DOCUMENT RESUME

ED 083 417 CE 000 408

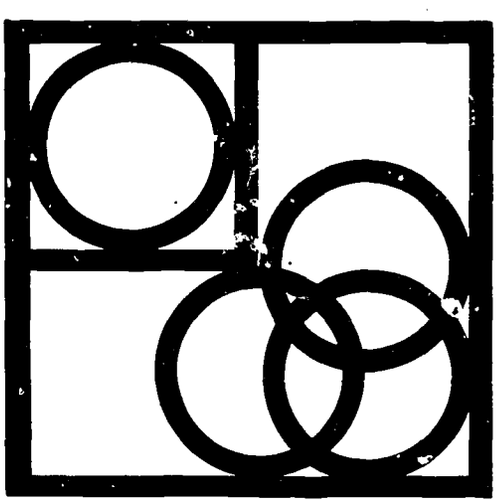
AUTHOR	Gillie, Angelo C., Ed.
TITLE	The Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education.
INSTITUTION	Pennsylvania State Univ., University Park. Center for the Study of Higher Education.
PUB DATE	Sep 73
NOTE	195p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Annual Reports; *Articulation (Program); Colleges; *Conference Reports; Conferences; Junior Colleges; Participant Satisfaction; *Post Secondary Education; *Vocational Education; Vocational Schools; Vocational Training Centers
IDENTIFIERS	*Pennsylvania

ABSTRACT

The purposes of the fourth annual Pennsylvania conference on postsecondary occupational education were to consider the role of area vocational schools, two year colleges, and senior colleges in the articulation of occupational programs; to provide participants with information that would better enable them to identify some of the elements and useful approaches in articulation; to provide an opportunity for exchange of ideas on topics associated with articulation; and to continue the series of cooperative ventures between The Pennsylvania State University and other Pennsylvania institutions which are aimed at contributing to the overall improvement of occupational education. To achieve these objectives eighteen papers were presented for the 84 conference participants. The text of the papers, an evaluation of the conference, the conference program, its registration list, and its advisory committee are presented in the report. (For the report from the third annual conference, see ED072194). (AG)

The Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education

Angelo C. Gillie
Editor



Center for the Study of Higher Education

The Pennsylvania State University

The Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education

Angelo C. Gillie
Editor

Center for the Study of
Higher Education

The Pennsylvania State University
University Park, Pennsylvania

September 1973

TABLE OF CONTENTS

TABLE OF CONTENTS (cont'd)

TABLE OF CONTENTS (cont'd)

FOREWORD

Any careful observer of the world of work and education would have to conclude that the interrelationships are complex. The observer would also have to conclude that the present is a period of ferment, change, conflict, and also one of creative and imaginative consideration of the alternatives to present programs and structures.

The interactions between occupational education at the secondary and postsecondary levels is one of the more important to be considered. It is to this topic that the Fourth Annual Conference on Postsecondary Occupational Education, held at The Pennsylvania State University, was directed.

With the growth of community-junior colleges and the current emphasis on career and vocational education, articulation between secondary and postsecondary education, in both vocational and nonvocational areas, has come to the fore as a primary client need.

We believe the papers generated for and by this conference and contained in this volume of the proceedings are most useful to those who are concerned with the many facets of the articulation of secondary and postsecondary occupational education.

G. Lester Anderson
Director, Center for the Study
of Higher Education

ARTICULATION IN OCCUPATIONAL EDUCATION

Angelo C. Gillie
Professor, Department of Vocational Education
and Associate, The Center for the Study
of Higher Education, The Pennsylvania
State University

Introduction

Vocational educators are becoming increasingly aware of the overlapping elements in occupational education. The simultaneous presence of over 1,100 two-year colleges and 1,900 area vocational schools underscores this fact. Each type of institution has its own unique objectives and the potential for conflict is ever present. On the other hand, the possibility is also present that institutional diversity can be the foundation for enrichment of the occupational education movement as a whole. In response to a desire to maximize the potential for both kinds of institutions, and to enable competition to benefit students, state level coordination of area vocational schools and community colleges is becoming commonplace. (See Table 1 for the distribution of community colleges and area vocational schools on a state by state basis.)

It should be noted that 931 of the 1,889 area vocational schools are classified as postsecondary institutions. Also of interest is that 227 (12 percent of the total) offer *both* secondary and postsecondary programs. Furthermore, 443 of the two-year colleges (about 40 percent) also serve as area vocational schools as well. These figures illustrate the extent of overlap and diversity in the kinds of institutions in which occupational education exists.

Added to this are the hundreds of private vocational schools which serve over 1.5 million students nationally.[1] An additional component in the occupational scene is the present popular trend toward baccalaureate programs in many of the vocational areas. While the conference itself has presentations from individuals who have successfully achieved articulation, this paper only attempts to describe the components involved.

The Present State of the Art

An examination of the variety of associate degree granting schools in the Commonwealth indicates that the Pennsylvania situation is a paradigm of the national situation. In June 1970, 8,000 associate degrees were granted by 43 schools, an average of 186 graduates per school.[2] With the exception of The Pennsylvania State University, typical middle level occupational training colleges have small enrollments. There are six generic types of associate degree granting institutions in the state:[3] a) public community colleges, b) private junior colleges, c)

---

[1]A. H. Belitsky, *Private Vocational Schools and Their Students: Limited Objectives, Unlimited Opportunities* (Cambridge, Mass.: Schenkam Publishing Co., 1969).

[2]R. C. Hummel, *Our Colleges and Universities: Degrees and Other Awards Conferred by Pennsylvania Institutions of Higher Education*, 1969-70, Vol. 8, No. 2, 1970-71 (Harrisburg, Pa.: Bureau of Educational Statistics, Department of Education, 1971).

[3]Angelo C. Gillie, *Post-Secondary Occupational Education: An Overview and Strategies* (University Park, Pa.: Center for the Study of Higher Education, The Pennsylvania State University, 1970); Karen L.

Commonwealth Campuses of The Pennsylvania State University, d) private colleges and universities, e) proprietary schools, and f) private state-aided institutions. (See Figures 1-4 for the distribution of these institutions.)

The number of schools offering associate degree occupational programs is expected to increase because new community colleges are still emerging in the state and a substantial number of proprietary schools are being authorized each year to grant the degree. More than 30 proprietary type institutions have already been authorized and their number is expected to reach 70 by 1973. No substantial growth in the associate degree granting programs by universities, other senior colleges, and private two-year colleges is expected. As of September 1970 the enrollment figures for associate degree candidates, by type of institution, were: a) community colleges - 26,000; b) private two-year colleges - 4,700; c) Pennsylvania State University Commonwealth Campuses - 3,800; d) proprietary schools - 3,000. About half of the associate degree candidates in the community colleges and private two-year colleges are in occupationally oriented programs, while all the university and proprietary school candidates listed in this paper are in such programs. The Pennsylvania State University, with 19 campuses, also serves a two-year (non-vocational) function because a large number of pre-professional students complete the first two years of their baccalaureate programs there and then transfer to the main campus in their junior year. Unlike proprietary schools, the preparation of occupationally

---

Bloom, Larry L. Leslie and Angelo C. Gillie, *Goals and Ambivalence: Faculty Values and the Community College Philosophy* (University Park, Pa.: Center for the Study of Higher Education, Report #13, 1971).

oriented graduates is not the major focus of the Commonwealth Campuses of The Pennsylvania State University. The difference in these two types of schools depicts the extremes of the span of institutions involved with occupational programs.

Another indicator of institutional and program diversity is reflected in the variety of titles given to the associate degrees awarded. Eight types of associate degrees are offered by various Pennsylvania institutions: (1) Associate and Applied Arts (AAA); (2) Associate and Applied Science (AAS); (3) Associate in Arts (AA); (4) Associate in Science; (5) Associate Science Technology (AST); (6) Associate Science and Business (ASB); (7) Associate Degree in Specialized Curriculum (AD); (8) Associate in Career Studies (ACS). This list does not indicate the ever greater diversity in vocational programs that lead to diplomas and certificates which are being offered by the proprietary institutions and area vocational schools. In 1971, there were 222 licensed private business schools and 126 private trade schools (Bureau of Private Schools and Veterans' Education, Pennsylvania Department of Education) in Pennsylvania. From this alone, one can suspect that the private sector is providing a substantial input to the postsecondary vocational education effort in the Commonwealth.

A major difference between types of schools is the way in which they are controlled and financed. The public community colleges obtain their financial support in a manner unlike any other higher educational institution in the Commonwealth. Support for physical facilities is obtained on a matching basis between the State Department of Education and the community college district (which is a voluntary formation of school districts in a given region). Support for programs (other than facilities) is obtained from the student, the community college district, and the state (Pennsylvania Community College Act of 1963 - Act 484) with each element contributing about one-third of the tuition cost. Local

taxation, based upon real estate assessment, is the major means for obtaining local funding. Tuition (September 1970) averaged $350 per academic year for Pennsylvania residents or $700 for the entire two-year program. Total tuition cost (including local and state contributions) averages about $2,100 for a typical two-year course.

The Commonwealth Campuses of The Pennsylvania State University receive their support as part of the overall budget of the university, with no financial input from direct local taxation. Tuition assessed the student is higher than in the community colleges (about $800 per academic year for in-state students, or $1,600 for the entire two-year program). The tuition in our 13 private (i.e. nonprofit) junior colleges (7 nonsectarian, 6 sectarian) is considerably higher than in the public community colleges.

The greatest number of postsecondary institutions offering programs in occupational education in Pennsylvania are proprietary schools. In 1967, the total enrollment of the 248 licensed institutions was 22,700 full-time students, an average of about 92 full-time students per school. About 8,500 of these students graduated from business type proprietary schools. The proprietary schools, like most private junior colleges, rely almost entirely upon student tuition and fees for financial support. However, pocket tuition cost to the student is in fact comparable to community colleges. Recent Pennsylvania Department of Education (1971) figures show that: (a) business schools average 82.5 cents per hour of instruction or $1,485 for a 1,800 hour associate degree program; (b) trade and technical schools average $1.20 per hour of instruction or $2,160 for an 1,800 hour associate degree program; (c) computer schools average $2.00 per hour or $3,600 for a 1,800 hour associate degree program; (d) aeronautics schools average $1.20 an hour for instruction or $2,640 for a 2,200 hour associate degree program.

The area vocational school is one of the major forces behind vocational education in the nation as well as the Commonwealth. Its most important impetus was perhaps derived through the Vocational Act of 1963 (PL 88-210) and the Vocational Education Amendments of 1968 (PL 90-576). These acts specify the kinds of schools that may qualify as area vocational schools. These include: (a) specialized high schools; (b) a department of a high school which offers programs in at least five occupational fields; (c) a technical or vocational school; (d) a department or division of a two-year college which offers programs in five or more occupational fields; (e) a department or division of a senior college or university which offers programs in at least five occupational fields. From this it can be seen that area vocational schools, at least from the federal funding point of view, can offer programs at the secondary, postsecondary, or both secondary and postsecondary levels. This has created some confusion. The Vocational Education Amendments of 1968 mandated that at least 15 percent of the federal funding allocated to each state be used for students who have either graduated from or dropped out of high school. There also are specific allocations for special and disadvantaged students, much of which can be utilized by two-year colleges. Many of the nation's two-year colleges, because they offer vocational programs in five or more occupational areas, qualify for and accept funding as area vocational schools, but identify themselves as community colleges and not as area vocational schools.[4] A number of senior colleges and universities do the same. In all of these cases, the public in general and even a majority of faculty administrators, do not view these institutions as area vocational schools.

---

[4]C. D. Perkins, ed., *Reports on the Implementation of the Vocational Education Amendments of 1968* (Washington, D.C.: U.S. Government Printing Office, 1971).

The most visible type of area vocational schools are those institutions called area vocational/technical schools, technical education centers, or board of cooperative educational service centers, depending upon the state in question. In Pennsylvania vocational schools are called area vocational schools and there are more than 60 in operation. Their first major characteristic is their physical and academic separation from other kinds of educational efforts. This educational separatism has been criticized as long ago as the turn of the century by John Dewey and others[5] and continues to be considered undesirable by some educators[6]. On the other hand, proponents of separate vocational schools are equally committed to their position because of the long-standing dissatisfaction of many vocational educators with the manner in which academic and general educators have viewed and conducted occupational programs in the past.[7] Evidence of the strength of this movement is seen in the large number of area vocational schools in operation, both nationally and in Pennsylvania (see Table 1).

A second characteristic of area vocational schools is that those which offer vocational preparation programs to students in grades ten through twelve emphasize occupations in the trades and crafts.

---

[5]Merle Curti, *Social Ideas of American Education* (New York: American Historical Association on the Social Studies, 1935).

[6]Clark Kerr, *The Open Door Colleges: Policies for Community Colleges: A Special Report and Recommendation by the Carnegie Commission on Higher Education* (New York: McGraw-Hill, 1970).

[7]A. C. Gillie; Grant Venn, *Man, Education, and Work* (Washington, D.C.: American Council on Education, 1964).

A. C. Gillie, *Principles of Postsecondary Vocational Education* (Columbus, Ohio: Charles Merrill, 1973).

TABLE 1*

Distribution of Community Colleges and Area Vocational Schools[a]

State	Total Jr. Col.	Total AVS[a]	Sec. Level	Post Sec. Level	PS Sec.[b]	Two-Year AVS[c]
Alabama	23	50	23	27	0	1
Alaska	8	9	6	2	0	2
Arizona	13	14	3	11	0	10
Arkansas	3	19	3	16	0	3
California	99	105	13	102	0	87
Colorado	16	13	13	13	13	5
Connecticut	22	19	5	14	0	4
Delaware	4	5	3	2	0	1
District of Columbia	3	6	4	2	1	0
Florida	32	31	14	17	14	10
Georgia	23	42	18	24	0	1
Hawaii	6	16	10	6	0	6
Idaho	4	6	6	0	0	2
Illinois	55	47	22	25	0	23
Indiana	4	30	20	10	0	1
Iowa	25	25	0	25	0	21
Kansas	25	14	14	14	14	1
Kentucky	23	57	44	13	0	0
Louisiana	8	32	23	32	23	0
Maine	6	21	13	9	1	3
Maryland	21	81	72	9	0	7
Massachusetts	33	66	54	27	9	9
Michigan	36	61	28	41	8	26
Minnesota	23	32	1	32	1	3
Mississippi	24	56	30	26	0	11
Missouri	22	55	45	28	18	7
Montana	3	5	5	5	5	0
Nebraska	13	10	2	8	0	2
Nevada	3	6	3	5	2	1
New Hampshire	4	24	15	9	0	1
New Jersey	22	35	35	17	17	0
New Mexico	9	8	6	8	6	2
New York	61	70	70	0	0	0
North Carolina	66	52	0	52	0	52
North Dakota	5	6	3	4	1	4
Ohio	38	126	105	21	0	15
Oklahoma	18	17	17	17	17	0
Oregon	16	18	4	14	0	13
Pennsylvania	49	62	62	27	27	1
Rhode Island	3	8	7	1	0	0
South Carolina	26	45	30	15	0	11
South Dakota	2	6	5	6	5	0
Tennessee	18	31	5	30	4	6
Texas	59	127	87	40	2	32
Utah	5	12	8	11	7	5
Vermont	5	15	15	0	0	0
Virginia	27	161	140	20	0	16

TABLE 1* (continued)

State	Total Jr. Col.	Total AVS[a]	Sec. Level	Post Sec. Level	PS Sec.[b]	Two-Year AVS[c]
Washington	27	31	9	28	6	20
West Virginia	7	37	30	27	20	0
Wisconsin	31	37	37	37	0	10
Wyoming	7	7	4	7	4	7
American Samoa	1	1	0	1	0	1
Guam	--	1	1	1	1	0
Canal Zone	1	0	0	0	0	0
Puerto Rico	19	16	16	0	0	0
Trust Territories	--	1	1	1	1	0
Virgin Islands	--	2	2	0	2	0
Totals	1,111	1,889	1,211	939	229	443

*From an unpublished manuscript: Gillie, 1972.

[a]Totals in Column 2 taken from Directory AVS: Fiscal Year 1972 (Mimeograph USOE).

[b]Ibid.

[c]Schools identified as AVS in Directory AVS and also classified as a two-year college in Directory: American Association of Junior Colleges.

Although in most states, the programs are concentrated on academic levels compatible with the maturity and abilities of secondary school students, some programs for postsecondary type students, particularly part-time and evening offerings, are beginning to operate. This trend is also taking place in Pennsylvania. A third characteristic of area vocational schools, which also relates to curriculum, deals with the general education component of the program, which accounts for about half of the time spent by students in AVTS secondary level programs. In some cases general education is provided at the home high school from which the student was sent; in other cases, general education is offered on the daily basis for those students who live near enough to commute from their high school to the AVTS. In still other cases, where the students travel considerable distances between the home town high schools and the AVTS, general education is offered in the home town high school on certain days while the vocational courses are offered in the AVTS on the other week days. Still another variation is that some AVTS's offer the general education component of the vocational programs within their own facilities. In most cases, regardless of the mode adopted, the separation of general and vocational education appears to be clear. In spite of the criticism aimed at vocational educators for the establishment of separate vocational institutions of this type, there is increasing evidence that vocational education may very well thrive as well, if not better, in such a configuration that it presently does in many of the comprehensive two-year colleges. Recognition of this possibility is beginning to appear in the literature.[8]

The fourth characteristic of the AVTS is its latent potential for the preparation of virtually all kinds of lower and middle level workers. If legal

---

[8]Sir Eric Ashby, *Any Person, Any Study* (New York: McGraw-Hill, 1971).

mechanisms can be found to place AVTS within a new educational configuration, allowing articulation from the lower grades at one end to grades 13-14 and the world of work at the other end, AVTS can perhaps become the most viable institution for preparing lower and middle levels of the work force. Perhaps in some future time, the AVTS's and community colleges can join forces more completely in this regard.

A Master Plan for Occupational Education

A master plan for vocational education that cuts across both secondary and postsecondary levels is needed to improve opportunities for students. Such coordination may be defined as "the act of regulating and combining so as to give harmonious results."[9] The coordinating agency approach, which leaves the matter of internal governance to local boards of control[10] rather than placing it in the hands of a central authority, may come to replace the former mode of central control which may have run its course.

Despite the tradition of institutional autonomy, particularly in postsecondary type institutions, there is a surge of efforts to bring about voluntary cooperation between various groups of schools and colleges. Educators are beginning to consider educational adequacy, effectiveness, economy, and maximization of available resources. Attempts by state legislatures to limit monies for education is certainly a

---

[9] Lyman A. Glenny, *Autonomy of Public Colleges: The Challenge of Coordination* (New York: McGraw-Hill, 1959).

[10] R. O. Berdahl, *Statewide Coordination of Higher Education* (Washington, D.C.: American Council on Education, 1971).

catalyst and there is mounting evidence that consortium type configurations can be efficient and productive for both the cooperating states and the students.

Possibly the most significant impetus to coordination is the difficulty in articulation between American institutions of higher education, which constitute an assemblage rather than a system. Unless special coordination efforts are made, the inadequate and improper articulation between units within this aggregate will continue to make it difficult for students to move from one institution to another without undue loss of credit and time.

Both horizontal and vertical constraints inhibit articulation. Vertical inconsistencies occur where there is difficulty in maintaining continuity in grade levels within educational units, such as refusing to accept students who graduate in certain lower level institutions, or to accept only a portion of their previous work. Removing such vertical constraints is of greatest urgency because of the social and economic mobility offered through further education.[11] Horizontal constraints occur when a student wishes to move into a similar program in another institution. Because of increased geographic mobility, both types of articulation are of great importance. The great diversity in philosophic goals and functional purposes found in these various institutions further confounds the articulation difficulties.

It is common knowledge that planning often is an afterthought which comes to mind when a series of events have taken place that point to the need for

---

[11] P. Blau and O. D. Duncan, *The American Occupational Structure* (New York: John Wiley & Sons, 1967).

some kind of coordination. Such is the state of vocational education in many places today. Master plans (as opposed to no planning at all) would provide the state with the means to engage in orderly, immediate, intermediate, and long-range planning. This process would begin with the establishment of accepted goals, followed by procedures to implement the goals within the means the state has at its disposal. Such a process can vary between the extremes of total state control to almost complete local control.

Occupational education has been suffering from interstitialitis for quite some time because the kinds of institutions in which it is offered vary from secondary to postsecondary levels with the great majority of occupational programs being offered in secondary schools.[12] But the condition is worsening as an increasingly larger number of programs are being developed in postsecondary institutions, both public and private.[13] This makes it increasingly more difficult to place occupational education in one level of education. Further confounding the issue is that some programs are offered in secondary schools in one region of the state and in postsecondary institutions in some other region of

---

[12]U.S. Office of Education, Bureau of Adult, Vocational, and Library Programs, "Fact Sheet: Vocational Education Amendments of 1968 - Public Law 90-576" (Washington, D.C.: American Council on Education, 1964).

[13]M. E. Hooper, *Associate Degree and Other Formal Awards Below the Baccalaureate, 1969-70* (Washington, D.C.: U.S. Government Printing Office, 1971); G. H. Wade, *Fall Enrollments in Higher Education, 1970* (Washington, D.C.: U.S. Government Printing Office, 1971).

the state. Therefore, occupational education has become an interstitial type of offering and clearly does not fit within the traditional rubric of secondary and postsecondary education.

If we are to profit from this complex interstitial situation, we need to move affirmatively in the direction of improving communications between various elements within the overall aggregate of occupational education. It is especially important to emphasize that, in the final analysis, good articulation in these institutions seeks to improve the occupational education condition so as to increase benefits for students.

The Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education, whose papers are presented in this volume, was steered in the direction of improved communication. We leave it to the reader to draw his own conclusions about the extent to which this basic goal has been achieved.

ADDITIONAL SOURCES NOT CITED IN FOOTNOTES

Chambers, M. M. *Voluntary Statewide Coordination in Public Higher Education.* Ann Arbor : University of Michigan Press, 1961.

Directory: American Association of Junior Colleges. Washington, D.C.: The American Association of Junior Colleges, 1972.

Directory AVS: Fiscal Year 1972. Washington, D.C.: U.S. Office of Education, mimeograph.

Public Law #210, 88th Congress (Vocational Education Act of 1963).

Public Law #576, 90th Congress (Vocational Education Amendments of 1968).

