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ABSTRACT

Articulation is used to indicate curriculum linkage between two-year secondary vocational programs and two-year college technical programs. Articulation efforts widen the pipeline of students preparing for vocational-technical careers. All programs seek to eliminate duplication of training across educational levels. The primary goal is to meet students' career preparation needs. Articulation provides benefits to all partners: the students, the educational institutions, and the community. Three forms of articulation are advanced placement, advanced skills, and core curriculum models. Advanced placement focuses on the program-to-program level and grants college credit to vocational graduates who have obtained competencies taught in college technical courses. For articulation to be successful, an individual should be employed by the school to give leadership to the effort. Effective articulation facilitators have speaking, writing, and interpersonal skills and are familiar with vocational and technical information. An articulation steering committee supports facilitators and establish policies. Two major types of agreements are used: interinstitutional agreements and more specific program-to-program agreements. Written agreements should be developed at both the institutional and program-to-program levels. Commitment among vocational and technical top administrators should be obtained and communicated to managers, faculty, and support staff. (NLA)

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THE OHIO STATE UNIVERSITY

COMPETENCY-BASED VOCATIONAL EDUCATION ADMINISTRATOR SERIES

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- approaches to enhancing economic development and job creation

As Easy as 2 + 2

One College's "Best Practices" Vocational-Technical Program Articulation Model

COMPETENCY-BASED VOCATIONAL EDUCATION ADMINISTRATOR SERIES

Consortium for the Development of
Professional Materials for Vocational Education

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Foreword

Like many two-year colleges, Columbus State Community College of Columbus, Ohio, has a long history of ***informal*** curriculum articulation–handled on a student-by-student basis–between local vocational programs and the college's technical programs. In 1986, Columbus State undertook the ambitious work of developing ***formal*** vocational-technical articulation linkages with secondary programs at five local joint vocational planning districts. Today, institutional agreements with each vocational district are in place, but the true substance of the articulation lies in the easy-to-use advanced placement articulation agreements that link specific secondary and adult vocational education programs with related associate degree technology programs.

Much of this work was made easier because Columbus State's Coordinator of High School Programs, Constance R. Faddis, had participated in a ground-breaking national research project on vocational-technical articulation, conducted in 1985-86 by The National Center for Research in Vocational Education, The Ohio State University. That study, reported in *Avenues for Articulation: Coordinating Secondary and Postsecondary Programs* (Long, Warmbrod, Faddis & Lerner 1986), provided her with a wide variety of articulation approaches from which to select the *best practices* to bring to the Columbus area effort.

These best practices (see summary on p. vi) constitute the body of this guide, which is intended to help other vocational schools and two-year colleges create reliable, simple-to-use agreements which require minimal human and other resources to develop and which reap numerous benefits for the students, educational partners, and community. Those who seek to use this guide should note. however, that although the policies, procedures, and documents offered here have a proven track record, none is cast in concrete–nor should it be. Flexibility and creativity are irreplaceable when working with the multiple agendas and divergent concerns that characterize vocational-technical partnerships.

Several individuals participated in the development of this document. Constance R. Faddis, Consultant, wrote the document; and Lois G. Harrington, Center Editor, revised and edited the document following field review. Credit also goes to Robert E. Norton, Consortium Program Director, for providing program leadership and a content review of the guide. Special appreciation is extended to Dominic Mohamed, Deborah Walz, and Roy Wood for their service as state representatives and field-review coordinators. And last, but certainly not least, thanks goes to the field reviewers and to Anne Miller for her skill in providing the necessary word processing to produce this document.

Ray D. Ryan
Executive Director
Center on Education and Training for Employment

Eleven Best Practices for Successful Vocational-Technical Articulation

1. Obtain commitment among top administrators at both the vocational and technical levels, and communicate this commitment to other managers and to faculty.
2. Assign major responsibility to an articulation facilitator who has (1) relevant knowledge about articulation, (2) necessary organizational and "people" skills, and (3) enough assigned time and resources to carry out the work.
3. Identify and communicate the benefits to all partners.
4. Involve faculty from both levels at an early stage.
5. Emphasize continually that articulation must address ***the best interests of students,*** before all other concerns.
6. Communicate clearly the criteria for student eligibility (e.g., *A*s or *B*s required in vocational content; 2-year window following high school graduation to use articulation; college credits held in escrow until student completes 10 credits in technology) ***and the reasons for those criteria.***
7. Nurture mutual respect, trust, and candid communication across levels.
8. Develop written articulation agreements at both the institutional and program-to-program levels.
9. Simplify the paperwork as much as possible to minimize the time needed to recommend students for articulated credits.
10. Conduct reviews every 1-3 years for program-to-program agreements to keep them up-to-date with changing curricula and/or personnel and to reinforce faculty communications.
11. Commit serious resources to promotion–"half the job of articulation." Vocational faculty are the primary promoters of articulation opportunities to their students. Other strategies include articulation workshops for high school/vocational counselors; media coverage of ceremonies during which articulation agreements are signed; development of brochures, flyers, and/or a brief articulation video; and presentations to vocational students, parent organizations, early-placement employers.

Introduction

The first section of this guide defines the *2+2* concept and its benefits to students, educators, and the community. Six models of articulation are also introduced and explained:

- Advanced Placement (Time-Shortened) Model
- 2+2+2 Model
- Advanced Skills Model
- Core Curriculum Model
- Concurrent Enrollment Model
- Noncurricular Coordination

The remainder of the guide offers an easy, practical, and cost-effective approach for initiating, developing, promoting, and evaluating the most commonly used form of articulation between vocational and college technical programs: advanced placement articulation. The step-by-step suggestions and recommendations offered are based on an amalgam of best practices gleaned from the Avenues of Articulation study as well as the extensive hands-on experiences of the articulation coordinator for Columbus State Community College in Columbus, Ohio. Checklists, handouts, and sample agreements are provided throughout and serve as templates for local adaptation.

Executive Summary

Articulation, especially the *2+2* model, is used most often to indicate some kind of curriculum linkage between 2-year secondary vocational programs and 2-year college technical programs. Linkages are of many types: direct granting of college credit for mastery of specific skills, to more complex concurrent enrollment for dual high school college credit, to truly intricate and comprehensive curriculum collaboration.

All articulation efforts aim to widen the pipeline of students entering and preparing for vocational-technical careers. All seek to reduce or eliminate duplication of training across educational levels. The primary goal of articulation efforts, however, is to efficiently meet the career preparation needs of students.

Articulation is usually a *win-win situation*, with benefits accruing to all partners: the students, the educational institutions, and the community. Three basic forms of articulation exist: advanced placement, advanced skills, and core curriculum models. Advanced placement, or time-shortened, articulation is the most common type of agreement and is often called *2+2*. It usually focuses on the program-to-program level and grants college credit to graduates of vocational programs who have obtained specific competencies that are also taught in college technical courses.

For articulation to be successful, an individual should be employed either full- or part-time by the school or college to give leadership to the articulation effort. An effective articulation facilitator will have excellent speaking, writing, and interpersonal skills and will be familiar with both vocational and technical education. An articulation steering committee should also be organized to help provide support for the facilitator and to help establish articulation policies for the school and college.

Two major types of agreements are commonly used in articulation efforts. Most articulation partners develop an inter-institutional agreement that commits the partners to the effort and spells out the policies under which articulation will operate. These agreements help to ensure the continuation of partnerships despite changes in institutional leadership and priorities.

More-specific agreements are also developed to link particular vocational programs with particular college technical programs. These agreements specify the eligibility criteria for students and list the specific college courses available for articulated credit. Program-to-program agreements can be developed in two meetings if the articulation criteria are in place and a template is available for the program-to-program agreements and forms.

The author recommends that written articulation agreements be developed at both the institutional and program-to-program levels. It is also important to obtain commitment among top administrators at both the vocational and technical institutions and to communicate this commitment to other managers and to all faculty and support staff.

Part A

Introduction to Articulation

1. Defining Articulation

Educational institutions have been practicing articulation in various forms for at least 30 years. In the 1980s, educators began to use the term *2+2*–originally developed to describe transfer linkages between 2-year and 4-year colleges–as a blanket term for nearly anything resembling curriculum coordination or collaboration across educational levels.

Today, *2+2* is used most often to indicate some kind of curriculum linkage between 2-year ***secondary*** vocational programs and ***2-year college*** technical programs. Such linkages may entail approaches as direct as the granting of college credit for mastery of specific vocational skills, to more-complex concurrent enrollment for dual high school/college credit, to truly intricate and comprehensive curriculum collaboration beginning in Grade 11 (or earlier) and extending through Grade 14 (or beyond). Other innovative approaches also exist, some of which focus on students in general education rather than vocational programs.

