for credit toward an AS degree in almost every district.⁶

⁵ Division of Community Colleges Office of Educational Effectiveness and Research, *Outcomes: A Longitudinal Look at the Class of Fall 1993*.

⁶ Many of them went on to an academic program: see page 5. Longitudinal studies and other follow-up data were compiled from reports provided by the Department of Education's *Florida Education and Training Placement*

Postsecondary Workforce Education

Although recent high school graduates rarely see the value of postsecondary technical education, by the time they reach their middle twenties, many do. The typical student starting out in workforce development education is a 29 year old female, most often a parent who needs to attend a program near home, and quite often someone who has unpleasant memories of the school environment. The articulation ideal is to enroll this adult in a short program where most of the learning is hands-on, not academic. Ideally, the technical center has a business partnership and she can easily find relevance in the learning process. She will be working while going to school, and when she is employed by the business partner, she will see the value of her training and overcome her ideas that she cannot succeed in an academic setting. The career path will be clear to her, her employer will assist her to continue in the next level, until she finds that she is accruing college credit and that most of it will apply to an associate degree and then to a baccalaureate degree.

The second part of this story rarely comes true. Most students go to work and do not continue their education. Those who do continue their education most often are in the same level of program, upgrading their skills but not climbing the educational ladder.

Articulation from Certificate to Associate Degree

Only in large urban school districts did local educators say that students frequently continue their education at the next highest level, or *vertical* articulation. Only six (19 percent) of the technical centers that responded to the survey reported that students often move from a technical certificate program to an associate degree program at a community college.

Follow-up data confirm this perception. Of students reported as completing a vocational program at a technical center, only 3.1 percent are found continuing their education at a community college credit-level program.

Articulation of Programs at the Same Level

About 15 percent of students who leave a certificate program are found continuing their education at the same level at a technical center, or *horizontal* articulation. Perhaps these students are taking courses to upgrade their skills, rather than to complete another program.

When follow-up studies are conducted using only the small percentages of students who do continue their education after completing a vocational program at the postsecondary level, community college students are less likely to “move around” than are students at school district technical centers. Among 1998-1999 students who are reported as completing a non college-credit program at a community college (*and are also found to be continuing their education*), over 85 percent remain at the college, but in a different program. Only 12.4 percent are in a different program at a different place.

Among students who are reported as completing a program at a technical center (*and are also found continuing their education*), over 58 percent are found in a different program at a different place. Over 25 percent are found in the same program at a different place, and only 15.8 percent are in a different program at the same technical center. So students at technical centers are more likely to experience both “vertical” and “horizontal” articulation.

Articulation to the State University System

The only vocational students who move into the state university system with much frequency are recent high school graduates. These are most likely students who are trying for a Bright Futures Scholarship but aren't sure of their ability to earn a score of 970 on the Scholastic Assessment Test or the equivalent on the ACT. (Gold Seal Vocational Scholars must complete a vocational program but do not need a college assessment test score to qualify.) In 1998-1999, 15.6 percent of all students reported as completing a high school vocational education program were in a state university. Over 32 percent were in an academic program somewhere – an AA, BA, or BS program at a public or private college or university – and not in a workforce education program.

Of community college completers of vocational programs in 1998-1999, only 2.7 percent of those in college-credit programs moved up to a state university and only 3.4 percent of vocational-credit completers did so. Of those who completed an AS degree, 5.3 percent enrolled in a state university.

Fewer than one percent of students who completed a vocational program at a technical center enrolled in a state university (0.76 percent).

AS-to-BS Articulation

Of the five AS-degree programs currently included in the statewide articulation agreement with the State University System, nursing is the most likely to attract

transfer students. Over a third of the Associate in Science degrees awarded are in Registered Nursing.

Three urban community colleges said they appreciated the effort that went into achieving the AS-to-BS articulation agreement but also said that they did not need it because they already had local articulation agreements with one or more state universities.

Several smaller colleges said that the effort to achieve the agreement with the state university system was beneficial for the academicians who participated in it, but they did not expect many students to be affected.

Several community colleges indicated that they were not yet convinced that AS-to-BS articulation would proceed smoothly once students begin to take advantage of it. Their concerns included the possibility that universities would make changes in their programs without collaborating with community colleges.

The programs most often mentioned as likely to benefit from a statewide AS-to-BS articulation agreement are in computer science and other information technology fields. Faculty committees are still working on the conditions for these agreements, but have not yet reached consensus.

Proliferation of Credentials

The creation of the 12 ATDs and the five AS-to-BS programs are a direct response to legislative mandate. However, the new distinctions between AS and AAS degree programs, the creation of the College Credit Certificate, and the combined AS and AA programs for business students are confusing to students and counselors. It is difficult to argue credibly that their main function is to assist students or the business community.

CCC compared to ATD

Some occupational deans at community colleges said that the College Credit Certificate (CCC) differs from the ATD only because it is conducted by a college and not a school district. Others said it requires general education courses, yet a review of college catalogues shows that every CCC is offered by at least one community college with no general education required.

Many community college leaders said that the CCC was created because private industry requested it, yet private industry employs community college students in large numbers before they receive any credential at all.

Some of the college deans said that the distinction between a CCC and an ATD was that the CCC was linked to a degree they offered, while they do not always have the AS degree that contains each ATD. These distinctions are not a sufficient reason to create a separate credential.