AREA VOCATIONAL-TECHNICAL SCHOOLS

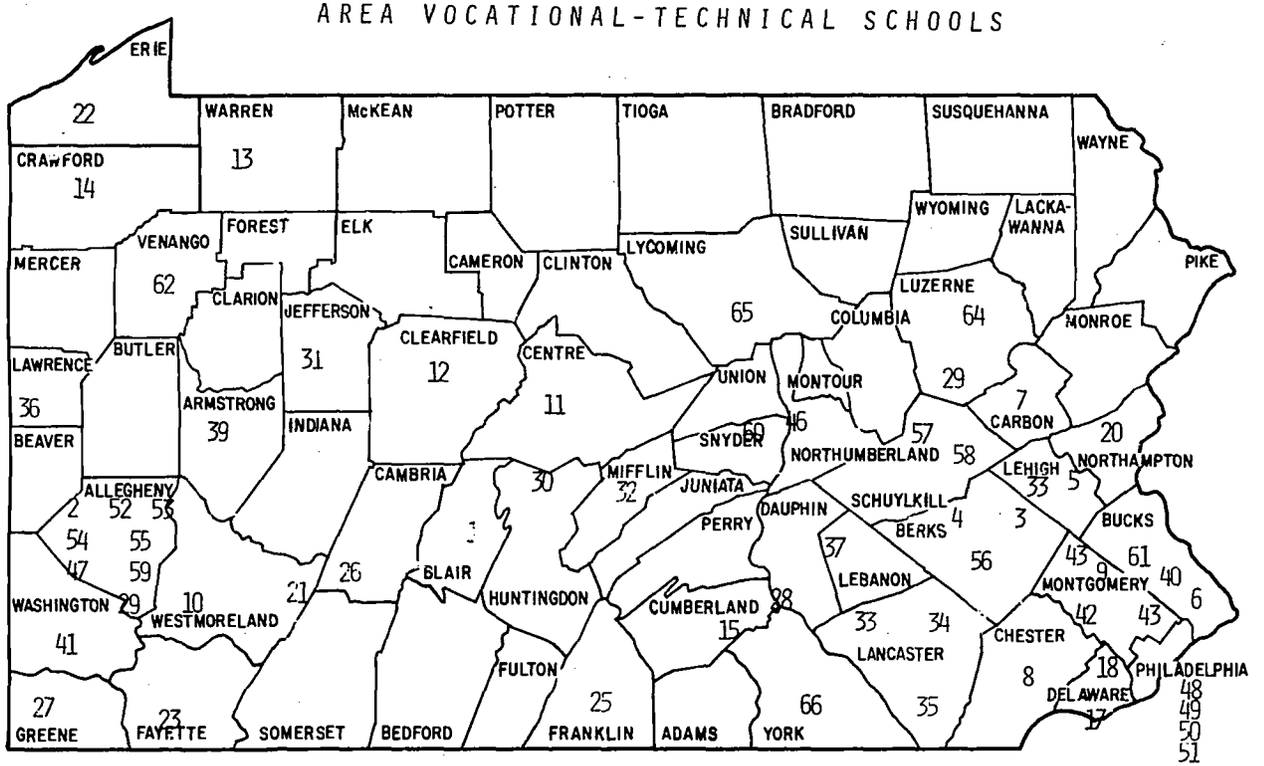


FIGURE 1

AREA VOCATIONAL-TECHNICAL SCHOOLS

1. Altoona
   1500 Fourth Avenue
   Altoona, PA 16603

2. A. W. Beattie
   9600 Babcock Boulevard
   Allison Park
   Pittsburgh, PA 15101

3. Berks - East
   R. D. #1
   Oley, PA 19547

4. Berks - West
   R. D. #1
   Leesport, PA 19533

5. Bethlehem
   3300 Chester Avenue
   Bethlehem, PA 18018

6. Bucks County
   Wistar Road
   Fairless Hills, PA 19030

7. Carbon County
   13 Street
   Jim Thorpe, PA 18229

8. Central Chester County
   1635 East Lincoln Highway
   Coatesville, PA 19320

9. Central Montgomery County
   New Hope Street and Plymouth Road
   Norristown, PA 19401

10. Central Westmoreland County
    201 Locust Street
    Youngwood, PA 15697

11. Centre County
    Pleasant Gap, PA 16283

12. Clearfield County
    P. O. Box 1028
    Clearfield, PA 16830

13. Columbia-Montour
    R. D. #5
    Bloomsburg, PA 17815

14. Crawford County
    860 Thurston Road
    Meadville, PA 16335

15. Cumberland-Perry
    R. D. #4
    Mechanicsburg, PA 17055

16. Dauphin County
    6001 Locust Lane
    Harrisburg, PA 17109

17. Delaware County (Aston)
    Birney Highway and Crozerville Road
    Aston Township
    Chester, PA 19014

18. Delaware County (Folcroft)
    Delmar Drive
    Folcroft, PA 19032

19. Delaware County (Marple)
    Malin and James Roads
    Broomall, PA 19008

20. Eastern Northampton County
    Kesslerville Road, R. D. #1
    Easton, PA 18042

21. Eastern Westmoreland County
    205 Harrison Avenue
    Latrobe, PA 15650

22. Erie County
    R. D. #3
    Oliver Road
    Erie, PA 16509

23. Fayette County
    R. D. #2, Box 122A
    Old Fairchance Road
    Uniontown, PA 15401

24. Forbes Trail
    Beatty and Cooper Road
    Monroeville, PA 15146

25. Franklin County
    Route #6
    Chambersburg, PA 17201

Area Vocational-Technical Schools - continued

26. Greater Johnstown
445 Schoolhouse Road
Johnstown, PA 15904

27. Greene County
R. D. #2, Box 141-D
Waynesburg, PA 15370

28. Harrisburg-Steelton-Highspire
3001 North Second Street
Harrisburg, PA 17110

29. Hazleton
23rd and McKinely Street
Hazleton, PA 18201

30. Huntingdon County
300 Allegheny Street
Huntingdon, PA 16652

31. Jefferson-Dubois
Box 100
Reynoldsville, PA 15851

32. Juniata-Mifflin County
Pitts Street and Belle Vernon Avenue
Lewistown, PA 17044

33. Lancaster County (Brownstown)
Box 435
Brownstown, PA 17508

34. Lancaster County (Mt. Joy)
R. D. #2
Mt. Joy, PA 17552

35. Lancaster County (Willow Street)
1730 Hans Herr Drive
Willow Street, PA 17584

36. Lawrence County
750 Wood Street
New Castle, PA 16101

37. Lebanon County
833 Metro Drive
Lebanon, PA 17042

38. Lehigh County
2300 Main Street
Schnecksville, PA 18078

39. Lenape
2215 Chaplin Avenue
Ford City, PA

40. Middle Bucks
Old York Road
P. O. Box 317
Jameson, PA 18929

41. Mon Valley
Guttman Boulevard
Charleroi, PA 15022

42. Eastern Montgomery
175 Terwood Road
Willow Grove, PA 19090

43. North Montco
Sumneytown Pike
Lansdale, PA 19446

44. Western Montgomery
77 Gratersford Road
Limerick, PA 19468

45. Northern Chester County
Charlestown Road
Phoenixville, PA 19460

46. Northumberland County
Seventh and Arch Streets
Shamokin, PA 17872

47. Parkway West
R. D. #1, Box 424
Oakdale, PA 15071

48. Bok
Eighth and Mifflin Streets
Philadelphia, PA 19132

49. Dobbins
22 and Lehigh Avenue
Philadelphia, PA 19132

50. Mastbaum
Frankford Avenue and Clementine Street
Philadelphia, PA 19134

51. Walter Biddle Saul
7100 Henry Avenue
Philadelphia, PA 19128

52. Allegheny
810 Arch Street
Pittsburgh, PA 15212

Area Vocational-Technical Schools - continued

53. Connelley
1501 Bedford Avenue
Pittsburgh, PA 15219

54. South
South Tenth and Carson Streets
Pittsburgh, PA 15203

55. Washington
169-40th Street
Pittsburgh, PA 15201

56. Reading-Muhlenberg
Box 3068
Reading, PA 19604

57. Schuylkill County (North)
Frackville, PA 17931

58. Schuylkill County (North)
Mar Lin, PA 17951

59. Steel Valley
4920 Buttermilk Hollow Road
West Mifflin, PA 15122

60. SUN
815 East Market Street
New Berlin, PA 17855

61. Upper Bucks County
Star Route
Perkasie, PA 18944

62. Venango County
1 Voc. Tech. Drive
Oil City, PA 16301

63. Warren County
345 East Fifth Avenue
Warren, PA 16365

64. West Side
Evans Street, Pringle
Kingston, PA 18704

65. Williamsport
1005 West Third Street
Williamsport, PA 17701

66. York County
2179 South Queen Street
York, PA 17402

LICENSED PROPRIETARY SCHOOLS

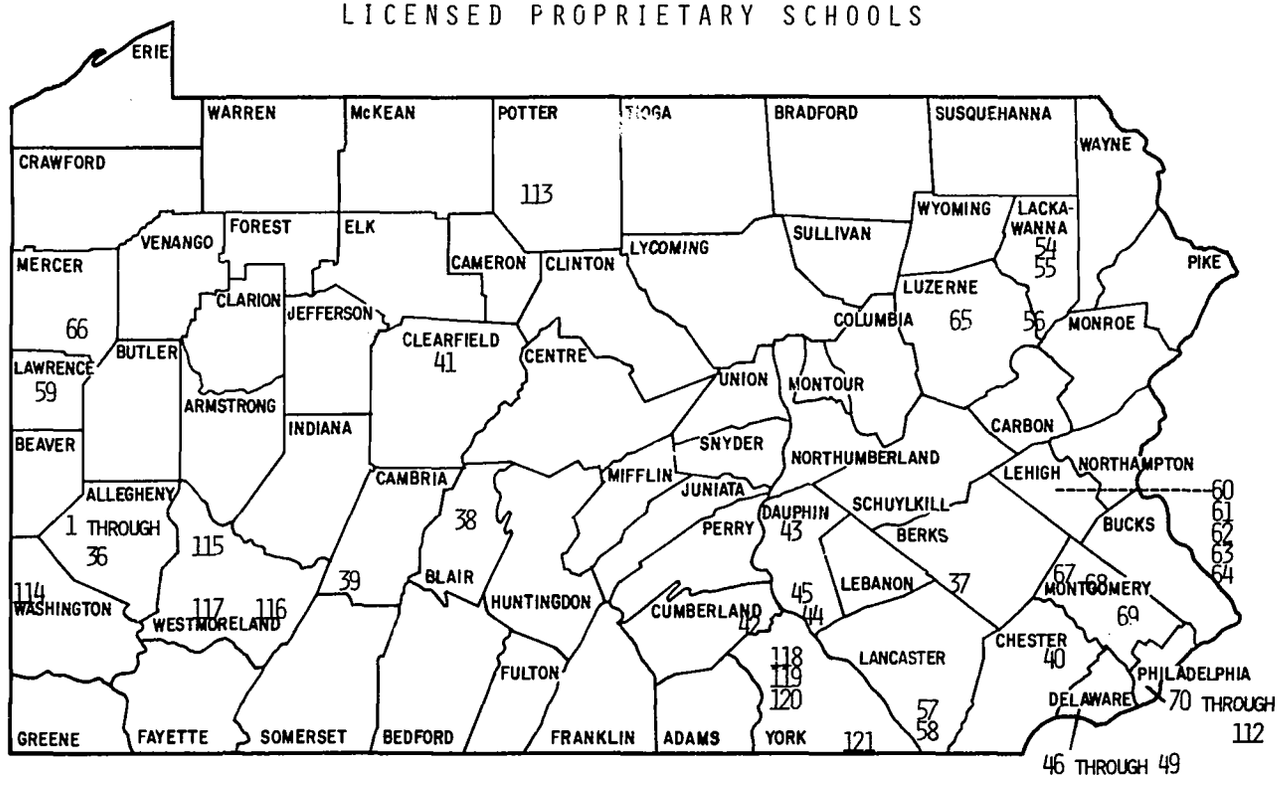


FIGURE 2

LICENSED PROPRIETARY SCHOOLS

Allegheny County

1. Allegheny Technical Institute, Inc.
   121 Ninth Street
   Pittsburgh, PA 15222

2. Allegheny School of Massage
   3402 Fifth Avenue
   Pittsburgh, PA 15213

3. Andrews Institute of Broadcasting
   618 Swissvale Avenue
   Pittsburgh, PA 15221

4. Art Institute of Pittsburgh
   526 Penn Avenue
   Pittsburgh, PA 15222

5. Carpet Installation School
   5648 Friendship Avenue
   Pittsburgh, PA 15206

6. Clarissa School
   197 Sixth Street
   Fulton Building, 7th Floor
   Pittsburgh, PA 15222

7. Control Data Institute
   Kossman Building
   Forbes and Stanwix Streets
   Pittsburgh, PA 15222

8. Dean Institute of Technology
   1509 West Liberty Avenue
   Pittsburgh, PA 15226

9. Electronic Institutes, Inc.
   1402 Penn Avenue
   Pittsburgh, PA 15222

10. Fashion Academy of Pittsburgh
    100 Fifth Avenue
    Pittsburgh, PA 15222

11. Gateway Technical Institute
    100 Seventh Street
    Pittsburgh, PA 15222

12. Industrial Technical Institute, Inc.
    121 Ninth Street
    Pittsburgh, PA 15222

13. Institute of Broadcast Arts
    107 Sixth Street
    Pittsburgh, PA 15222

14. International Academic of Law Enforcement
    141 South Highland Avenue
    Pittsburgh, PA 15206

15. Ivy School of Professional Art
    201-07 Market Street
    Pittsburgh, PA 15222

16. John Robert Powers School of Pittsburgh, Inc.
    100 Fifth Avenue
    Pittsburgh, PA 15222

17. Maynard Research Council, Inc.
    The Maynard Building
    718 Wallace Avenue
    Pittsburgh, PA 15221

18. Medlan School
    12 Eighth Street
    5th Floor
    Pittsburgh, PA 15222

19. Monroeville Broadcasting Company, Inc.
    1 Sylves Lane
    Monroeville, PA 15146

20. Opticians Institute
    2020 West Liberty Avenue
    Pittsburgh, PA 15226

21. Orthotics Technician Training Institute
    Division of Marmarville Rehabilitation Cntr
    Ridge Road
    Pittsburgh, PA 15238

22. Penn Technical Institute
    5440 Penn Avenue
    Pittsburgh, PA 15206

Licensed Proprietary Schools - continued

Allegheny County - continued

23. Pennsylvania Gunsmith School
812 Ohio River Boulevard
Avalon
Pittsburgh, PA 15202

24. Pennsylvania Institute
2840 Glenmore Avenue
Pittsburgh, PA 15216

25. Pittsburgh Bartending Institute, Inc.
818 Liberty Avenue
Pittsburgh, PA 15222

26. Pittsburgh Institute of Aeronautics
Allegheny County Municipal Airport
Box 10897
West Mifflin
Pittsburgh, PA 15236

27. Pittsburgh Institute of Mortuary Science
3337 Forbes Street
Pittsburgh, PA 15213

28. Pittsburgh Playhouse School of the Theater
222 Craft Avenue
Pittsburgh, PA 15213

29. Pittsburgh Technical Institute
313 Sixth Avenue
Pittsburgh, PA 15222

30. Rosedale Technical Institute, Inc.
1008 East Ohio Street
Pittsburgh, PA 15212

31. Technician Training School
1000 Island Avenue
McKees Rocks, PA 15136

32. Triangle School of Drafting
635 Smithfield Street
Pittsburgh, PA 15222

33. Universal Art Academy, Inc.
635 Smithfield Street
Pittsburgh, PA 15222

34. Victoria Modeling School
415 Smithfield Street
Pittsburgh, PA 15222

35. Westinghouse Technical Night School
240 Braddock Avenue
Turtle Creek, PA 15145

36. Wheeler School
William Penn Hotel
First Floor
Pittsburgh, PA 15219

Berks County

37. Industrial Management Institute
Y.M.C.A. Building
631 Washington Street
Reading, PA 19601

Blair County

38. Technical Trade School of Altoona
221 Seventh Avenue
Altoona, PA 16601

Cambria County

39. Pennsylvania Rehabilitation Center
727 Goucher Street
Johnstown, PA 15905

Chester County

40. Automotive Training Center
Pickering Creek Industrial Park
114 Pickering Way
Lionville, PA 19353

Clearfield County

41. Technician Training School
23 East Park Avenue
DuBois, PA 15801

Cumberland County

42. A.G.B. Associates, Inc. Training School
900 Market Street
Lemoyne, PA 17043

Licensed Proprietary Schools - continued

Dauphin County

43. Electronic Institutes, Inc.
1678 South Cameron Street
Harrisburg, PA 17104

44. PMTA Truck Driver School
1401 West Harrisburg Pike
Middletown, PA 17057

45. Thompson School of Technology, Inc.
5650 Lancaster Street
Harrisburg, PA 17111

Delaware County

46. Elwyn Institute
111 Elwyn Road
Elwyn, PA 19063

47. Pennsylvania Institute of Technology
414 Sanson Street
Upper Darby, PA 19082

48. PCA Technical Institute
67 Long Lane
Upper Darby, PA 19082

49. R.E.T.S. Electronic Schools
214 South 69 Street
Upper Darby, PA 19082

Erie County

50. A.T.E.S. Technical School
2823 West 26 Street
Erie, PA 16506

Fayette County

51. Fayette Institute of Commerce
& Technology, Inc.
45 West Kerr Street
Uniontown, PA 15401

Indiana County

52. Indiana School of Technology
1675 Saltsburg Avenue
Indiana, PA 15701

53. Vale Technical Institute
35 North Liberty Street
Blairsville, PA 15717

Lackawanna County

54. Intext Drafting School
Oak and Pawnee Streets
Scranton, PA 18515

55. Northeastern Training Institute
Box 9
Deer Lake
Fleetville, PA 18420

56. O.S. Johnson School of Technology
3427 North Main Avenue
Scranton, PA 18508

Lancaster County

57. Bowman Technical School
Duke and Chestnut Streets
Lancaster, PA 17604

58. Modern Heat Council
665 South Ann Street
P. O. Box 513
Lancaster, PA 17604

Lawrence County

59. New Castle School of Trades, Inc.
R. D. #1
Youngstown Road
Pulaski, PA 16143

Lehigh County

60. Allentown Business School
801-03 Hamilton Street
Allentown, PA 18101

61. Breeden School of Welding
3578 MacArthur Road
Whitehall, PA 18052

Licensed Proprietary Schools - continued

Lehigh County - continued

62. House of Charm
133 North Eighth Street
Allentown, PA 18101

63. Oil Burner Technician School
211-215 East Lexington Street
Allentown, PA 18103

64. Ryder Technical Institute
5151 Tilghman Street
Allentown, PA 18104

Luzerne County

65. American Academy of Broadcasting
of Wilkes-Barre
Provincial Tower
34 South Main Street
Wilkes-Barre, PA 18701

Mercer County

66. Institute of Broadcast Arts
WPIC Radio Station
2030 Pine Hollow Boulevard
Sharon, PA 16146

Montgomery County

67. American Chick Sexing School
168 Prospect Avenue
Lansdale, PA 19446

68. Maintenance School-Norristown Unit
Norristown State Hospital
Building #51
Norristown, PA 19401

69. Philco-Ford Automotive Technology Center
1230 East Mermaid Lane
Wyndmoor, PA 19118

Philadelphia County

70. Academy of Vocal Arts
1920 Spruce Street
Philadelphia, PA 19103

71. Aeronautical Development Institute, Inc.
Island Road
International Airport
Philadelphia, PA 19153

72. American Academy of Broadcasting
of Philadelphia, Inc.
726 Chestnut Street
Philadelphia, PA 19106

73. American Institute of Drafting, Inc.
of Delaware Valley, Inc.
1614-16 Orthodox Street
Philadelphia, PA 19124

74. Antonelli School of Photography
209 North Broad Street
Philadelphia, PA 19107

75. Art Institute of Philadelphia
125 South Ninth Street
Philadelphia, PA 19107

76. Automotive Training Center, Division of
Richfield School, Inc.
2815 North 17 Street
Philadelphia, PA 19132

77. Barbizon School of Modeling
1520 Walnut Street
Philadelphia, PA 19102

78. Berean Manual Training & Industrial School
1901 West Girard Avenue
Philadelphia, PA 19130

79. Career Educational Institute
1200 Walnut Street
Philadelphia, PA 19107

80. Claver School for Girls
5301 Chew Street
Philadelphia, PA 19138

81. Craft School of Tailoring
933 North Broad Street
Philadelphia, PA 19123

82. Daryl School of Trades
1531 Vine Street
Philadelphia, PA 19102

Licensed Proprietary Schools - continued

Philadelphia County - continued

83. Delaware Valley Academy of Medical and Dental Assistants
6539-43 Roosevelt Boulevard
Philadelphia, PA 19149

84. Electronic Technical Institute
1300 Arch Street
Philadelphia, PA 19107

85. Franklin School of Science and Arts
251 South 22 Street
Philadelphia, PA 19103

86. Granoff School of Music, Inc.
105 South 18 Street
Philadelphia, PA 19103

87. Graphic Arts Education Center
1900 Cherry Street
Philadelphia, PA 19103

88. Household Employment Association for Re-Evaluation and Training
4131 North Broad Street
Philadelphia, PA 19140

89. Hussian School of Art, Inc.
1300 Arch Street
Philadelphia, PA 19107

90. Institute of Computer Sciences of Philadelphia, Inc.
325 North Broad Street
Philadelphia, PA 19107

91. John Robert Powers Charm & Finishing School
1425 Chestnut Street
Philadelphia, PA 19102

92. Jason School, Inc.
Sec. Broad & Spring Garden Streets
Philadelphia, PA 19123

93. Kalix Trade School, Inc.
439-43 North 11 Street
Philadelphia, PA 19134

94. Keystone Sewing Machine Repair Institute
807 Carpenter Street
Philadelphia, PA 19147

95. Lincoln Technical Institute
9191 Torresdale Avenue
Philadelphia, PA 19114

96. McCarrie School, Inc.
128-34 North 12 Street
Philadelphia, PA 19107

97. National School of Health Technology
928 Market Street
Philadelphia, PA 19107

98. Neupauer Conservatory of Music
250 South Broad Street
Philadelphia, PA 19102

99. Pennsylvania Meat Cutting Training Center
5948 Larchwood Avenue
Philadelphia, PA 19143

100. Philadelphia Institute of Vocational Training
Met Building
Broad and Popular Streets
Philadelphia, PA 19130

101. Philadelphia Offset Printing School
1068 Central Medical Building, 6th Floor
1737 Chestnut Street
Philadelphia, PA 19103

102. Philadelphia Technical Institute
School of Trades, Inc.
231 North Broad Street
Philadelphia, PA 19107

103. Philadelphia Training Center
1211 Chestnut Street
Suite 805
Philadelphia, PA 19107

104. Philadelphia Wireless Technical Institute
1533 Pine Street
Philadelphia, PA 19102

Licensed Proprietary Schools - continued

Philadelphia County - continued

105. Philco-Ford Technical Institute
219 North Broad Street
Philadelphia, PA 19107

106. Quaker City School of Aeronautics, Inc.
2563-69 Grays Ferry Avenue
Philadelphia, PA 19146

107. Richfield School
227 North Broad Street
Philadelphia, PA 19107

108. Ronnie's Bartenders' School
1612 Market Street
Philadelphia, PA 19103

109. Ryder Technical Institute
"D" Street and Erie Avenue
Philadelphia, PA 19134

110. Sedgwick School
1344 Spring Garden Street
Philadelphia, PA 19123

111. Studio School of Art & Design
1424 Spruce Street
Philadelphia, PA 19102

112. Tracey-Warner School of Fashion Design
665 North Broad Street
Philadelphia, PA 19123

Potter County

113. Breeden School of Welding
Central Avenue
Genesee, PA 16923

Washington County

114. Washington Institute of Technology, Inc.
110 South Main Street
Washington, PA 15301

Westmoreland County

115. Art Institute of New Kensington
401 Ninth Street
New Kensington, PA 15068

116. Barton's School of Aviation Tech.
Box 715
Latrobe Tower
Latrobe, PA 15650

117. Greensburg Institute of Technology
302 West Otterman Street
Greensburg, PA 15601

York County

118. Helf Carpet Crafts
1868 Carlisle Road
York, PA 17404

119. Thompson School of Business
& Technology
1253 West Market Street
York, PA 17404

120. York Academy of Arts
625 East Philadelphia Street
York, PA 17403

121. York Technical Institute, Inc.
650 South Richland Avenue
York, PA 17403

PRIVATE JUNIOR COLLEGES, COMMUNITY COLLEGES,

AND COMMONWEALTH CAMPUSES OF THE PENNSYLVANIA STATE

UNIVERSITY

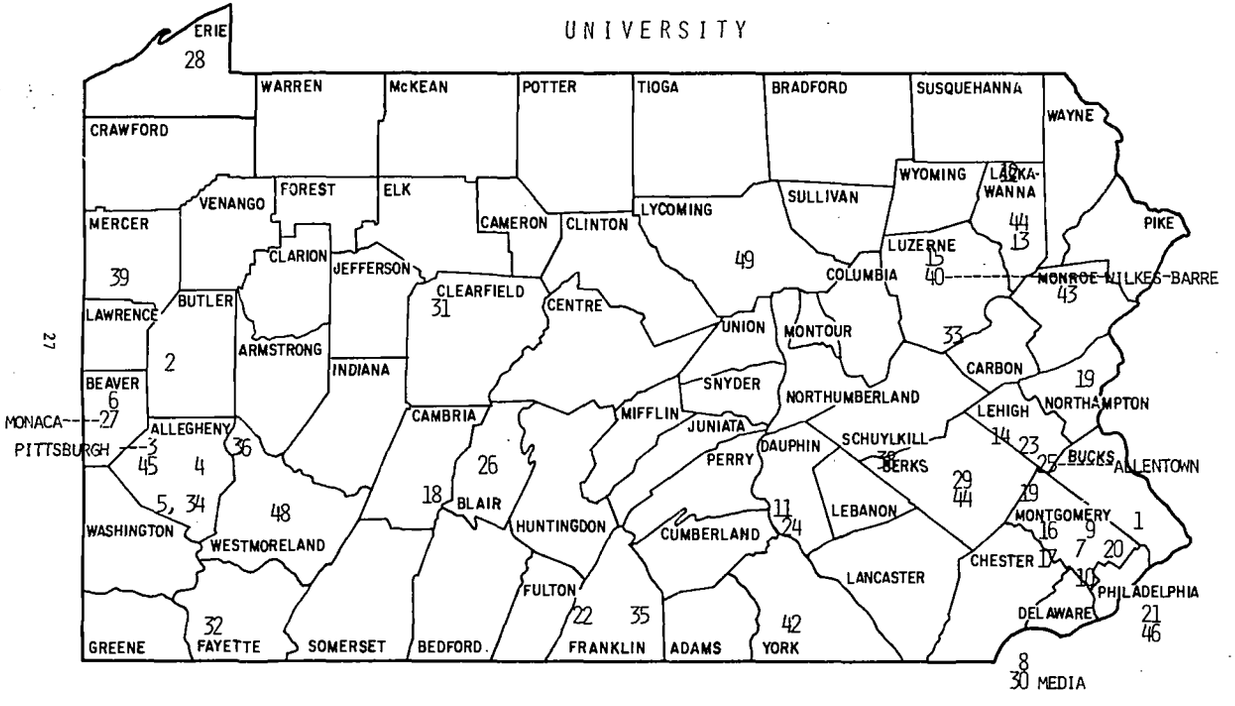


FIGURE 3

PRIVATE JUNIOR COLLEGES, COMMUNITY COLLEGES,

AND COMMONWEALTH CAMPUSES OF THE PENNSYLVANIA STATE UNIVERSITY

1. Bucks County Community College
   Newtown, PA 18940

2. Butler County Community College
   Butler, PA 16001

3. Community College of Allegheny County
   Pittsburgh, PA 15219

   Allegheny Campus
   Pittsburgh, PA 15212

4. Boyce Campus
   Monroeville, PA 15146

5. South Campus
   West Mifflin, PA 15122

6. Community College of Beaver County
   Monaca, PA 15061

7. Community College of Philadelphia
   Philadelphia, PA 19107

8. Delaware County Community College
   Media, PA 19063

9. Ellen Cushing Junior College
   Bryn Mawr, PA 19010

10. Harcum Junior College
    Bryn Mawr, PA 19010

11. Harrisburg Area Community College
    Harrisburg, PA 17110

12. Keystone Junior College
    La Plume, PA 18440

13. Lackawanna Junior College
    Scranton, PA 18503

14. Lehigh County Community College
    Schnecksville, PA 18078

15. Luzerne County Community College
    Wilkes-Barre, PA 18702

16. Manor Junior College
    Jenkintown, PA 19046

17. Montgomery County Community College
    Blue Bell, PA 19422

18. Mount Aloysius Junior College
    Cresson, PA 16630

19. Northampton County Area Community College
    Bethlehem, PA 18017

20. Northeastern Christian Junior College
    Villanova, PA 19085

21. Pierce Junior College
    Philadelphia, PA 19102

22. Penn Hall Junior College
    Chambersburg, PA 17201

23. Penn Wesleyan College
    Allentown, PA 18103

24. Penn. Junior College of Medical Arts
    Harrisburg, PA 17104

<u>The Pennsylvania State University
Commonwealth Campuses</u>

25. Allentown Campus
    Allentown, PA 18031

26. Altoona Campus
    Altoona, PA 16603

27. Beaver Campus
    Monaca, PA 15061

28. Behrend Campus
    Erie, PA 16510

29. Berks Campus
    Reading, PA 19610

30. Delaware County Campus
    Media, PA 19063

Private Junior Colleges, Community Colleges, and Commonwealth Campuses of The Pennsylvania State University - continued

31. DuBois Campus
DuBois, PA 15801

32. Fayette Campus
Uniontown, PA 15401

33. Hazelton Campus
Hazelton, PA 18201

34. McKeesport Campus
McKeesport, PA 15132

35. Mont Alto Campus
Mont Alto, PA 17237

36. New Kensington Campus
New Kensington, PA 15068

37. Ogontz Campus
Abington, PA 19001

38. Schuylkill Campus
Schuylkill Haven, PA 17972

39. Shenango Valley Campus
Sharon, PA 16146

40. Wilkes-Barre Campus
Wilkes-Barre, PA 18708

41. Worthington Scranton Campus
Dunmore, PA 18512

42. York Campus
York, PA 17403

43. Pinebrook Junior College
East Stroudsburg, PA 18301

44. Reading Area Community College
Reading, PA 19605

45. Robert Morris College
Pittsburgh, PA 15108

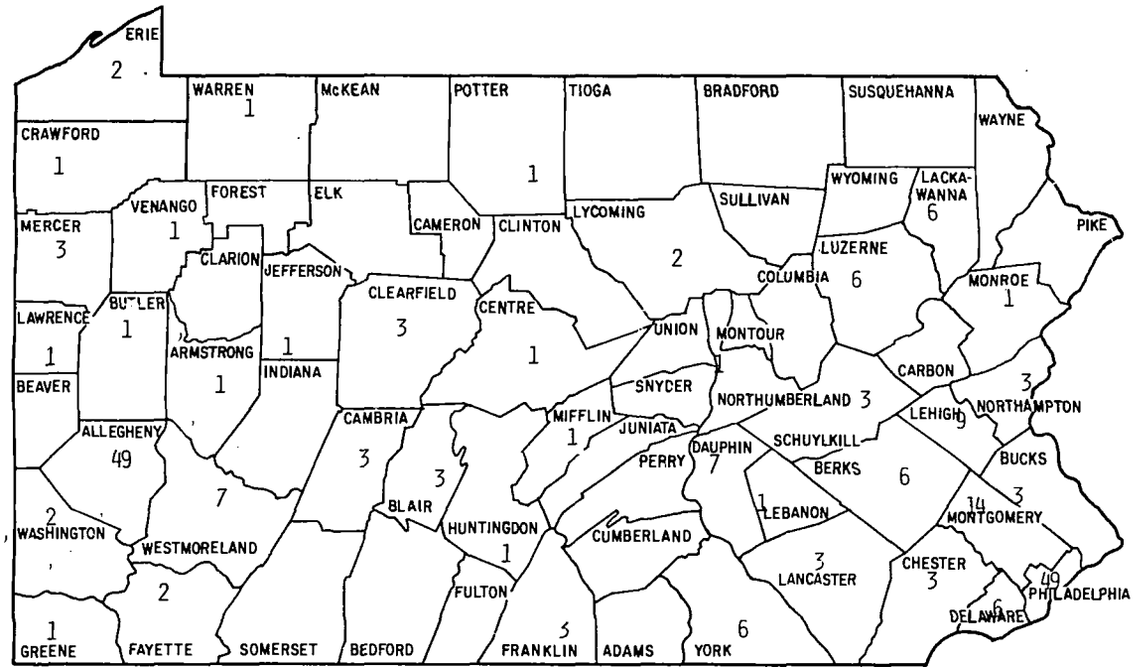
46. Spring Garden College
Philadelphia, PA 19118

47. Valley Forge Military Junior College
Wayne, PA 19087

48. Westmoreland County Community College
Jeannette, PA 15644

49. Williamsport Area Community College
Williamsport, PA 17701

DISTRIBUTION OF VOCATIONAL SCHOOLS IN PENNSYLVANIA*



*Includes Area Vocational Technical Schools, Community Colleges, Private Junior Colleges, Proprietary Schools and Commonwealth Campuses of The Pennsylvania State University.

FIGURE 4

THE NEED FOR ARTICULATION OF OCCUPATIONAL PROGRAMS AMONG SECONDARY AND POSTSECONDARY INSTITUTIONS

Aleene Cross
President, American Vocational Association

Articulation, according to a dictionary, is the action of joining or interrelating. When joining or interrelating two or more levels of education, the programs in various types of institutions become interlocked, forming a continuous line and creating articulation. This process permits students to move easily from one program level or type of school to another. It also provides a system whereby teachers can cooperate more effectively in providing instruction to meet the needs of individuals. The need for articulation of occupational programs among secondary and postsecondary schools should be self evident for those who are familiar with today's technological developments, manpower needs, and social changes.

Our educational system has been somewhat responsive to the needs of society, but often after the fact. By the time the system is geared to meet a need, that need no longer exists. For example, following the launching of Russia's Sputnik, there was a push to train scientists and engineers. Today, when we have unemployed scientists and engineers, the public is calling for our schools to become accountable, and young people in school are crying for relevance. Articulation can contribute greatly to both accountability and to relevance.

The barriers to articulation between secondary and postsecondary institutions are similar to those that exist between secondary schools and colleges or

universities. These barriers are certain aspects of structure of the education system, institutional isolation, administrative separation, and leadership among school personnel.

Those who are responsible for the structuring and conduct of our nation's educational system must take a hard look at what is being done and find ways and means to meet the educational needs of all people in this latter part of the twentieth century. Evidence indicates that the needs of people are not at the top of the list of educational priorities. Too often the subject matter or institutional interest supersede the individual's needs. In order for an individual to enroll in certain subjects or institutions, he must often meet certain requirements. Since these barriers may or may not have any relationship on the individual's success in that subject matter area or school, there is a need to reexamine all requirements, prerequisites, and possible obstacles which exclude people from the educational system at whatever level or stage they wish to participate.

Institutional isolation is one of the greatest barriers to achieving an articulated educational program that will serve the needs of individuals from the cradle to the grave. Our educational system has been beset with labels, each of which carries a status symbol. Nursery schools, kindergartens, elementary schools, middle schools, secondary schools, post-secondary institutions, colleges and universities have become "pigeonholes" where people are assigned depending on their age and academic achievement. These assignments are quite often uncoordinated and unrelated.

Another great barrier to articulation is the administrative separation of institutions. The school administrator who is the product of higher education can relate to such institutions because of previous experience, but often he has trouble relating to the needs of those who wish occupational programs which do not follow the pattern of traditional academic higher

education programs or professional training requiring a baccalaureate or higher degree. The higher education community also has difficulty in relating to the needs of people in occupational fields which do not require a baccalaureate degree. By tradition, higher education has been highly academic. In the history of education almost every attempt to change it has demonstrated that the academic influence has prevailed over attempts to take a more practical approach to education. The community college movement is designed to offer a comprehensive education program; however, many institutions are now offering the first two years of a baccalaureate program and aspiring to become a four-year, degree-granting institution.

In other words current leadership, generally, is the product of an academic system that tends to perpetuate itself. This presents problems of structuring and conducting an occupational program. Educators who have a commitment to and knowledge of occupational education, must provide dynamic leadership in the field to offset the biases and lack of understanding of those who set policy and direct the educational system.

Central to our educational system should be the student--his or her needs, aspirations, and welfare. Given such a mission there must be an articulated program from the cradle to the grave. As the student ascends the educational ladder, each step is dependent on the previous step; to have a student falter is an indication of an unsafe ladder. Not all ladders are the same, and neither do they help people get to the same place, nor to move from one ladder to another.

Educational opportunities must resemble a smorgasbord--where people come and choose those things they like and need and are permitted to come back as many times as they wish. For many the educational menu is limited; if they want to satisfy their hunger they have a limited choice. This educational smorgasbord can be accomplished by removing the aforementioned barriers as well as other barriers to

articulation between secondary and postsecondary institutions. Several suggestions to help obtain this interrelationship are maximization of the career education concept, competency-based programs, modules of instruction, and programmed learning. Others are flexibility of offerings, simultaneous attendance at two or more institutions, elimination of unnecessary prerequisites, cooperative planning, and joint evaluation.

The concept of career education is a promising educational movement that, if implemented, will maximize the articulation between educational institutions. Through revision of the school curriculum, career education makes children aware, at an early age, of what people do to earn a living. It provides experiences for children attending middle school to find out their interests and aptitudes by exploring different kinds of work. It also prepares secondary and postsecondary youths for job entry and permits adults to return to school at any point in their work life for upgrading and retraining. Career education holds great promise for the future, but like other educational movements of the past, it is beset with antagonists who are afraid that it will affect their jobs. Some are using career education as a substitute for occupational education and downgrading the importance of job preparation. Educators who are concerned with articulation should optimistically view it as an excellent means of developing an effective continuum of occupational education.

Competency-based programs at both secondary and postsecondary levels can provide an excellent means of articulation because they include pre- and post-assessment based on clearly stated behavioral objectives for each competency. This can prevent duplication of learning for students who have had training for an occupation at the secondary level before enrolling at a postsecondary institution. It can provide evaluation of skills gained in work experience and it can also accommodate those students

who spin in and out of occupational programs. A chief means of competency-based programs is modules of instruction rather than prescribed programs. These modules often include programmed instruction because both are based on the concept of a student moving at his own rate. For example, one student preparing to be a child care worker may proceed through a module dealing with art activities at the secondary level, while her fellow student may proceed through the same module at the postsecondary level. When the first student indicates that she has the skills and knowledge outlined in the behavioral objectives for the first module, she can go on to the next one. Articulation between secondary and postsecondary levels is enhanced when personnel from both institutions in the same community develop the instructional packets together or mutually accept materials developed elsewhere and use them to eliminate duplication in developing student competencies.