Regardless of the form, effective *2+2* efforts have a number of common characteristics. All aim to widen the pipeline of students entering and preparing for vocational-technical careers. All reduce or, preferably, eliminate duplication of training across educational levels. Most operate on a philosophy of *students first*–that is, the foremost goal of the articulation effort is to meet the career preparation needs of the students. To be successful, articulation must accrue visible benefits to all partners, making it a *win-win* situation for all concerned.

The Win-Win *Benefits of Articulation*

The benefits of articulation are truly pervasive. Some are immediate and obvious; others are subtle or take time to develop. Here are some of the most important:

Benefits to Students

- Articulation saves students time and money by eliminating the need to repeat skills training in college that was mastered in a secondary vocational program.
- Articulation creates clear career training paths and motivates high school students to consider college education as a viable personal option.
- Articulation reduces student frustration and improves college retention by allowing students to enroll in more advanced technical courses rather than making them sit through introductory courses whose content they have already mastered.

Benefits to Educators

- Articulation creates a visible *college-stream* option for vocational graduates–a potent recruiting tool for occupational programs.
- Articulation motivates high school students to perform well, since students usually must have good grades to qualify the credit made possible through the for articulation agreements.
- Articulation can increase both the number and quality of secondary students who enroll in college technical programs and who later go on for a bachelor's degree or other higher education.
- Articulation improves relationships among faculty and administrators across educational levels by helping them appreciate both the quality and the concerns of each other's programs.
- Articulation can serve as a foundation upon which to build numerous other kinds of mutually beneficial collaborations across educational levels.

Benefits to the Community

- Articulation helps create a more comprehensive educational delivery system, with clearer, easier transitions across levels for students.
- Articulation offers incentives for youth to go to college, thus increasing the potential tax base and overall quality of life in the community.
- Articulation helps turn out more and better-trained technicians and managers for local employers–a strong drawing card for attracting or retaining business and industry in the community.

Models of Articulation

Models of articulation abound. Some are relatively discrete; others are hybrids and less easily defined. *Avenues of Articulation* (Long, Warmbrod, Faddis & Lerner, 1986), a national survey of vocational-technical articulation, identified three major models: time-shortened, advanced skills, and core curriculum. Since then, some of these models have undergone refinement, and new ones have emerged. The six major forms as they currently exist are as follows:

- Advanced Placement (Time-Shortened) Model
- 2+2+2 Model
- Advanced Skills Model
- Core Curriculum Model
- Concurrent Enrollment Model
- Noncurricular Coordination

Advanced Placement (Time-Shortened) Model

Advanced placement, or time-shortened, articulation is the most common type of agreement; it is also the form of articulation most often called *2+2*. It usually focuses on the program-to-program level and grants college credit to vocational program graduates who have mastered certain competencies that are also taught in college technical courses. (Duplication of training can occur because community or technical colleges also serve adults who may not have had the advantage of related vocational training and who must, therefore, start their technical learning *from square one.*)

This type of articulation is considered *time-shortened* because students who receive advanced placement credit for specific college technical courses subsequently require less time to complete the technical degree. In most articulation agreements of this type, vocational students must master every competency covered in a college technical course to receive credit for it; partial credit for mastery of individual competencies is not usually available.

The time-shortened model is the oldest form of vocational-technical articulation. Some agreements have been in place for nearly 25 years and have a proven history of success (e.g., at the former Williamsport Area Community College, now part of Pennsylvania State University). Columbus State Community College in Ohio currently has 147 such agreements with local vocational programs.

2+2+2 Model

This rarer kind of articulation builds on advanced placement agreements between vocational and technical programs and adds to them a baccalaureate component. Such agreements guarantee that students who successfully complete one level of education can move directly to the next level without losing credits.

For example, in Columbus, *2+2+2* agreements link area vocational programs with 2-year associate degree programs at Columbus State Community College, which in turn link with bachelor of science degree programs at Franklin University. This means that most vocational graduates who enter and complete Columbus State technical degree programs are eligible to enroll in related Franklin University baccalaureate programs as college juniors, without loss of credits.

Agreements of the *2+2+2* type are possible only when a local 4-year college or university is receptive to the notion of accepting and applying the entire 2-year technical degree to the baccalaureate degree, in full faith and with full credit.

Advanced Skills Model

Advanced skills articulation is one of the most complex and demanding forms of articulation. It involves a total rethinking and rewriting of both vocational and college technical curricula for maximum integration of instruction. The goal of this kind of partnership is to respond to a local demand for master technicians–individuals who graduate from a technical program with specialized training beyond that normally offered at a 2-year college.

In some ways, advanced skills articulation (*Avenues of Articulation* calls it "vocational technical 2+2") resembles the time-shortened model in that it first seeks to eliminate duplication of training. It goes well beyond this, however, by using the time saved through integrating the curricula to add more advanced technical courses at the end than would be offered in a traditional associate degree program. Other features of such a partnership may include the following:

- Development of *career exits* at the completion of each year of the program
- Sharing of facilities and/or faculty
- Training of secondary and postsecondary students in the same classes
- Use of joint secondary/postsecondary vocational-technical advisory committees

Development of this kind of articulation requires considerable time, resources, and cooperation. Competency-based training is a must. Model developers must totally reconceptualize the training program from beginning to end, while resolving the inevitable concerns over turf, cost-sharing, and governance.

Despite these barriers, successful advanced skills articulation agreements do exist. The first, and still best, example is the Mechanized Agriculture Program (Grades 10-14) in Bakersfield, California, which is described in *Avenues of Articulation*. Most articulation partners, however, find it difficult to justify the time and expense of developing such an ambitious form of articulation unless local business and industry guarantees to hire the program graduates and to offer them salaries and/or opportunities for advancement beyond those available for persons with less training.

Core Curriculum Model

The core curriculum model of articulation focuses on improving high school students' preparation for college and/or work by providing them with (1) stronger, applied academics, (2) basic technological literacy, and (3) focused but limited learning in some marketable work skills. This model does not apply to vocational students only; it may also be used to improve or replace the general education curriculum for nonvocational, non-college-bound students (the *neglected majority*) in a regular high school.

A major advantage cited for the core curriculum concept is that this kind of program spares high school sophomores or juniors from having to make specific vocational training choices before they may be ready, while still preparing them with enough science, mathematics, communications skills, and technological literacy for success in postsecondary learning–whether that learning takes place in a college setting or on the job. Major disadvantages of the core curriculum model are that the students generally graduate with few or no specific occupational skills and receive little or no college credit for their high school coursework.

By far the most well-known core curriculum model is one based on the special applied high school academic courses developed by the Center for Occupational Research and Development (CORD), such as the applied physics course, *Principles of Technology*. Numerous vocational schools have adopted CORD's courses as a way of strengthening their programs' academics, but many traditional high schools also use one or more of the courses for general education students. Use of the CORD courses involves little actual articulation with college technical programs; however, students *do* graduate from high school better prepared to begin college technical programs than they would have with an unfocused general education curriculum.

Another, more comprehensive version of the core curriculum model is Ohio's Model for Technology Education (Savage, 1989). This K-12 model–an ambitious expansion of industrial arts–focuses on building increasingly sophisticated **technological literacy** and **career awareness** among students across the grades. At the high school level, students receive a combination of academic and hands-on practical arts preparation in one of three technological cluster areas:

- Communication technology systems
- Physical technology systems (e.g., transportation, energy, engineering)
- Bio-related technology systems

At least one pilot site, South-Western City Schools in Grove City, Ohio, also uses CORD's *Principles of Technology* course to augment the district's Model for Technology Education in its three high schools. Because this model includes some focused vocational training (e.g., drafting/CAD, computer applications), it may be possible to offer advanced placement credit to program graduates toward certain introductory-level college technical courses.

Concurrent Enrollment Model

This model is actually another type of time-shortened program. It enables high school vocational students to enroll concurrently in related technical courses at a 2-year college and to receive dual high school and college credit. Although concurrent enrollment options are available at many colleges around the country, the opportunity is seldom offered to vocational students.

The VOTE (*vo*cational-*te*chnical) concurrent enrollment program at Columbus State Community College is based on a special arrangement with the Ohio Department of Education. Through this program, eligible vocational seniors can trade their vocational lab or early-placement job in the second semester of their senior year for the opportunity to enroll in up to five college courses, at least two of which are technical.