AS compared to AAS

The distinction between the Associate in Science and the Associate in Applied Science is also a fine one. A student who earns an AAS degree takes the same number and types of courses as a student who earns an AS degree, but the general education courses may be taught by an instructor who does not have the college degree required by SACS at the time the agreements were reached. The other distinction is that all the general education courses may not be at the academic level required by SACS, although they are appropriate for the occupation.

The definition of an AS degree was changed to assure that university accreditation would not be jeopardized if universities were required to admit students who earn an AS degree, but full articulation is guaranteed for only five AS degree programs. Under the capstone articulation agreement, students are guaranteed admission to a university (but not full articulation of credits) if they have one of the other AS-degrees. These issues may be revisited when SACS publishes its new standards for accreditation as well as the peer review process.

When the definition of an AS degree was changed, and the AAS degree was defined, most college AS-degree programs did not meet the new definition. According to the rule, they were AAS-degree programs and needed to be changed if they were to retain their former title (AS-degree programs). Colleges made the decision whether to convert their programs to the AS-degree requirements based on the value they placed on transferability, as well as on practical matters, such as whether they had qualified faculty available.

Most colleges interviewed for this review said that students seeking a technical degree have employment as their immediate goal and not a university education. They are more likely to benefit from an AAS degree than an AS degree, because only a few students will transfer to a university. Students preparing for employment do not necessarily need college-level math and literature courses. Many occupations do not require academic mathematics and prefer the courses to be tailored to the tasks required of their employees. One college dean cited concern about accreditation if the

mathematics courses in an engineering program were required to be “transferable” -- the engineering accrediting agency (ABET) prefers the math course they are currently providing for the AAS.

So the AS-AAS issue is complicated by the scrutiny of accrediting bodies, licensing agencies, university faculty, and local industry. One college avoids confusion by calling all of its degree-level technical programs Associate in Applied Science-degree programs. This college catalogue refers the students to their advisor if they want to transfer to a university with a technical degree. This approach avoids the need to identify each program as either AS, AAS, or both. Programs that fully articulate with the state university system are the only programs that should be given a name that is typically associated with university transfer.

Number of ATDs and AS-to-BS Programs

This review found only two community colleges that are conducting all five of the AS-to-BS programs at this date.⁷ Thirteen have none of those AS-degree programs except nursing. Two have developed “bridges” between Licensed Practical Nursing programs and Registered Nursing programs. Innovative practices like these bridges are an example of less formal, local approaches to successful articulation practices.

Of the 12 approved ATD programs, only five are being conducted or are in the planning stages at any community college or technical center. Only eight community colleges are conducting ATD programs, although many colleges have those programs under the College Credit Certificate credential. Seventeen of the 31 technical centers that responded to the survey (55 percent) said that they plan to conduct an ATD program, mostly Emergency Medical Technician or Coder Specialist. Two districts would like to offer an ATD in Aircraft Airframe & Powerplant Mechanic but are uncertain that the local community college will approve their faculty’s credentials. They also said that students who complete that program find lucrative employment without earning a degree.

Local Articulation Agreements

Most of the large urban community colleges have excellent articulation agreements with state universities and with school district technical centers. Technical

⁷ Information obtained from college catalogues. Eight colleges had not yet completed their 2000-2001 catalogues at this date.

centers, however, reported wide discrepancies among the community colleges that accept their students. The difference in the number of credit hours accepted for the same program by two different colleges can be as high as 27 credit hours. In some cases, the agreement is unnecessarily vague about the amount of credit to be awarded (“up to” 20 credit hours).

The survey produced little evidence of unique courses required by different institutions, although many say they enhance their courses beyond what is required by the Course Code Directory. They give the same Common Course Number and do not discriminate against transfer students who have the same course without the enhancements. Two school districts and eight community colleges reported having programs that are unique to the state, but they could be implemented by other agencies using the same courses and curriculum frameworks.

RECOMMENDATIONS

1. Community Colleges should simplify their nomenclature for degrees and other credentials:
 - a. All former Associate in Science Degree programs should be renamed Associate in Applied Science Degree programs, except for programs that are fully covered under a statewide Articulation Agreement (that is, student admission and transfer of required credit hours are guaranteed).
 - b. The Interdisciplinary Capstone Agreement should authorize university admission to all students who hold an Associate in Applied Science Degree. The procedure should be approved during the process of adopting the new standards for the

- Southern Association of Colleges and Schools (SACS).
- c. The word “certificate” should indicate occupational or industry certification only. For consistency, College Credit Certificate programs should be renamed Applied Technology Diploma programs.
 2. The Articulation Coordinating Committee should examine the articulation history of students who earn certificates in workforce development education programs. The programs in which many students transfer to college level education should be considered in the decision to create new Applied Technology Diploma Programs. Programs that emphasize information technology should be at the top of the list.
 3. Community colleges and technical centers should continue their efforts to obtain industry- certified skill standards and a career path for shorter programs within programs.
 4. The Articulation Coordinating Committee should analyze new programs created since the creation of s. 239.115, F.S. (SB 1688).
 - a. Any proposal to create a unique workforce development program should receive an evaluation by a statewide committee of representatives from all three public education sectors and the private sector.
 - b. Evaluation criteria should include the employment opportunities for the occupation, the proposed length, and the proposed level of the program.

COMMITTEE(S) INVOLVED IN REPORT *(Contact first committee for more information.)*

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MEMBER OVERSIGHT

Senator Cowin