Such elimination means flexibility. Flexibility enables a student-employee to move in and out of a career cycle by permitting him to gain needed skills. This flexibility could be provided by cooperative planning of offerings by personnel from both institutions involved. Both modules and programmed instruction could contribute to flexibility. For example, the aforementioned student, enrolled in a program to prepare child care workers, could eliminate certain learning experiences in a module if she has already obtained the prescribed skill and knowledge.

Another more or less obvious means of articulation is an opportunity to study at both a secondary and postsecondary institution simultaneously. Throughout the country, students are obtaining instruction in "academic" areas in secondary schools and preparing for occupations in postsecondary institutions. The same kind of opportunity--to enroll in two different courses or modules in a given occupational preparation sequence--would provide additional articulation between secondary and postsecondary institutions. It

would also be invaluable to students, who are preparing for an occupation, to be permitted to enroll simultaneously in two schools for different parts of the program. In order for articulation to be maximized, any two schools in a given community would need to plan the modules to be available in each institution together. If not, efforts would be duplicated and students would be frustrated.

Prerequisites are another definite barrier to articulation between secondary and postsecondary schools, just as they are a barrier to many students obtaining the instruction necessary for entrance or advancement in a given occupation. Educators have traditionally identified prerequisite knowledge and skills in terms of courses. If a high degree of articulation is to exist, prerequisites must be carefully analyzed and eliminated wherever possible. The emerging four-quarter system is forcing educators to recognize that the various parts can fit into a whole in various ways. A kaleidoscope can be used to illustrate this theory, since all the parts are present but a different pattern forms each time the kaleidoscope is turned. The essential idea is to have all parts present when the whole is complete. It is possible to move as easily from the practical to the technical as from the comprehension of background knowledge to skill application. Postsecondary institutions have already realized that a high school diploma is not always a necessary prerequisite to enrollment in all programs.

Cooperative planning and joint evaluation of programs are excellent means of articulation. Joint advisory boards should result in cooperative planning. Resource persons can assist both secondary and postsecondary personnel in initiating a continuous evaluation system. Joint activities provide a means of communication that can only serve to increase articulation.

The challenge of articulation between secondary and postsecondary schools belongs to occupational education. The way to begin is to invite personnel from both institutions to outline a plan of cooperative activities. Administrators and instructors from both institutions must respect the capability and accomplishments of each other. There must be mutual acceptance of the worth of the programs being offered in each institution and recognization of the expertise of their graduates since articulation between secondary and postsecondary institutions is essential if occupational education is to meet the needs of individuals and the demands of the world of work.

PROGRAM AND CURRICULUM ARTICULATION: SECONDARY AND POSTSECONDARY OCCUPATIONAL EDUCATION

Robert Jacoby
Senior Program Specialist, Trade and Industrial Education, Bureau of Vocational, Technical and Continuing Education, Department of Education

The subject of this conference is very appropriate and enduring. In May 1970, this group discussed the subject of this conference briefly; this year we have two days to discuss clearly, distinctly, and systematically, joining together to coordinate secondary and postsecondary programs of occupational education. Such discussion proceeds from the fact that leaders in secondary and postsecondary programs have gone their own separate ways in believing that the total job could be accomplished by separate programs at each institution.

Need for Articulation and Coordination in Technical Education

The need for articulation and coordination of secondary and postsecondary occupational education is self-evident; articulation among the various leaders in institutions providing occupational education is also needed. But beyond this is the need to provide articulation among the occupational instruction areas *and* between the skill development and academic areas of instruction.

The recent passage of the Educational Amendments of 1972, Title X--Community Colleges and Occupational

Education, is evidence of Congressional recognition for attention to the coordinated development and continued growth of postsecondary and adult vocational-technical education programs. In this legislation, emphasis is directed to a number of key elements relating to coordination and integration of secondary and postsecondary vocational education. Coordination of all programs involved in vocational education is emphasized. Assessment of capabilities and effective utilization of facilities is another key point. There is also emphasis on planning requirements as they relate to training needs, establishment and conduct of programs, and facility utilization and design.

It seems strange that at this time federal legislation is needed to provide grants for study and research on how to resolve differences and how to articulate and coordinate efforts more effectively. It is distressing that federal legislation is needed to provide planning grants for "the development of an administrative procedure which provides reasonable promise of resolving differences between vocational educators, community and junior college educators, college and university educators, elementary and secondary educators, and other interested groups with respect to the administration of the program."

In the 70's, as in the last decade, the fastest growing occupations are in the professional and technical fields, and these continue to be the occupations requiring the most educational preparation. Technician job opportunities are the greatest demand field below the college degree level. It is predicted that 25 percent of job opportunities in 1980 will be in the technician category. The need for cooperative effort is evident; the job ahead is tremendous and we must proceed with the training program as a team.

Fallacies in Development of Technical Education

Several fallacies stand as artificial roadblocks in the coordinated development of technical education.

First, we try too hard to categorize technical education into secondary or postsecondary programs and attach technical education to a particular type of institution. While it is possible to label *certain* technical education curricula as strictly secondary, strictly postsecondary, or secondary in origin but postsecondary in completion, we still need to recognize and emphasize the development of technical education as a continuum from high school through college in the total program of vocational-technical education. The foods trades and the printing trades provide good examples of skill development in comprehensive high school and area vocational-technical school programs; the management curriculum is a good example of development provided in community colleges and in advanced four-year collegiate programs.

Second, although technical education and postsecondary vocational-technical education are not synonomous, many vocational educators automatically infer and conclude that postsecondary occupational education is always technical.

Third, many educators, particularly on the local level, have conceived of technical education as an upgraded level of the skilled occupations curriculum--something "better" than mere vocational level instruction. But technical education is not trade training.

Developing Technical Education

There are several ways to develop technical education:

1. The state staff should exercise direct and positive leadership in guiding local administrators. There must be greater communication between the staff of the Bureau of Vocational Education and institutions of higher education in order to develop many of the following suggestions which will assist in

the expansion, development, and improvement of technical education, as well as articulation of programs. For example, the Vocational Bureau has expertise which should be used in joint planning of educational programs and facilities in community colleges.

2. State and local policies for promoting and operating programs and developing standards and guidelines for the establishment and operation of vocational postsecondary and adult vocational-technical schools in Pennsylvania must be clear.

3. Technical education should be included in the career education concept.

4. There is a technology aspect in most occupations but there are few true technology programs on the secondary level. Therefore, the place, role, and program of technical education in the secondary school needs to be reviewed. Programs for community colleges might be similarly reviewed.

5. Ways to expand postsecondary programs of vocational-technical education in all types of institutions must be explored. Passage of House Bill 1108, authorizing area vocational-technical schools to provide postsecondary vocational-technical education, would be a great boost in this direction.

6. Some type of accreditation of technical programs should be considered in order to improve the quality of programs and give proper recognition to graduates of postsecondary programs.

7. Competencies required of students in secondary and postsecondary programs should be established as the basis for developing curriculum and instruction.

8. Curriculum development and research needs in technical education should be analyzed.

9. The necessity for mandated state certification or standards for postsecondary technical education teachers as a means of improving the quality of the teaching-learning situation in postsecondary technical programs should be studied. Perhaps one of the evidences of need for better instruction is the small number of technical graduates of community college programs as compared to the numbers enrolled in occupational education curriculums and transfer programs.

10. Innovative methods of teaching should be explored. This area of education has been handicapped by a lack of good instructional materials. The textbooks and workbooks available in many specialized technical fields are either too theoretical or too simple. New learning systems, using laboratory-oriented instructional materials which combine laboratory and theory instruction, to teach technical principles through laboratory application are needed.

Suggested Ways of Articulation and Coordination of Secondary and Postsecondary Vocational-Technical Education Programs

Articulation and coordination of secondary and postsecondary programs cannot be legislated or forced upon institutions. Rather, there must be mutual respect and understanding of each institution's purposes and programs. The major element in coordinating postsecondary with high school level education is communicating to each of these two levels. If achieved, such communication will be mutual understanding of the interrelatedness and interdependence of each program upon the other. Therefore, as the word articulate infers, problems, programs, and plans for developing a continuum in vocational-technical education must be clearly and systematically enunciated and formulated.

Specific ways of articulating and coordinating secondary and postsecondary vocational-technical education programs are:

1. Work accomplished at the high school level should be accepted for its actual value at the postsecondary level. There can be no valid reason for an institution to make a student repeat a course whose competencies he has mastered.

2. Forecasting job availability, establishing training requirements, and planning educational programs must be done more effectively. Adequate program planning before initiating a curriculum at the secondary or postsecondary levels involves in-depth study and analysis which should be accomplished in joint efforts.

3. Similar programs offered at different schools or institutions should use joint advisory committees.

4. Early admittance of students into the postsecondary occupational education programs should be as valid for students with immediate occupational objectives as early admittance for superior academic students who are ready for college level work.

5. School superintendents, community college presidents, area vocational-technical school directors of vocational education and all occupational education instructional personnel should jointly evaluate their programs of occupational education in light of the recommendations and findings of the National Advisory Council on Vocational Education.

6. Postsecondary guidance personnel should work closely and continuously with high school counselors to provide adequate occupational information, materials, and services. Occupational guidance is the most important function of a postsecondary institution and generally cannot

be effective without close and constant contacts with counselors and guidance personnel in the secondary schools.

7. Occupational educators should consider training programs for some students who do not require the use of institutional buildings or facilities. A carefully prepared cooperative work program may enable some students to meet with success, success denied them in the traditional institutional environment. Programs of this nature require extensive planning and close supervision.

8. Teacher education departments of universities need to plan, with the cooperation of local vocational directors, deans of occupational education, and occupational program teachers, a more realistic program for instructional improvement and teaching effectiveness.

Conclusion

There is a need to analyze strengths and weaknesses of programs and curriculums and to recognize that no one institution can be all things to all people. Educators should learn to recognize the characteristics which make a program technical and/or postsecondary. There should be a continuum of vocational education available to all citizens. To do this, there must be understanding, communication, and cooperation at all levels.

AN ARTICULATION MODEL FOR PENNSYLVANIA

James P. Murphy
Chief, Division of Two-Year Programs,
Bureau of Academic Services,
Pennsylvania Department
of Education

During the seven-year period from 1964 to 1971, the number of community college students transferring to upper division study in Pennsylvania increased from 18 to 5,432. It is not difficult to anticipate a future in which more than two-fifths of the students enrolled in the upper divisions of the state colleges and universities could have a community college origin. This changing student mix in the upper division level has intensified and will intensify problems of articulation that remain, to date, unsolved. Articulation agreements do exist on an individual basis between some schools in Pennsylvania. However, no general agreements have been reached, and often the student finds that he or she must negotiate independently with a public college or university for admission after completing the first two years at publicly supported community colleges.

Many of the problems of articulation are rooted in mistrust and misinformation about the transfer student as well as the community college from which he emerges. In an effort to reduce this mistrust and misinformation, therefore, I propose a model aimed toward a Commonwealth program of articulation that would enable students from community colleges to transfer (without credit loss and without experiencing bureaucratic hassling) to either the state college or state-related universities.

In developing this model, several state operations of articulation and transfer have been reviewed. While individual states are unique in their institutional arrangements, common problems do exist in states with a developed community college program. Much of the material presented here has also been developed from experience in working continuously on articulation and transfer during the last five years.

The provisions of this model for articulation will provide the following:

1. Each public institution of higher education in Pennsylvania, i.e., each state college or university and each community college, is encouraged to foster and promulgate a "core" program of general education for students working toward a baccalaureate degree. This core should involve not fewer than 36 semester hours of academic credit, broken down as follows:

   9 hours - Social Sciences
   9 hours - Humanities
   6 hours - Math
   9 hours - Communicative Arts
   3 hours - Electives

   The basic assumption of this model is that all state-related institutions of higher education in Pennsylvania will accept this core.

   The institutions are encouraged to exchange ideas in the development and improvement of programs of general education. The experience already gained in the established state colleges and universities and community colleges will be of value. While the institutions are to work cooperatively in the development and improvement of general

education programs, each institution has the continuing responsibility for determining the character of its own program.

After a state college or university in Pennsylvania has developed and published its program of general education, the integrity of the program will be recognized by the other public institutions in Pennsylvania. Once a student has been certified by such an institution as having satisfactorily completed its prescribed general education program, no other public institution of higher education in Pennsylvania to which he may be qualified to transfer will require any further lower division general education courses in his program.

2. Any agreement between the community colleges and the state-related four-year colleges requires mutual acceptance of the nature and purpose of the Associate in Arts degree. This degree is to be the primary basis for admission of transfer students to upper division study in a state college or university and should be awarded upon:

   a. Completion of 60 semester hours of academic work (including the basic core of 36 semester hours mentioned above), exclusive of remedial and physical education courses.

   b. Achievement of a grade point average of not less than 2.0 in all courses taken at the community college awarding the degree, provided that only the final grade received in courses repeated by the student shall be used in computing this average. The grade of "D" will be accepted for transfer (provided the overall grade point average does not drop

below the prescribed 2.0 level) and will count toward the baccalaureate degree in the same way as "D" grades obtained by native students in the lower division of state colleges and universities, i.e., credits in courses transferred with "D" grades will count toward the credits required for the baccalaureate degree; however, the department or college of the institution offering the major decides whether courses with "D" grades in the major may satisfy requirements in the major field.

In other words, the model proposes that if a student has completed his first two years in a community college with an average of 2.0 or better, he should be eligible for transfer to any four-year state-related institution in Pennsylvania, subject only to the limitations mentioned in item 5.

3. The baccalaureate degree in all state colleges and universities should be awarded in recognition of lower division (freshman-sophomore) work combined with upper division (junior-senior) work. The general education requirement of the baccalaureate degree should be the sole responsibility of the institution which the student attends during his first and second year. If, for any reason, a student has not completed an approved general education program in a community college prior to his transfer to a state-related four-year institution, the general education requirement should become the responsibility of the institution to which he transfers.

4. Lower division programs enrolling freshmen and sophomores may offer introductory courses

which permit the student to explore the principal professional specializations that can be pursued at the baccalaureate level. These introductory courses should be adequate in content to be fully counted toward the baccalaureate degree for students continuing in such a professional field of specialization. However, the determination of the major course requirements for a baccalaureate degree, including courses in the major taken in the lower division, should be the responsibility of the state college or university awarding the degree.

5. Students receiving the Associate in Arts degree will be admitted to junior standing within the system of state colleges and universities. The specific institution that accepts the student will be determined by the preference of the student, by the program of major concentration, and by space available within the specific institution. If, because of space or fiscal limitations, any institution must select from among qualified community college graduates, its criteria for selection should be reported to the coordinating committee described in item 11.

6. Other associate degrees and certificates may be awarded by a community college for programs which have requirements different from the Associate in Arts, or a primary objective other than transfer. Acceptance of course credits for transfers from such degree or certificate programs will be evaluated by the senior level institution on the basis of applicability of the courses to the baccalaureate degree program in the major field of the student. Each state college and university is encouraged to develop admission policies that will consider all factors indicating the possibility of success in its

upper division for transfer students who have not earned the Associate in Arts degree.

7. Each state college or university department should list and update the requirements for each program leading to the baccalaureate degree and shall publicize these requirements for use by all other institutions in the state.

8. Each state college and university should include in its official catalog of undergraduate courses a section stating all lower division prerequisite requirements for each upper division specialization or major program. The sections of the catalog may also list additional recommended courses but there should be no ambiguity between statement of requirements for all students for admission to upper division work; and prerequisites and other requirements for admission to an institution or program should be set forth with precision and clarity. The catalog in effect at the time of the student's initial enrollment in a community college should govern lower division prerequisites, provided that he has had continuous full-time enrollment as defined in the college or university catalog.

9. Each institution should keep a complete academic record for each student. The coordinating committee (item 11) should develop a standard form for recording the academic performance and credits of students. Each transcript should include all academic work for which a student is enrolled during each term; the status in each course at the end of each term such as superior, average, incomplete, or unsatisfactory; all grades and credits awarded; and a statement explaining the grading policy of the institution.

10. Experimental programs in all institutions should be encouraged. A community college and a state college or university wishing to engage in a joint specific experimental program which varies from the existing transfer policy can report such a program to the coordinating committee (item 11) prior to implementation and should keep the committee informed of the progress and outcome of such experimentation. Proposed experimental programs which would have statewide implications or would affect transfer to more than one institution should have approval of the coordinating committee prior to implementation. All experimental programs should be reported in writing to the coordinating committee including the purpose, design, the participants, the duration, and the results of the experiment.

11. In order that agreements can remain effective, this model includes a "Commonwealth Coordinating Committee on Articulation." Conceivably, this committee could be a function of the State Board of Education. It would then be in a position to review and evaluate current articulation policies and coordinate these with the *Master Plan for Higher Education in Pennsylvania, 1971*, as well as with future master plans.

    An alternative would be to have this committee appointed by the Secretary of Education. If this course is pursued, the Secretary should appoint those individuals from the Department of Education who could bring to this committee experience and knowledge relevant to the question of articulation. The majority of the committee, however, should be composed of students and faculty from community and state colleges.

Regardless of the manner in which the committee is developed, in order for this plan to be effective, the committee should have continuous responsibility for community college state college, and university relationships on questions of articulation.

Once the committee is organized, it should:

a. Authorize professional committees or task forces consisting of representatives from both levels of higher education to facilitate articulation in subject areas.

b. Conduct a continuing review of the provisions of this agreement.

c. Review individual cases or appeals from students who have encountered difficulties in transferring from a community college to a state college or university. (Decisions reached by the coordinating committee will be advisory to the institutions concerned.)

d. Make recommendations for the resolution of individual issues and form policy or procedural changes which would improve community college, state college, and university articulation statewide.

e. Establish the priority to be given to cooperative research between individual institutions. Such cooperative research should be encouraged and should be conducted in areas such as admissions, grading practices, curriculum design, and follow-up of transfer students. Statewide follow-up studies should be conducted, and results of these studies should be made available to all

institutions at both levels for use in evaluating current policies, programs, and procedures.

f. Review and approve experimental programs as provided in item 10 of this agreement.

g. Develop procedures to improve community college, state college, and university articulation by exploring fully specific issues such as academic record form, general education requirements, unit of credits, course numbering systems, calendars, and credit by examination.

h. Review procedures for non-traditional programs.

i. Define occupational/vocational education.

Conclusion

While the purpose of this model is directed toward a Commonwealth program of articulation, it is obvious that the private two-year and four-year colleges have been excluded from this model. However, these institutions form a vital link in the program of higher education in the Commonwealth and any agreement on articulation which is reached by the public two-year and four-year colleges should contain some provision allowing the private institutions to participate if they so elect.

ARTICULATION IN OCCUPATIONAL EDUCATION AT THE POSTSECONDARY LEVEL

Arden Pratt, Dean
Vocational Technical Institute
Southern Illinois University

The system of totally articulated education allows a student to enter at the kindergarten level and eventually receive the doctorate degree if he or she is willing and knowledgeable enough to follow all of the rules of registration, curriculum requirements, attendance, and maintenance of grade levels. This educational track, commonly labeled "academic," is well traveled and the guideposts and directions are clear for the student. Due to the fact that increasing numbers of students are not choosing to follow this, the "normal" collegiate academic orientation is finally being recognized with concern by traditional educators at all levels.

Occupational educators have been characterized in the past as maintaining a separation or an isolation from other elements of education. Recently, however, many of them have begun to implement new delivery systems, new curriculum ideas, and new approaches to learning to better serve the students enrolled in occupational education. The goal of these changes and innovations is articulation of occupational education with other areas of education to move it into the educational "mainstream."

Articulation is recognition of the student as the focal point of learning. It is recognition that the student's needs and objectives not the program or the institution, the equipment, faculty members or other vested interests are of prime importance.

Articulation, according to Handbook VI, *Standard Terminology for Curriculums and Instruction in Local and State School Systems*, is:

> The manner in which the classroom instruction, curricular activities and instructional services of the school system are interrelated and interdependent, the aim being to facilitate the continuous and efficient education program of the pupils, to interrelate various areas of the curriculum, and/or to interrelate the school's instructional program with the program of out-of-school educational institutions.

It is apparent that within the above description or definition, the educational elements which can be considered in a discussion of articulation is quite inclusive. In addition to the more usual considerations of "vertical articulation" (i.e., from one level of educational institution or program to the next) and "lateral articulation" (i.e., combination of various types of subjects), many other types of interrelations are important if occupational education is to render the maximum service and benefit to the student.

One of the most pressing needs is for institutions offering the same level of education to plan and work together. Institutions offering postsecondary occupational programs have often become competitive and duplicative in their program offerings. Usually, the results have been higher program costs, weaker programs and much individually duplicated effort in curriculum development and preparation of instructional materials. Too often the community colleges, technical institutes, area vocational schools, proprietary schools and units of four-year colleges and universities have gone their separate ways sometimes ignoring, sometimes opposing, the efforts of the other institutions. Some of this behavior may be attributed to desire for power, but probably the principal motive is

the educators' sincere belief in the quality of their program. Because of this belief, a basic change in attitude is required to accept articulation. Educators must recognize that not all skills and knowledge must be acquired within a single program or institution.

In the past few years, articulation of postsecondary occupational education has either been implemented or planned in a number of states. In the *Master Plan for Higher Education--Phase III*, completed in 1971, the Illinois Board of Higher Education recommended the implementation of a Collegiate Common Market to fully utilize the existing and developing resources, to broaden and maximize educational opportunities, and reduce duplication. The Board has given high priority to those programs that reflect efforts toward interinstitutional cooperation. It sponsored legislation which approved and earmarked $350,000 in 1972-1973 to fund specific efforts in this direction. Occupational education within the community colleges, Southern Illinois University, and proprietary schools were included in those eligible for support

Types of Postsecondary Articulation

Illinois, of course, has not been the first to encourage and sponsor articulation among postsecondary educational institutions, either through state or regional master planning or through efforts of individual institutions. The important types of postsecondary articulation which are usually implemented can be generally divided into four categories:

(1) Conventional program articulation
(2) Administrative articulation
(3) Interdependent articulation
(4) Intrainstitutional articulation

These four categories are, of course, not mutually exclusive and elements of two or more of them may be

identified in most formalized articulation processes. All of these categories can pertain to articulation of occupational education.

1. Conventional Program Articulation. The acceptance of credit granted at one institution by another is an informal articulation based on conventional programs. This is the most usual and most traditional pattern of articulation. The term "transfer" and all it implies for the student and credit institutionally earned is conceptually contained in this category of articulation. If the student has satisfactorily completed a year in a private liberal arts college or a year in a community college in a program labeled transfer or baccalaureate-oriented, he or she will encounter little trouble or loss of credit in moving to another postsecondary institution, large or small, for the sophomore year. Some institutions require the student to have completed two years before blanket transfer will be granted, but the number of these is decreasing. In some institutions the transfer credit will be given on an individual course basis; in others, an equivalent number of hours will be granted the student. Southern Illinois University at Carbondale, for example, will accept an associate degree in a baccalaureate oriented program for two full years of credit and assumes that the present general studies requirement of 67 quarter hours is completed in addition to major, minor, or elective credits. Credit in English Composition III is generally accepted for Written Communications, Freshman Composition and other specific freshman introductory writing classes. Almost universally, 6 credit hours in College Chemistry 101 is accepted as the equivalent of 6 credit hours of General Chemistry, Basic Chemistry or freshman chemistry. In too many cases, however, 8 credit hours of Circuit Analysis is not accepted by an electronics technology program in a transfer situation. Objections raised by the second institution include the textbook, the teacher, the equipment, the college, the program, the admission policies, even the administration. This is clearly a

problem area in articulation of occupational education. It is of particular concern in the highly structured curricula often found in technical education. This inflexible type of curriculum and attendant lack of recognition of equivalence of educational experiences tends to rebuff a student who has not gone through the built in chain of prerequisites.

In the past few years there has been some softening of this structured curriculum approach. Changes exhibited by some portions of occupational education include increased use of media, recognition of need to individualize learning experiences, efforts to more clearly define what the curriculum attempts to do for the student, and recognition of student's needs for options and flexibility. Accompanying these changes is an increasing recognition that education programs in other institutions and other occupational programs in the same institution have validity. Fewer are the instances in which a student, having successfully completed one year of an occupational program, is told by another institution that the first year, except for two or three general studies courses, will have to be repeated because its program is completely different. In addition to the informal articulation discussed above, formal patterns of articulation based on conventional programs are being implemented in increasing numbers. The methods vary, but generally follow a few simple modes.

A college or university may formally agree to accept the credit from one or more specific courses from another college. This acceptance of credit will normally be based on agreements reached in discussions between the colleges and will generally designate the courses acceptable. These agreements may be based on the course objectives, textbooks, course outlines or detailed study guides. In some cases, the course will be essentially the same in the two institutions.

One postsecondary institution may offer a certificate level program of a specified duration while a

second college will agree to accept most or all of this credit toward its associate degree requirements in specified programs. In other cases an add-on type of program requires the completion of the first year at one college before the second college will accept the credit. This is often characterized as a "one-plus-one" program. In Dallas Community College District, as an example of articulation within a multi-campus community district, two or more of the community college campuses may offer the first-year courses of a two-year program while the second year is offered in only one institution. In New York State, first-year courses are offered in some of the smaller community colleges while the second-year courses of an associate degree program are offered in one of the agricultural and technical colleges. Approval has been granted for Southeastern Illinois College to offer a certificate program in Law Enforcement. The credits received in that program are guaranteed fully transferrable to the associate degree program offered by the Vocational-Technical Institute of the Southern Illinois University at Carbondale.

In some instances, the first-year courses are common among the institutions involved. Obvious problems can and do occur at the second-year institution in the latter case. Some educational elements considered to be essential by the faculty and advisory committee may have been omitted. Some elements normally included in second-year courses will have already been learned. However, accommodation of the program to the student can be made if the faculty and administration is so motivated and makes the necessary efforts to individualize the learning experiences.

2. *Administrative Articulation.* Increasingly, colleges are initiating mutual planning and arrangements to broaden their program offerings. These efforts can be termed administrative articulation. The arrangements may be as simple as one institution contracting with another to deliver a course to one or more students or as complex as an interchange of

total programs among several institutions. It may take the form of an occupational survey or joint curriculum development among a group of institutions.

A multi-campus community college district may be considered a legally constituted administrative articulation unit. Miami-Dade Junior College, the community colleges of the City University of New York, Los Angeles Community College District, and many others are examples of such units. A larger system such as the community colleges of Virginia represents another such legal unit. In that system a program which has been determined to be low need or low incidence is assigned to a specific college in the state. Any student in the state is then eligible to attend that program as if he or she were a member of that college's district.

A grant of funds made under the 1968 amendments to the Vocational Education Act was used in 1969 to form a consortium of colleges in the San Joaquin Valley of California. The goal of the consortium was to increase the accessibility of a variety of occupational education programs for students in community college districts located in the valley. A student wishing to enroll in a program unavailable in his district college could attend the desired program if offered in any consortium college at no out-of-district fee and with additional financial assistance for living expenses.

Waubonsee Community College and Elgin Community College in Illinois have contracted for free exchange of students between the two colleges in certain programs not offered at the other institution. This carries administrative articulation one step further than the state system which sets up a charge-back system between colleges when a student does not have a desired program offered at his home college. In New York, the community college act guaranteed administrative articulation of this type by setting up a charge-back system allowing a student to attend the

community college of his choice anywhere in the state with no additional cost.

"Contracting" is a generally different system of administrative articulation. If, for example, a college finds it is desirable to offer cosmetology courses without building a staff or equipping laboratories, it may contract with a private agency to deliver the skills classes. One institution may contract with another college, or even with a high school under certain conditions, to teach a specific class or group of classes. The college may contract for the use of laboratories, or other facilities, faculty time, or specific equipment from another institution, hospital, or industry. The implementation of the contracting procedure is usually initiated by the student registering at his home institution. This institution usually completes the necessary arrangements with the external institution for the student. Funds are usually exchanged only between the institutions. Most recommend that credit for the course be given by the home college.

Common registration or cross registration is probably the newest of the administrative articulation methods. Under this procedure it is usual that the student registers at either of two institutions involved. Through exchange of information by the registrars, the student is simultaneously registered with the cooperating institution. A course taken at either college is considered to be credit earned at each college. These arrangements are quite limited at the present time; however, there is a probability of expansion of this procedure, particularly between colleges located geographically near one another and whose programs complement one another.

3. *Interdependent Articulation.* Newer types of articulation, illustrated by programs operated through consortia may be characterized as interdependent articulation. This approach to occupational education fosters joint planning, joint use of

facilities and makes it possible to offer much broader programs to students.

Examples of this type of articulation are relatively few and only a few theoretical models have been formulated. An excellent illustration of this type of articulation is a coordinated program at the secondary level in its first year of operation in Arkansas. Four high schools in rural western Arkansas have formed a consortium they call the "Round Robin." The consortium has purchased four sixty-foot trailers each equipped as a different occupational laboratory. Coordinated by an area vocational school in the region, one of the trailers is placed at each school for one semester; then they are moved. The teacher moves with the laboratory. At the end of a two-year period each school has had four well-equipped occupational laboratories available to their junior and senior students for one semester each.

A projected plan for an associate degree nursing program illustrates cooperative or interdependent management of occupational education on the postsecondary level. Four community colleges, John A. Logan College, Rend Lake College, Southeastern Illinois College, and Shawnee College, and the Vocational-Technical Institute of Southern Illinois University at Carbondale are planning to offer an associate degree nursing program as a portion of a career ladder for graduates of the Licensed Practical Nursing programs presently offered at each of the four community colleges. The plan is for the program to be operated by the consortium with course offerings and clinical activities to be scheduled as close to the student's home college as possible. Courses, laboratories, and faculty will be moved as necessary to minimize student movement and program costs. In this manner four community colleges in a sparsely populated area will be able to offer a much desired and needed program to their students.

4. Intrainstitutional Articulation. A less clearly defined articulation of postsecondary

occupational education, but one of great importance, is that which should take place within a university. Programs of an occupational nature have existed in postsecondary education at least from the founding of the land-grant colleges. Their importance has waxed and waned through the years within these institutions. Not only are community colleges, technical institutes, and proprietary institutions of various types offering increasing numbers of occupational programs, but now four-year colleges and universities are joining the trend. A few of these institutions have been engaged in this activity for a number of years; however, there are many newcomers to the field.

There is great need for closer ties between occupational education and the liberal arts. But this articulation opposes attitudes deeply rooted within traditionalists that anything vocational cannot really be education in the true sense. Due to these attitudes, introduction of such programs into an institution steeped in traditional academic raise a number of questions:

> Should traditional academic departments offer associate degree programs along with those leading to the baccalaureate and graduate degrees or is this the responsibility of a separate unit?
>
> Should faculty teaching traditional programs also teach in occupational education programs?
>
> Should faculty be appointed to usual faculty ranks and, if so, what will be the criteria for appointment?
>
> On what criteria will promotions and raises be granted?
>
> Will the institution allow relevant occupationally-oriented general studies instead of traditional liberal arts courses, particularly in the

basic skills areas of communications, mathematics and social studies?