Eligibility requirements for the VOTE program are stringent. Students must have a *B* average and excellent attendance record, as well as the recommendation of their vocational instructor and counselor. They must score as *college ready* in reading, comprehension, and mathematics on the college's intake placement examination. Students must also take and pass a special College Success Skills course at their vocational school before enrolling for courses on campus.

Tuition, lab fees, and books are provided free of charge; students and parents must sign a student contract, however, and students who fail to complete a college course are billed for the costs. College grades are applied to vocational laboratory grades. About two-thirds of the vocational seniors who enter the VOTE program subsequently continue their education at a college or university; about half of those stay on at Columbus State Community College.

Noncurricular Coordination

One of the *win-win* benefits of articulation mentioned earlier was the development of other, noncurricular collaborations between secondary and college faculty and staff. Although these kinds of articulation do not affect either institution's program content or offer college credit, they too improve the likelihood that secondary students will prepare for and enter college technical programs.

Some examples of these valuable formal and informal partnerships between high school and college faculty and staff include–

- Visits to college technology laboratories for secondary students
- High school/college team teaching opportunities
- High school and college classes meeting together for special demonstrations or speakers
- Shared field trips to business and industry
- Loaning or sharing of instructional media, equipment, and/or facilities
- Membership of faculty on each other's advisory committees
- Mutual sponsorship of career fairs or skills contests

Tech Prep

Given the many models of articulation, which one, if any, is *Tech Prep*? No clear definition has as yet emerged, either in the literature or as a result of the 1990 reauthorization of the federal Perkins Act. Tech Prep models reported at various conferences differ substantially in their breadth and structure. Most begin at Grade 11; a few begin earlier. All are articulated in some manner with college technical training.

Despite the confusion, three essential components seem to emerge from discussions of Tech Prep:

- Tech Prep includes strengthened (e.g., applied) academics for vocational or general education students.
- Tech Prep includes some form of articulation of secondary (vocational or general education) programs with 2-year college technical programs.
- Tech Prep includes inservice/professional development for secondary faculty and staff.

Two more elements of Tech Prep extend beyond Grades 11-14; these are probably not essential but add immeasurably to the long-term effectiveness of a Tech Prep program:

- Tech Prep (ideally) includes expanded career education programs–beginning at least as early as middle school–with a strong emphasis on preparation for vocational-technical careers.
- Tech Prep (ideally) includes vigorous community education programs to counteract myths in the minds of parents and other influential adults about the supposed low status, low income potential, and general undesirability of vocational-technical careers.

The first and foremost goal of all Tech Prep efforts is to increase the number and quality of students coming into and completing postsecondary technical training or apprenticeships–the skilled technicians and journeyworkers upon whom America's future economy will depend. If the foregoing analysis of Tech Prep components is accurate, development of some form of vocational-technical articulation agreement(s) is essential (though not sufficient) for an effective Tech Prep program.

A final note: some Tech Prep purists believe that "real" Tech Prep specifically includes the advanced skills model of articulation. As discussed earlier, however, the time and expense necessary to develop a true advanced skills type of articulation can only be justified if it reaps extra benefits (e.g., increased income, more promising career ladders) for the ***program graduates,*** not for industry alone. Where those extra benefits are not available, it is probably better to use one of the other, simpler articulation models.

Part B

Focus on Advanced Placement Articulation

2. Getting Started

Partners in advanced placement articulation fall into five main roles:

- Policymakers, needed to agree on the articulation model(s) and set the parameters of the agreements
- Vocational and technical faculty, needed to serve as both content experts and primary promoters of the articulation–the most important partners in the effort
- A facilitator, needed to organize and give structure to the effort
- Vocational and college counselors and other staff, needed to process, promote, and evaluate the agreements

The Articulation Facilitator

Articulation does not happen spontaneously. It requires the close and constant attention of at least one person serving as a facilitator–somebody who has this responsibility as part or all of his or her job description.

The facilitator may be employed by the college partner, a secondary vocational partner, or both. If employed by a college, the facilitator ideally reports to the chief academic officer, although some colleges house their articulation facilitator in the admissions office. Many articulation efforts seek a state or local grant to fund this position initially.

The facilitator has numerous responsibilities, including the following:

- Serve as the project's articulation expert, informing the other players and guiding them in their roles
- Set up and provide leadership at articulation meetings
- Write and revise agreements according to feedback from partners
- Organize agreement signing ceremonies
- Provide inservice education for the vocational and college staff who will promote, process, or support the agreements
- Convene and work with the articulation promotion subcommittee
- Collaborate with or carry out articulation evaluation efforts
- Keep the project on time, on target, and within budget

An effective articulation facilitator will have excellent speaking, writing, and interpersonal skills and will be familiar with both vocational and technical education. A high level of organizational ability is also crucial.

The Articulation Steering Committee

Articulation cannot take place without the approval and support of the vocational and college administrators. An effective way to bring these key parties together is to create an Articulation Steering Committee. The steering committee should include the following members:

- Superintendent, director, and/or principal of every vocational school or district involved in the articulation effort
- College president and/or chief academic officer
- Key college technology deans or department chairpersons
- Articulation facilitator

Other, optional members may include (1) representatives of the college's admissions, records and registration, and public relations offices; (2) director of college institutional research; and (3) student, parent, and/or industry representatives.

This policy-making body has a variety of responsibilities. With the guidance of the articulation facilitator, most steering committee tasks can be carried out during one or two initial meetings and an annual review meeting, as follows:

1. Select the articulation model(s) to be used (in this case, the model will be advanced placement articulation).
2. Commit the personnel and resources needed to develop and operate the model(s).
3. Develop the criteria/parameters for the articulation agreement(s).
4. Identify the vocational and technical programs to be linked and the appropriate faculty to be contacted.
5. Approve or revise the wording of the articulation agreement(s) drafted by the articulation facilitator.
6. Designate institutional representatives to serve on an articulation promotion subcommittee.
7. Sign completed agreements, as appropriate.
8. Review the progress and effectiveness of the model(s) and agreement(s) periodically, and revise as needed.

Major Policy Issues for the Steering Committee

Advanced placement agreements make college credit available to qualified vocational students who enroll in college technical programs. It is important, for both clarity and ease of use, that these criteria be consistent across agreements, regardless of which programs are being articulated. Equally important is the need to reduce all possible barriers that may

discourage vocational teachers and students from using the agreements, or the college from efficiently processing them.

Experience shows that articulation efforts tend to bog down when **faculty** articulation committees are made responsible for critical policy issues (e.g., the criteria for student eligibility for advanced placement credit or the specific wording of the document of agreement). To circumvent potential turf battles, the Articulation Steering Committee should be the body to determine the wording of the agreements and the criteria included in them. This enables the faculty members who meet later to concentrate on the work of selecting the course content for the agreements–their true area of expertise.

In order to develop practical, consistent criteria for articulation, the Articulation Steering Committee must resolve the following issues, as well as others that may arise. Recommendations concerning each issue are provided here.

Should students be required to take proficiency tests at the college to be eligible for college credit? No. The most effective advanced placement agreements operate on trust–trust in the judgment of the vocational instructors who recommend their students for the college credit. At Columbus State Community College and elsewhere, the consistent success of students who use these agreements reinforces this trust.

Should students' high school grades be used to determine eligibility for college credit? Yes. Experience with advanced placement agreements shows that students who seek college credit for vocational content should have mastered that content at an *A* or *B* level. This helps ensure their success in subsequent technical coursework. However, a student's overall high school grade point average should not be used–only the grades for those vocational competencies for which the student wants credit should be considered. Because the structure and sequence of vocational curricula do not resemble those of college courses, the vocational instructor usually makes a judgment about the grade level at which the student mastered the content in question.

How long should the articulation opportunity be available to vocational graduates? Some limitation should be set on how long the window of opportunity is open. A grace period is necessary, since many high school graduates go directly to work and only later decide to enroll in college. However, their skills will degrade if they are not working in their field of training. Columbus State Community College keeps its articulation window open for 24 months following high school graduation. Central Ohio Technical College, another two-year college that uses advanced placement articulation, allows 15 months.

Should a ceiling be placed on the number of credits that may be articulated? Yes. Clearly, colleges must guard the integrity of their technical programs. A college certificate or degree should reflect an appropriate amount of coursework completed at that institution. Central Ohio Technical College has set a maximum of 30 articulated credits for students entering associate degree programs and 15 credits for those enrolling in 1-year certificate programs.

