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ABSTRACT

A study of 2-year post secondary institutions was conducted to provide more adequate information about institutional guidance and research programs. A questionnaire was sent to 351 vocational-technical schools that offered no transfer programs, and a slightly different version was sent to 689 community or junior colleges offering both college transfer work and vocational-technical programs. Data were requested on counseling, research, data collection, program completion, transfer rates, and graduates' employment experiences. The results showed that vocational schools collected more extensive standardized data for selection purposes, whereas community colleges provided more comprehensive counseling. Research by community colleges was oriented toward demographic studies, unlike the vocational schools, which mainly conducted studies of student satisfaction and success both in school and after leaving. Vocational school graduates were less likely to transfer or drop out. (Author/BH)

# ACT RESEARCH REPORT

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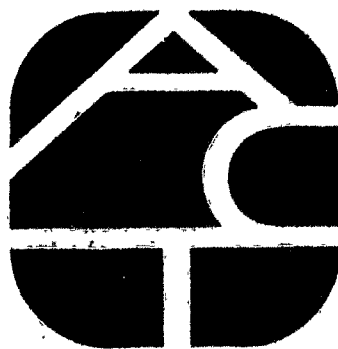
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**PRACTICES AND OUTCOMES OF  
VOCATIONAL-TECHNICAL EDUCATION  
IN TECHNICAL AND COMMUNITY COLLEGES**

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**ABSTRACT**

A study of 2-year post-high school institutions offering vocational-technical education was conducted to provide more adequate information about institutional guidance and research programs. A questionnaire was sent to 351 vocational-technical schools that offered no transfer programs and a slightly different version was sent to 689 community or junior colleges offering both college transfer work and vocational-technical programs. Items sought information on the collection and use of standardized data, counseling services, involvement in institutional research, program completion and transfer rates of students, and graduates' success in acquiring employment directly related to their specialized education. Institutions that conducted follow-up studies on vocational technical students were requested to return copies of these studies.

Vocational-technical schools collected standardized information more extensively and used such information for selection purposes more frequently than did community colleges. Community college counseling centers available to vocational-technical students were more heavily staffed in relation to the number of students served and were more comprehensive in scope than those maintained by vocational-technical schools. Most institutions engaged in institutional research to some extent. However, community colleges directed more attention toward demographic studies while vocational-technical schools concentrated more on studies of student satisfaction and success while in school as well as follow-up studies of students after leaving school. In regard to outcomes, students attending vocational-technical schools had higher program completion rates and were less likely to transfer from one program to another than were their counterparts in community colleges. Approximately 80% of the graduates of both types of institutions found work related to their training.

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## PRACTICES AND OUTCOMES OF VOCATIONAL-TECHNICAL EDUCATION IN TECHNICAL AND COMMUNITY COLLEGES

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In recent years rapid technological change in most occupational areas has created a growing demand for highly trained and skilled personnel. There seems to be general agreement, however, that at present this demand is not being fully met. As late as 1964, only 10% of those completing their formal education below the baccalaureate level had training which prepared them for specific occupations (Venn, 1964, p. 23).

Most writers have looked to postsecondary vocational-technical education as a means of remedying this situation. For example, Venn (1964) has concluded that, "unless far more and better education on the semiprofessional, technical and skilled levels is soon made available to greater numbers of citizens, the national economy and social structure will suffer irreparable damage [p. 1]."

However, vocational-technical education faces the problems of a rapidly growing field. Little is known about the practices and outcomes that characterize effective and efficient education of this type—practices and outcomes which will be

necessary to meet the demands society is placing on this field. In fact, little more is known about the practices and outcomes that currently prevail in vocational-technical education.

This study was undertaken for the purpose of obtaining some basic information about what is being done and what is being achieved by vocational-technical schools and by comprehensive community colleges offering programs in occupational fields. We compared the two types of institutions with respect to possible relevant factors such as size of enrollments, the collection and use of standardized information, counseling services, involvement in institutional research, program completion and transfer rates, and graduates' success in gaining employment appropriate to their training. We hope this survey may provide a point of departure from which the task of improving vocational-technical education can begin.

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<sup>1</sup>The authors are indebted to Nancy S. Cole, Robert H. Fenske, and Gary R. Hanson for their advice and assistance in designing and reporting this study.