Will the institution continue to recognize the integrity of the associate degree programs as a viable educational exit point with legitimate educational objectives and not relegate it to being the first two years of a four-year program?

Will credit earned by the student in technical level programs be considered equivalent to other college credit if the student wishes to continue work in a related baccalaureate program?

Will adequate funding be given to occupational programs in view of budget restrictions and competition for funds from more traditional university programs?

The preceding questions exemplify the problems generally confronting efforts to implement occupational education programs at or below the associate degree level within a university. Resolution of such issues in addition to those normally attendant to occupational education is imperative if these programs are to exist as viable educational activities of the institution.

Intrainstitutional articulation can materially assist in constructive resolution of these issues. Ways in which articulation can contribute to resolution include:

1. Structuring the governance of the occupational education programs so its administrators and faculty are able to participate fully and freely in university academic decisions.

2. Carefully outlining experiences equivalent to advanced degrees as criteria for appointment, promotion, and retention if occupational education faculty are to be on similar

appointments with the remainder of the institution's faculty.

3. As far as possible, including selected faculty and staff members from traditional university programs on occupational education program advisory committees (e.g., data processing, commercial art, business and secretarial).

4. Encouraging students enrolled in traditional programs into specific courses offered within occupational programs.

5. Offering workshops and courses for in-service occupational teacher preparation for high schools and community colleges and other postsecondary institutions.

6. Teaching special courses or modules of courses for other programs within the university (e.g., agriculture, technology, vocational teacher education).

7. Offering service to the university units in as many areas related to the occupational programs as possible (e.g., printing, commercial art, construction, aviation maintenance).

8. Offering service to the community in as many areas related to the programs as possible (e.g., dental hygiene clinic, automotive maintenance, architectural technology).

9. Using teachers from traditional programs in specialty modules wherever possible.

10. Making as extensive use as possible of the learning resources and media development staff of the university.

11. Helping sponsor career fairs and other forms of community service programs.

12. Encouraging maximum use of university facilities, courses, and other faculty in in-service training of occupational education faculty.

13. Participating fully in high school career days and other informational and recruiting visits sponsored by the university.

14. Handling admissions through regular procedures of the university but holding periodic meetings with admissions officer concerning special admission requirements for specific programs.

15. Allowing students from the occupational programs and the traditional university programs to participate equally in governance and other non-academic activities.

Most of the above articulation procedures are current practice within Southern Illinois University at Carbondale. They are equally applicable in other universities which plan occupational education programs and undoubtedly would contribute to more complete cooperation among various educational areas of comprehensive community colleges to make available a suitable pattern of experience and development for each given individual.

Secondary-postsecondary articulation, school-community articulation, school-professional agencies are only a few examples of other important dimensions of articulation, without which viable programs in occupational education would be much more difficult. The limitation of this discussion to postsecondary articulation should not be construed as ignoring the importance of these other dimensions of articulation.

THE AVTS AND THE COMMUNITY COLLEGE: A RELAY TEAM

James P. Bressler and Alfred L. Hauser

The phenomenal growth of the community college in the family of educational institutions points up the need for articulation. As the role of the community college becomes better understood, a closer relationship must be developed with the secondary schools that feed it. These concerns are both economic and human, for we can ill afford inefficiency in either the cost of our school system, or in the training to which young people are willing to devote so many years of their lives.

We like to think of this relationship as that of a relay team--an analogy that connotes teamwork, rather than competition. In a relay effort one takes up where the other leaves off, and the success of the whole depends upon the diligence of each. With the new emphasis on career education, the role of each phase in the educational continuum can no longer be regarded independently and out of context, for it is becoming painfully apparent that occupational direction has its genesis at a much younger age than we have heretofore recognized. Perhaps the observation of psychologist, B. F. Skinner, is worth repeated here. He asserted that if you control the teaching of a child during the first six years of life, nothing can then reverse that teaching. Many of the problems relating to vocational and personal attitudes are results of long years of development prior to the high school and college experience. By this criterion, the need for articulation could well be extended backward almost as far as we wish.

It is not the purpose of this paper to examine the whole spectrum of learner development, but we allude to it here, if for no other reason than to establish the need for greater awareness of the interplay each phase of education, especially occupational education, has upon the other. Our concern rests chiefly with the community college and its role in articulation with another fairly new member of the team, the Area Vocational Technical School (AVTS), so that the established role of each may be fulfilled.

Nowhere is this relationship more directly established in Pennsylvania than in The Williamsport Area Community College, where the services of an AVTS and a community college are integrated into one system. We shall look at this school as a case study and as a catalog of articulation problems that are based on a long tradition in occupational and technical education. The problems encountered here and the attempts at solution might well be examined for suggested application elsewhere.

The Williamsport Area Community College Experience: A Case Study in Articulation

The Williamsport Area Community College is unique among public educational institutions because the College and the secondary school operate under a common administrative structure. The President of the College is also the director of the AVTS.

The instructional staff of the College is assignable, when qualified, to duty in either the college or the secondary (AVTS) phase. All instructors enjoy professional rank and work under a common salary structure. AVTS instructors are under the direct supervision of the AVTS coordinator, who in turn reports to the Dean of Applied Arts and Sciences. The Department Chairman is the lowest administrative level to wear two hats. While the AVTS is assigned its own counseling staff, just about all other

services, such as finance, budgeting, recruiting, and policy are absorbed into the general administrative structure on up to the Board of Trustees.

While this may be a unique structure as compared to other school systems, it is nevertheless based on long and eminently successful experience. The Community College, established in 1965, is an outgrowth of the former Williamsport Technical Institute, which followed the pattern of integrating secondary and postsecondary education from its inception in 1941. The leadership of that Institution, long a leader in occupational education, was furnished by Dr. George H. Parkes, and is now assumed by Dr. Kenneth Carl. This continuity of leadership is largely responsible for the consistent direction the school has taken. Occupational education is a tradition here and the close relationship between secondary and postsecondary education is a firm tenet of that tradition.

A primary reason for this type of organization was and is economic. Occupational education is infinitely more expensive than that which is primarily academic. By making maximum use of facilities and by extending the length of classroom days, both high school and post-high school students can be accommodated. The maximum usage concept has justified investment in a wider field of occupations and in a more complete and elaborate inventory of teaching tools. The result has been a steady growth in service by the College.

In the Fall of 1972 the AVTS will have enrollments of nearly 1100 high school students in nineteen different programs. Total college FTE enrollments may top the 3,000 mark, roughly a one to three ratio, AVTS to College.

The College offers the services of its AVTS division to any sponsor district high school that desires it. At present sixteen high schools send their vocational students to Williamsport--from Lock

Haven to the West to Millville on the East; from Montgomery to the South to Mansfield and Canton to the North. Distance prevents some outlying districts to the North from participation, a problem that is now under extensive study by Intermediate Unit 17.

Classes in the AVTS operate on a two-week rotation plan. This has been so during the entire history of the Technical Institute and the College. Next year a six-week rotation will be tried. This departure from the usual half-day rotation plan was instituted to make more effective use of shop time. Much of the instruction in the Williamsport plan involves extensive projects which require completion before the work station can be vacated. In Auto Mechanics, for example, much instruction is based on live work requiring tying down a work station for much more than one half-day. The two-week plan allows greater flexibility in instructor and student planning. Its chief disadvantage rests in the requirements it imposes on the home high school to assign separate instructors to the vocational group, since they will be in the home high school only one-half of the time. It also requires that two vocational student groups (generally referred to as odd-even sections) must be organized in order to provide a steady flow of students for bussing and for utilizing the instructional staffs fully. The AVTS offers nineteen different programs.

With sixteen separate high schools feeding students into the Community College-AVTS System, coordination of bus schedules becomes a problem. This is further complicated by the location of instructional areas within the College. When students arrive in the morning, many must again be bussed to such locations as the Airport aviation schools; others must go to the Earth Science complex across the Bald Eagle Mountain for Ag-Forestry, Horticulture-Floriculture, and Service and Operation of Heavy Equipment; still others go to the city for Health Assistant and Small Engine instruction. Of course, the whole

process is repeated in the afternoon in reverse order for the trip home.

Problems in Articulation Between the College and the Secondary Schools That Feed the AVTS

With so many schools spread over so large a geographic area, it is rather obvious that communication is a daily requisite. Attendance reports are phoned daily to each home high school and a close rapport is kept between the coordinator and the guidance counselor in each high school serving the vocational group. While thirteen of these schools send only juniors and seniors, three schools send sophomores as well--further complicating the instructional pattern.

While the articulation that must occur to adapt to each school's transportation of problems is complicated, the task is more routine and logistical than philosophical. Not so regarding articulation in matters of curriculum and program effectiveness. Here we stand on common ground with all community colleges as they look beyond their own self-imposed limits of concern. It is easy to become provincial when the College and the schools that feed it have little, if any, contacts. In the Williamsport system, articulation is a very real thing.

Let us look now to several specific efforts at articulation that have been applied. The first is that of advanced placement.

Students coming to Williamsport from anywhere who have had vocational training in their home high school are immediately tagged by the Admissions Office. Transcripts are sent to the Dean and rerouted to the department chairman who is to receive the student. Several test dates are set up at which time the student may report for advanced placement testing. The department chairman sends a postal card to each student notifying him of the dates; he is subsequently

responsible for administering both written and practical tests. From these the chairman determines how much credit to award. Most such credit results in at least one semester gain. Related subjects are not open for advanced placement, unless the student was enrolled in college level work in high school.

This year for the first time, high school seniors with exceptional potential may enroll in the College as regular college students. This, together with the advanced placement opportunities, represents a progressive move designed to realistically phase in potential AVTS students. It should be mentioned that 56% of the student body of the College came from non-sponsor districts from outside The Williamsport Area Community College patronage area in 1971. Advanced placement, however, is at this time confined to those students who enroll in the College in the same occupational area that they pursued in high school. No requests have so far been honored for such placement on the basis of strictly work experience in industry, but such testing is not ruled out. After all, the philosophy that spawned advanced placement is simply that no student should be forced to repeat a skill he already has. To do so would be self-defeating.

Some other facets of articulation are at various stages of development. One has to do with establishing a closer relevancy between the various shops and the teaching of mathematics and English. At this time the effort is largely intraschool, while for the longer haul, a major objective is to establish understandings with the member high schools, so that students aiming to continue their education at the Community College will be fully aware of the prerequisite needs in these two basics.

A pilot project is now underway in the College to coordinate general mathematics for certificate students in Machine Shop with shop problems the student encounters. As any vocational educator soon learns, the number one problem with occupational

students is motivation in the academic areas. Where math is taught in the traditional textbook, problem-solving manner of the traditional liberal arts style, the student often is turned off, for no one bothered to establish a pattern of relevancy for him. He just doesn't see what's in it for him. Ditto for English.

At Williamsport we are fortunate to have a Math chairman who is sincerely interested in improving math efficiency. Together with the chairman of the Machine Shop a math program was developed whereby the traditional textbook approach was augmented by the use of typical live machine shop projects requiring math calculations. The Machine Shop instructors supplied these live, problem-solving projects to the math instructors in the College assigned to certificate students. While no statistical measurements are yet available to portray the improvement in math interest among those students, grades improved significantly as relevancy was established.

A similar case can be stated for English. If the success of the teaching of English in high school were judged by the writing ability of the average-entering college student, especially in the occupational areas, the conclusion would be that the whole effort borders on catastrophe. Both motivation and ability are often close to rigor mortis. Yet at our Community College, articulation between the English Department and the technology areas has significantly reversed the damage by using technical writing courses as vehicles of relevancy. Using the students' basic interests as a motivation base, high quality technical reports, involving many of the fundamental skills of expression and communication, were produced. Such reports, attached to student resumes, were responsible for successful job placement; and what is even more surprising, a number of graduates became full-time technical writers in the companies where they found employment.

Unfortunately, this highly successful case of articulation fell a casualty to accreditation. The Middle States' advisor felt that relevancy was too close to technology and that English should take the broader humanistic approach somewhere out there among the classics and the more liberal literature of the day. As a result, occupational students lack motivation and interest on the whole, but they do enjoy the advantage of a broad humanistic awakening, whatever that is.

Also underway is a broader movement, aimed at strengthening prerequisite mathematics abilities, to standardize mathematics offerings in the member high schools, especially for those students who later come to the College. Relevancy is the key here, too. College math and shop instructors, so the planning goes, will team up to produce new texts reflecting the results of the pilot study in the Machine Shop described earlier. Two general meetings have so far been held with representatives of the home high schools for the purpose of defining the math requirements of the several college levels, and to sharpen a general awareness among these schools of the need for teaching math more effectively. This is not to say that all AVTS graduates are expected to enter the community college. Many of them are job ready from high school.

Whether students do or do not enter postsecondary occupational education is really not the point; any approach that motivates secondary students to acquire a working knowledge of arithmetic, algebra, and geometry will reap its rewards, whether on the job, or in the college. At the root of it all is motivation, and motivation can be improved by a skillful teacher in a concerned system. It is this concept that we are promoting at Williamsport in the hope that failure rates can be reduced. The need for extensive remedial math programs should then be unnecessary.

To facilitate evaluation of the articulation approach throughout the College (both secondary and

postsecondary) all instructors are required to produce approved course syllabi. Special attention is given to the formulation of behavioral objectives that pinpoint the skills a course will develop. Since such syllabi are reviewed with the students at the beginning of the school year, everyone knows where he is going and when he gets there. Weak instruction no longer has a place to hide and course planning is articulate and positive. Entirely too much teaching has occurred in the past by simply "covering the book," a practice that may have had the appearance of good teaching, but in effect turned most of the course planning over to the writer of a text. Some instructors had, in fact, nothing but the barest of outlines, but managed to redeem themselves somewhat with an active shop program that kept the students productively busy. None of this is adequate now. The syllabus, properly constructed and followed with sensible allowance for individual differences in the rate of learning, is a key ingredient in any articulation effort. The syllabus is a manifestation of good planning.

Impact of the Building Program

One of the most serious handicaps to articulation at Williamsport is inadequate buildings. Many of the shops have deteriorated over the years and have become a drag on morale for both students and instructors. A long-range building program is underway that will eventually replace all shops with well-planned new structures. Two such facilities are not completed, but at this date some of the furnishings remain to be installed.

In all these buildings, the Williamsport idea of serving both secondary and postsecondary students will be maintained. Separate areas are designed in each building, so that the two levels will be segregated, but in close enough proximity so that secondary students can observe and evaluate the postsecondary program in action. There is a certain

amount of built-in articulation in this arrangement analogous to the one-room school. Entry into the college occupational program will not be a strange experience for these students.

Certain adjustments and shifting around of classrooms must occur while new facilities are constructed around a live and ongoing program. This is a challenge in itself, and the problems generated are bound to slow down the progress toward articulation that will occur once all energies are released in that direction. But with the building program visibly underway, there is a faculty understanding that this is the price of progress. Under these temporary handicaps, the planning for a comprehensive occupational and academic educational experience with a maximum of rapport between secondary and postsecondary is moving forward. The relay team is on track.

THE BUCKS COUNTY EXPERIENCE

Richard C. Skinner, Assistant Dean
for Career Programs, Bucks County
Community College
and
Joseph Vallone, Director
Upper Bucks County Technical School

Introduction

In recent years, attention has been focused on one word common to all educational institutions. Webster defines the word as "the quality or state of being accountable;" *The American College Dictionary* defines the word as "liable to be called to account; responsible; that can be explained." Many of you sitting in the audience, as well as we at the Upper Bucks County Technical School, are badgered by this word from the time we step into our offices in the morning until our heads hit the pillows at night. As you have already probably guessed, the word, of course, is *accountability*.

Those of us fortunate enough to be associated with vocational-technical education have answered the call for accountability long before government agencies sent out the cry. Our problem was--no one was listening to us. Maybe we should have been shouting, rather than answering meekly as many vocational leaders had been doing because they did not want to rock the boat.

During the past five years, the boat has been rocked; and some of the people that were sitting and not listening to us are now standing and helping us to rock that boat. I'm sure you have heard the story

about the young farm boy who was trying to train the donkey by talking nicely to him--trying not to excite the animal. He had been doing this for several hours to no avail. Along came an old black man who had been living down the road, and he asked the young boy what the problem was. After the boy explained to the black man that he had been trying for hours to make the donkey move, the black man asked him to step aside and let him try. The boy consented. The black man then proceeded to pick up a broken branch, about four inches in diameter. He walked over to the donkey and hit him squarely on the head. The boy ran over and screamed at the black man and proceeded to ask him what he thought he was trying to do. Of course, the punch line you all know: "Before you ask the donkey to do anything, you first have to get his attention." Ladies and gentlemen, we have not hit the American public squarely on the head. We now have their attention--let us not lose it.

Postsecondary Institutions in Bucks County

Bucks County is privileged to have three fine area vocational-technical schools and a fine community college. During the last five years, graduates of the AVT schools have been able to continue their education on the postsecondary level in programs either in the field of their high school choice or one closely related. Courses such as Data Processing, Computer Technology, Chemistry, Chemical Laboratory Technician, Engineering, Electronic Technology, Nursing, Metallurgical Technology, Hotel-Motel-Restaurant-Institutional Management are just some of the available programs our graduates can pursue that are in direct relationship to their educational needs on either the vocational or technical level. This range of courses did not come about by chance. Much planning had been done to ensure a good postsecondary program fo all graduates.

Many times, parents and students are led to believe that students graduating from an academic high school are the only ones who should consider and pursue baccalaureate or associate degree programs. This we know is not true. Thousands of graduates of AVTS's have considered, pursued, and completed baccalaureate or associate degree programs in recent years and are now gainfully employed in the field of their training. The coupling or dovetailing of these programs between the AVTS and the Bucks County Community College has made the dreams come true for post-secondary programs for many of these students. And students is what education is all about. Without them, there can be no educational programs.

By way of geographical background, Bucks County is somewhat rectangular in shape, about fifteen miles wide and thirty-six miles from north to south. There are regions of dense suburban population as well as beautiful rich rural farm land. The southern part of the county has had the greatest population density; however, population has increased in the central and northern regions of the county. All regions of the county are within relatively short commuting distance of Philadelphia, New York City, and the Trenton-Princeton area. Let us look at four specific educational institutions in Bucks County.

Bucks County Community College opened in September 1965; and, at that time, two of the three area vocational technical schools were in operation (Bucks County Area Vocational Technical School and Upper Bucks County Technical School). In September 1969, Middle Bucks Technical School opened its beautiful new facility. Thus, Bucks County has the advantage of three AVT schools located geographically in southern, central, and northern regions of the county and a community college on a 200-acre campus in south central Bucks County.

Cooperation Between Bucks County Community College and AVT Schools

Shortly after the community college opened, meetings were held between the directors of the AVT schools and community college officials. A complimentary, rather than a competitive, spirit prevailed at these sessions. The spirit, along with a desire to explore ways to dovetail our programs, has continued. The following points were an outgrowth of these meetings:

1. Bucks County Community College Board of Trustees stated that the community college had no desire to compete with other schools for programs.

2. Technological education at the thirteenth and fourteenth year level is primarily a responsibility of the community college.

3. AVT schools and community college officials would identify AVTS programs which would feed into programs at the community college.

4. AVT schools and the community college would seek means of sharing facilities to prevent needless duplication.

5. AVTS Directors and the Assistant Dean for Career Programs would meet several times each year to discuss areas of mutual interest and concern.

Recent community college policies will benefit students at the AVT schools. The fourteen credits required of all students as part of the requirement for the associate degree were eliminated in May 1972. In order to receive the Associate of Arts degree (the only degree awarded) from Bucks County Community College, a student must successfully fulfill the following requirements:

1. Completion of not less than sixty semester hours in a program of study.

2. Completion of not less than thirty semester hours at Bucks County Community College.

3. Official enrollment during the semester the degree is anticipated.

4. Fulfillment of all financial and other obligations to the College.

5. Achievement of a 2.0 (C) overall grade point average.

The intent is to provide each student with an opportunity to develop a program with his academic advisor, which will meet his career objectives or goals.

Another policy which has been implemented this fall is credit by examination. This provides students who have had experience or training in a particular area to challenge a course by sitting for an examination. If they pass the exam, they receive credit for the course. Some of the exams are CLEP exams; others, particularly in the career and/or technical area, are departmental tests.

In addition to the above new policies, the College has a High School Enrichment Program. This permits students identified and recommended by their respective high schools to enroll in courses at the Community College during their senior year. Students can take two courses each semester at the Community College.

Program Articulation

The Restaurant Practice Program at AVTS and Hotel-Motel-Restaurant Program at the Community College show how programs can dovetail now and in the future.

The food preparation courses offered at the three AVT schools in Bucks County are designed for the student interested in the many fields related to the food industry. The courses have been developed to provide instruction in food production from the basics to advanced recipes.

During the three-year course, the students are exposed to actual restaurant and institutional food production. The students prepare and serve in a practice dining room area. They are also exposed to everyday kitchen responsibilities--from washing pots and pans to preparing prime beef and French desserts. Specific points covered include: basics of food production, food decorating, cake decorating, ice carving, hygiene and sanitation, tools and equipment, safety, food and drug laws, business ethics, personnel management, menu planning, purchasing, inventory control.

These basic experiences in school, along with those provided for the students working on a cooperative-work program, help many students to develop a keen interest in the field of management. Those capable of pursuing this field are provided with the opportunity of doing so in a program designed to prepare them for management trainee positions in the hotel, motel, restaurant, and institutional industries.

The programs at the AVTS provide students with an excellent background for employment upon graduation. Some of those graduates wishing postsecondary education come to the community college. The Hotel-Motel-Restaurant-Institutional Management Program at the Community College is designed to prepare students for management trainee positions in the hospitality industry. This program is management oriented with an opportunity to develop general business management skills and techniques through courses such as Business Organization and Management, Personnel Management, Accounting, Marketing, Sales Promotion, and Advertising. A student may also take a series of

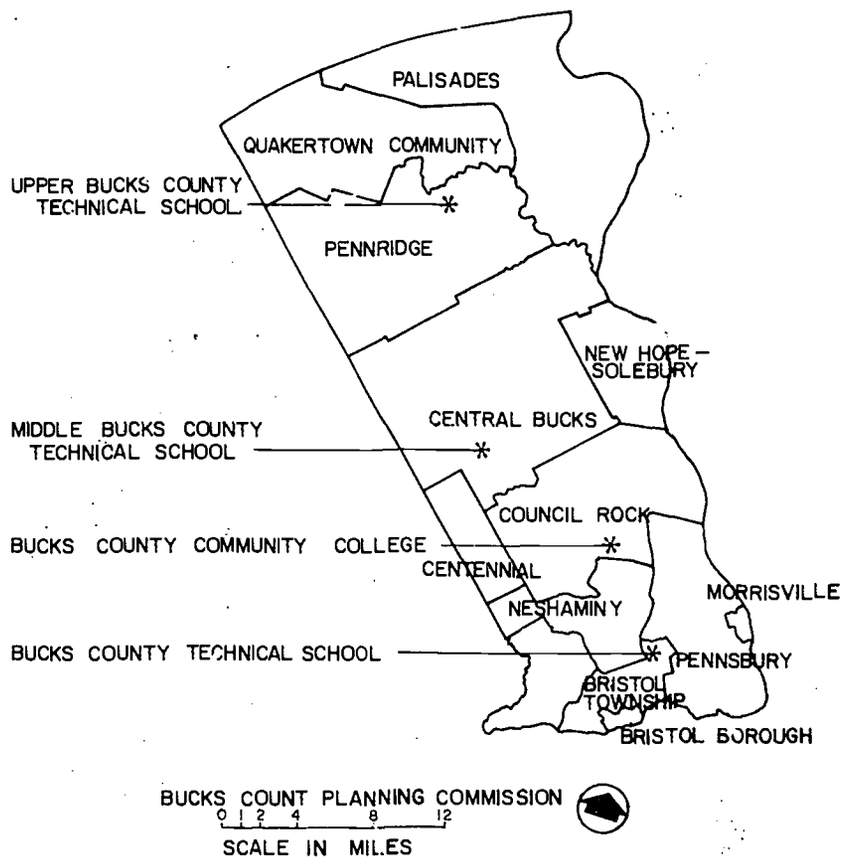
specialized courses in H-M-R-I such as: Introduction to H-M-R-I, Food and Beverage, H-M-R-I Operations, H-M-R-I Seminar and Internship. Because of their previous preparation, students entering the post-secondary program from an area vocational technical school should be able to test out of some of these courses, such as Food and Beverage.

Upon completion of the program at the Community College, students have found employment in nearby restaurants and motels in a variety of positions from desk clerk to assistant manager.

A well-planned and coordinated program should afford the student with an opportunity for a variety of cooperative experiences during his high school and postsecondary educational experience.

Institutional cooperation should provide the possibility for future faculty exchange and certainly, shared facilities. Much remains to be done and there are many problems to be worked out, but we have made a start.

BUCKS COUNTY, PENNSYLVANIA



HOTEL/MOTEL/RESTAURANT/INSTITUTIONAL MANAGEMENT

This program is designed to prepare students for management trainee positions in the hotel, motel, restaurant, and institutional industries. A student may also select this program if he wishes to transfer to a four-year school or university that specializes in the hospitality career field.

Students are urged to follow these guidelines in selecting the 14 credits of basic studies required of all degree candidates:

Transfer students should elect Composition 101 and 102, Economics 261, and a mathematics course that will form a sequence transferable to the college of their choice. Nontransfer students should elect Composition 101 and another 3-credit Communications course of their choice, Economics 261, and Business Mathematics 615 or a science course. In addition, 2 credits in Physical Education or Health Education should be selected by all students.

ESSENTIAL SPECIALIZATION COURSES

Freshman Year:

Course No.	*Course Title*	*Credit Hours*
611	Introductory Accounting I	4
613	Hotel/Motel/Restaurant/Institutional Accounting	3
621	Business Organization and Management	3
607	Introduction to Hotel/Motel/Restaurant/Institutional Management	3
685	Hotel/Motel/Restaurant/Institutional Operations I	3
617	Food and Beverage Operations I	3
626	Principles of Marketing	3
		22

Sophomore Year:

Course No.	*Course Title*	*Credit Hours*
663	Advertising Promotion	3
625	Sales Promotion (Salesmanship)	3
665	Personnel Management	3
686	Hotel/Motel/Restaurant/Institutional Operations II	3
618	Food and Beverage Operations II	3
647	Hotel/Motel/Restaurant/Institutional Seminar	3
691	Business Internship	3
		21

SUGGESTED ELECTIVES

General or specialization electives	7

Transfer students should elect Economics 262 and a sequential course in mathematics. The selection of additional electives should be based on the program of the college to which they plan to transfer or their vocational interests. It is recommended that nontransfer students select their electives from Course Nos. 262, 615, 616, 646, 666, 687, 688, and 803.

INSTITUTIONAL COOPERATION LEADS TO ARTICULATION BETWEEN AN AVTS AND COMMUNITY COLLEGE

Thomas C. Feeney, Associate Dean
of Academic Affairs, Montgomery
County Community College
and
John Weaver, Coordinator of Pupil Services
North Montgomery County AVTS

"Need a job? These areas have lots of openings: Bricklayers, Carpenters, Pharmacists, Custodians, Librarians, Registered Nurses, Accountants, Computer Programmers." Jan Schaffer, *Philadelphia Inquirer*, August 6, 1972.

"An educational system that turns out thousands of college-trained young people who can't find jobs, while it offers thousands more the prospect of boredom and futility, is badly out of kilter." Editorial, *Philadelphia Inquirer*, September, 1972.

"About 40 percent of our high school students are enrolled in the general curriculum, which frequently leads neither to higher education nor a job." Sidney P. Marland, *World*, August 17, 1972.

"The traditional American pattern of every college going it alone is crumbling under the combined pressure of limited resources and virtually unlimited needs." Franklin Patterson, *World*, July 19, 1972.

Comments like those above are an indication that education for careers and occupations is a must for meeting the needs of the future.

Vocational and technical education has had a phenomenal growth in Montgomery County during the past ten years because the need for vocational programs was recognized and appropriate action was taken to provide the high school students with an opportunity to be trained to enter the world of work. By 1967, four Area Vocational-Technical Schools were opened and approximately 1800 students were enrolled in over 30 different programs. Presently there are over 3600 students enrolled in nearly 50 programs.

To accommodate the ever growing demand, the AVT schools are actively investigating means of expanding their programs and facilities. Additions are being constructed, new programs are being offered, extended time schedules are being used, adult evening and Saturday programs are being scheduled, but still the need is not being satisfied. The schools are enrolling approximately 15 percent of the secondary students in the county when eighty-five percent of the high school graduates leave high school without a saleable skill.

Articulation of secondary and postsecondary occupational education has become essential and the Community College is in the position to become the leader in providing the career training so badly needed by our young high school graduates. Career-oriented programs are and will become more and more in demand. In the past the Community College has served as an important interim step between leaving high school and leaving home. The student was given the advantage of a local opportunity to "try" college before taking the larger and more expensive step to a campus away from home. Now, many graduates look to the Community College as an opportunity to develop a skill while gaining the maturity needed to enter the world of work.

Cooperation and articulation between the Community College and the Area Vocational-Technical School can provide many more opportunities for post-

secondary continuing education programs. This is especially true if the community colleges are truly committed to the concept of being comprehensive two-year institutions, it is very natural for them to cooperate with the AVT schools to develop articulated programs for their students.

Montgomery County Community College has cooperated with the Area Vocational Technical Schools in the following projects.

1. *Courses for Area Technical School Teachers.* Since 1969, the Community College has scheduled special sections of courses in Speech, Psychology, English Composition, Education, Sociology for the technical school teachers in the late afternoon. On several occasions the courses were taught by college faculty members at the technical schools. These courses have been used for certification purposes by the technical school teachers.

2. *College Credit Courses for Dental Assisting Students.* In Spring 1972, the Montgomery County Community College began offering courses at the college for the students in the Central Montgomery County AVTS Dental Assisting Program. The students have taken Introduction to Anatomy and English Composition for college credit. Some of the students in this Assisting Program can enroll in the Dental Hygiene Program which will begin at the Community College in Fall 1973.

3. *Advanced Standing - Challenge Examinations.* In Fall 1971, the Community College recognized the fact that many students already have excellent background in certain areas and do not need further courses. For this reason, students who have been admitted to a degree program are permitted to challenge any course offered by the College. The Department Chairman examines the student's credentials and administers an examination if necessary; sometime the student just presents a portfolio of his accomplishments. When

credit by examination is awarded, the student moves along to the next area of concentration. A student can earn up to thirty credits by this method.

4. *Practical Nursing Program.* In July 1972, the Practical Nursing Program from the North Montco AVTS was transferred to the Montgomery County Community College. During this academic year, the College is exploring ways of articulating this Practical Nursing Program with the Registered Nurse Program so that students will be able to develop to their fullest capabilities. Students starting in the P.N. Program should be able to transfer into the R.N. Program at some time during the two-year period.