Should articulated credit be recorded on the student's transcript immediately upon enrollment at the college? No. Articulated credits should be held in escrow by the college until the student has shown some reasonable commitment to pursuing a college education. At Columbus State Community College, they are held in escrow until the student has completed the next 10 credits in the technology with at least a grade of 2.0 (low *C*). This policy serves several purposes. First, the college avoids rubber-stamping college credits for a student who may then withdraw from the college without ever completing a course there. Second, a credit-in-escrow policy serves as a check and balance on the student's vocational skills. If the student cannot successfully complete the next 10 credits in the technology, something has clearly fallen through the cracks and that student needs to go back and repeat important foundational courses in order to be successful.

Should articulation be limited to college technical courses? This is an internal issue for the partner college. It may be difficult to justify the transferability of articulated credit for high school English, science, and mathematics classes, should the student later wish to transfer to another college or university. College technical programs can usually vouch more readily for a student's technical skills. A good rule of thumb may be, *When in doubt, leave it out.*

Should articulation opportunities be restricted to students whose educational goals are to complete a 1- year certificate or associate degree program? No. Students come to 2-year colleges with many different educational goals, and once there, they are just as likely to change them. As long as a credit-in-escrow policy is in place, the college is assured that the student can only obtain articulated credits after showing a reasonable level of commitment to his or her continuing education.

Should articulated credit be offered to students free of charge? Yes. Any costs involved in obtaining articulated credits act as barriers for prospective students. Columbus State Community College includes in all of its advanced placement agreements a sentence stating that a small fee may be charged to handle the student's transcript; however, the college has yet to charge such a fee.

Who should sign the agreements? The vocational superintendent and the college president or chief academic officer should sign both institutional and program-to-program agreements. This authorizes both the school and college to use the agreement. For program-to-program agreements, it is important for the vocational instructor(s) and/or supervisor(s) to sign, because it provides a mark of ownership. The same is true for the department chairperson at the college.

How often should agreements be reviewed and updated? Some vocational and technical careers are in constant flux, making it important to update curricula frequently. Programs of this type should probably be reviewed annually. Agreements for programs that change less often may need to be reviewed only every 2 or 3 years. Periodic review is necessary regardless of how stable an occupational field and related programs may be. Faculty at both levels need to refresh their commitment; in addition, periodic reviews offer a chance to educate any new faculty about the articulation opportunities for students.

The Roles of Faculty

The Articulation Steering Committee sets the articulation parameters, and the facilitator drafts the form of the agreement(s). However, the vocational and technical faculty–the hands-on content experts–are the only persons really qualified to identify the specific content of the agreement. Face-to-face discussion and examination of each others' curricula are critical to determining where sufficient duplication of instruction exists to grant credit to a vocational graduate for a college technical course.

Fortunately, this work need not be laborious or time-consuming. A simple, two-meeting process developed and used extensively by Columbus State Community College and its vocational partners is detailed in a later section.

Another important reason to involve faculty at both levels is that no one is better able to promote articulation opportunities to promising vocational students than the vocational instructors. Their sense of ownership of any articulation agreement is a must. Nothing encourages vocational faculty to *buy into* a linkage with a college technical program more than developing a face-to-face dialogue and relationship with their instructional counterparts at the college.

Other Important Actors

Developing agreements is only half of the work of articulation. A number of other actors come into play once the agreements are signed. These people are responsible for helping promote the agreements to students, parents, and the community, and for processing the recommendation forms when they arrive at the college. The following high school and college staff should receive inservice training concerning the articulation process in order to carry out their related roles:

- Vocational and other local high school counselors and administrators
- College admissions office staff
- Public relations staff at the vocational school(s) and college
- College records and registration staff (this unit will probably receive and process the articulation recommendation forms)
- Other college student services units (e.g., Counseling Center) that are likely to receive questions about articulation opportunities and procedures
- College cashier's office (if any fees or tuition waivers are involved)

Cost of Advanced Placement Articulation

The **facilitator's salary/benefits** is the major line item in a budget for the development of advanced placement articulation. Coordination of articulation development is detail-

oriented and labor-intensive. Columbus State Community College's facilitator spent about 75 percent of her time on articulation for 2 years in order to coordinate the development of most of the college's 147 existing agreements.

Part-time **clerical support** for the facilitator is extremely helpful, although it is not absolutely necessary. Articulation development entails setting up meetings, sending out mailings, and writing and revising numerous agreements on a word processor–activities that are better carried out by a secretary or typist.

Some articulation partners offer **stipends to vocational and college faculty** for their participation in developing the program-level agreements (especially if articulation meetings take place on weekends or evenings). Others offer **reassigned time**. Still others (including Columbus State Community College and its vocational partners) ask their faculty to **volunteer their time** to meet immediately after school for the two meetings needed to identify agreement content; faculty have generally done this willingly.

Because so much of the development work involves meetings of several hours' length, funds for **entertainment** (e.g., coffee and doughnuts, box lunches for noon meetings) should also be provided. Offering snacks or simple meals at a meeting reduces the formality of the setting, inviting the open, collegial atmosphere that best promotes cooperation.

In addition, some funds should be set aside for holding **receptions** at articulation agreement signing ceremonies at each vocational district or school–important publicity activities for both partners. Columbus State Community College and its vocational partners split the costs of these signing events.

Other budget items include **travel reimbursement** for the facilitator (and perhaps for faculty); extensive **photocopying**; **postage** and **mailing supplies**; and other **general office supplies**.

There are some potential **funding sources** available to you. Because articulation is a key element in any Tech Prep program, Perkins Act Tech Prep monies are currently the most likely funding source for articulation development projects. Some state educational agencies (e.g., state departments of education) have target monies for vocational-technical articulation. Local and national private foundations and corporations with a strong investment in education may also be approached to fund a 1- or 2-year articulation development project. In some cases, a college or vocational school or district may choose to fund an articulation project out of its operating budget, or articulation partners may choose to share these costs.

3. Agreements and Forms

Once the Steering Committee approves the articulation criteria, the facilitator develops templates for the institutional and program-to-program agreements and forms, as well as inservice handouts to be used throughout the development process.

An Institutional Agreement

Most articulation partners develop an inter-institutional agreement that commits the partners to the articulation, spells out the policies under which articulation will operate, and may designate the vocational-technical program linkages. In some cases, the agreement may also stipulate how the articulation development costs will be shared among the partners.

Although some articulation partners focus on program-to- program agreements and forego the formality of an institutional document, there are legal and promotional advantages to creating a formal agreement at this level. Inter-institutional agreements ensure that the partnerships will continue despite changes in institutional leadership and priorities. In addition, any ceremonies held for the official signing of institutional agreements provide an occasion to involve the news media and the community and to announce and promote the new articulation opportunities for students.

Sample 1 at the end of this chapter shows the institutional agreement format used by Columbus State Community College and its vocational partners. (For another, generic agreement, refer to *Avenues for Articulation*).

A Program-to-Program Agreement and Form

Program-to-program agreements are essential for advanced placement articulation. Each agreement document must–

- Indicate which secondary vocational program links with which college technical program
- Spell out the eligibility criteria for students in easily understood language
- List the specific college courses available for articulated credit

Sample 2 shows the formal agreement page for a program-to-program articulation document used by Columbus State Community College and its vocational partners (the college course list appears on separate pages). Their format for program-level agreements and forms consists of the following parts:

1. The formal program-to-program agreement (one to two pages), signed by the appropriate administrators and faculty (see sample 2). Students do not need to see this part of the document.

2. A one-page instruction sheet, describing in simple terms the eligibility requirements for students and how to fill out and send in the application (see sample 3).
3. A simple one-page application form, asking for the student's name, address, and social security number; date of expected high school graduation date; and signatures of the student, vocational instructor, and a designated vocational administrator (see sample 4).
4. One or more pages providing a list and brief descriptions of the college courses available for articulated credit (see sample 5). Descriptions include the major competency-based course outcomes whenever possible to help vocational instructors ensure that their students have indeed mastered the critical content of the college course. Spaces are provided beside each course description for a letter grade and the vocational instructor's initials, to indicate for which specific courses the particular student qualifies.
5. A place for approval and sign-off by the respective college department chairperson (see bottom of sample 5).