## Method

A questionnaire designed for the study was sent to the principal officers of 689 community colleges; a slightly different version of the same basic questionnaire was used to survey the heads of 351 vocational-technical schools. These questionnaires are given in the appendix. Two separate mailing lists were compiled by consulting the following sources: *The Education Directory, Part 3, 1968-1969, Higher Education*; *Patterson's American Education, Part II*; *The College Bluebook 1969/70, Volumes 2 and 3*; *American Junior Colleges, 7th edition*; and *Technician Education Yearbook 1969-1970*.

Two-year institutions offering course work acceptable towards a baccalaureate degree as well as a 2-year, post-high school vocational-technical program were sent the community college questionnaire; thus, private junior colleges and public junior colleges were treated as one group of institutions. Institutions offering postsecondary vocational-technical programs but not offering college parallel work, area vocational schools, area vocational-technical schools, and technical institutes were treated as a single, separate group of institutions and were sent the vocational-technical school questionnaire. While an attempt was made

to contact the entire population of institutions currently offering broad programs of post-secondary vocational-technical education in the United States and its territories, special purpose institutions such as barber colleges, aviation schools, schools of cosmetology, and similarly specialized schools were not included in either group.

Those institutions not returning questionnaires within 10 days of the initial mailing were sent follow-up letters; a second follow-up letter and a second copy of the questionnaire were sent to those still not responding after an additional 10 days had passed. Eventually, 560 (82%) community colleges and 278 (79%) vocational-technical schools returned questionnaires containing usable data.

In addition to the questionnaire, institutions which conducted follow-up studies on vocational-technical students after they had left school were asked to send copies of these studies, if available. Of the 1,040 institutions contacted, 45 (4.3%) returned studies. Some results contained in these studies were reviewed and summarized where possible.

## Results

The mean total enrollments of community colleges and vocational-technical schools were compared. As expected, the community colleges generally have substantially larger enrollments than do vocational-technical schools. The two types of institutions were also compared with respect to their mean full-time vocational-technical student enrollments. Comparison of the data presented in Table 1 with that in Table 2 indicates that the

difference between vocational-technical student enrollments in the two types of institutions is far less striking. It should be noted, however, that although vocational-technical students represent a minority of the students enrolled in community colleges, the majority of students in postsecondary vocational-technical education are, nevertheless, served by community colleges since there are approximately twice as many community colleges as vocational-technical schools.

Table 1

Mean Total Enrollments of Community Colleges and Vocational-Technical Schools

	<i>Community Colleges</i>		<i>Vocational-Technical Schools</i>	
	Mean	S.D.	Mean	S.D.
Total Enrollment	2,720	3,471	864	1,322
	N	% <sup>a</sup>	N	% <sup>a</sup>
Institutions Responding to Item	552	99	273	98

<sup>a</sup>These percentages are based on the total number of usable questionnaires.

Table 2

Mean Enrollments of Students in Vocational-Technical Programs Preparing Them for First Entry into an Occupation

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	Mean	S.D.	Mean	S.D.
Vo-Tech Program Enrollment	817	1,142	611	640
	N	% <sup>a</sup>	N	% <sup>a</sup>
Institutions Responding to Item	488	87	249	90

<sup>a</sup>These percentages are based on the total number of usable questionnaires.

## Counseling Services

Institutions were asked whether or not they provided counseling to students enrolled in vocational-technical programs. As Table 3 indi-

cates, 89% of the community colleges and 91% of the vocational-technical schools reported offering counseling services.

**Table 3**

### Counseling for Vocational-Technical Students

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Counseling	477	89	251	91
No Counseling	60	11	24	9
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	537	96	275	99

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of usable questionnaires.

The data presented in Table 4 show that virtually all institutions having counseling programs provided vocational-educational counseling to students. In addition, the majority of both types of

institutions provided personal-adjustment counseling and maintained systems of faculty advising. However, in both instances, this was true of a higher proportion of community colleges than vocational-technical schools.

**Table 4**

### Types of Counseling Offered

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Vocational-Educational	474	100	250	100
Personal-Adjustment	427	90	200	80
Faculty Advising	425	89	164	65
Other	40	9	20	8
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	474	99+	250	99+

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.