5. *Associate of General Studies.* The Associate of General Studies degree allows the Community College student to select any sixty credits in the college catalogue to meet degree requirements. This program allows the student an opportunity to be very creative in planning a meaningful program to meet his needs. A student with automotive skills might like to become a service manager. With carefully selected courses in business management, economics, bookkeeping, speech, etc., he could develop a highly individualized program. With an advisor or counselor, a student could develop a unique curriculum to meet his specialized needs. Much needs to be done in order to promote this Associate of General Studies degree.

Future Plans for Articulation

These are just a couple of the things which the Community College has attempted to date in the area of cooperation and articulation. Let's take a look into the future and consider some of things which could and should be considered.

1. The *AVTS facilities* can be utilized *to provide the technical expertise for students interested in pursuing a technical career.* -Many of the AVTS

shops and laboratories are idle after the high school students leave for the day. The Community College could provide the supportive academic courses to the technical offerings. Students who did not take advantage of technical education while in high school could be provided the opportunity on a postsecondary program in cooperation with the Community College. Why duplicate expensive facilities that are readily available?

2. A vast untapped educational reservoir in Montgomery County is utilization of the rapidly growing *industrial parks as partners in education.* With the cooperation of the industrial community an industrial-based school could be developed with at least three goals.

a. To give students who have not narrowed in on their career choices an opportunity *to explore* what industry has to offer. This would of course be done without financial compensation and on a scheduled basis within a cluster of occupations.

b. To provide AVTS graduates an opportunity *to work* on a cooperative work program using their acquired skills while continuing their education at the College.

c. To provide those students with definite goals but no training an opportunity to receive *on-the-job training* while continuing their education at the Community College.

3. Another service that could be offered to AVTS graduates could be *short term programs to develop business management skills.* Many of the training areas (Appliance Repair, Auto Trades, Auto Body, Distributive Education, Cosmetology, etc.) will lead to small business ownerships. The average AVTS graduate is lacking the skills to be successful in a small business. Many of these students may not be

ready for such training until several years after graduation, while others may want to continue immediately.

4. A great need is becoming apparent for a central clearing house for the ever growing amount of *career information*. The Community College may very well be the area to locate a Career Development Resource Center. The AVTS could serve as area branches to disseminate information to the local schools.

5. Most of the instructors in the AVTS have to acquire many credits for certification. Since the major universities are not convenient for the teachers, the Community College could develop *certification programs* in cooperation with the state universities to ease the burden for the AVTS instructors. Some transferring of credits is already being done, but not on a prescribed program basis.

6. There is presently a great need to develop a good *communications system* between the Community College, the comprehensive high schools and the AVT schools that operate within each county. A good program is only as good as the word it spreads.

Many things have been done, many are being done, and many need doing. Now that the AVTS and the Community Colleges are established, time has to be set aside for cooperative ventures if we are to continue to educate for the needs of the local community.

VOCATIONAL-TECHNICAL SCHOOL AND COMMUNITY COLLEGE COOPERATION IN LEHIGH COUNTY

George W. Elison
Dean of Career Studies,
Lehigh County Community College
and
Robert A. Nagle, Director,
Lehigh County Vocational-Technical School

School boards and community groups in Lehigh County have held a long standing interest in broadening educational opportunities. This interest was demonstrated in the early move to form nine joint or union districts from the twenty-four independent districts beginning in the early 1950's and continuing till 1963. This reorganization came five years prior to legislation mandating the reduction of districts.

With this task completed, the districts turned to the investigation of other areas of education which could best be promoted on a regional basis. Included were feasibility studies for an area vocational-technical school and a community college. These studies resulted in the signing of Articles of Agreement for the establishment of both institutions in early 1967. Chief administrative officers were elected shortly thereafter with each assuming his duties in the fall.

Many factors established an atmosphere conducive to cooperation between these institutions. As noted above, both were developed at the same time; both were authorized by the same group of sponsors; and, both had responsibilities for programs of occupational education.

The similarity of the geographic area served by the institutions and other common interests led to a coordinated study for possible sites for the schools. When a tract of 153 acres, easily accessible from all sponsoring districts, was donated to the college, the area vocational-technical school purshased an adjacent tract of fifty acres for their operation. This made possible the sharing of such facilities as sewage disposal, access roads, and also set the stage for the future sharing of facilities.

Although the community college has been in operation for five years and the area vocational-technical school for two years, the 1972-73 term is only the second year when both have been operating at the permanent site. Therefore, the cooperative activities which follow have been implemented within the past year. These might be listed in three categories:

1. Program articulation.
2. Expanded program and services to students.
3. Sharing of facilities.

1. Program Articulation. Our most significant progress to date has been in program articulation. During the planning process, each school developed programs which reflected its philosophy and objectives, with neither school attempting to dictate to the other. Once these programs were formulated, the faculties met to analyze the extent to which the programs had common leanings. This analysis provided the basis for awarding credit and advanced standing to graduates of the vocational-technical program. Credit is awarded to those entering the college upon recommendation of the vocational-technical school faculty. Challenge examinations are not used in this process. Although eight to nine semester hours of work represent the typical amount of credit awarded, the actual amount varies depending upon the specific programs involved.

This procedure has been used for the past three years and advanced standing has been awarded to graduates of five area vocational-technical schools as well as graduates of vocational programs in comprehensive high schools. The results have been very satisfactory and an increase both in the number of programs involved, presently seven, and the number of credits awarded is anticipated.

A spin-off of program articulation has been the enrollment of seniors at the Lehigh County Vocational-Technical School in selected college courses. This process was just initiated this fall with enrollment of four architectural drafting students in a Construction Materials course. Results to date seem to indicate potential for other programs.

2. *Expanded Program and Services to Students.* Providing expanded services and programs was accomplished with the start of the 1971-72 term. Two programs presently in operation are:

> *Data Processing.* Students gain a knowledge of two different operating systems and have hands-on experience on two types of equipment through a planned program of student exchange.
>
> *Food Services.* College students operate the area vocational-technical school dining room during the midterm recess. While they are gaining this experience, high school students are available for concentrated theory classes taught by college faculty members.

This phase is expected to expand also. Use of college laboratories by the vocational-technical school for demonstrations of principles of mechanics, strength of materials, hydraulics and pneumatics and similar activities will probably be initiated this term.

3. Sharing of Facilities. The last type of coordination has been the sharing of facilities. We have tried two different procedures in the sharing of facilities and found both to be satisfactory. In the case of Machine Shop Practice, a part of the college Mechanical Technology program, the college defines the objectives of the course and then contracts with the AVTS for the instruction. The course, Skills and Modalities, a part of the college program in Occupational Therapy Assisting, is designed to develop a variety of basic skills in woodworking, metalworking and similar crafts. In this case, the college uses AVTS facilities, equipment and tools, but has college faculty conduct the classes.

This sharing of facilities has greatly reduced the cost of operating programs as it has eliminated the need for the college to provide highly specialized facilities and equipment which would have minimal utilization.

The success of all cooperative ventures resulted in a move to establish a completely coordinated program of occupational and adult education. This agreement includes the Carbon County AVTS as well as the Lehigh County Community College and VTS. Distance will probably restrict the involvement of Carbon County to the postsecondary phase of the agreement. The proposed program is now being considered by the boards of control. Although some modifications may be made, the basic principles stated below will guide the schools in their future development of a total program in occupational education.

Policy and Procedure Statement Concerning Cooperative Agreements Among The Lehigh County Community College, The Lehigh County Vocational Technical School, and The Carbon County Area Vocational Technical School.

The governing boards of the Lehigh County Community College, the Lehigh County Vocational Technical

School and the Carbon County Area Vocational Technical School, recognizing the need to provide maximum opportunities for occupational education at a minimum cost, have adopted the following policy for the coordination of programs of occupational education.

Basic Assumptions

1. The need for educational programs, designed to prepare persons of all ages for specific occupations, will increase. This need will require new programs as well as increased capacity in existing programs.

2. The present and future funding of special retraining programs by State and Federal agencies will not provide for the continuity required to develop program, provide for facilities, employ instructional staff, etc. Therefore, long-range planning can be best provided through local institutions.

3. The differences in the missions of community colleges and area vocational-technical schools in meeting the need for occupational education are created by the age of the student, requirements for general education, etc. and do not necessarily require major variations in facilities and equipment.

4. Basic preparation for a given occupation will be similar regardless of the age level at which it occurs. The trend in education towards stating goals in terms of behavioral objectives will make it easier to evaluate progress at one age level with that of another. Therefore, students should receive credit for work already completed when they move from one school to the other.

Determination of Need

Each institution will work with lay advisory committees, the Manpower Planning Council, Offices of the Pennsylvania Bureau of Employment Security and other organizations interested in manpower development to determine manpower needs. The work of these committees will be to encourage programs in the best interest of students of all ages and the community, thus avoiding duplication of effort in research, development, and operation of programs.

Designation of Institution

Recommendations for new programs will be forwarded to the Joint Vocational-Technical School and Community College Coordination Study Committee to determine the dispensation of same: It shall be this Committee's responsibility to designate the institution which is to operate the program using the following general guidelines:

1. The level or levels at which it should be offered.
2. The adequacy of existing facilities.
3. The effect on the total educational program if existing facilities were used.

When existing facilities are considered to be adequate, the institution having the facilities available will be authorized to conduct the specialized phase of the program.

Program Development

1. The institution conducting the specialized phase of the program will be responsible for the appointment of the advisory committee, development of the curriculum, determination of the need for equipment, and staffing.

2. The cooperating institution will be involved in the planning process to insure that the program is in accord with existing legislation, regulations, and standards.

3. Programs shall be planned, to the maximum extent possible, to permit students to select from a program those courses which meet their interests and needs. This could range from one course to a planned program leading to the Associate Degree in Applied Science.

Student Recruitment and Selection

1. Recruitment of the students will be coordinated by all institutions involved. Assistance will be provided by State and local agencies when appropriate. Students will be registered with the institution from which they will receive their degree or certificate.

2. Students will be accepted from the Bureau of Employment Security and other agencies authorized to contract for educational services.

Budget

1. The institution conducting the specialized phase of the program will prepare operating and capital budgets for a period of three years. All institutions participating in the program will guarantee financial support for the initial three-year period to provide for adequate staffing, program promotion and development, and evaluation.

2. Payments for contracted services received from governmental or private agencies shall be credited to the specific program for which they are received.

3. Applications for State and Federal funds will be made in accordance with existing regulations.

Program Evaluation

Program evaluation will be a continuing process. Procedures for this evaluation will be developed cooperatively.

Procedure for Conducting a Joint Continuing Education/Community Service Program

1. Continuing education programs being offered by both institutions will be reviewed and classified as:

   a. Credit courses applicable to a Certificate or Associate Degree.

   b. Non-credit general interest courses.

2. Two combined adult program brochures will be published as is presently planned at the Lehigh County Community College:

   a. Credit courses.

   b. Non-credit courses.

   No separate Vocational-Technical School brochure will be necessary, nor separate advertising.

3. One joint registration will take place.

4. The Adult Supervisors of both institutions will develop the program of studies to be offered as a joint effort.

5. The Vocational-Technical School will revamp its adult programs from one long semester to two semesters, aligning with the Community College.

6. When more than one semester of work is to be offered in an area of instruction, the content will be organized to provide credit applicable to a Certificate or Associate Degree.

7. Scheduling will be coordinated to provide students with the opportunity to enroll in general education courses at the college during the same semester in which they are taking occupational programs at the Vocational-Technical School.

8. Administrative control of programs will be in line with the aforementioned policy.

9. The financial arrangements of these programs will be in line with the State Guidelines.

ARTICULATION OF OCCUPATIONAL PROGRAM GRADUATES BETWEEN OHIO TWO-YEAR COLLEGES AND THE UNIVERSITY OF AKRON

Michael N. Sugarman
Program Director, Technical Teacher Education
College of Education

Before 1950 and even up to the early 60's, two-year colleges had such a poor image in higher education that they were largely ignored by the four-year college and university. As a result, the problem of articulation from the two-year college to the senior institution was also largely ignored.[1] Even today, in the early 70's, we still find that many students in the two-year college transfer program (college parallel) frequently find great difficulty in receiving full transfer credit from the senior institution. The problem of credit transfer from two-year college occupational program to a senior institution is a world of its own.

We have pretty solid evidence that most students go on to college for vocational purposes--to get skills to obtain a job or to get a degree to get a job.[2] We also know that only about a quarter to a

---

[1] C. R. Monroe, *Profile of the Community College* (San Francisco: Jossey-Bass, 1972).

[2] M. S. Sugarman, "Vocationalism in Higher Education," *Vocational Guidance Quarterly* 18 (1969): 103-90; A. P. Garbin and D. Vaughn, *Community-Junior College Students Enrolled in Occupational Programs: Selected Characteristics, Experiences, and Perceptions* (Columbus, Ohio: Center for Vocational and Technical Education, 1971).

third of the enrollments in the two-year college are in occupational programs.

Postsecondary occupational education is still considered second class education by large segments of our society. As a result most students still flock to the more prestigious transfer program leading toward the baccalaureate degree. Students generally do not want to enter a dead end or terminal program, as the occupational program is frequently classified. In order to attract students to the occupational programs we must build in a career ladder philosophy, and this means that there must be someplace for the occupational graduate to transfer to if he so desires, in his climb up the ladder.

It was not until the middle 60's that some senior institutions began to accept the occupational degree graduate as a junior in full standing.[3] We are now witnessing a rather rapid growth in the development of two-plus-two programs and Bachelor of Technology programs specifically designed for the associate degree technician. The bachelor of science degree in technology is now offered in at least 76 colleges, most of which accept the two-year degree.[4]

The State of Ohio is far from being a bed of roses. We have forty-eight public two-year college campuses in Ohio including four comprehensive community colleges, five community and technical

---

[3] Angelo C. Gillie, *Pennsylvania State University Associate Degree Technician Graduates: Some Demographic Variables* (University Park, Pa.: The Pennsylvania State University, 1971).

[4] L. W. Bender, "Occupational Education Program Articulation Between the Community College and Baccalaureate Levels," *Proceedings of the National Seminar for State Directors of Community-Junior Colleges, January 10-11, 1972* (Columbus, Ohio: The Center for Vocational and Technical Education 1972), pp. 33-44; 57-59.

colleges of universities, seventeen technical colleges, and twenty-two branch campuses of state universities. These institutions are administered by the Ohio Board of Regents.

The associate degree is rather new in Ohio, as none were awarded prior to 1960. During 1971-72 we have approximately 75,000 students on two-year campuses and anticipate 133,000 students during 1975.

Very few senior institutions in Ohio have articulation programs favorably oriented toward the occupational program graduate. This may change in the near future because of a new "statement of policy on articulation between two-year campuses and four-year campuses" put forth by the Ohio Board of Regents. The policy states that "It should be generally understood that no two-year curriculum offered by an Ohio public two-year campus is intended to be terminal in nature." Another statement presently under consideration states "The approximate 10 percent, completing the requirements of Associate of Applied Science/Business degree, who desire to pursue a baccalaureate degree on the 'two-plus-two' concept should be permitted to do so without a loss of credit."

The University of Akron is one of the few institutions in Ohio which is presently prepared to meet the challenges of the new articulation policies of the Ohio Board of Regents. A student may go all the way from an associate degree in an occupational area through a master's degree in technical education (In Ohio *technical education* includes all areas of postsecondary occupational education).

The associate degree graduate may continue his education through two distinct routes at the University of Akron. The student has a choice of the Bachelor of Technology program offered through the Community and Technical College or the

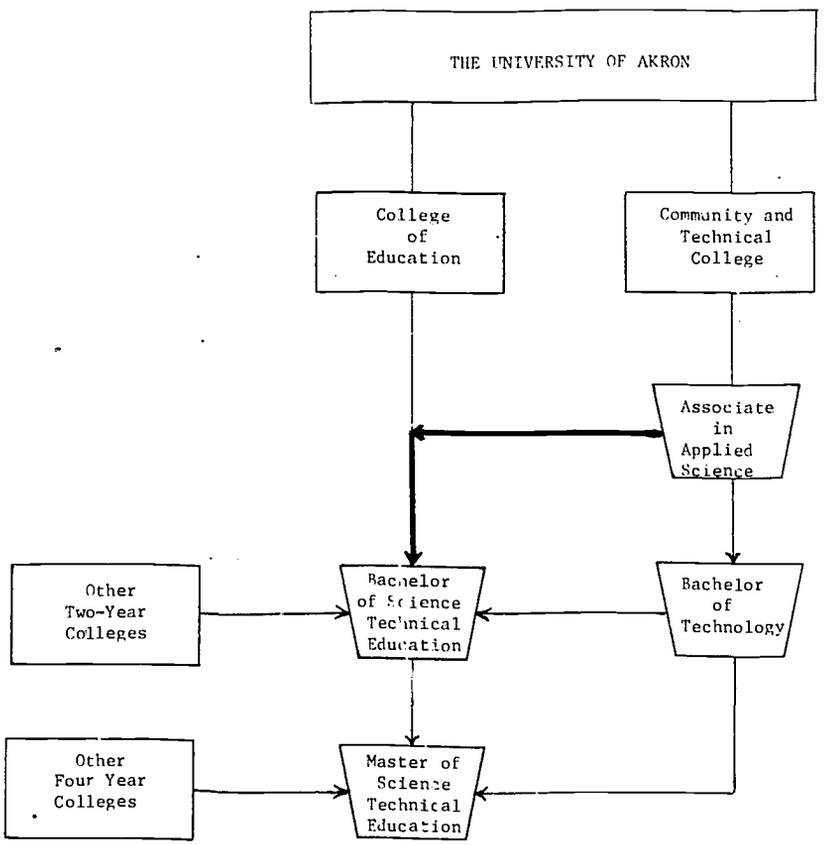

THE UNIVERSITY OF AKRON
College of Education
Community and Technical College
Associate in Applied Science
Other Two-Year Colleges
Bachelor of Science Technical Education
Bachelor of Technology
Other Four Year Colleges
Master of Science Technical Education

Figure 5

Bachelor of Science in Technical Education offered through the College of Education. Graduates from either one of these programs may then continue on to earn a Master of Science in Technical Education in the College of Education (see figure 5).

The Bachelor of Science in Technical Education (B.S.T.E.) was developed to prepare occupational education instructors for postsecondary institutions, two-year colleges, technical institutes, and industry. Some graduates have also found teaching positions in police training academies, hospital schools of nursing, occupational therapy training programs, and industrial training programs.

The program leading toward the Bachelor of Science in Technical Education is designed to admit the associate degree technical graduate from any accredited two-year college in the broad technology areas of allied health, public service, home economics, agriculture, business, and industrial and engineering technologies without loss of academic credit.

The B.S.T.E. is designed around a technical content of 76-89 quarter hours of individually programmed technology related courses, 52-65 hours of general studies, 29 hours of professional education designed to prepare the student to teach at the two-year college level, 16 hours of electives, and 6 hours of related occupational experience (see "Requirements for the Degree of Master of Science in Technical Education" at the end of this paper).

As non-traditional paths (external degrees, CLEP, etc.) to a college degree gain in acceptability and recognition across the country, and as colleges and universities face declining student enrollments, I am sure that articulation problems between two-year and four-year colleges will lessen.

Four-year colleges must search for new students. They must create new markets and find new customers for their services. The technical program associate degree graduate is begging for admission to the baccalaureate degree program. Two-year and four-year colleges will have to resolve their differences. They cannot afford not to.

COLLEGE OF EDUCATION
THE UNIVERSITY OF AKRON
AKRON, OHIO 44325

Requirements for the Bachelor of Science in Technical Education

A. General Studies Requirements (52-65 qtr. hours*)

110:111-112	English Composition	8 qtr. hrs.
110:108	Effective Speaking	4 qtr. hrs.
110:115-116-117	Institutions in the U. S.	9 qtr. hrs.
110:XXX	Physical Education	2 qtr. hrs.
110:205	Types of Literature	4 qtr. hrs.
110:303-304	Eastern Civilizations	6 qtr. hrs.
110:317-318-319	Western Cultural Traditions	12 qtr. hrs.
110:401	Senior Seminar	2 qtr. hrs.
375:141	General Psychology	5 qtr. hrs.
	Mathematics	4 qtr. hrs.
	Science	9 qtr. hrs.

B. Technical Content Requirements (76-89 qtr. hours*)

The technical content courses are defined as courses in the technical specialty and those related courses in mathematics, physical science, and related technical science. The specific courses required in the various technologies will be determined cooperatively between the College of Education and the Community and Technical College.

C. Professional Requirements (29 qtr. hrs.)

565:157	Human Development and Learning	4 qtr. hrs.
540:410	Postsecondary Technical Education	3 qtr. hrs.
540:421	Instructional Techniques in Technical Education	5 qtr. hrs.
540:430	Course Construction in Technical Education	3 qtr. hrs.
510:401	Problems in Education	4 qtr. hrs.
515:402	Student Teaching	6 qtr. hrs.
515:403	Seminar in Student Teaching	2 qtr. hrs.
XXX:XXX	Elective in Education	2-4 qtr. hrs.

D. Occupational Experience (6 qtr. hrs.)

540:301	Occupational Employment Experience and Seminar	2-6 qtr. hrs.

E. Electives (16 qtr. hrs.)

These hours may support the student's technical field of specialization, add to the student's general education, or professional education courses.

TOTAL: 192 credits

*Since most technical education programs far exceed the general studies requirement of 13 quarter hours, math and science related to the technology is substituted. However, if the technological program does not include courses in these areas, the general studies courses are required.

Revised: 9/72

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

IN TECHNICAL EDUCATION

A. Core Courses . . . . . 13 credits

510:600	Philosophies of Education	4
565:602	Behavioral Bases of Education (or 565:620)	4
590:603	Techniques of Research	5

B. Professional Technical Education . . . . . 13 credits

540:510	Postsecondary Technical Education	3
540:521	Instructional Techniques in Technical Education	5
540:530	Course Construction in Technical Education	3

C. Field of Specialization (One option is selected) 13-14 credits

1. Teaching Option: An approved schedule of technical courses selected from the offerings of The Graduate School. Course selections will be determined on the basis of the student's academic and professional background . Application required.

2. Guidance Option A (Must be followed in sequence) 17 credits

560:617*	The Interview	3
560:618*	Counseling: Theory and Philosophy	3
560:619	Techniques of Counseling	3
560:620	Group Counseling	3
560:621	Practicum in Counseling	5
	*no sequence for 617 and 618	

3. Guidance Option B (No sequence) 14 credits

560:617	The Interview	3
560:616	Career Guidance: Theory and Practice	4
560:601	Student Personnel Services in Higher Ed.	3
560:623	Evaluation and Diagnosis of Learning Probs.	4

4. Curriculum and Supervision Option 14 credits

570:610	Principles of Educational Supervision	5
570:710	Principles of Curriculum Development	4
	Elective in Curriculum or Supervision	5

D. Teaching Internship: Students that enter the program without teaching experience are required to take a teaching internship at a cooperating two-year institution.
515:690 Internship Teaching . . . . . Application required. 4 credits

E. Elective: These hours may support the student's field of specialization or add to the student's general education, or professional education courses . . . . . 5-10 credits

Total....48 credits

Comprehensive examination required. No thesis.

THE COMMUNITY COLLEGE OF PHILADELPHIA APPROACH

Sidney August
Director, Division of Educational Resources
Community College Of Philadelphia

The Community College of Philadelphia opened in 1965 and has consistently endeavored to maintain a proportionate relationship between traditional transfer programs and occupational programs leading to certificates and to the associate degree. The technical curricula include courses in the humanities and they are designed to offer students the backgrounds and skills which will facilitate immediate employment.

My summary today will speak of the emphasis at the college in guiding students through the occupational programs, with particular emphasis on success ful experiences in continuing education for these students.

The college has an enrollment of approximately 5,000 full-time equivalents, including many who are enrolled in one-year certificate programs, and over 500 in Community Service Programs.

Guidance for the community college student who has academic and professional objectives and is oriented toward the four-year objective even before he submits his admissions application is a comparatively easy and well-traveled road. The student enrolled in the paraprofessional occupational program, on the other hand, is often quite unaware of the potential program available to him after the certificate or the associate degree.

A new study by Warren W. Willingham, of Educational Testing Service, estimates that approximately 250,000 community college students annually transfer to four-year institutions of all types. He refers to the wide variation in course requirements and

sequences among, or even within, colleges and universities, which lead to transfer with loss of credits. In a few states,(California, Florida, and Illinois), the transfer of jointly agreed upon general education courses is "guaranteed." Willingham suggests that these plans are designed to assure articulation between lower and upper divisions without lacing community colleges into a "curricular straitjacket."

Such articulation raises many problems:

1. Is financial aid available or is there an aid gap between transfer and "native" students?

2. Is there space in the four-year institution? Is there planning for transfer? Is there a need for "upper-level colleges" as such?

3. Does the difference in academic standards at the "open admissions" college and the "selective" process at the senior college affect transfer student progress? Are there differences in grading standards?

4. What of guidance responsibilities? Is information available about senior colleges admissions requirements, courses accepted, history of transfers of the same type, housing, and developmental programs?

5. What is the orientation role of senior institutions? Are there brochures and detailed descriptions of the curricula?

Articulation of the Architectural Technology Curriculum

In the Architectural Technology Curriculum at Community College of Philadelphia, a successful history of transfer has been in effect. The implemention of this articulation is based upon the record of involvement of teaching as well as administrative staff.

Some students in their first year may have vague motivation. By the second year a more informed approach to architectural technology is developed through guidance.

A conference with the student concerning achievement begins at an early date, and he is advised in choices of electives so that he transfers with the maximum course work acceptable for credit. Students in Architectural Technology are introduced to literature in the field in order to develop a career approach which takes the place of the syndrome of "getting a job as soon as I can." Construction engineering as a related approach is developed with students through career counseling. For a segment of the students, the associate degree is only one step on the career ladder or the career lattice. Similar experience with students interested in the Bachelor of Technology degree in other colleges has encouraged first and second year CCP students in this pattern of study.

Meanwhile, the efforts of the professional Advisory Committee for this curriculum have borne fruit. Representation from the Spring Garden College, as well as other local colleges, take an active role in this advisory committee. The group meets two to three times a year, striving to update participants, keeping them informed concerning developments in the field as well as the employment market.

The success of articulation with Spring Garden in this curriculum is comparable to the success experienced in the Chemical Technology Curriculum and local colleges. The credit hours required for this associate degree include courses that are subject to scrutiny by some four-year colleges. The history of students continuing to Spring Garden has been quite successful.

Goals of Articulation

The goals of articulation in occupational education are clearly outlined in four areas:

1. Advance the vocational objectives of the student by cooperation of all agencies involved in vocational education.

2. Expand the student's opportunities by broadening his horizon.

3. Encourage the student to take courses that are meaningful to him.

4. Begin as early as possible to provide the contacts, the literature, and the opportunity to explore the entire career ladder.

TWO PLUS TWO EQUALS THREE AND ONE/HALF OR FOUR OR MORE

Thomas C. Cooke
Vice President and Dean of Academic Affairs
Spring Garden College

Spring Garden College, in deciding to change its structure from that of a two-year technical institute to that of a four-year technical and business college was faced with the problem of maintaining its educational mission and objectives--which had proven over the years to be quite viable--while it enlarged and broadened its area of service to students and industry. The questions before us were about integration and articulation. Should we drop the Associate in Science degree and offer a four-year integrated Bachelor of Science in Technology degree? If we maintained the Associate Degree program, how would it articulate with a Bachelor of Science in Technology program? Should we have both a "terminal" Associate degree program and an integrated Bachelor of Science in Technology program?

Industry needed a more sophisticated technologist and was letting us know of that need. Internally, students were pressing for additional opportunities for advancing their education. The faculty strongly supported a broadening and deepening of the educational program which cou d not be accomplished in a period of two academic years.

The Two-Plus-Two Curriculum

Our answer was to develop the two-plus-two curriculum, one of the first in the country and one which has since been implemented by many colleges.

The lower division of the college would continue to grant the Associate in Science degree. An upper division of the college was created to accept those

students successfully completing their Associate in Science degree for work toward the Bachelor of Science in Technology degree.

As the rather whimsical title of this paper suggests, the two-plus-two concept in education, while a sound and workable general concept, is one which can have considerable variations when applied to specific situations.

Spring Garden College, in establishing its four-year program leading to the Bachelor of Science in Technology, was very conscious not only of its own students, but also of the needs of those transfer students who would be looking for continuing technical education upon graduation from the community and private junior colleges. We believed that the upper division program which we devised should not only meet the needs of Spring Garden College students but also those of students from the two-year colleges who wished to continue their education.

Our program was developed at a time when the articulation between junior colleges and four-year colleges was even less effective than it is today. Complaints were heard from many quarters about the difficulty of the transfer process. The educational marketplace was much tighter then; the four-year colleges were still adjusting to the increasing number of graduates of two-year colleges seeking transfer without loss of credit; increasing numbers of students were enrolling in the two-year colleges with the expectation of transferring with full junior status to a four-year institution. Moreover, many of these students who expected to transfer were enrolled in "terminal" technical curricula rather than in "transfer" programs.

Planning the Curriculum

Spring Garden College, in developing the four-year program, invited representatives from all two-

year colleges in the state who were interested in a technical program, to meet with the staff from Spring Garden College. At that meeting, it was evident that the two-plus-two concept with which we began was, indeed, a viable one. However, there were also very real problems introduced at that meeting which needed to be solved if we were to meet our objectives of serving our own students *and* transfer students.

Forseeably, students could be applying for transfer to the upper division of the college with three different general educational backgrounds from the two-year colleges: 1) those having a fairly specific background in the technical area to which they wished to transfer; 2) those having a background in a related "industrial" technology requiring less rigorous mathematics and physics; 3) students with little or no technical education.

Our objective was to structure a program which would enable all these students to finish the Bachelor of Science in Technology degree requirements in two years and to admit them as Juniors solely on the strength of their having been awarded an Associate degree by a two-year college.

How to do this and maintain educational integrity was our big problem. The test of the program would be the employment of the students--at an appropriate level of employment for one holding a bachelor's degree--in those disciplines in which they had been educated. Another objective was to allow the student sufficient flexibility in his choice of courses so that he could develop his own interests and career goals within his chosen discipline. That is, an electronics-electrical engineering technology student might wish to develop interest in design as opposed to sales or production, or vice versa.

A very real advantage in approaching this problem was the fact that we were structuring both a lower division and an upper division college. Hence,

students with certain weaknesses in their technical preparation could be provided with the necessary course work in the lower division. By not being limited to upper division offerings, the college could be fairly flexible in its admissions policy, and could accommodate students with varying technical education backgrounds.