Although the Columbus State Community College format has a history of high instructor approval and use, it is by no means the only format for program-to-program agreements. One alternative format you may wish to consider appears in *Avenues for Articulation.*

A streamlined recommendation form is vital. Since vocational instructors are typically responsible for recommending their students for articulated credit, ***the faster and easier the recommendation form is to use, the more it will be used.*** The entire form shown in samples 2-5 can be completed and signed by the student and vocational instructor in 2-3 minutes. The parts of the form are so simple that many vocational faculty routinely fill out and send them in for their promising seniors, even though the students may not express an immediate interest in going to college (as mentioned earlier, Columbus State Community College allows a 24-month window of eligibility following high school graduation).

Most of the Columbus State Community College's program-level agreements consist of *boilerplate* content; that is, the content is the same on each agreement page, instruction page, recommendation information page, and departmental approval space except the names of the vocational and technical programs being articulated, and the phone number of the college's department contact person.

The content that varies from agreement to agreement–the ***meat*** of advanced placement articulation–is the course listing. Development of these lists is the major task in an advanced placement articulation project, and it can only be performed by instructional content experts–the vocational and technical faculty–working under the guidance of the articulation facilitator.

Handling of Recommendations at the College

Efficiency of handling is also important for the partner college. Columbus State Community College receives between 60-100 articulation recommendation forms each year. These generally come in to the college's Records and Registration Office. Records personnel create a paper file for each recommendation. The document is then sent to the specified department chairperson for review and approval.

Department chairpersons make a quick check of the information page and course list, sign the department approval space, and return the document to the Records and Registration Office. This normally takes 2-3 minutes. Approval is delayed only if the chairperson notes an error (e.g., a course initialed by a vocational instructor with a grade other than an *A* or *B* beside it) or other problem. In those cases, the chairperson phones the vocational faculty person (the recommendation form asks for the school phone number) and works out the problem before approving the recommendation.

Once the approved form is returned to the Records and Registration Office, it waits in a date-flagged file for the student to enroll in the specified college program within the time allowed by the window of opportunity. Upon enrollment, the student's electronic record is flagged, placing the articulated credit in escrow pending successful completion of the required 10 technical credits. If the student does not enroll in the program within the window of opportunity, the paper file is thrown away.

Should any fees be included as part of the articulation application process, procedures should be worked out with the cashier's office at the college to ensure appropriate interdepartmental communication.

Generic Agreements and Forms

Sometimes developing a detailed program-to-program articulation agreement is neither feasible nor desirable. For example, too few students from a distant vocational district may be likely to use the agreement, making it difficult to justify the time and travel needed to develop specific program-to-program agreements. In such situations, it may be best to use a *generic* agreement and form.

The generic articulation materials used by Columbus State Community College consist of a vocational-technical articulation guide, a generic institutional agreement, and a generic recommendation form. The **generic articulation guide** is no more than a listing of likely vocational-technical program linkages (see sample 6), accompanied by lists and descriptions of the college courses typically available for articulated credit as was done in sample 5. Vocational instructors must consult this guide to identify potential college courses for which they can recommend articulated credit for a student. A copy of the guide is usually placed in the secondary school's counseling office.

The **generic institutional agreement** is purely optional, but it does present the vocational school with a promotional tool. Such an agreement does not include a list of specific vocational-technical linkages or statements of cost sharing.

The **generic recommendation form** asks for the same student information and signatures as the usual form, but instead of including a course list, space is allotted for vocational instructors to write in the college courses for which they wish to recommend their students. In addition, because the vocational and college faculty do not meet to discuss and become familiar with each other's curricula, the generic form may ask for details on the vocational program content and textbook(s).

The college handles generic application forms in the same way as program-specific forms. The department chairperson, however, must scrutinize the vocational instruction information much more closely, and may need to phone the school before approving the recommendation. Because no formal program-to-program agreement has been worked out, the college does not guarantee it will grant the articulated credit. Approval is carried out on a student-by-student basis.

SAMPLE 1

INSTITUTIONAL AGREEMENT

An Articulation Agreement between Delaware Joint Vocational School and Columbus State Community College

When secondary and postsecondary institutions articulate their programs to allow students to gain college credit for relevant vocational courses, they (1) eliminate unnecessary duplication of learning and (2) save students time and tuition in pursuit of higher learning.

Recognizing the need for such curriculum articulation, Delaware Joint Vocational School and Columbus State Community College hereby create this agreement to enable Delaware JVS students to take advantage of articulation opportunities developed with Columbus State. These opportunities will be implemented beginning with the 1988-89 or 1989-90 school year.

Delaware JVS students who fulfill competency requirements specified in the program-to-program agreements may earn college credit from Columbus State in the following areas.

	Delaware JVS Program	Columbus State Program
1988-89:	Executive Secretary	Secretarial Science Technology
	Early Childhood Education	Social Services Technology
	Entry Data Processing	Computer Programming Technology
1989-90	Auto Mechanics	Automotive Maintenance Technology
	Electronics	Electronic Engineering Technology *or* Electromechanical Engineering Technology
	Machine Trades	Mechanical Engineering Technology
	Marketing and Management	Business Management Technology *or* Retail Management Technology *or* Marketing Technology
	Medical Profession Assistant	Multi-Competency Health Technology

There will be no charge for college credit granted through this agreement, although Columbus State may charge a small fee for administration of the student's record.

The Superintendent and the President hereby pledge their commitment and support to continuing articulation between the two institutions and to promotion of articulation opportunities to the students.

Superintendent, Delaware Joint Vocational School

Date

President, Columbus State Community College

Date

SAMPLE 2

PROGRAM-TO-PROGRAM AGREEMENT PAGE

An Articulation Agreement
between the
Columbus Public Schools
Career Center Drafting Programs
and
Columbus State Community College
Mechanical Engineering Technology Program

Articulation of advanced placement credit to postsecondary programs for relevant high school courses (1) eliminates unnecessary duplication of learning and (2) saves students time and tuition in the pursuit of postsecondary education. Recognizing the need for such articulation, the Columbus State Mechanical Engineering Technology Program agrees to grant advanced placement credit to students completing CPS Career Center Drafting programs, as follows:

1. The student must graduate from high school and have completed the specified vocational training with a grade of *A* or *B*.
2. The vocational teacher must review and complete the Mechanical Engineering Technology articulation form (see attached form) and send it to Columbus State.
3. The student must enroll at Columbus State in the Mechanical Engineering Technology Program within 24 months of high school graduation.
4. The student must complete 10 credits in the technology area at Columbus State with a grade point average of at least 2.0 before the articulated (nontraditional) credit will be added to the student's college transcript.

There will be no charge for college credit awarded through this agreement, although Columbus State may charge a small fee for the administration of the student's record.

The administrators and faculty of the programs at both levels pledge their commitment and support to continuing this articulation relationship and to promoting these articulation opportunities to the students.

Columbus Public Schools		Columbus State Community College	
Superintendent	Date	President	Date
Director of Career Education		Mechanical Engineering Technology Chairperson	

SAMPLE 3

INSTRUCTION SHEET FOR A PROGRAM-LEVEL AGREEMENT

Articulation between the Columbus Public Schools Career Center Drafting Programs and the Columbus State Community College Mechanical Engineering Technology Program

Recommendation for College Credit

The articulation agreement between your school and Columbus State Community College enables high school graduates to receive advanced placement credit for selected Columbus State courses upon evidence of competency in vocational courses that are equivalent to those in the attached list. There is no fee for this advanced placement credit.

Instructions to the Student

You may be eligible for advanced placement credit at Columbus State for your vocational drafting courses. You must have an *A* or *B* in the courses to get college credit.

If you feel you may qualify for advanced placement credit, fill out the first part of the attached form. Then take the form to your vocational teacher(s), who will read the college course descriptions. If your teacher agrees that you meet the criteria for the course(s), the teacher will complete the form and send it to Columbus State.

Once the college accepts your application for advanced placement credit, you have up to 24 months after high school graduation to enroll at Columbus State in the Mechanical Engineering Technology program. The college will hold your advanced credit in escrow until you complete 10 credits in the technology area at Columbus State with a grade point average of at least 2.0.

If you don't meet the articulation criteria, you may still qualify for advanced credit by taking and passing a proficiency test administered by Columbus State. A fee of $10 is charged for each proficiency test.

Instructions to the Vocational Teacher

Please read the attached form carefully before filling it out. Your student must (1) have achieved the knowledge and skills listed for the Columbus State course(s) in question and (2) have completed the equivalent high school course with an *A* or *B*.

Your signature is evidence that the student meets all articulation criteria for the indicated course(s). Mail the completed form to–

Records and Registration
Columbus State Community College
550 E. Spring Street
Columbus, OH 43215

If you have any questions about articulation with Columbus State, contact the Mechanical Engineering Technology department chairperson at [phone number].