As shown by the figures given in Table 5, 99% of the responding community colleges and 95% of the responding vocational-technical schools reported employing professional counselors to work with vocational-technical students. In terms of the number of counselors employed, however, this small gap between community colleges and vocational-technical schools appears to widen.

Table 6 indicates that the mean number of counselors employed by community colleges to work with vocational-technical students was over twice that of those employed by vocational-technical schools. In view of the vocational-technical student enrollment figures given in Table 2, it appears that community colleges generally maintained lower student to counselor ratios than did vocational-technical schools.

**Table 5**

**Employment of Professional Counselors**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Do Employ Professional Counselors	433	99	188	95
Do Not Employ Professional Counselors	6	1	9	5
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Items	439	92	197	78

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

**Table 6**

**Number of Counselors Employed**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>Mean</b>	<b>S.D.</b>	<b>Mean</b>	<b>S.D.</b>
Counselors Employed	4.32	4.50	1.85	2.10
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Institutions Responding to Item	439	92	197	78

<sup>a</sup>These percentages are based on the number of institutions to whom the item applies.

Of the community colleges and vocational-technical schools providing counseling services for vocational-technical students, 89% and 84% respectively reported using standardized instruments as part of their counseling programs (Table 7). However, community colleges and vocational-technical schools differed to a somewhat greater extent with

respect to the types of tests they used in counseling. While similarly high proportions of both types of institutions used ability measures, the figures in Table 8 indicate that proportionately more community colleges than vocational-technical schools administered personality measures and interest inventories as part of their counseling procedures.

**Table 7**

**Use of Standardized Instruments in Counseling**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Use Tests in Counseling	383	89	176	84
Do Not Use Tests in Counseling	47	11	34	16
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	430	91	210	84

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

**Table 8**

**Types of Tests Used in Counseling**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Ability Measures	318	83	151	86
Personality Measures	149	39	37	21
Interest Inventories	315	82	99	56
Other	60	16	34	19
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	383	100	176	100

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

Community colleges also tended to use a wider variety of standardized instruments. While 78% of the community colleges reported using more than one type of instrument as part of the counseling process, only 51% of the vocational-technical schools reported doing so; 38% of the community colleges and 20% of the vocational-technical schools reported administering three or more different types of standardized instruments.

Institutions that reported not providing counseling for vocational-technical students were asked to indicate whether or not such programs would be significantly useful. Table 9 shows that while responses to this question were generally positive, a smaller proportion of vocational-technical schools than community colleges replied that counseling services for vocational-technical students would be significantly useful.

Table 9

Potential Usefulness of Counseling

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Counseling Would Be Helpful	56	92	18	75
Counseling Would Not Be Significantly Useful	5	8	6	25
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	61	100	24	100

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

Standardized Information

In general, 2-year institutions offering vocational-technical programs have two sources of standardized test information concerning prospective and currently enrolled students: (a) test scores reported on the students' high school records, and (b) scores achieved by students on standardized instruments administered by or for the institutions themselves. The data shown in Table 10 indicate to

what extent these two sources are employed. Vocational-technical schools used both sources of standardized information, rather than only one or none, more often than did community colleges. While 74% of the responding vocational-technical schools used both sources, only 48% of the community colleges reported doing so. Furthermore, more community colleges than vocational-technical schools reported using neither source for gathering standardized information about students enrolled in occupational programs.

**Table 10**

**Use of Sources of Standardized Information**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Use H.S. Records Only	31	6	19	7
Use Instruments Administered by the Institution Only	179	34	40	15
Use Both Sources	256	48	197	74
Use Neither Source	65	12	11	4
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	531	95	267	96

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of usable questionnaires.

Institutions were asked to indicate whether they administered standardized instruments to all vocational-technical students, to students enrolled in some but not all vocational-technical programs, or to no vocational-technical students. As the data in Table 11 indicate, nearly equal majorities of both types of institutions reported testing all

vocational-technical students. However, a higher proportion of vocational-technical schools than community colleges reported testing students in some but not all vocational-technical programs. Thus, a slightly higher proportion of vocational-technical schools than community colleges used standardized instruments to some extent.

**Table 11**

**Administration of Standardized Instruments  
by or for Institutions**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Test All Vo-Tech Students	362	66	176	64
Test Students in Some Programs	90	16	68	25
Do Not Test	93	17	31	11
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	545	97	275	99

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of usable questionnaires.