The Curriculum Design

Being the easiest to deal with, we began with the Associate degree graduate in a specific technology. It was determined that approximately 30% of the courses would be in upper division technical courses as a *minimum* requirement. Other minimums would be 20% course selection in the liberal arts (including math, physics, and chemistry), and 20% in business administration. Thirty percent of the course choices would be "free electives." The student could thus specialize very heavily in the technical discipline or could choose to spread his electives in the other areas.

For those students having a background in related technology, the required technical courses were increased to include the appropriate lower division courses needed to meet prerequisite requirements for upper division courses. The same number of credits were required in liberal arts and business administration. However, the number of free elective credits was reduced significantly.

Students having no technical background, of course, presented the greatest problem. We expected few of them to apply, but we wanted to be prepared to assist those who wanted a technical career and who did not decide this until graduation from a two-year college. Sixty percent as a minimum was established in the technical discipline as a requirement for these students. An appropriate blend of lower and upper division courses would be established by the academic advisor to the students. Such students would have almost no free choices in the technical discipline.

Two-Plus-Two Results

Spring Garden College has now graduated two classes with the bachelor's degree in technology. All of these students have done very well in the employment market. A few have been admitted to graduate programs, and although that is not the objective of the program, we feel that it does say something about the quality of the program. We believe that our approach has proven to be a sound one, meeting the objectives of the college, the needs of the students, and the needs of the industries which we serve.

Part of our success may be attributed to the fact that we could look at the product of the two-year college and tailor our program to best accommodate the educational objectives of those students who wished to enter a technical career field. As might be expected, we have not been able to see every student through this process in two academic years. The program was established to meet the needs of students from three general types of educational background. However, *each* student presents a *specific* as well as a general background.

Students with a weak background in math and physics and/or little or no technical education have elected to, or have been advised (required) to, pursue light course loads and finish their degree requirements in five or six semesters instead of four. In some cases, students came from three-year associate degree programs and were allowed some advanced credit for the additional liberal arts courses taken in the associate degree programs. These students have been able to complete their requirements in two years with lighter course loads or, in some cases, in less than two years with heavier course loads or summer study.

The policy of admitting students on the basis of the associate degree has proven to be quite successful. No transcript evaluation is made for the purpose of *admission*. However, academic advisors in the

technical discipline in which the student is matriculating *do* evaluate the transcript for the purpose of establishing appropriate and necessary course selection. In most cases, the student knows, soon after matriculation, what will be required in technical and supporting courses over the two-year period. In all cases where students come from other than strong technical backgrounds, the entire program is laid out over the requisite educational period so that students are clear about academic requirements.

All students enter under the same umbrella, but from that point their individual coverage is designed to insure that the student will accomplish his educational and career goals. In this, the two-plus-two concept serves its purpose very adequately. It has proven to be a most appropriate instrument through which Spring Garden College has been able to articulate well with community and junior colleges.

AN UPPER DIVISION COLLEGE EXPERIENCE IN TECHNICAL EDUCATION

Walter M. Slygh
Academic Services Officer
Capitol Campus
The Pennsylvania State University

In 1966 a new upper division and graduate center was established at Middletown, Pennsylvania as an integral part of The Pennsylvania State University. It was a logical sequence of the passage of the Community College Act in Pennsylvania and of the growing need for new concepts in higher education.

Beginnings

The Capitol Campus opened its doors in October 1966 with eighteen students enrolled in liberal arts programs. Dr. Eric Walker, President of the University, viewed Capitol Campus as an opportunity to develop a new and different kind of college. He told the faculty that in developing courses and programs they should not feel constrained by rules and regulations built up over the years at the University. The programs, while continuing the traditional, would emphasize new curricula and new approaches.

The first programs were established in the social sciences and humanities, followed by Elementary Education, Business, Engineering Technology and now Mathematical Sciences. Before I further emphasize the nature of each program it may be well to explain the admissions philosophy adopted at the beginning of the planning stages for the campus.

Since Capitol is an upper division campus, the planning committee had to first consider the articulation problems of incoming students who would already have completed two full years of college either at a Commonwealth Campus of the University or a Community/Junior College. The Admission guidelines

had to permit smooth articulation from those colleges to an upper division program. It was first agreed that only those students completing two years of designated baccalaureate credits would be admitted. But when general course prerequisites were established for each program at Capitol, it soon became obvious that exceptions were necessary to accommodate the wide variance in lower division preparation. Further, as surveys were completed and needs of higher education analyzed, new programs were developed which directed a change in admission philosophy.

Our present admissions guidelines accept all applicants as ready and capable of pursuing upper division studies in their chosen field. This means that students enrolled in two-year associate degree programs must complete their program and be awarded the two-year degree. Other applicants from four-year colleges must complete sixty distributed academic credits prior to attending the Capitol Campus.

Some Technical Curricula

The Bachelor of Business program with emphasis in Accounting, Management/Marketing, and Finance is now able to accept students completing a two-year associate degree program in such areas as Data Processing, Retailing, Cooperative Marketing/Management, etc. Each student admitted is then scheduled into courses which round out a baccalaureate degree program, yet produce a wide range of qualifications to enter the working world.

The largest of our vocational oriented programs has been in engineering. In 1967 new programs in Electrical Design Engineering Technology, Mechanical Design Engineering Technology and Water Resources Engineering Technology were added for two-year Associate degree students in Electronics and Drafting and Design Technology who wished to continue their development. This was a new breakthrough in baccalaureate education because students completing two years

of technical engineering education had been considered terminal students. Clearly, the gap between the draftsman/technician and the Engineering Scientist has widened so far since 1946 that curricula needed to be developed for the technologist who could fill that widening gap. Today, the bachelor of technology graduate is recognized as a full-fledged engineer. In an attempt to offer necessary technical education for those students who desire to continue, two new programs have been added in Civil Engineering, Building Construction and Transportation.

As we surveyed the needs of students from our major sources of input we found that many students completing so-called applied science programs desired to continue their formal education in some area closely related to their degree without loss of credit for their first two year techical education. Law Enforcement was one such area. Contact was mde with local, state, and federal agencies to determine a realistic and feasible means through which such students could continue their education, be preapred for a specific vocation, and still satisfy baccalaureate degree requirements in a minimum of two years. Our investigation into this area led to the admission of students with a technical background into our Social Sciences programs. Again, special advisement and course scheduling is a necessary part of each student's progress towards the baccalaureate degree. We are most pleased with the results of this investigation and the ultimate progress of the students involved.

Further Directions

In the Academic Policy Plan recently released for the University, Capitol Campus is charged with the responsibility to develop new programs which cater to the special needs of the Community College students and students attending PSU Commonwealth Campuses. This charge pertains to transfer students as well as to those students in vocationally oriented programs. I am positive that the Faculty and Adminis-

tration of the Capitol Campus will accept this responsibility without question as past experiments have proven them to be most worthy.

VOCATIONAL ARTICULATION BETWEEN CAPITOL CAMPUS, PENN STATE UNIVERSITY, AND BOYCE CAMPUS, COMMUNITY COLLEGE OF ALLEGHENY COUNTY

Charles A. Darrah
Dean of Students, Boyce Campus,
Community College of Allegheny County

Introduction

Until the present decade, educational emphasis has been placed on the academic phase of education, with parents and students alike placing the attainment of an academic degree at the top of their list of educational priorities. This is not to say, however, that there have not been certain educators who felt strongly about vocational education and who played a leadership role in promoting and activating vocational educational programs and informing the populace of its importance.

It was not until recent years, however, when thousands of college graduates found their educational training inadequate for the available employment opportunities, when business and industry started to place greater emphasis on securing the individual trained to perform a specific function, when employment opportunities existed in the skilled and semi-skilled categories of employment, and when there was a lack of needed personnel, that local, state, and national attention began to focus on vocational education at the secondary and postsecondary levels.

Statement of the Problem

The Boyce Campus, Community College of Allegheny County, was instituted in September 1966; of those students initially enrolled, approximately 70 percent were enrolled in college transfer programs with the remaining 30 percent in career areas such as technology, business, and data processing. Through a

financial grant from the Pittsburgh Plate Glass Company in 1966, a Police Science Program was instituted with both the career or transfer option.

During the early years of existence of Boyce Campus one of the major concerns of the administration was that of narrowing the percentage differences between the transfer and career students. The Allegheny County Commissioners, who hold the responsibility for allocating local funds for supporting the community college, began making demands that the Community College of Allegheny County find ways of better serving business and industry and provide educational opportunities for a greater percentage of the people of the county whose major interests centered in the career areas. The Boyce Campus administration was also very much concerned about the placement of its graduates, either in business and industry or in the four-year institutions. Since, as mentioned previously, most of the students were enrolled in college transfer programs, the emphasis was on college placement. In the numerous conferences held between Boyce Campus officers and the admissions representatives of a range of four-year institutions, the matter of credit transfer immediately became an issue. Most of the institutions took the position that they would accept only those courses for which there was a parallel offering on their respective campuses. The substance of this position was that a student who earned 60 credits at Boyce Campus would be able to transfer only a percentage of the earned credits to a four-year institution, with the size of the percentage directly dependent upon the course offering of the particular four-year institution. But more important, it meant that an A.S. degree from Boyce Campus would be considered terminal.

Resolution

In the fall of 1967, an announcement was made of the establishment of the Capitol Campus, Penn State University, Harrisburg, Pennsylvania. Shortly there-

after, Mr. Walter Slygh visited Boyce Campus and the problem as stated above was related to him. Early in the spring of 1968, some four months prior the first degree conferring exercise at Boyce Campus, Mr. Slygh returned to Boyce Campus and informed the administration that Capitol Campus would provide the following educational opportunities for its graduates:

(a) Accept all credits earned at Boyce Campus if the student had earned the degree, attained a 2.0 quality point average, and had a course major that paralleled a course major offering at Capitol Campus.

(b) Design a special program for students majoring in the technologies whereby they could transfer all of their credits to Capitol Campus and pursue a course of study leading to a Bachelor of Technology degree, provided they had earned the A.S. degree and attained 2.0 quality point average at Boyce Campus.

The actual design for the Bachelor of Technology degree required cooperative planning between faculty from the technology division of the community college and Capitol Campus. Certain base disciplines within the program needed to be redesigned to provide a continuity of learning experiences for the student. The major program developed in the mathematics and physics areas.

Outcome

Six of the 1968 graduates in the technology field transferred into the advanced degree program at Capitol Campus. In addition approximately 25 percent of the transfer graduates of that class also transferred to the upper division institution. This transfer opportunity was also extended to all Community Colleges of Pennsylvania.

The bachelor program has now been expanded to include data processing and police science; other programs are presently under consideration. In a recent visit to Capitol Campus, the Provost told me that consideration would be given to the expansion of any career or vocational program providing the various community colleges in Pennsylvania could show a need for such a program.

At one time, counselors and other college officials associated with Boyce Campus held the position that most of our transfer credits were transferable to four-year institutions; but with action taken by Capitol Campus relative to their bachelor programs in the career areas, our present position is that *all* credit courses are transferable to one institution or another.

Conclusion

Capitol Campus must be given credit for pioneering in the more liberal policies of acceptance of community college credits and expanding the bachelor's program offerings to include career or vocational programs.

Other institutions across the nation have followed the example set by Capitol Campus and liberalized their transfer policies or expanded their bachelor's program to include the career or vocational areas. Kent State, Indiana State University (PA), and the University of Pittsburgh are prime examples.

The number of institutions accepting in bulk all credits earned at the Junior or Community College with the attainment of the associate degree is increasing each year and it is the opinion of the writer that within a five-year period most of the collegiate institutions acoss the nation will implement a similar policy.

COOPERATION BETWEEN A COMMUNITY COLLEGE AND COMMUNITY SERVICE AGENCIES IN ESTABLISHING HUMAN SERVICE CURRICULA

Mary M. Norman
Academic Dean, South Campus
Community College of Allegheny County

In the planning and development of human service curricula it is not only important that there be articulation between the community college and secondary institutions; it is equally important that there be articulation and cooperation between the college and various agencies within the community. Indeed, as community colleges move in the direction of establishing human service curricula the more directly they need to cooperate with the various private and governmental agencies within their service area. It is the purpose of this paper to present examples of two Human Service Programs which have been jointly planned by a community college and community service agencies. The mutual benefits derived from this type of cooperative activity will be explored, along with a discussion of ways in which to most effectively work with local agencies.

SOUTH CAMPUS, COMMUNITY COLLEGE OF ALLEGHENY COUNTY, EXPERIENCE

Child Care

Two years ago a member of our Social Science faculty learned that the McKeesport School District had applied for and was about ready to receive a federal grant to open child care centers. Since the college had long contemplated offering some type of program for the training of child care personnel, the college inquired of the school district whether or not it might in some way service the school district's

program by providing some minimum training for their employees. The response from the school district was affirmative. The school district had planned to staff the care centers with a number of black women who were very capable of working with and caring for young children, but who lacked any formal education in child care. Members of the college's social science faculty worked jointly with school district officials in developing an eighteen (18) credit certificate program in child care for these employees.* The college supplied the faculty to train these employees and classes were held during the day in the various child care centers. To motivate the employees, the school district offered to pay one half the tuition cost plus further financial aid through the college's community service division. The school district also agreed to upgrade salaries and jobs of those who would complete the eighteen (18) credit program.

Since the demand for child care in the area could not be met by the number of child care centers supported by the school district, the school district subcontracted to the Louise Child Care Program, a private social agency, to provide child care by Day Care Mothers in their homes. These women again lacked formal education in child care and thus the college agreed to offer its eighteen hour certificate program to these women through its evening program. Through the community service division these day care mothers as well as the teachers in the day care centers were given an opportunity to take as many of the eighteeen credits they wished at a cost of only ten dollars ($10.00) per person. This past June the college awarded twenty certificates in child care.

Due to the success of the certificate program in the McKeesport area the college was contacted by the Turtle Creek Model Cities program and the Singer Child Care Centers and asked to establish an educational

*Please see program outlines at end of this paper.

program for a number of day care centers. In addition, because of the demonstrated cooperation between the college and community service agencies, the college has been the recipient of a federal grant. This grant has enabled the college to hire a part-time director for the Child Care program. This part-time director, in concert with the college's social science faculty, university faculty, and community agency officials has developed two additional *two-year programs* in the child care area.* One program is specifically aimed at preparing para-professionals who wish to become teacher-aids in the child care centers. The second curriculum is a two-year transfer program which is tied in with universities in Pennsylvania which offer a B.A. degree in child development. This program is aimed at those individuals who desire a profession as a day care teacher. These three district programs are purposely interwoven to provide students with the opportunity to move along the career lattice.

Because of the college's demonstrated willingness to work with community service agencies in the child care area, other similar opportunities are beginning to present themselves. During the past few months the McKeesport Family and Children Services, a United Fund sponsored organization, and the McKeesport Housing Authority approached the college about the feasibility of offering some train in the *social work area*. The Housing Authority had been given a grant to hire five individuals to work with the underprivileged in the McKeesport area. The individuals hired for these positions had previously been underemployed. Other agencies and the Department of Public Welfare were hiring individuals who had little or no training in social work. Again, working jointly with officials of these agencies, the social science faculty developed a one-year certificate program for the training of *social work technicians.** Since this program is just be-

*Please see program outlines at the end of this paper.

ginning, it is too early to predict its ultimate worth. However, both community college and community agency officials envision an unlimited opportunity to update individuals in a significant way so that they will have a meaningful impact on improving the lives of individuals within the inner city.

Psychiatric Technician

The prior example is an excellent example of a community college responding to the expressed needs of the community. The following example demonstrates a desire on the part of the college to move in a certain direction and the ability of community service agencies to aid the institution in the development of the best possible program.

For little more than a year there was an interest expressed by the faculties of the social science division and the math/science division to develop a curriculum aimed at training two-year college graduates to work in the field of mental health. An intensive search of the literature in this field seemed to indicate a significant need for two-year programs in this field. A national survey of existing programs seemed to indicate that the college could develop a program without adding any new courses or additional staff. A survey of students in the college's service area also indicated a strong interest in such a program. At this juncture a tentative curriculum proposal was developed by the college.* This proposal, along with an exploratory letter, was sent to all the mental health agencies, mental health hospitals, and general hospitals in the college's service areas. Letters were also sent to four-year colleges and universities regarding the possibility of transferability to their programs. Although the responses to these inquiries were generally positive, it became clear that before the college could move to inaugurate such a curriculum much more study and

*See tentative program outline.

spade work needed to be done. Some agencies and hospitals, for example, were fearful that the college might be infringing on in-service programs already established by them for the updating of their employees.

At this point the college decided to set up a number of meetings with the members of local mental health agencies and local hospitals. As a result of these meetings a number of significant decisions were reached. The mental health agencies indicated their strong interest and support and agreed that they would be interested in providing some on-the-job training in their agencies for the potential students. These officials also confirmed the fact that there was a great need for people trained in this manner in their agencies, but they alerted the college personnel to the fact that they had to be careful that the program bore the proper name and requirements, since their positions were civil-service positions and thus had to meet state dictated guidelines. The hospital officials were equally helpful and cooperative. As a result of meetings with hospital personnel it became clear that the college could begin to service some hospital personnel by offering a number of courses for employees at these locations. Thus, this fall the college is offering courses at two hospital locations.

The cumulative result of all these meetings was that before any curriculum in this area could be adopted by the college, much more needed to be done. The college decided to establish a community advisory committee composed of individuals from mental health agencies, local hospitals, and the college to further explore the development of a psychiatric technician program. One of the first tasks of this advisory committee will be to make significant adjustments in the proposed curriculum and to seek out state help and backing for the development of this program.

The mutual benefits derived from the preceding examples perhaps are self evident, but some aspects

bear highlighting. Every community college has as one of its major objectives the servicing of the community in which it exists. Too often this objective is met by simply putting on a few community service courses. Very often the college plans and develops curricula without full knowledge and awareness of the employment needs of the community. On the other hand, community agencies are usually unaware of the services which the community college might provide them and many are reluctant to approach the college.

As the above examples illustrate, by mutual cooperation both the curricula offerings of the college and the local agencies can be improved to better service the needs of the people. As is evident from the above illustrations, initiation of cooperation between the college and a particular agency, creates a snowballing effect. If the college and an agency are successful in working on mutual concerns, other opportunities begin to open up within the community. One very important aspect of this mutual cooperation is the increased opportunity for federal and state funding. In all areas, but especially in the human service area, funding agencies are much more apt to fund programs that are jointly sponsored by a college and a community agency than they are to fund a program wholly conceived by one or the other institution. Finally and very importantly, in this year of accountability, both the college and community service agencies can appear much more legitimate to the taxpayer if they are cooperating and not competing in the development of programs which are meant to render aid to them.

Although there are certainly more advantages than disadvantages for a college in cooperating with community agencies, some caution should be observed. Very often officials of community agencies are asked to serve on college advisory boards and are "used" as window dressing. This has a negative effect within the community and can do more harm than good to the status of the community college. On the other hand

community colleges have also established advisory committees and have not made their functions clear and have then found themselves in the somewhat awkward position of asking these committees not to "interfere" in the educational program of the college. Before *any* relationship can be established between a college and a community agency, guidelines need to be established which *clearly* outline the roles and responsibilities of each participant.

Another pitfall which must be avoided at all cost is the college's over-enthusiasm for participation in some areas. There will be times when a college must say no to a particular plan or program because of its limited resources or staff, its own priority of goals and objectives, or because a particular program can best be handled by other agencies. Community colleges as all other colleges must recognize that they cannot nor should not attempt to be all things to all people. Finally, especially in the area of human service occupations, both community colleges and community service agencies must move with great caution and care. This is a new and exciting area, but only with proper research and long-range planning will programs be established that will service any lengthy period of time, but this must be one of the primary goals of this type of cooperation or the community again will bear the burden of ill-planning and shoddy educational programs.

CHILD CARE CERTIFICATE PROGRAM

Child Development I	Behavior Observation
Child Development II	Racism and Children
Understanding Children's Play	Child in Social Setting

CHILD CARE CAREER PROGRAM

First Year

First Semester	Second Semester
English Comp. I or English Writing Lab	Oral Communications
Math Elective	Intro. to Psychology Intro. to Sociology
Open Elective	Child Development I
Music or Art Appreciation	Life Science
	Behavior Observation

Second Year

First Semester	Second Semester
Intro. to Sociology or Social Psychology	Racism and Children
Child Development II	Art Elective
Understanding Children's Play	Psychology Elective or Recreational Games
Humanities or Communications Elective	Child in a Social Setting
Social Science Elective	Marriage and Family

Suggested Electives

English Composition	Art Appreciation
Intro. to Humanities	Watercolor I
Intro. to Philosophy	Painting I
Drama	Ceramics I

CHILD CARE TRANSFER PROGRAM

First Year

First Semester	Second Semester
English Comp. II	English Comp. II
Intro. Psychology	Intro. Sociology
Intro. College Math or Elementary Statistics	Biology I
Music or Art Appreciation	Behavior Observation
Child Development I	Recreational Games or Open Elective

Second Year

First Semester	Second Semester
Oral Communications	Literary Types
Social Psychology	Racism and Children
Child Development II	Psychology Elective
Understanding Children's Play	Child in Social Setting
Social Science Elective	Marriage and Family

Suggested Electives

Adolescent Psychology	Social Problems
Psychology of Adjustment	Human Sexuality
Abnormal Psychology	American Government
	Modern Political Thought
	U. S. and Pennsylvania History

SOCIAL WORK TECHNICIANS PROGRAM

New Courses

1. Foundations of Social Work Practice

   This course is basic for persons without previous experience in social work training in order to help them understand the ethical base and value system upon which the profession rests. It will also help persons understand underlying human behavior. Classroom methods will include lectures, films, and discussions.

2. Interviewing Skills

   This course is designed to help beginning practitioners in social work gain skill in the art of listening, in order to help workers understand, in depth, the themes and problem areas as expressed by the client. Further methods of responding and practical treatment techniques will be explored. Class methods will include discussion, role playing, use of taped material, and closed circuit T.V.

3. Case Work Seminar

   This seminar will offer opportunities for social work practitioners to critically examine their field performance within a classroom group. Methods used in this course will be group discussion, with students presenting actual case material. Discussion will be both pragmatic, offering immediate suggestions for case intervention, and theoretical.

4. Community Organization Seminar

   Focus of the course will be on development of theoretical knowledge and obtaining practical skills in organizing and working with community groups such as tenant councils, agency boards, citizens' groups. Classroom methods will include lectures and discussions.

Existing Courses

5. Social Psychology

   An introduction to the research and theories of individual experience and behavior as affected by other people, groups, and culture: the scientific analysis of socialization, cognition and group dynamics, and the practical application in business and industry and other human organizations.

6. Contemporary Social Problems

A consideration of the significant problems of American society, their socioeconomic bases, and the conditions facilitating their growth. Students will be encouraged to search for possible solutions. Problems selected for study include family disorganization, racial conflicts, and class struggle.

MENTAL HEALTH TECHNOLOGY
A.A.S. PROGRAM

First Semester	Cr.
Eng. Comp. I	3
Anatomy and Physiology I	4
Intro. to Psychology	3
Intro. to Sociology	3
Intro. to Mental Health	3
	16

Second Semester	Cr.
Eng. Comp. II or Intro. to Literature	3
Anatomy & Physiology II	4
Psychology of Adjustment	3
Child Growth and Develop.	3
Group Dynamics I	3
	16

Third Semester	Cr.
Practicum in Mental Health I	5
Psychology of Adolescence	3
Sociology Elective	3
Group Dynamics II	3
Elective	3
	17

Fourth Semester	Cr.
Practicum in Mental Health II	5
Social Psychology	3
Seminar in Mental Health	3
Group Dynamics III	3
Elective	3
	17

THE VALE TECHNICAL INSTITUTE EXPERIENCE

John E. Marino
Director of Admissions

Experiences in technical education at Vale are not as varied as some. In the past, postsecondary technical educational facilities did not have much appeal to academic or college prep students from our secondary schools; our student body was primarily made up of students who followed either a vocational or general curriculum. Now we find that 40 percent of current student body are from academic curriculums, 40 percent from general, 15 percent from vocational, and 5 percent from commercial.

These figures lead me to believe that we will have a higher percentage of students going on into four-year programs than we have had in the past. Until the present, our prime concern has been the placement of graduates in industry. Until recently we were unable to document the placement of graduates; we knew our graduates were going to work, but did not know where. We knew they had little difficulty in finding employment, but were seldom called on for placement.

Our first efforts in following up our graduates were slightly disappointing. We had devised a questionnaire that was and still is mailed to the graduates six months, one year, and two years after graduation. Our returns ran about 10 percent. This gave us some assurance that our people were successful in finding employment. We could have compiled some interesting placement figures with this information, but would have received little satisfaction in doing so.

To obtain more accurate and realistic data, we appointed a full-time staff employee to implement a more efficient placement service and followup program. Our current procedure calls for each graduate to be

interviewed two weeks prior to graduation to determine what area of employment the graduate would prefer and if he has made a job contact on his own. If he has not located employment, we then set up an interview at various shops and dealerships in the geographic area the graduate has chosen. Prior to these interviews, we have contacted employers to determine the openings available and the procedure they prefer for filling the openings.

To obtain the followup data we desire after employment, we use the questionnaire previously mentioned, supplemented by telephone contact for local students, and a followup letter to those who live a considerable distance from our school. (One interesting fact that we have uncovered in our data collection is that our students respond better to a one paragraph, handwritten letter than to any other instrument.)

Since the installation of our current data collection procedure, we have been able to verify the location and employment of 70 percent of our graduates of the last two and a half years. Our data has shown us that 98 percent of those contacted are gainfully employed in the automotive industry or a closely related field. There are only three who are not working and, interestingly enough, only two have continued their education after graduation from Vale. We expect this to change considerably. I recently submitted an informal questionnaire to 210 of our present students in which 47 percent indicated that they wish to enter degree programs after completing their studies with us. It will be interesting to see how many of them do. This data should be available next year.

PROBLEMS ASSOCIATED WITH THE ASSOCIATE IN SPECIALIZED TECHNOLOGY AND SPECIALIZED BUSINESS DEGREE

Oscar W. Nestor
President, Pittsburgh Technical Institute

Three years ago, private trade, technical, and business schools were authorized by the Department of Education to grant two new degrees--the Associate in Specialized Technology and the Associate in Specialized Business Degrees. (Hereinafter these will be treated as the same and referred to simply as the degree.)

There are several facets to this new degree which represent problems or potential problems to private business and technical schools.*

First, there is some concern that the increased emphasis on academic-type courses will jeopardize the major objective of such schools--namely, to train persons for jobs. One president stated it this way: "I think it would be a serious mistake if institutions like ours started to act as 'feeders' for four-year institutions rather than preparing people for employment." One of the real dilemmas has been to provide the academic excellence required by the standards of the degree without losing the ability to deal with the practical aspects of our programs. I am reminded of the very real story of the man who was hired to teach auto mechanics. Having had practical training, the only way he knew how to teach was to get right in there and tear the motor down, getting all

*The comments are based in part on the survey results of all thirty-six private business and technical schools in Pennsylvania now authorized to grant these degrees. Twenty-six schools (72 percent) responded to a questionnaire and these responses serve as the basis for many of the conclusions and observations of this paper.

dirty and greasy in the process. Then he helped the students do the same thing. One day he was looking through an educational publication and he noticed that all the teachers wore white coats. So he got one. But now he couldn't work very well because he didn't want to get his coat dirty. Some time later, he was sent off to a teachers' seminar and he discovered that no teacher could really teach without a blackboard and chalk. He implemented this--and so became a true professional, white coat, chalk and all--but his teaching, of course, was not nearly as effective. Fortunately, we have dealt with an agency, the Bureau of Academic Services, which has had a real grasp of this dilemma and to date the problems have not been serious. For the long run, however, this could emerge as the most serious problem presented by the degree. I say this because differing objectives of the educational process could create major conflicts in such areas as curriculum, faculty qualifications, performance standards for students and teachers, and the kind of student recruited.

A more appropriate question or problem, which is not completely unrelated, centers around the transferability of specialized degree subjects earned at private schools. This new degree was initially regarded as a terminal degree, if in the academic world we can accept *any* degree as a terminal degree. However, almost immediately, questions were raised by parents, teachers, counselors, and admissions directors about the transferability of such a degree to a four-year institution. As a result, the main problem to be discussed here, centers around where these degrees fit into the academic community, and more specifically with the transferability of subjects.

The degrees were especially and differently named resulting in some obfuscation--reminiscent of the graduate student who hoped that it would be an essay test, so the prof couldn't figure out what his answer meant. With the newness of the degree, and with the obvious question of how it relates to other associate

degrees and to four-year degrees, perhaps I can shed some light that will help in this important matter of transferability.

Significance of our Degrees

Private trade, technical, and business schools must pass muster on three fronts before either degree can be granted. First, a representative of the state (Board of Private Trade and Technical or Business Schools) inspects the school as a prerequisite for being licensed. Once licensed, each school is governed by a set of rules and regulations covering almost every area of operation and administered under the general direction of a Board appointed by the Secretary of Education.

After at least two years of successful operation a school may apply for accreditation. A separate and additional inspection is required in order to be accredited. Accreditation is by the National Association of Trade and Technical Schools or the Accrediting Commission for Business Schools, each recognized by the United States Office of Education as the official accrediting body in its field. These associations maintain their own rigorous academic and administrative standards and, having been an accreditation team leader on a number of visitations, I can personally vouch for the integrity and depth of the visitation inspections. Accreditation by a recognized accreditation body is in turn a prerequisite for applying for authorization to grant the Specialized Associate Degree.

Finally, each school must be specifically approved by the Secretary of Department of Education to grant the Associate Degree. This occurs after application and after a "tortuous" self-appraisal and self-evaluation report and visitation by a special accreditation team selected and administered through the Bureau of Academic Services. One of the technical requirements for accreditation, by the way, is that at least 25 percent of the subjects must be academic

(related) courses. This compares to about 40 percent academic (general studies) courses in some other types of associate degrees. Our associate degree authorization must be renewed each year for three years before final approval, and our accreditation is reviewed every five years. Unlike Senator Eagleton's initial investigation, we are rather thoroughly inspected before we can run in this academic race.

There are about 300 private technical and business schools in the Commonwealth, yet only thirty-six, or 12 percent are authorized to grant the Associate Degree. A number of other states, including New York, Massachusetts, Ohio, Illinois, North and South Carolina, and Tennessee now permit private schools to grant comparable degrees.

It should be clear that the schools which do finally attain Associate Degree granting status have been rather thoroughly evaluated. They have achieved the highest academic attainment level possible in this field.

As educators, we all recognize that education is a process and that change is evolutionary. Clearly, private technical and business schools have emerged with increasingly higher academic and administrative standards, particularly over the last five to seven years. They have truly taken their place as an integral and respectable part of the academic community.