SAMPLE 4

RECOMMENDATION INFORMATION PAGE FOR A PROGRAM-LEVEL AGREEMENT

Articulation between the Columbus Public Schools Career Center Drafting Programs and the Columbus State Community College Mechanical Engineering Technology Program

Recommendation for College Credit

To Be Completed by the Student

Student's Name _____

Address _____
(street) (city) (state) (zip code)

Home Phone _____ Work Phone _____

Social Security Number _____

Expected High School Graduation Date _____
(month and year)

I agree to permit my high school teacher(s) to provide Columbus State with the information on this form:

Student's Signature _____ Date _____

****

To Be Completed by the Vocational Teacher(s)

Teacher or Teacher's Name(s) _____

Name of High School _____

School Address _____
(city) (state) (zip code)

School Phone Number _____

As indicated by my initials next to the attached course description(s), my former student has achieved the knowledge and skills listed hereafter. I therefore believe that my former student should receive advanced placement (nontraditional) credit for the Columbus State course(s):

Teacher's Signature _____

Director's Signature _____

Date _____

SAMPLE 5

COURSE LISTING AND DEPARTMENT APPROVAL FOR A PROGRAM-LEVEL AGREEMENT

Columbus State Community College
Mechanical Engineering Technology Courses
Available for Advanced Placement Credit
Through Articulation with CPS Career Center Drafting

Recommendation for Credit for _____
(student's name)

Social Security Number _____

Letter Grade	Teacher's Initials	Columbus State Course Available for Credit
_____	_____	*4652 Computer Applications for Manufacturing* (3 credits). The student is able to discuss and apply basic knowledge about microcomputers, including basic machine operations, PC-DOS, disk storage, and so forth. the student is able to demonstrate a basic familiarity with word processor, file manager, spreadsheet, and graphics software. The student is able to describe how microcomputers relate to manufacturing. Experience on IBM-PCs is preferred.
_____	_____	*4601 Mechanical Drafting I* (3 credits). The student is able to apply principles of orthographic, isometric, and oblique projection, as well as dimensioning, sectioning, and applied descriptive geometry, to produce detail and assembly drawings.
_____	_____	*4603 Computer-Aided Drafting I* (2 credits). The student is able to use a CAD computer system to generate basic orthographic drawings.

****

Columbus State Departmental Approval

I approve the granting of advanced placement credit as indicated on this form. Credits will be held in escrow by the Columbus State Records Department until the student has completed 10 credits in the Columbus State technology program area:

Department Chairperson's Signature _____

Department _____ Date _____

SAMPLE 6

VOCATIONAL-TO-TECHNICAL PROGRAM LINKAGES FOR ADVANCED PLACEMENT CREDIT

Vocational Program →	Columbus State Program
Auto/Truck Mechanics	Automotive Maintenance Technology
Business/Marketing/Merchandising	Business Management Marketing Technology Retail Management Technology
Merchandising	Marketing Technology Retail Management Technology
Carpentry/Building Trades	Construction Management Technology Heating & Air-Conditioning Technology (Residential Service major only)
Data Processing	Computer Programming Technology
Dental Assistant	Dental Laboratory Technology
Dental Laboratory	Dental Laboratory Technology
Drafting	Architecture Technology Civil Engineering Technology Construction Management Technology Heating & Air-Conditioning Technology Mechanical Engineering Technology
Early Childhood Education	Early Childhood Development Technology
Electricity	Heating & Air-Conditioning Technology (Residential Service major only)
Food Service/Culinary Arts	Hospitality Management Technology
Graphic Arts/Printing	Graphic Communications Technology
Health Career Programs	Multi-Competency Health Technology
Hospitality & Tourism	Hospitality Management Technology
Law Enforcement	Law Enforcement Technology (except Academy track)
Machine Trades	Electromechanical Engineering Technology Mechanical Engineering Technology Quality Assurance Technology
Office-Related Programs	Secretarial Science Technology)
Welding	Electromechanical Engineering Technology Heating & Air-Conditioning Technology Mechanical Engineering Technology Quality Assurance Technology

4. Program-to-Program Agreements in Two Meetings

Once the articulation criteria are in place and the facilitator has designed a template for the program-level agreements and forms, the substantive work of the project can begin. To develop the listing of college courses to be offered for articulated credit, the faculty and/or chairpersons from the related vocational and technical programs must meet and work together. Although administrators and other staff may be present at these meetings, it is important that faculty–the content experts–conduct the actual development activities.

The optimal arrangement is for a college to conduct a series of program-level articulation development meetings with **one vocational school** at a time. However, these meetings can accommodate **any number of faculty teams** working on specific vocational-technical linkages (e.g., vocational drafting and mechanical engineering technology; cooperative business education and secretarial science technology; vocational medical assisting and surgical technician technology).

It is also possible to work with **more than one vocational school** at a time, but this could give rise to a competitive mentality among the vocational participants. If the multiple-school approach is used, fewer specific vocational-technical linkages should be attempted at the same time. The maximum number of people for whom these meetings can be made to work is about 30.

Program-level articulation development can be completed in two meetings. (In some cases, it has been completed in one, but this is less desirable, for reasons that should become apparent). Each meeting typically takes 2-3 hours; if the vocational and technical instructors are already acquainted, it usually takes even less time. Sample 7 lists the basic steps for the two-meeting articulation development process.

SAMPLE 7

THE TWO-MEETING ARTICULATION DEVELOPMENT PROCESS

MEETING 1	Vocational and technical faculty meet with the articulation facilitator at the vocational school. The facilitator briefs the group on the benefits and processes of articulation. Faculty discuss their related programs, share courses of study (or other curricular materials), and tour the vocational labs.
INTERVAL BETWEEN MEETINGS	Faculty examine each other's curricula for possible duplication of instruction. The college faculty give the facilitator a list of tentative courses for articulation. The facilitator prepares draft agreements for second meeting.
MEETING 2	The facilitator convenes the meeting at the college with vocational and technical faculty. Faculty examine and negotiate draft agreements, discuss cooperative strategies to promote articulation opportunities to students, and tour the technology labs.
WRAP-UP	The facilitator revises the agreements based on mutual faculty decisions, sends the revised agreements to all parties to review for accuracy, and then prepares the final agreements.
SIGNING	Designated administrators and/or faculty sign the finalized agreements.
PROMOTION	The facilitator or other qualified vocational and/or college personnel deliver inservice training to vocational and local high school counselors on articulation opportunities. The college provides inservice training on articulation procedures to its admissions and registrar staff. Faculty carry out their strategies for promoting the opportunities to students.
UPDATE	Vocational and technical faculty meet on a periodic basis to review and update agreements and familiarize new faculty with them.

Faculty Meeting No. 1

Pre-meeting preparations. A number of tasks must be carried out by the facilitator before the articulation development meetings can begin:

1. Work with the designated faculty to find mutually agreeable dates for the two articulation development meetings. If at all possible, the first should be held at the vocational site and the second at the college. This enables faculty from each level to have one of the meetings on *home turf* and gives them the opportunity to show off their laboratories and equipment to their new partners.
2. Prepare a letter of invitation and an agenda for the first meeting, and mail them to all participants. The letter should advise both vocational and college faculty to bring to the meeting copies of their courses of study and/or any other materials that will convey to their articulation partners the content and depth of study of their curricula. These materials will be used to assist in identifying duplication of instruction for possible articulated credit.
3. Arrange with the host institution to provide comfortable meeting space, with a table and chairs for each vocational-technical work team. Ask that coffee and light refreshments be available to encourage an informal, collegial atmosphere.
4. Prepare handouts to be used at the meeting. These may include a brief description of advanced placement articulation (see sample 8), a list of its most important benefits (as described in Chapter 1, pp. 3-4), a copy of the two-meeting articulation development process (see sample 7), and a sample of an advanced placement articulation document (see samples 2-5).
5. If appropriate, encourage and/or work with vocational or technical faculty to develop competency-based course descriptions and/or outcomes. Having course materials in this form makes it significantly easier to identify probable instructional duplication across levels.

Meeting agenda. The initial meeting has two parts. The facilitator should begin the meeting with an informational presentation to the entire group, after which the related vocational-technical work teams can split off to work together as small groups.