Students

A large population of the students at private technical and business schools could undoubtedly have been accepted at other institutions of higher learning, including four-year colleges. For example, analyzing the 1972 incoming class at the Pittsburgh Technical Institute, and using the same criteria I used at a major university where I served, about 80% would pass both admissions standards without debate (and could presumably enter other four-year institutions). Another 15 percent of incoming

freshmen of the Pittsburgh Technical Institute were admitted on a conditional basis and possibly would have the same status at other schools, depending on the admissions policies. Somewhat facetiously and somewhat seriously, it seems that officials at schools charged with the responsibility of admitting students (new or transfer) apply Skinner's Constant--defined as that quantity, which when added to, subtracted from, divided into, or multiplied by your answer, gives the correct one.

I do, however, attach particular significance to these admissions statistics. One of my tasks at the university was also to pass on transfer students who had applied to enter as third-year juniors. We found, with experience, that many of them got into academic difficulty despite good two-year records. A more thorough study of this problem indicated that many of these transfer students would not have met our original freshman admission standards at the university. This is clearly not the case with our existing freshman group, which I believe is a fair representation of our type of student at Pittsburgh Technical Institute as well as students at other private schools.

The student who selects a shorter two-year technical school, sometimes referred to as the "non-college bound" (how would you like to be described in terms of a negative) is different. He is not interested in frills--in this category I sadly include, among other courses, History and Foreign Languages. He is not going to school because of social status. He is not inferior to college students, just different. He just wants to get out, and get a job, a car and a girl--usually in that order. He is the kind of kid that you visualize when you say--not everyone should go to college--a truism which people apply to all kids but their own.

However, Dr. Kenneth Hoyt gives these students a little status--he calls them Specialty Oriented Students. He reported in a recent study (*The Compass*,

September, 1971) that of 4,887 (almost 5,000) Specialty Oriented Students in private schools:

1. Seventy-two percent completed the entire training program.

2. Although eighty-one percent reported that their first job directly related to their training--and most did take jobs--thirteen percent either took further specialty training or enrolled in a college or university later.

This study gives a good profile of the type of student to which I am referring. In general, it is an image of responsible motivation and behavior, coupled with a desire on the part of a certain percentage to continue their education.

Transferability of Subjects

Technical and business schools are concerned about the opportunity for their graduates to transfer credits to four-year institutions, particularly to four-year institutions within the Commonwealth. Most students would prefer to transfer to a Pennsylvania school, according to the survey referred to earlier. However, only eight four-year Pennsylvania institutions (two state institutions) have accepted students to date. This compares to thirty-one out-of-state schools which have accepted more than 50 percent of the credits earned and a number of them are accredited by important accrediting bodies. To date, therefore, Pennsylvania schools have not participated as extensively in this process of transferring students as have out-of-state schools.

It is clearly recognized that acceptance of transfer students rests exclusively with the receiving institution. Most private technical and business schools are extremely conscious, however, of the grave responsibility the transfer process places on them. Whan a student transfers and succeeds, it helps

the student, the school to which he transferred, and the school from which he came. Conversely, it damages everyone when he fails. As schools offering this new degree seek to transfer students on to four-year institutions, they must seek the maximum effectivensss of both their own admissions and educational process, so that their transferees do not fail at the higher levels. This success will be, of course, the ultimate test of the acceptability of this, as well as any other degree. At the moment, such transferees seem to have worked out well for all concerned. Testimony from the private schools themselves shows that nine of ten students who do transfer to four-year institutions, go on to graduate. In part this is because interest in transferring is usually confined to a small percentage (3-5 percent) of students, usually excellent students. Given the existing objectives of private schools, this record should not change appreciably in the years ahead.

Conclusion

In the meantime, the transferability process could be greatly facilitated if four-year institutions in the state would take positive steps to understand these new degrees. An appeal is made particularly to the state-related four-year institutions, particularly Penn State University. They could, for example, help individuals and schools by taking the leadership in this area. With the active involvement of the major state university, clear paths for transfers would evolve faster and this, in turn, would be a major contribution to education in general.

ARTICULATION OF OCCUPATIONAL STUDENTS BETWEEN SECONDARY SCHOOLS, ASSOCIATE DEGREE PROGRAMS, AND BACHELOR'S DEGREE PROGRAMS IN WASHINGTON TECHNICAL INSTITUTE

Addison S. Hobbs
Director, Bachelor of Science Degree Program
in Teaching of Technology
Washington Technical Institute

The assigned topic "Articulation of Occupational Students Between Secondary Schools, Associate Degree and Bachelor Degree Programs" suggest a multitude of approaches.

The operational definition of occupational education and its articulation at different levels is outlined here as a series of educational experiences which balance the cognitive and manupulative skills of the learner with levels of performance or competency. Therefore, the primary thrust of this paper will be oriented toward the Washington Technical Institute method of developing problem-solving capabilities and analytical techniques for practical problems.

Purpose

Washington Technical Institute was created by Congress to provide career educational opportunities of the highest quality for the residents of the District of Columbia. The Institute fulfills this mandate by providing District residents an increasing number of degree and certificate programs on a full-time basis. Programs are offered on the main campus and at various locations in the community.

The WTI Commitment: A Systems Approach

The Washington Technical Institute is committed to finding creative and successful methods to educate District of Columbia residents, providing its

students with the technological capability necessary for them to choose a career for a fulfilling and secure life. An effective way to describe the Institute's approach is to view the Institute as a subsystem within the community system. This "systems" approach involves a formal analytic process used in programming the Institute's course of development. The ultimate goal is considered, together with supporting objectives, while at the same time practical limitations and constraints are recognized. It is so designed that its curriculum, supportive services, and organization remain flexible and open to each student's personal needs and career aspirations.

The evaluation and guidance program augments the student's instructional experience. It is organized so that the student is counseled at each step of his training about his career aspirations and educational development. This is possible through the unique organizational structure that allows part of the faculty to address itself to the student's instruction, part of the faculty to aid the student in solving personal and social problems and to assist him in his entrance into employment, and a separate faculty for Research and Development. Under WTI's system approach, instruction, counseling, and administration are fused into a single process. WTI's student-teacher organization, flexible administration, and staffing pattern allow an honest, sincere interaction necessary for an environment of creativity and personal security. The systems approach permits the cooperative planning, mutual support in teaching, modification of roles and degrees of responsibility, action research, and interaction among staff which the process of instruction demands. Through its systems approach, the Institute is able to assess continually the complex and interwoven factors necessary for success in living up to its charge, while remaining responsive to the educational needs of the students and to the manpower demands of the community. It is through this continual systematic assessment and built-in responsiveness that the Institute aspires to develop a model

for the creation of new and more relevant educational philosophies and educational strategies.

The Washington Technical Institute approach to articulation of secondary and postsecondary occupational programs is based upon a model for continuous career education.

The following are a number of educational assumptions which undergird the objectives of this continuous occupational education program:

1. Differing learning capacities and styles of students will require a differentiation of objectives at several maturation levels.

2. No one teacher or any curriculum service can be expected to become a master of all educational levels and in all areas of speciality, because of individual limitations and because of the philosophies of each curriculum service.

3. Valid career choices by students must be approached from at least two directions, one focusing upon attitudinal changes and the other on specific job skill preparation.

Since philosophical commitments of schools and their faculty members vary within the differing systems of education, the curriculum has been outlined into levels for the primary reason of providing a number of alternatives for articulating occupational programs (see Figure 6).

The concreteness needed to solidify the occupational perceptions of students is the specific objective at the early levels (K-9). Therefore, the occupational outlook is aimed toward creating awareness, exploration and guidance.

CONTINUING EDUCATION FOR VOCATIONAL CAREER DEVELOPMENT

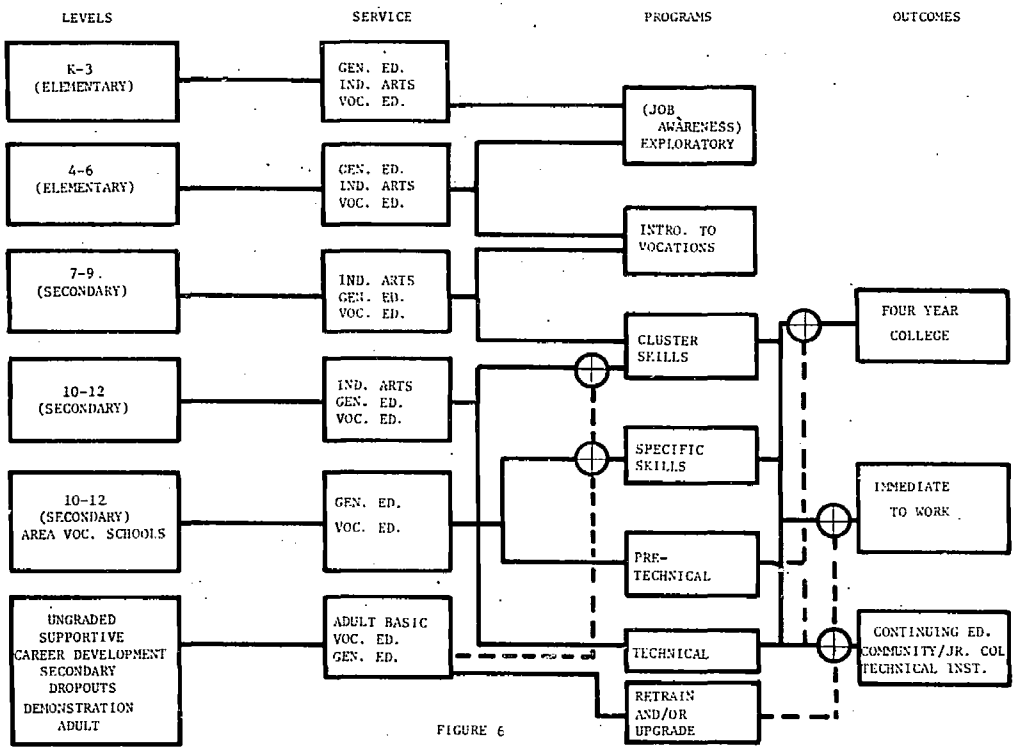


FIGURE 6

The upper level (10-12) places emphasis upon career development clusters beginning at the tenth grade and utilizing such areas as transportation, construction, personal services, human services, and business. At this level of development the refinement of occupational choices is built upon a hierarchy of performance goals. Later offerings will become more specifically skill oriented with opportunities offered for choices in higher levels of technical and skill attainment. It is at this level that the preceding programs or input will reflect validity of student choice. In the affective domain, the student should possess the needed prerequisites which assure his success in the career choice being pursued.

The high school level (11-12), exhibited in Figure 6 as area vocational schools, represents the point at which preparation for the world of work reaches the top level in the hierarchy of skill refinement. The choices open to boys and girls should be at a higher level of technical and skill achievement for those students who are ready to profit from them. The needed prerequisites, attitudinal and physical, should be assessed for the high prediction of success for the individual in the vocational-technical area being purused.

The last level indicated by Figure 6, the nongraded career development center, bridges the gap for the small percentage of students who reject any kind of formal school organization. It also provides for student mobility factors where differing systems are unable or unwilling to finance a total career plan. A positive factor in this concept is its allowance for the coupling of research oriented activities with curriculum change and staff development for teachers on a continuing basis.

It is evident that adult vocational programs practice this concept through certification endeavors in the comprehensive community colleges, but the necessity for these institutions to prepare individuals

for middle manpower jobs deters even the most ardent proponents of teaching for the varying individual needs of students. Meanwhile, as educational institutions developed on a nongraded experimental basis achieve sufficient maturity, leadership, and technically superior teachers, they will assume the role and function as developmental centers with measurable objectives providing continuous vocational education through viable curriculums. Washington Technical Institute carries out these objectives through its Research and Development Division.

The institution has certified educational programs ranging from the awarding of certificates for short and interim objectives through the bachelor's degree in a number of specialties. However, the important factors to be considered this morning is How and What. As previously mentioned, the Division of Research and Development operates independently yet is inextricably interwoven into the activities of the regular institutional programs. This special division of Washington Technical Institute uses the project method to design, implement or test the feasibility of educational managerial and supervisory models.

Priority is given to starting activities through external funding where results can be integrated into the regular academic program as well as the agency contracting for services.

For example, one model employed by the Division of Research and Development to deliver multi-level articulation programs is hereby displayed (Figure 7). The concept is simple, yet significantly valid in that three stages are developed before the curriculum is determined:

1. *Preassessment*
2. *Instructional Component Needs and*
3. *Evaluation Through Performance Objectives*

STEPS IN DEVELOPING A MULTI-LEVEL ARTICULATION PROGRAM

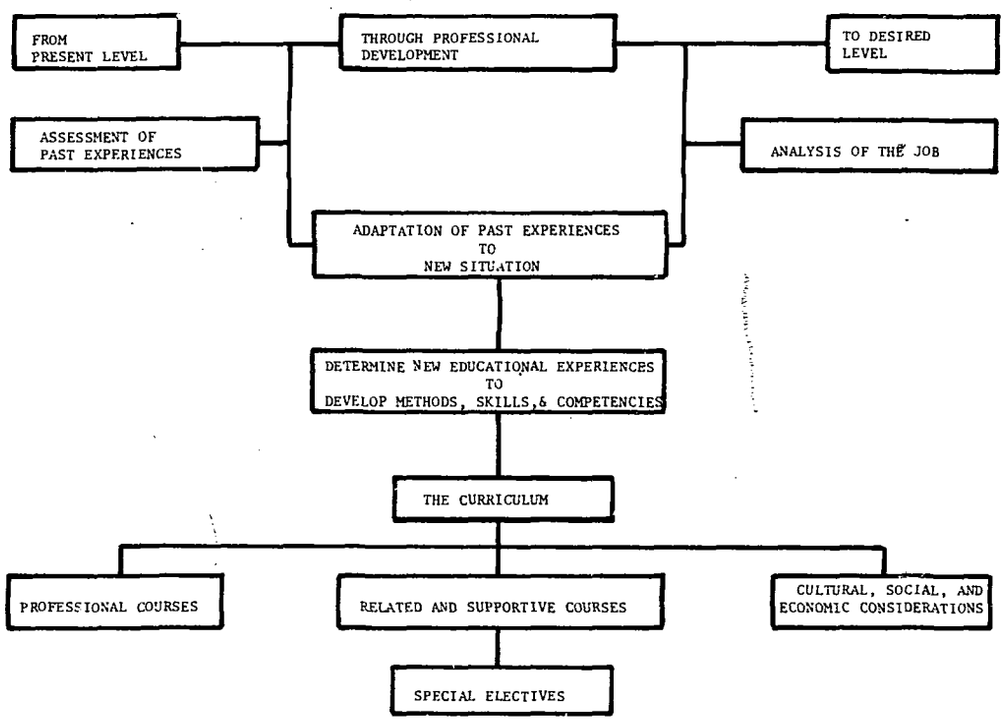


FIGURE 7

Before exploring the three facets that make up the analysis for articulation through individual and flexible curriculum designs, the rationale defining these procedures should be summarized.

The epitome for most proponents who view the community junior college as a multi-functioning aspect of American education is shown in the following philosophy:

> The American way of life holds that all human beings are supreme, hence of equal moral worth and are, therefore, entitled to equal opportunities.... The basic function of public education then should be to provide educational opportunity by teaching whatever needs to be learned to whoever needs to learn it.[1]

Blocker[2] writes that the primary problem faced by the comprehensive college is the challenge of students to grow to the limit of their abilities. At the same time, policies must be avoided that eliminate, discourage, or exclude those students unable to immediately respond favorably. There is a fine balance between lowering the quality of education, and encouraging students with low levels of motivation and previous academic achievement, to attempt post-high school studies suited to their dispositions and talents. The problem of the two-year college is to strike this balance.

In order to make this philosophy operational, an ideal image of the community college image must be constructed. Gleazer enunciates this ideal when he says:

[1]The Philosophy of Education of the Joliet Township High School and Junior College (Joliet, Illinois: Board of Education, 1959).

[2]Blocker, Clyde E., et al. *The Two Year College: A Social Synthesis* (Englewood Cliffs, New Jersey: Prentice-Hall, 1965), p. 131.

> A good community college will be honestly, gladly, and clearly a community institution. It is in and of the community. The community is used as an extension of classroom and laboratory. Drawing upon the history, traditions, personnel problems, assets and liabilities of the community, it declares its role and finds this accepted and understood by faculty, administration, and the citizenry.[3]

Two judgemental theories concerning the position of education for the future encourage continuous debate. On one hand, it is purported that the need for greater and greater specialization makes of the broadly based college education a luxury beyond the means of the future society. On the other hand, conflicting theories seem to prefer that students bring to the universities the developed abilities to read, write, reason, and be familiar with the broad spectrum associated with educational curriculums. Such forecasts invite careful examination by all educators, demanding the particular attention of those concerned with education in the two-year college.[4]

Education's urgency has grown because the bulk of knowledge has expanded beyond imagination. Barzun supports this theory when he writes of the barrier created between one man and the next because of the abundance of information to be digested today. "What is considered true knowledge often may be equated as convenient for the worker, but not necessary to understand the subject."[5] With a cautious confidence,

---

[3]Gleazer, Edmund J., Jr, ed., *A New Social Invention: The Community College* (Washington, D.C.: American Association of Junior Colleges, n.d.).

[4]Sanford, Nevitt, "Implications of Personality Studies for Curriculum Planning," *Personality Factors on the College Campus* (The Hogg Foundation for Mental Health, The University of Texas, 1962), p. 4.

[5]Barzun, Jacques, *The House of Intellect* (New York: Harper and Row, 1959), pp. 11-12.

one will be able to master the new literature. However, he must first gain a proper understanding of the accepted truths, the disputed problem, the rival schools, and the methods now in favor.

To understand schools and school systems for the future, they must be related to the surrounding cultural, economic, historical, philosophical, and political circumstances. Since education is always an expression of a civilization and of a political and economic system, one way to gain an understanding of the close relationship of the social environment to the development of an appropriate educational program, is to view the social setting from the standpoint of the individual. Each person faces problems of self-fulfillment and self-development. Thus, from the individual learner's standpoint, the school program, if it is rationally developed, must provide for vocational demands and requirements, the demands of citizenship, and the demands of self-fulfillment.[6]

This rationale sets forth the assumptions, objectives, procedures and outcomes for articulation of occupational programs at different levels.

Preassessment must be a vital part of each program to provide realistic outcomes in terms of time and cost analysis. Using the student's past experiences as a catapult invites success and provides a positive self-image for advancement to the next level of competency.

Figure 8 shows how courses are designed to meet the individual needs of students. It is an evaluation measure which insures that performance criteria are reached. Practicums are designed to provide each learner the opportunity to experience success or failure under low risk conditions to develop confidence in his or her ability to perform.

---

[6]Hass Glenn and Wiles, Kimball, "Social Forces," *Readings in Curriculum* (Boston: Allyn and Bacon, 1966), p. 3.

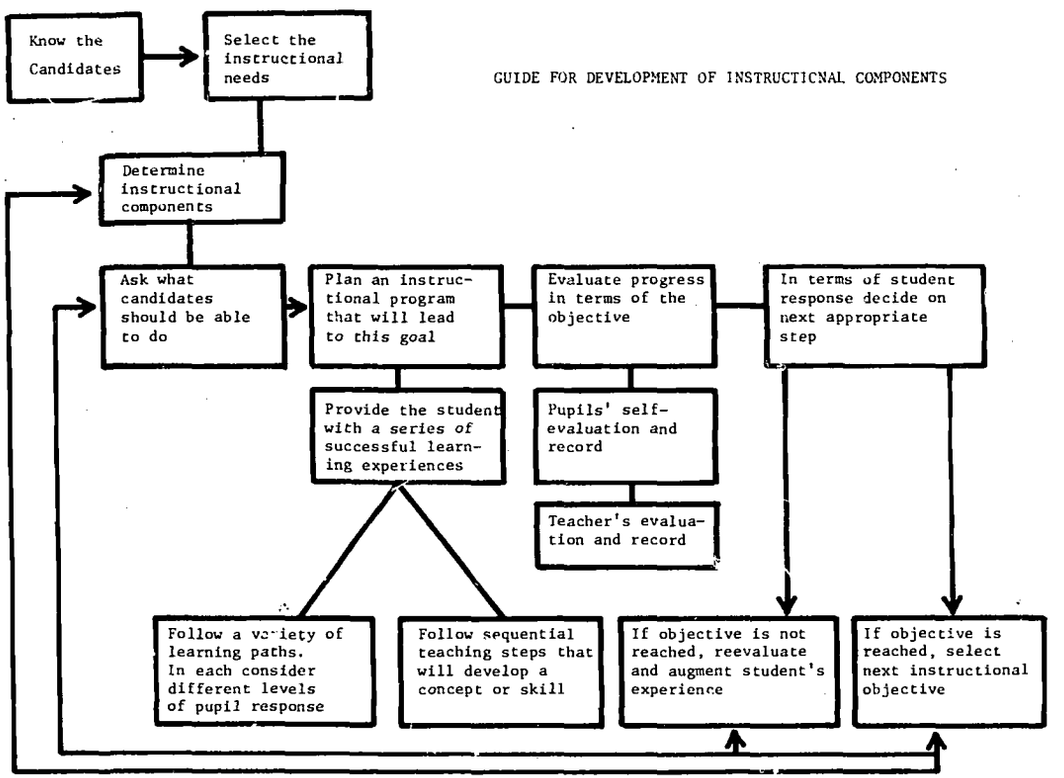

Know the Candidates
Select the instructional needs
GUIDE FOR DEVELOPMENT OF INSTRUCTICNAL COMPONENTS
Determine instructional components
Ask what candidates should be able to do
Plan an instructional program that will lead to this goal
Evaluate progress in terms of the objective
In terms of student response decide on next appropriate step
Provide the student with a series of successful learning experiences
Pupils' self-evaluation and record
Teacher's evaluation and record
Follow a variety of learning paths. In each consider different levels of pupil response
Follow sequential teaching steps that will develop a concept or skill
If objective is not reached, reevaluate and augment student's experience
If objective is reached, select next instructional objective

FIGURE 8

The overall mission of Washington Technical Institute as a catalyst for articulation has been presented, but it would be somewhat presumptuous to assume that one standard or format can be applied to all states. The future mission of the public two-year college is based upon the assumption that educational programs appropriate for changing societal needs and a heterogeneous student body can be formulated.

Every two-year college must serve its own selected clientele. It will succeed or fail in the same degree that it understands and provides for the educational needs of the clientele. The design for curriculum is determined by the needs of the community, and enlarges in scope as prudent investigation steers its course. However, the two-year college can never assume that the curriculum task is "set." Communities change. Educational needs emerge or disappear, creating a need for continuous, uninterrupted, and intensive surveillance. Constant concern provides a basis for effective growth patterns which affect educational service.

---

[7] Thornton, James W., Jr., *The Community Junior College* (New York: John Wiley and Sons, 1966), pp. 121-122.

EVALUATION OF THE CONFERENCE

Edward C. Mann
Graduate Assistant
Department of Vocational Education
The Pennsylvania State University

Man's need to know is closely coupled with his wish to judge. The purpose of this final chapter is to report the results of our attempt to determine the extent to which the conference achieved its objectives.

The major objectives of the conference, as stated in the welcoming letter to the conference participants, were:

1. To consider the role of area vocational schools, two-year colleges, and senior colleges in the articulation of occupational programs.

2. To provide the participants with information that would better enable them to identify some of the elements and useful approaches for articulating occupational programs between secondary and postsecondary levels and between similar level institutions.

3. To provide an opportunity for educators concerned with occupational education to meet for the purpose of exchanging ideas and viewpoints on topics associated with articulation, particularly:

   a. secondary to postsecondary education.
   b. two-year college to senior college.
   c. school to employment.

4. To continue with the series of cooperative ventures between The Pennsylvania State University and other Pennsylvania institu-

tions which are aimed at contributing to the overall improvement of occupational education.

The instrument used for evaluating the conference was a questionnaire designed to measure the extent to which the above stated conference objectives were met. This questionnaire consisted of three checklist questions and three questions asking for a rating of the major talks on a one to five scale.

The questionnaire, along with a return, self-addressed stamped envelope, was sent out to all conference participants on October 17, 1972, approximately two weeks after the conclusion of the conference. On October 30, 1972 a followup letter was sent to all non-respondents. Approximately 95 percent (80) of the 84 mailed questionnaires were returned completed. Due to the inappropriate phrasing of question number two, several questionnaires were either not answered or answered improperly. This requried another letter sent on November 6, 1973, asking for proper answering of that particular question. The return rate was 100 percent.

Questionnaires were not sent to members of The Pennsylvania State University faculty or to the graduate assistants in the Department of Vocational Education who participated in the conference.

Questionnaire results are shown in Table 1.

The attendance of the various sessions of the conference as reported by the participants show "The Need for Articulation of Occupational Programs Among Secondary and Postsecondary Institutions" (Cross) and "Workshop #1 - Area Vocational Schools and Community Colleges" (Bressler, Hauser, Vallone, Skinner, Feeney, Weaver, Nagle, and Elison) tied as the most heavily attended with 72 participants while headcount indicates a two person majority for Cross. The opening session of the conference, "Program and Curriculum Articulation"

TABLE 1

Ratings of Conference

Session	From Questionnaire[1] Rank	N	%	By Head Count[2] Rank	N
Program and Curriculum Articulation (Jacoby)	3	68	85	3	106
The Need for Articulation of Occupational Programs Among Secondary and Post-secondary Institutions (Cross)	1	72	90	1	111
Workshop #1 - Area Vocational Schools and Community Colleges (Bressler, Hauser, Vallone, Skinner, Feeney, Weaver, Nagle, and Elison)	1	72	90	2	109
Reflections on Occupational Education (Ziegler)	4	67	84	4	101
Workshop #2 - The Two-Year Colleges and Senior Institutions (Sugarman, Cooke, August, Slygh, and Darrah)	8	51	64	8	69
Articulation of Secondary and Postsecondary Occupational Programs (Martorana)	5	60	75	6	77
Workshop #3 - Articulation with Private Agencies (Norman, Marino, and Nestor)	7	52	65	5	80
Articulation of Occupational Students Between Secondary Schools, Associate Degree Programs, and Bachelor's Degree Programs in Washington Technical Institute (Hobbs)	6	53	66	7	75

[1] Members of Penn State faculty and graduate assistants did not fill out the questionnaire and are not included in this N.

[2] Members of Penn State faculty, graduate assistants, and invited guests were included in this N.

(Jacoby) placed third by questionnaire replies, whereas, the dinner session "Reflections on Occupational Education" (Ziegler) placed third by headcount.

The final session of the first day, "Workshop #2 - The Two-Year Colleges and Senior Institutions" (Sugarman, Cooke, August, Darrah, and Slygh), was the least attended according to both the questionnaire and the headcount. One can conjecture the low attendance was in great part due to the fact that it convened after dinner at the tail-end of a rather busy day. It is also interesting to note that there is a +.80 correlation between the order of the various presentations and the attendance.

Exchange of Viewpoints and Ideas

Question two asks the participants in which session did the greatest *exchange* of ideas and viewpoints on articulation of secondary and postsecondary occupational education take place. Due to an error, the statement was made "check the *boxes* that apply" instead of "check the *box* that applies." This mistake permitted the respondents to check more than one box. Because of this, 44 percent of the questionnaires had two or more boxes checked, while 41 percent had one box checked, and the remaining 15 percent were left blank. The following table shows the distribution of responses to this question.

The participants felt that the greatest exchange of ideas and viewpoints on articulation of secondary and postsecondary occupational education took place during "Workshop #1 - Area Vocational Schools, and Community Articulation" (Jacoby). The session having the least exchange of ideas and viewpoints was Dr. Martorana's breakfast talk on "Articulation of Secondary and Postsecondary Occupational Programs."

TABLE 2

Session of Greatest Exchange

Session	N	%
Program and Curriculum Articulation (Jacoby)	22	15
The Need for Articulation of Occupational Programs Among Secondary and Post-secondary Institutions (Cross)	18	12
Workshop #1 - Area Vocational Schools and Community Colleges (Bressler, Hauser, Vallone, Skinner, Feeney, Weaver, Nagle, and Elison	36	24
Reflections on Occupational Education (Ziegler)	12	8
Workshop #2 - The Two-Year Colleges and Senior Institutions (Sugarman, Cooke, August, Slygh, and Darrah)	11	7
Articulation of Secondary and Postsecondary Occupational Programs (Martorana)	6	4
Workshop #3 - Articulation with Private Agencies (Norman, Marino and Nestor)	12	8
Articulation of Occupational Students Between Secondary Schools, Associate Degree, Programs, and Bachelor's Degree Programs in Washington Technical Institute (Hobbs)	14	9
Coffee breaks, Meals, Cash Bar, Social Hour	16	11
TOTAL	147	

Theme of the Conference

Using a five point scale, participants of the conference were asked to rate all of the presentations on the degree to which the theme "Articulation of Secondary and Postsecondary Occupational Education" was followed. The best average rating (1.8) was given to the presentation "Program and Curriculum Articulation" (Jacoby) followed by "Workship #1 - Area Vocational Schools and Community Colleges" with a rating of 2.0, and "The Need for Articulation of Occupational Programs Among Secondary and Postsecondary Institutions" (Cross) with an average rating of 2.2. The average rating of all the sessions was 2.3.

Amount of Information Provided

The conference participants were also asked to rate the amount of information provided to them in the various sessions on a one to five scale. The opening session of the conference "Program and Curriculum Articulation" (Jacoby) rated as providing the greatest amount of information with a 2.2 rating. "Workshop #1 - Area Vocational Schools and Community Colleges" placed second with an average rating of 2.4, followed by Hobb's "Articulation of Occupational Students Between Secondary Schools, Associate Degree Programs, and Bachelor's Degree Programs in Washington Technical Institute" with a 2.6 rating. The average rating was 2.6.

Major Papers

The five major papers at the Fourth Annual Conference were presented by Jacoby, Cross, Ziegler, Martorana and Hobbs. The conference participants were asked to give each of these papers an overall rating using a one to five scale (1 = very good, 2 = good, 3 = fair, 4 = poor, and 5 = very poor).

Jacoby's "Program and Curriculum Articulation" lead the ratings with the average rating of 2.1, followed by "The Need for Articulation of Occupational Programs Among Secondary and Postsecondary Institutions" (Cross) with

an average rating of 2.3. "Articulation of Occupational Students Between Secondary Schools, Associate Degree Programs, and Bachelor's Degree Programs in Washington Technical Institute" (Hobbs) place third with a 2.4 rating. Martorana's "Articulation of Secondary and Postsecondary Occupational Programs" had an average rating of 2.5 while Ziegler's Reflections on Occupational Education completed the rating with an average of 2.6.

Topics for Future Conferences

The participants of the fourth annual conference were asked to indicate, from a list of seven topics, *two* choices they most preferred as themes for future conferences. There was also a space provided for write-in suggestions. Leading the list with 31 votes was "Approaches to Statewide Coordination of Secondary and Postsecondary Occupational Education." Placing second was "Curriculum in Occupational Education" with 24 votes, followed by "Relationships Between Counseling Programs and Occupational Education" with 21 votes. Tied for fourth place with 20 votes each was "Inservice Training Programs for Teachers of Occupational Subjects," and "Administration of Secondary and Postsecondary Occupational Education." Sixth place went to "Performance (Competence) Based Teacher Training" with 19 votes and seventh place to "The Open University Concept for Vocational Education" with 18 votes. There were also seven varied write-in suggestions.

Conclusions

The percent of attendance throughout the entire conference was 74 percent. There was +.80 correlation between the order of the presentations during the conference and the attendance rate.

Ideas and viewpoints on articulation of secondary and postsecondary occupational education were exchanged in every session of the conference by at least 4 percent of those in attendance at that session and as high as 24 percent, with the mean being 11 percent.

The degree to which the theme of the conference was followed by all presenters ranged from a 1.8 to a 2.7. The average rating was 2.3.

The participants felt they were provided with information in all the sessions. The range of rating as to the amount of information provided went from a 2.2 to 3.0, with an average rating of 2.6.

Of the major papers presented at the conference Jacoby's lead with an overall rating of 2.0. His rating was highest in both providing information with a 2.2 and in following the theme of the conference with a 1.8.

"Approaches to Statewide Coordination of Secondary and Postsecondary Occupational Education" is the topic most preferred although all the other suggested topics received a relevant number of votes.

The Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education appeared to have achieved its objectives.

We hope to see you next year.

APPENDIX A

Conference Program

Program
Fourth Annual Pennsylvania Conference
On Postsecondary Occupational Education

CONFERENCE DIRECTOR: Dr. Angelo C. Gillie
Professor, Vocational Education and Associate,
The Center for the Study of Higher Education
The Pennsylvania State University

CPNFERENCE ADVISORY COMMITTEE CHAIRMAN: Mr. Robert L. Sheppard, Advisor
Division of Two-Year Programs
Bureau of Academic Services
Department of Education
Commonwealth of Pennsylvania

THEME: ARTICULATION OF SECONDARY AND POSTSECONDARY OCCUPATIONAL EDUCATION

DATES: October 4 - 5, 1972

PLACE: J. Orvis Keller Conference Center
The Pennsylvania State University
University Park, Pennsylvania

SPONSORED BY: The Center for the Study of Higher Education, The Pennsylvania State University, and the Department of Vocational Education, Pennsylvania Department of Education.

AGENDA:

October 4, 1972

10:00 a.m. - 12:00 noon Registration, Conference Center, Lobby

12:00 noon - 1:30 p.m. Luncheon, Multipurpose Room
Conference Center

CONVENING OF THE CONFERENCE: Mr. Robert L. Sheppard

HOST: Dr. William Toombs
Assistant Director
Center for the Study of
Higher Education
The Pennsylvania State University

Guests: Dr. A.W. VanderMeer, Dean
College of Education
The Pennsylvania State University

Dr. Calvin J. Cotrell, Chairman
Division of Vocational Education
Temple University

Mr. David Hornbeck
Special Assistant to the Secretary
of Education
Department of Education
Commonwealth of Pennsylvania

Dr. Rutherford E. Lockette, Chairman
Vocational Teacher Education
University of Pittsburgh

Dr. S.V. Martorana, Professor of Higher
Education and Research Associate
Center for the Study of Higher Education
The Pennsylvania State University

Dr. John W. Struck
State Director of Vocational Education
Department of Education
Commonwealth of Pennsylvania

Dr. S. L. Wiersteiner, President
Pennsylvania Vocational Association

Dr. William A. Williams, Head
Department of Vocational Education
The Pennsylvania State University

Speaker: Mr. Robert Jacoby
Senior Program Specialist
Trade & Industrial Education
Department of Education
Commonwealth of Pennsylvania

Topic: "Program and Curriculum Articulation"

1:30 p.m. - 2:00 p.m. Room 402, Conference Center

Main Speaker: Dr. Aleene Cross, President
American Vocational Association

Introduced By: Dr. John W. Struck
State Director of Vocational Education
Department of Education
Commonwealth of Pennsylvania

Topic: "The Need for Articulation of Occupational Programs Among Secondary and Postsecondary Institutions"

2:00 p.m. - 2:20 p. m. Questions from the Floor

2:20 p.m. - 2:45 p.m. Coffee, 4th Floor Hallway.

2:45 p.m. - 4:00 p.m. Room 402, Conference Center

WORKSHOP PRESENTATIONS: AREA VOCATIONAL SCHOOLS AND COMMUNITY COLLEGES

Chairman: Mr. Robert L. Sheppard

2:45 p.m. - 3:00 p.m. Presentation: "The AVTS and the Community College: A Relay Team"

Mr. James P. Bressler, Dean of Applied Arts and Sciences
Mr. Alfred L. Hauser, AVTS Coordinator
Williamsport Area Community College

3:00 p.m. - 3:15 p.m. Presentation: "The Bucks County Experience"

Mr. Joseph J. Vallone, Director
Upper Bucks Area Vocational Technical School

Mr. Richard Skinner, Assistant Dean
Bucks County Community College

3:15 p.m. - 3:30 p.m. Presentation: "Institutional Cooperation Leads to Articulation Between the Area Vocational Technical School and the Community College"

Mr. Thomas C. Feeney
Associate Dean of Academic Affairs
Montgomery County Community College

Mr. John Weaver
Coordinator of Pupil Services
North Montco Area Vocational Technical School

3:30 p.m. - 3:45 p.m. Presentation: "The Lehigh County Experience"

Mr. Robert Nagle, Director
Lehigh County Area Vocational Technical School

Mr. George Elison
Dean of Technologies
Lehigh County Community College

3:45 p.m. - 4:00 p.m. Questions from the Floor

4:00 p.m. - 5:30 p.m. Rest Period

5:30 p.m. - 6:00 p.m. Cash Bar - Social Hour, Fireside Lounge, Nittany Lion Inn

6:00 p.m. - 7:45 p.m. Dinner - Penn State Room, Nittany Lion Inn

HOST: Dr. A. W. VanderMeer, Dean
College of Education
The Pennsylvania State University

Speaker: Dr. Jerome M. Ziegler
Commissioner for Higher Education
Department of Education
Commonwealth of Pennsylvania

Topic: To be announced

8:00 p.m. - 9:00 p.m. Room 402, Conference Center

WORKSHOP PRESENTATIONS: THE TWO-YEAR COLLEGES AND SENIOR INSTITUTIONS

Chairman: Mr. E. Jerome Kern

8:00 p.m. - 8:15 p.m. Presentation: "Articulation of Occupational Program Graduates Between Ohio Community Colleges and the University of Akron"

Dr. Michael Sugarman, Assistant Professor
University of Akron

8:15 p.m. - 8:30 p.m. Presentation: "Two + Two = Three and One Half - or Four - or More"

Mr. Thomas C. Cooke, Vice-President and Dean of Academic Affairs
Spring Garden College

Mr. Sidney August, Division Director
Educational Resource Center
Community College of Philadelphia

8:30 p.m. - 8:45 p.m. Presentation: "The Pennsylvania State University Capitol Campus Experience"

Dr. Walter Slygh, Director of Admissions
Capitol Campus,
The Pennsylvania State University

Dr. Charles Darrah, Dean of Students
Boyce Campus
Community College of Allegheny County

8:45 p.m. - 9:00 p.m. Questions from the Floor

October 5, 1972

7:30 a.m. - 8:45 a.m. Breakfast, Penn State Room, Nittany Lion Inn

HOST: Dr. Fred Welch, Assistant Professor of Cooperative Education
Department of Vocational Education
The Pennsylvania State University

Speaker: Dr. S. V. Martorana
Professor of Higher Education and Research Associate
Center for the Study of Higher Education
The Pennsylvania State University

Topic: "Articulation of Secondary and Postsecondary Occupational Programs"

9:15 a.m. - 10:15 a.m. Room 402, Conference Center

WORKSHOP PRESENTATIONS: ARTICULATION WITH PRIVATE AGENCIES

Chairman: Mr. Charles O. Whitehead, Director
State Technical Institute at Memphis

9:15 a.m. - 9:00 a.m. Presentation: "Cooperation Between the Community College and Community Service Agencies in Establishing Human Service Curricula"

Dr. Mary Norman, Academic Dean
South Campus
Community College of Allegheny County

9:30 a.m. - 9:45 a.m. Presentation: "The Vale Technical Institute Experience"

Mr. John Marino, Director of Admissions
Vale Technical Institute

9:45 a.m. - 10:00 a.m. Presentation: "Problems Associated with Special Technology and Business Associate Degrees"

Dr. Oscar Nestor, President
Pittsburgh Technical Institute

10:00 a.m. - 10:15 a.m. Questions from the Floor

10:15 a.m. - 10:45 a.m. Coffee, 4th Floor Hallway

10:45 a.m. - 11:30 a.m. Main Speaker: Dr. Addison Hobbs
Director of Bachelor's Degree Programs
Washington Technical Institute

	INTRODUCED BY:	Dr. Clyde E. Blocker Visiting Professor of Higher Education and Research Associate Center for the Study of Higher Education The Pennsylvania State University
	Topic:	Articulation of Occupational Students Between Secondary Schools, Associate Degree Programs, and Bachelor's Degree Programs in Washington Technical Institute."
11:30 a.m. - 11:45 a.m.		Questions from the Floor
12:00 noon - 1:00 p.m.		Multipurpose Room Conference Center

Lunch and Concluding Remarks - Dr. Angelo C. Gillie

APPENDIX B

REGISTRATION LIST

Postsecondary Occupational Education

October 4-5, 1972

The Pennsylvania State University
University Park, Pennsylvania

REGISTRATION LIST

ANDRUCCI, Leonard A.
Assistant Director
Bethlehem Area Vo-Tech School
3300 Chester Avenue
Bethlehem, Pennsylvania 18017

AUGUST, Sidney
Director
Community College of Philadelphia
Division of Ed. Resources
34 S. Eleventh Street
Philadelphia, Pennsylvania 19107

BACON, John
Dean of Technical Arts
Butler Co. Community College
Butler, Pennsylvania 16001

BANTA, Andrew
Assistant Professor
Northampton Co. Area Community College
3835 Green Pond Road
Bethlehem, Pennsylvania 18017

BARAK, Robert J.
Res. Assistant
SUNY at Buffalo
Dept. of Health, Sciences, Education
and Evaluation
260 Winspear Avenue
Buffalo, New York 14217

BEALER, James
Allentown Campus
The Pennsylvania State University
Fogelsville School Bldg.
Fogelsville, Pa. 18051

BEARD, James A.
Director of Vo-Ed.
Lebanon Co. A.V.T.S.
833 Metro Drive
Lebanon, Pennsylvania 17042

BELL, James E.
Director of Vo-Ed.
Vo-Tech. School
Eastern Northampton Co.
R.D. #1, Kesslersville Road
Easton, Pennsylvania 18042

BURGER, Jack
Director of Placement Officer
Lehigh Co. Community College
2370 Main Street
Schnecksville, Pennsylvania 18078

CARL, Kenneth E.
President
Williamsport Area Community College
1005 W. Third Street
Williamsport, Pennsylvania 17701

CARY, Michael C.J.
Lake Area Health Ed. Cntr.
VA Hospital
135 East 38th Street Blvd.
Erie, Pa. 16501

CONNOR, William A.
Dean of Career and Continuing Ed.
Northampton Co. Area Community Col.
3835 Green Pond Road
Bethlehem, Pennsylvania 18017

CORNELIUS, Raymond A.
Director
Williamsport School of Commerce
430 High Street
Williamsport, Pennsylvania 17701

COSTELLO, William F.
Director C. Education
Harcum Jr. College
Montgomery Avenue
Bryn Mawr, Pennsylvania 19010

CURTIS, Carrol A., Dr.
Educational Res. Assoc. II
Dept. of Education
Bur. of Educational Research
Research Coordinating Unit
P.O. Box 911
Harrisburg, Pennsylvania 17126

DE SANTIS, Joseph P.
Dean of Community Service
Howard Community College
Little Patuxent Parkway
Columbia, Maryland 21043

DICKEY, Donald
Crawford County Vo-Tech School
860 Thurston Road
Meadville, Pa. 16335

DIMASI, Louis A.
Director
Penn Technical Institute
5440 Penn Avenue
Pittsburgh, Pennsylvania 15206

DITTENHAFER, Clarence Albert
Research Associate
Pa. Dept. of Education
P.O. Box 911
Harrisburg, Pennsylvania 17126

DOUGLAS, Harlan L.
Reading Area Community College
Fremont & Bruckman Ave.
Reading, Pa. 19605

DRESSLER, George
Provost
Penn State
Capitol Campus
Middletown, Pennsylvania 17057

ELISON, George W.
Dean of Career Studies
Lehigh Co. Community College
2370 Main Street
Schnecksville, Pennsylvania 18078

ENTERLINE, John H.
Coordinator Adult Education
Lancaster Co. Area Vo-Tech Schools
1730 Hans Herr Drive
Willow Street, Pennsylvania 17584

FEDERICO, Joseph, Dr.
Dean of Students
Lehigh Co. Community College
2370 Main Street
Schnecksville, Pennsylvania 18078

FEENEY, Thomas C., Jr.
Assoc. Dean of Academic Affairs
Montgomery Co. Community College
340 DeKalb Pike
Blue Bell, Pennsylvania 18422

FERRI, Eugene C.
Department Chairman
Bucks Co. Community College
Swamp Road, Newtown, Pennsylvania 18940

FISK, H. William, Jr.
Supervisor
Berks Co. Vo-Tech Education
11th Floor Court House
Reading, Pennsylvania 19601

FORD, Charles W.
Assistant Professor
SUNY at Buffalo
Dept. of Health, Sciences, Education & Evaluation
260 Winspear Buffalo, New York 14214

FOX, Thomas J.
Higher Ed. Association
Pa. Dept. of Education
Bureau of Academic Services
P.O. Box 911
Education Building
Harrisburg, Pennsylvania 17126

GERHART, H. Brenton
Voc. Ed. Consultant
206 Wineland Street
Martinsburg, Pa. 16662

GINGERICH, Garland E.
Director
2179 S. Queen Street
York, Pennsylvania 17543

GREEN, Clair
Coordinator
Altoona Area Vo-Tech School
1500 4th Avenue
Altoona, Pennsylvania 16603

HALL, Glenn L.
Dean of Academic Affairs
Bucks Co. Community College
Swamp Road
Newtown, Pennsylvania 18940

HANAVAN, Francis V.
SUNY at Buffalo
260 Winspear Ave.
Buffalo, New York 14314

HANTJIS, Arlene P.
Acting Asst. Dean of Instruction
Bucks Co. Community College
Swamp Road
Newtown, Pennsylvania 18940

HARDING, A. Louise
Sr. Program Specialist
Pa. Department of Education
Box 911
Harrisburg, Pennsylvania 17126

HARRISON, Robert M.
Consultant
Box 64
Newtripoli, Pennsylvania 18066

HAUSER, Alfred L.
R. D. #3
Jersey Shore, Pennsylvania 17740

HEMBERGER, Wanye F.
Instructor
Business Administration Penn State
Behrend Campus
Erie, Pennsylvania 16500

HERR, Carl E.
Consultant, PDE
Box 911
Hollidaysburg, Pennsylvania 16648

HIMES, John C.
Director Adult Education
Jefferson Co. DuBois AVTS
Drawer #100
Reynoldsville, Pennsylvania 15851

HORST, Earl L.
Supervisor
Lebanon Co. AVTS
833 Metro Drive
Lebanon, Pennsylvania 17042

HUGHES, Merill
Director Vocational Education
Delaware Co. Inst. Unit
6th & Olive Streets
Media, Pennsylvania 19063

JACOBY, Robert
Sr. Program Specialist
Trade & Industrial Education
Dept. of Education
P. O. Box 911
Harrisburg, Pennsylvania 17126

JAFFE, Sydney M.
Vocational Field Services
4577 Tilghman St.
Allentown, Pennsylvania 18104

JOHNS, John A.
President
Art Institute of Pittsburgh
526 Penn Avenue
Pittsburgh, Pennsylvania 15222

KAPES, Jerome T.
Professor
Dept. of Voc. Education
The Pennsylvania State University
University Park, Pennsylvania 16802

KIFER, Robert H.
Admin. Director
Greater Johnstown AVTS
445 Schoolhouse Road
Johnstown, Pennsylvania 15904

KNOEBEL, Robert M.
Executive Secretary
Commission for Community Colleges
232 N. Second Street
Harrisburg, Pennsylvania 17101

KRAY, Eugene J.
Associate Dean of Continuing
& Occupational Education
Delaware Co.
Community College, Baltimore Pike
Media, Pennsylvania 19063

LANGLEY, Donald J.
Director Northern Chester Co.
Tech School
Charlestown Road
Phoenixville, Pennsylvania 19460

LAREAU, Edward H., Dr.
Associate Director for Research
Admiral Peary Area VTS
Box 96
Ebensburg, Pennsylvania 15931

LEHMAN, Boyd E.
Adm. Assistant
Greater Johnstown AVTS
445 Schoolhouse
Johnstown, Pennsylvania 15904

LYON, G. Crawfold
Director
New Castle Business College
316 Rhodes Place
New Castle, Pennsylvania 16101

MARINO, John E.
Director of Admissions
Vale Tech. Institute
35 N. Liberty Street
Blairsville, Pennsylvania 15717

MC DERMOTT, Dr. Robert E.
Capitol Campus
The Pennsylvania State University
Middletown, Pennsylvania 17057

MAYNARD, B. Witherell
Guidance Counselor
Mt. Aloysius Jr. College
Cresson, Pennsylvania 16630

MILICH, Eugene
Continuing Education
Butler Co. Community College
Butler, Pennsylvania 16001

MOBERLY, Arthur W.
Assistant Director for Resident
Instruction, Penn State Berks Campus
R. D. #5
Tulpehocken Road
Reading, Pennsylvania 19608

MOTT, Stephen D.
Coordinator of Instruction
Vo-Tech School
Eastern Northampton Co.
R. D. #1, Kesslerville Road
Easton, Pennsylvania 18042

MYERS, Byron E., Dr.
Assoc. Dean
Tech. Career Prog. Luzerne Co.
Community College
19-21 N. River Street
Wilkes Barre, Pennsylvania 18711

MYERS, Mary F.
Consultant
Pa. Department of Education
Health Occupation Education
Box 911
Harrisburg, Pennsylvania 17126

NAGLE, Robert A.
Director
Lehigh Vo Tech
R. D. #1
Schnecksville, Pennsylvania 18078

NESTOR, Oscar W.
Director
Pittsburgh Tech. Institute
313 Sixth Avenue
Pittsburgh, Pennsylvania 15222

NORMAN, Mary
Academic Dean
Allegheny Co. Community College
South Campus, 6th & Market Streets
McKeesport, Pennsylvania 15100

PACKER, Richard W., Jr.
Beaver Co. Planning Commission
Court House
Beaver, Pennsylvania 15009

PEARSON, Betsy
Human Development
The Pennsylvania State University
University Park, Pennsylvania 16802

PENNYPACKER, Frank G.
Dean of Academic Affairs
Peirce Jr. College
1420 Pine Street
Philadelphia, Pennsylvania 19102

PETRIE, Robert
Educator
Mercer Co. Vo Tech School
Mercer, Pennsylvania 16137

RAGER, William B.
Coordinator
Voc-Ed. Juniata-Mifflin Counties AVTS
Pitt Street and Belle Vernon Avenue
Lewistown, Pennsylvania 17044

REID, Clayton L., III
Coordinator of Vo-Ed/Curriculum
Central Mont. Co.
Area Tech School
Plymouth Rd. & New Hope Street
Norristown, Pennsylvania 19401

REID, Hubert D.
Dean of Applied Sci & Tech.
Community College of Beaver Co.
Center Grange Road
Monaca, Pennsylvania 15061

RHODES, Donald E.
Administrative Assistant
Altoona Area Vo-Tech School
1500 and 4th Avenue
Altoona, Pennsylvania 16603

RISBON, Joseph J.
Director
Bethlehem Area Vo-Tech School
3300 Chester Avenue
Bethlehem, Pennsylvania 18017

ROMAN, Albert G.
Director of Voc-Ed.
Mon Valley AVTS
Buttman Boulevard
Charleroi, Pennsylvania 15022

SABLE, Paul F.
Allentown Business School
801 Hamilton Street
Allentown, Pennsylvania 18101

SARVAS, Arlene F.
Instructor
Bethlehem Area Vo-Tech School
3300 Chester Avenue
Bethlehem, Pennsylvania 18017

SCHIECK, George A.
Administrative Asst. to the Director
Reading-Muhlenberg AVTS
P. O. Box 3068
Reading, Pennsylvania 19604

SHAFFER, E. B.
Dean of Instruction
Butler Co. Community College
Butler, Pennsylvania 16001

SKINNER, Richard C.
Asst. Dean for Career Programs
Bucks Co. Community College
Swamp Road
Newtown, Pennsylvania 18940

TARRIS, Joseph
Program Specialist
Appalachia Intermediate Unit 08
Ebensburg, Pennsylvania 15931

TAYLOR, Ray L.
Voc Director
Schuylkill Co. AVTS
420 N. Centre Street
Pottsville, Pennsylvania 17901

THOMAS, Don B.
Director Curriculum Research
& Development
Greater Johnson AVTS
445 Schoolhouse Road
Johnstown, Pennsylvania 15904

THRANE, William J.
Spring Garden College
102 E. Mermaid Lane
Chestnut Hill, Pennsylvania 19118

TULE, James O.
Director, Vo-Tech Ed.
Montgomery Co. Intermediate
6198 Butler Pike
Blue Bell, Pennsylvania 19403

TWEARDY, John
Director of Education
Institute of Computer Management
542 Penn Avenue
Pittsburgh, Pennsylvania 15222

UHL, James B.
Associate Professor of English
Penn State York Campus
1031 Edgecomb Avenue
York, Pennsylvania 17403

UNKLESBAY, Carolyn
Assistant Professor
Penn State York Campus
Hospital Food Service
1031 Edgecomb Avenue
York, Pennsylvania 17403

WEAVER, John
Coordinator Pupil Services
North Montco AVTS
Sumneytown Pike
Lansdale, Pennsylvania 19446

WHITWORTH, L. L.
Assistant Dean
College Center North
Community College of Allegheny Co.
9104 Babcock Boulevard
Pittsburgh, Pennsylvania 15237

WITZNER, T. Dean
Educator
Pa. Dept. of Education
Box 911
Harrisburg, Pennsylvania 17126

WOLFE, Joseph P.
686 Diamond Building
Ligonier, Pennsylvania 15658

APPENDIX C

THE CONFERENCE ADVISORY COMMITTEE

ADVISORY COMMITTEE

Chairman

Mr. Robert L. Sheppard, Advisor, Division of Two-Year Programs, Bureau of Academic Services, Department of Education, Harrisburg, Pa. 17126

Members

Dr. S. P. Wiersteiner, Assistant Dean of Applied Arts & Sciences, Williamsport Area Community College, 1005 West Third Street, Williamsport, Pa. 17701

Mr. Joseph J. Vallone, Director, Upper Bucks Area Vocational Technical School, Star Route, Perkasie, Pa. 18944

Dr. S. T. Brantner, Associate Professor, Department of Vocational Education, The Pennsylvania State University, University Park, Pa. 16802

Mr. Robert Kiser, Director, Greater Johnstown Area Vocational Technical School, 445 Schoolhouse Road, Johnstown Pa.

Dr. William Dunn, Assistant Professor of General Engineering, 102 Hammond Building, The Pennsylvania State University, University Park, Pa. 16802

Mr. Robert Knoebel, Executive Secretary, Commission for Community Colleges, 230 North Second Street, Harrisburg, Pa. 17101

Dr. Larry Leslie, Associate Professor and Chairman of Higher Education, Center for the Study of Higher Education, The Pennsylvania State University, University Park, Pa. 16302

Dr. Charles MacRoy, Assistant to the President, Community College of Beaver County, Center Grange Road, Monaca, Pa. 15061

Dr. Mary Norman, Academic Dean, Community College of Allegheny County, South Campus, 250 Lebanon School Road, West Mifflin, Pa. 15122

Dr. James Selgas, Director, Research & Commission Resources, Harrisburg Area Community College, 3300 Cameron Street Road, Harrisburg, Pa. 17110

Dr. David Vitrogan, Division Director, Community College of Philadelphia, 34 South 11th Street, Philadelphia, Pa. 19108

Dr. T. Dean Witmer, Chief, Special Emphasis Program Section, Bureau of Vocational, Technical and Continuing Education, Department of Education, Harrisburg, Pa. 17126

APPENDIX D

CONFERENCE EVALUATION

THE PENNSYLVANIA STATE UNIVERSITY
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Education
Department of Vocational Education

October 17, 1972

Dear Conference Participant:

One of the final concerns we have relative to the Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education is the extent to which the conference achieved its objectives. We are asking every person registered at this event to respond to the items listed in the following pages.

Enclosed is a short conference evaluation form. Your answer for each question should be made as indicated. If you have any additional comments, please feel free to write them on the reverse side of either page of the questionnaire. Please return the questionnaire in the enclosed self-addressed, pre-paid envelope.

Your assistance and suggestions will certainly help us in planing future conferences. The results of the evaluation will also be included in the forthcoming monograph. Thank you for your cooperation.

Sincerely,

Angelo C. Gillie
Conference Director

ACG/rzm

Enclosure

TALKS AND WORKSHOPS	Which sessions did you attend? Please check the boxes that apply.	In what session did the greatest exchange of ideas and viewpoints on articulation of secondary and postsecondary education take place? Please check the boxes that apply.	Rate all of the presentations of the conference on the degree to which the theme "Articulation of Secondary and Postsecondary Occupational Education," was followed, using the scale: 1 = very much; 2 = much; 3 = some; 4 = little; 5 = very little.	Rate all the presentations on to the amount of information provided to you, using the scale: 1 = very much; 2 = much; 3 = some; 4 = little; 5 = very little.
Program and Curriculum Articulation (Jacoby)			1 2 3 4 5	1 2 3 4 5
The Need for Articulation of Occupational Programs Among Secondary and Postsecondary Institutions (Cross)			1 2 3 4 5	1 2 3 4 5
Workshop #1 - Area Vocational Schools and Community Colleges (Bressler, Hauser, Vallone, Skinner, Feeney, Weaver, Nagle, and Elison)			1 2 3 4 5	1 2 3 4 5
Reflections on Occupational Education (Ziegler)			1 2 3 4 5	1 2 3 4 5
Workshop #2 - The Two-Year Colleges and Senior Institutions (Sugarman, Cooke, August, Slygh, and Darrah)			1 2 3 4 5	1 2 3 4 5
Articulation of Secondary and Postsecondary Occupational Programs (Martorana)			1 2 3 4 5	1 2 3 4 5
Workshop #3 - Articulation with Private Agencies (Norman, Marino and Nestor)			1 2 3 4 5	1 2 3 4 5
Articulation of Occupational Students Between Secondary Schools, Associate Degree Programs, and Bachelor's Degree Programs in Washington Technical Institute (Hobbs)			1 2 3 4 5	1 2 3 4 5
Coffee Breaks				
Meals				
Cash Bar Social Hour				

Circle Your Choice	Program and Curriculum Articulation (Jacoby)	The Need for Articulation of Occupational Programs Among Secondary and Postsecondary Institutions (Cross)	Reflections on Occupational Education (Ziegler)	Articulation of Secondary and Postsecondary Occupational Programs (Martorana)	Articulation of Occupational Students Between Secondary Schools, Associate Degree Programs, and Bachelor Degree Programs in Washington Technical Institute (Hobbs)
Major papers were presented by Jacoby, Cross, Ziegler, Martorana, and Hobbs. Please give an overall rating to each of these papers using the scale: 1 = very good; 2 = good; 3 = fair; 4 = poor; 5 = very poor.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

As participants in the Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education, we are asking for your suggestions for possible topics for next year's conference theme. In the checklist below, please indicate your two (first and second) most preferred topics of interest. NOTE: If you have suggestions other than those listed, please write them in the space provided below in number 8.

( ) 1. Inservice training programs for teachers of occupational subjects.

( ) 2. Performance (competence) based teacher training.

( ) 3. Curriculum in occupational education.

( ) 4. Approaches to statewide coordination of secondary and postsecondary occupational education.

( ) 5. Administration of secondary and postsecondary occupational education.

( ) 6. Relationship between counseling programs and occupational education.

( ) 7. Open university concept for vocational education.

( ) 8. _____

_____

_____

_____

THE PENNSYLVANIA STATE UNIVERSITY
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Education
Department of Vocational Education

October 31, 1973

Dear Conference Participant:

You have recently received a brief questionnaire in the mail asking you to evaluate the Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education.

If you have not had the opportunity to complete your evaluation, would you please take a few minutes to check the appropriate boxes which will best give us your evaluation of the conference and return the questionnaire to us.

Thank you for helping us to evaluate the conference.

Sincerely,

Angelo C. Gillie
Professor
Graduate Studies and Research

ACG/rzm

THE PENNSYLVANIA STATE UNIVERSITY
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Education
Department of Vocational Education

November 6, 1972

Thank you for responding to our questionnaire relative to the Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education. However, you did not indicate an answer to one of the questions, namely: In what session did the greatest exchange of ideas and viewpoints on articulation of secondary and postsecondary occupational education take place?

The possible answers are:

( ) Program and Curriculum Articulation (Jacoby)
( ) The Need for Articulation of Occupational Programs Among Secondary and Postsecondary Institutions (Cross)
( ) Workshop #1 - Area Vocational Schools and Community Colleges (Bressler, Hauser, Vallone, Skinner, Feeney, Weaver, Nagle, and Elison)
( ) Reflections on Occupational Education (Ziegler)
( ) Workshop #2 - The Two-Year Colleges and Senior Institutions (Sugarman, Cooke, August, Slygh, and Darrah)
( ) Articulation of Secondary and Postsecondary Occupational Programs (Martorana)
( ) Workshop #3 - Articulation with Private Agencies (Norman, Marino and Nestor)
( ) Articulation of Occupational Students Between Secondary Schools, Associate Degree Programs, and Bachelor Degree Programs in Washington Technical Institute (Hobbs)
( ) Coffee Breaks, Meals, Cash Bar Social Hour

Would you please take a moment and check your answer. Thank you.

Sincerely,

Angelo C. Gillie
Conference Director

ACG/rzm/mz

TELEPHONE FOLLOW-UP

Hello, Dr. (Mr.) _____, this is Ed Mann, Dr. Gillie's Graduate Assistant from The Pennsylvania State University, calling. Recently you received a questionnaire concerning our Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education. We have not received your reply as of today. Would you please take a few minutes of your time to fill out the questionnaire and return it to us. If necessary I will have another questionnaire sent to you. Thank you. Your cooperation will be very helpful in evaluating and planning our conference.

U.Ed. 4-158