The informational presentation. Following introductions, the facilitator can use the handouts to do the following:

- Explain the purpose of the meeting
- Define advanced placement articulation
- Describe its benefits to the students and all participants
- Explain the two-meeting process, and clarify the roles and tasks of the faculty work teams
- Walk the group through the criteria and parts of a sample articulation agreement document

SAMPLE 8

CENTRAL OHIO TECHNICAL COLLEGE HANDOUT:
WHAT IS *ARTICULATION?*

Articulation agreements are formalized linkages between educational institutions that make it easier and more attractive for students to move from one level of education to the next. The major goal is to create smoother, more visible career preparation paths for students.

There are many kinds of articulation. Often, they are grouped together under the term *2+2*. Included are advanced placement, advanced skills 2+2 (useful only where local industry requires numbers of advanced technicians, 2+2+2 (vocational-to-technical-to-baccalaureate articulation), and concurrent enrollment (akin to Ohio's Post-Secondary Enrollment Option).

Articulation at COTC will focus mainly on the advanced placement model.

Advanced placement articulation, which links vocational programs to college technical programs, is the most common type of agreement. Advanced placement agreements grant college credit to recent graduates of vocational programs who have mastered (at a stipulated level) certain competencies that are also taught in the college's technical courses.

This kind of articulation is sometimes called *time-shortened*. Because duplication of training across levels is eliminated, it takes a student less time to complete an associate of applied technology degree. (Duplication of training can occur across the two levels because college technical programs also serve many adults who do not have a vocational or experiential background and must, therefore start their technical learning from scratch.)

Advanced placement articulation between vocational and technical programs has a long history of success–nearly 25 years in some communities. Most vocational graduates ***do*** use advanced placement agreements and do well in college technical programs.

The most successful agreements are based on ***trust:*** when the vocational teacher signs a student's articulation application form, the college takes the teacher's word that the student has indeed mastered the specified competencies.

Several studies show that this trust is well founded. At Williamsport Area Community College, for example, vocational teachers actually could have recommended more college credits for their students, but they chose to be conservative because they felt that when they signed an application, they put their reputation on the line as well.

A crucial theme that should run throughout the presentation is an emphasis on **students first**. The facilitator needs to communicate clearly to all participants that their work is, first and foremost, *to improve opportunities for vocational graduates to continue their training in college technical programs*. This emphasis can help deflect the development of potential turf issues.

Another crucial theme is **how articulation benefits the vocational and technical faculty.** For example, a prime and readily grasped benefit for programs at both levels is articulation's potential for positively affecting student recruitment. Vocational faculty with college articulation agreements in place can legitimately tell potential students and their parents that their vocational programs are college preparatory streams for students who work hard, get good grades, and set their sights on technical careers. Any improvements in the number and quality of students entering the vocational pipeline should also reap recruitment benefits for the college technical programs.

A final important theme to convey is **the relative ease and simplicity of the articulation development process** for the faculty work teams. Most of the articulation document is already prepared for them. Their work, focused solely on content issues, should go quickly and painlessly. This has, in fact, been consistently true of the articulation development activities conducted at Columbus State Community College and Central Ohio Technical College.

Small-group discussion. Following the presentation, the vocational and technical faculty working on specific program linkages can start to meet in small groups. The facilitator should circulate among the groups to answer questions and provide any needed assistance. Generally, little assistance is required; faculty are eager to talk with each other and typically get down to work quickly to discuss curriculum specifics.

Once the day's discussions wind down, vocational participants should invite their college partners for a tour of the vocational labs. This not only helps the technical faculty appreciate the content and quality of the vocational curriculum, it also encourages greater collegiality.

Faculty Meeting No. 2

Pre-meeting preparations. During the interval between the first and second meetings, faculty should spend time reviewing and becoming familiar with each other's programs of study. Their charge is to identify where sufficient mastery of occupational competencies occurs at the vocational level to truly equal the competencies taught in one or more specific college technical courses, so as to ensure that the students have the foundation they need to succeed in subsequent college courses. A minimum of one week should be allowed between these meetings; two to three weeks is better.

Prior to the second meeting, the facilitator should mail out letters to all participants reminding them of the upcoming second meeting. If appropriate, campus maps and parking permits should be included for vocational participants.

In addition, the facilitator should contact the college faculty participants and get from them a *first-cut* list of the college courses the faculty think are candidates for articulated credit. The facilitator can then prepare a draft agreement for each vocational-technical linkage, including the draft list of college courses and descriptions. (Descriptions should be written in competency-based language, if possible, to convey the critical competencies covered by each course.) Enough photocopies should be made of each agreement to provide each participant with his or her own copy.

Meeting agenda. At the second meeting, the facilitator should begin by reviewing the purpose of the meeting and distributing the draft agreements. The vocational-technical work teams can then meet as small groups to examine the agreements and negotiate the courses to be included in the final document. (Having draft agreements available gives the groups something concrete from which to begin their discussion and negotiation.) The intended outcome of this work is to have, by the end of the meeting, a final list of college courses for each vocational-technical agreement being developed.

Once the groups have negotiated their agreements to everyone's satisfaction, they should move on to the development of mutual plans to promote the articulation opportunities to students. Although the schools and college may develop institution-level promotional materials to support the agreements, it is ***vital*** that faculty develop their own plans and that these be collaborative wherever possible. No brochure or videotape presentation can approach the impact of personal student-instructor contacts. A handout of promotional ideas for faculty is shown in sample 9.

If time and interest allow, college faculty should invite their guests to tour the technology laboratories and classrooms.

SAMPLE 9

CENTRAL OHIO TECHNICAL COLLEGE HANDOUT:
SUGGESTED ACTIVITIES FOR JVS/COTC ARTICULATION PROMOTION

_____ Vocational instructors inform their students of the articulation opportunities and encourage them to prepare for and take advantage of them.

_____ Vocational instructors bring their students to COTC for a field trip to tour the technology labs, meet COTC faculty, and learn about technical career opportunities.

_____ COTC faculty visit the JVS to meet students personally and talk about technical careers and about articulation and career preparation opportunities at COTC.

_____ COTC and vocational faculty plan joint activities aimed at raising student interest in higher education (e.g., team-taught demonstrations, joint vocational-technical field trips to employer sites).

_____ COTC and vocational faculty develop joint brochures, videos, newsletters, posters, or other media to promote vocational-technical linkages to current and prospective high school students and their parents.

_____ Vocational schools and COTC jointly host skill competitions for current and prospective students.

_____ Vocational schools and COTC jointly host articulation update inservice activities for counselors (and, perhaps, faculty) of the JVS's feeder high schools (and, if feasible, middle schools).

_____ Vocational schools, COTC, and employers jointly host vocational-technical career fairs or other activities targeted at improving students' and the public's knowledge and perceptions of vocational-technical careers.

_____ COTC faculty–or technology students (as a community service activity)–take advantage of opportunities to meet and mentor promising vocational students or *adopt* a vocational class, making an extra effort to spend time with the high school students and encourage and help them to enroll and succeed at COTC.

_____ Vocational schools and COTC collect data on articulation usage and subsequent student success stories and feed this information to parents, current and prospective students, and the local media.

. . . and so forth. Opportunities are limited only by the amount of time and creativity you can give!

Completion of the Agreements

Following the second program-level meeting, the facilitator must carry out any follow-up activities necessary to complete the course listings for each program agreement. The facilitator can then make whatever revisions may be needed and prepare copies of each agreement document for final review. These are then sent to each relevant participant, along with a letter asking each person to review the document for accuracy and to contact the facilitator with any corrections by a certain date. If corrections are needed, another revision and round of reviews by mail will be needed.

Special-case course listings. Most program agreement course listings will be simple, containing the course number, course title, number of credits, and course description (preferably in competency-based language). Some special cases may arise in the second meeting that require something to be added to a course description or listing. Sample 10 offers some alternative language for some of these special cases.

Articulation Signing Ceremonies

Once institutional and program-to-program agreements are completed between the college and a vocational partner, the articulation facilitator should coordinate a date and place (usually at the vocational school) for an official signing of the agreements. Invitees usually include the following:

- Vocational superintendent and/or other administrators
- College president and/or chief academic officer, technology deans, and other relevant administrators
- Faculty, supervisors, and chairpersons involved in development of the agreements
- Articulation facilitator and any assistants
- Other interested faculty and staff from both levels (including relevant college Admissions staff)
- Business and industry representatives
- Members of the local news media
- Interested students and parents

Public relations staff from both institutions should coordinate their efforts in inviting appropriate media representatives so as to ensure maximum publicity.

In preparation for the signings, the facilitator should prepare two originals of each agreement to be signed. Each signatory signs both agreements; one signed original is kept by the vocational school or district, and the other is kept by the college.

SAMPLE 10
SPECIAL-CASE COURSE DESCRIPTIONS OR LISTINGS

For a course with prerequisites:

——— ——— *2782 Computer Literacy I* (3 credits). The student is able to . . .

[A student may get credit for this course only if the student has also mastered the competencies of the prerequisite course, *3325 Typing I.*]

For a course available only through proficiency testing:

——— ——— *3912 Professional Selling* (4 elective credits). This course is ***not*** available for advanced placement credit. However, students who have significant professional selling experience may take a proficiency exam to gain credit for the course. A proficiency exam costs $50. To take the exam, make an appointment with the chairperson of the Business Management Technology Program at [phone number].

For program limitations on number of elective credits:

——— ——— *3921 Distribution* (3 elective credits).* The student is able to . . .

——— ——— *3942 Marketing Internship I* (4 elective credits).* The student is able to . . .

——— ——— *3912 Professional Selling* (4 elective credits).* The student is able to . . .

* Students may earn only up to 6 elective credits in the program. However, additional elective credits will appear on the official college transcript.

To alert students to other articulation options:

NOTE: Students who are more interested in *Business Management* than in the articulation with the Marketing Technology program may instead apply some of their vocational coursework toward advanced placement credit in the Business Management Technology program at Columbus State. Please use the appropriate Recommendation for College Credit form.

A typical agenda for a signing ceremony may include the following:

- Welcoming speech
- Appropriate explanatory speeches by the chief vocational and college representatives
- Testimonials from some current vocational seniors who plan to use the new articulation opportunities
- Signing of the institutional agreement
- Signings of the program-to-program agreements
- Reception

Costs of the reception may be shared by the two institutions.

It is not necessary to repeat signing ceremonies as additional agreements are developed or updated. These can be signed informally and copies distributed.

Distribution and Processing of Agreements

Following the signing ceremonies, the articulation facilitator should make copies of the signed document and send one to each of the persons who participated in its development. Vocational instructors should be advised to keep their copy as their *master copy* and to photocopy it as needed for students. Other copies should go to relevant administrators. The originals should be filed in a central archive at each institution.

5. Promotion– The Other Half of Successful Articulation

One of the sad awakenings for the research staff who wrote *Avenues for Articulation* occurred when they traveled to a site at which vocational and technical educators had spent a daunting number of hours developing their articulation agreements, only to have the agreements gather dust in a file drawer. No articulation is successful unless students ***use*** the opportunities!

As discussed earlier, one way to help make this happen is to create articulation recommendation forms that are as fast and easy to use as possible, but that is only the beginning. Students, parents, and guidance counselors at every level must be told about the articulation opportunities and should then be reminded regularly and repeatedly in a variety of ways.

Promotion by the Vocational and Technical Faculties

The vocational instructors are the first line of articulation promotion. They are the individuals in the best position to encourage their vocational students to take advantage of the opportunities to get a head start on a college technical degree. The individual or mutual promotion plans they make with their articulation partners at the college should be carried out with reasonable regularity and should revised or renewed as their programs and relationships evolve.

Inservice Training for School Counselors

Clearly, **vocational** counselors need to know what the articulation opportunities are for their students and how the recommendation process works. It is also important to convey this same information to **general** high school counselors, whether they work in the same building as the vocational programs or not. These individuals all have direct access to students and roles to play in their career preparation decisions.

An ideal way to inform counselors about articulation is to invite them to a breakfast or luncheon workshop at the partner college. The workshop presenters (the articulation facilitator and/or college admissions staff) should–

- Explain the purpose of articulation
- Explain the articulation development process
- Provide appropriate copies or synopses of the agreements
- Discuss the specific opportunities made available to vocational graduates

- Equate articulated credits to actual tuition dollars saved
- Walk the group through a sample agreement and recommendation document

This workshop should be repeated every few years to refresh the counselors' memories, inform them of any additional agreements that may be available, and educate new counseling staff about the opportunities for students.

It may also be valuable to conduct awareness workshops for other school personnel. For example, Ohio legislation will soon require that individualized career plans be developed for each eighth grader. Middle school teachers and counselors responsible for career education may find information about the college opportunities available through vocational-technical articulation an important new option for many of their students.

College Student Services Staff

The partner college should conduct a similar inservice workshop for its student services staff, especially admissions officers and counseling center staff. College admissions representatives, especially, need a solid grasp of the purpose and benefits of articulation, as well as specific information about program-level articulation opportunities. This information will be invaluable as the admissions staff visit area high schools, talk with students and parents, and work with vocational students considering enrollment at the college. In addition, admissions staff may find it useful to set up a special articulation information booth at high school career fairs and at college open houses.

Other units of the college (e.g., records and registration staff, financial aid staff) may also be asked questions about articulation and should at least be informed about where such questions may be directed.

The Articulation Promotion Subcommittee

The collaborating institutions should consider cooperative development of materials to promote the articulation agreements. An Articulation Promotion Subcommittee–consisting of vocational and college public relations staff and other personnel designated by the Articulation Steering Committee–should be given a modest budget and charged with developing these materials, which may include a brief educational videotape for students and parents (this could be appended to a college admissions video), as well as brochures, booklets, or pamphlets.

Columbus State Community College's vocational partners preferred to develop school-specific brochures rather than generic college articulation brochures. Most of the schools also incorporated information on articulation opportunities into their normal student recruitment materials.

The college also developed a short (5-minute) video on vocational-technical articulation opportunities at the college. The articulation facilitator drafted the videoscript, which was reviewed and revised by the Articulation Promotion Subcommittee and produced by the college's Public Relations Department. The college then provided a copy of the videotape to each partner school.

6. Follow-up and Evaluation

The Articulation Steering Committee is the body that determines what kinds of outcomes it expects from the articulation partnerships it has established. If a formal evaluation is desired, appropriate data should be identified, collected, analyzed, and periodically reported to the committee.

Categories of data that may be useful include the following:

- Number of program-level recommendation forms received by the college per annum, listed by vocational school and vocational-technical linkage
- Number and percentage of vocational graduates for whom recommendation forms are received who actually enroll at the college within the window of opportunity, by vocational school and vocational-technical linkage
- Number and percentage of these vocational graduates who enroll in the technical program to which the recommendation form applies
- Number and percentage of these students who successfully complete the credit-in-escrow requirements and receive the articulated credit on their college transcripts
- Number and percentage of these students who fail to complete the credit-in-escrow requirements and do not receive the articulated credit
- Average number of articulated credits received by students who complete the credit-in-escrow requirements
- Total number of articulated credits granted by the college per annum and the equivalent in tuition dollars saved by students
- Number and percentage of vocational students who successfully complete the credit-in-escrow requirements and who subsequently complete the technical certificate or degree, as compared to other vocational graduates who enroll in the college within the 24-month period after high school graduation but who do not apply for articulated credits

Since most of these data rely on access to college records, the partner college should probably take primary responsibility for carrying out the evaluation.

Columbus State Community College and its vocational partners have not pursued a formal evaluation of articulation outcomes. Verbal information from vocational faculty and counselors, as well as college department chairpersons, provides strong informal testimony concerning the value placed on the articulation opportunities by the schools, the vocational graduates, and the college programs. The college's articulation facilitator also receives copies of articulation recommendation forms and student transcripts from the Records and

Registration Department and carries out periodic informal assessments concerning the use of the agreements. For example–

- In the period between January 1989 and January 1991, Columbus State Community College received over 230 recommendation forms from local schools.
- Of these, 76 vocational graduates had enrolled in articulated college programs.
- Of the enrollees, 41 had successfully completed the credit-in-escrow requirement and had their articulated credits recorded on their official college transcript.
- Only one student who finished the 10 technical credits necessary to meet the credit-in-escrow requirements had failed to achieve sufficient grades to receive the articulated credit.
- The successful students received an average of 7 credits–a value at that time of approximately $308 in tuition, not counting lab fees and book costs also saved.
- The maximum number of credits received was 32, by a student enrolled in Secretarial Science Technology.
- The minimum number of credits received was 1, by a student enrolled in Multi-Competency Health Technology.

Finally, the Columbus State facilitator has kept an articulation "scrapbook" of local newspaper articles reporting on articulation opportunities for local vocational students or mentioning these opportunities in profiles of local achievers. Nearly two dozen newspaper clippings make up this file at the time of this writing.

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Competency-Based Administrator Education (CBAE) Materials

CBAE materials have been developed which address most of the competencies that were identified and verified as important by this and a previous research study. The available materials cover the competencies needed to be a successful administrator—competencies that address the following duty areas:

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