Those institutions which reported testing either all vocational technical students or students in some vocational-technical programs were asked to give the names of the instruments they administered. The seven most often named instruments were the same for both types of institutions and fell into three categories: academic ability tests, multiple ability tests, and interest inventories.

However, as the data presented in Table 12 indicate, the frequencies with which specific instruments were used differed for the two types of institutions. While community colleges relied heavily on academic ability tests and interest inventories, the vocational-technical schools tended to make greater use of multiple ability tests such as the Differential Aptitude Test and the General Aptitude Test Battery.

Table 12

**Seven Instruments Most Often Used by Institutions  
Administering Tests to All or Some Vocational-Technical Students**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
<b>Academic Ability Tests</b>				
American College Test	244	54	41	17
Scholastic Aptitude Test	95	21	38	16
School and College Aptitude Test	97	21	22	9
<b>Multiple Ability Tests</b>	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
General Aptitude Test Battery	106	23	132	54
Differential Aptitude Test	52	11	95	39
<b>Interest Inventories</b>	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Strong Vocational Interest Blank	99	22	7	3
Kuder Preference Record	139	31	61	25
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	452	100	243	99

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

Only slight differences were found in the number of instruments administered. Approximately 66% of both types of institutions administered one to three instruments while only 7% of the institutions in each category administered seven or more instruments.

The majority of institutions administering

standardized instruments reported doing so before the students enrolled. As the figures in Table 13 show, the differences between community colleges and vocational-technical schools in regard to when tests are administered were not substantial. However, they appeared to differ in terms of the purposes for which their testing activities were designed.

**Table 13**  
**Periods During Which Testing is Conducted**

Periods	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	N	% <sup>a</sup>	N	% <sup>a</sup>
Before Enrollment	376	84	217	90
Immediately After Enrollment	98	22	50	21
During Counseling	119	26	44	18
Other	41	9	29	12
	N	% <sup>b</sup>	N	% <sup>b</sup>
Institutions Responding to Item	449	99	240	99

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

While the data presented in Table 14 indicate that similarly high proportions of both types of institutions used the information gained from test scores for counseling students, they differed somewhat in regard to the other purposes listed. A greater proportion of vocational-technical schools than community colleges reported using test results

for selection purposes while community colleges more often than vocational-technical schools used such information for placement and acquiring summary descriptive data. Further examination of the data revealed that 79% of the community colleges and 80% of the vocational-technical schools used the standardized information resulting from testing activities for more than one purpose.

**Table 14**  
**Purposes Served by Standardized Information**

Purposes	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	N	% <sup>a</sup>	N	% <sup>a</sup>
Selection	143	32	142	59
Placement	321	71	144	60
Counseling	414	92	212	88
Summary Descriptive Data	138	31	27	11
Other	16	4	19	8
	N	% <sup>b</sup>	N	% <sup>b</sup>
Institutions Responding to Item	450	99	242	99

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

Institutions which reported administering tests were asked to indicate whether or not the instruments they used adequately fulfilled the purposes for which they were intended. The data presented in Table 15 show that the majority of institutions judged the instruments they administered to be

adequate. However, 27% of the community colleges and 22% of the vocational-technical schools indicated that at least some of the instruments they administered were inadequate. Table 16 shows that the reason most often cited for dissatisfaction with these instruments was their inappropriateness for the type of student being tested.

**Table 15**

**Adequacy of Instruments Administered**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Adequate	302	73	173	78
Some Adequate—Some Inadequate	6	15	34	15
Inadequate	50	12	16	7
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	413	91	223	91

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

**Table 16**

**Reasons for Judging Instruments as Inadequate**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Too Difficult to Use	14	14	2	4
Too Costly for Student	12	12	5	11
Too Costly for Institution	15	15	3	6
Inappropriate for Type of Student	60	60	33	70
Other	40	40	12	26
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	99	89	47	94

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

According to the data presented in Table 17, in both types of institutions a higher proportion of

the users of multiple ability tests judged them as more adequately meeting their needs than did the users of academic ability tests.

Table 17

Perceived Adequacy of Different Types of Standardized Instruments

	<i>Community Colleges (Vo-Tech Divisions)</i>			<i>Vocational-Technical Schools</i>		
	Number of Judgments	Number of Positive Judgments	Percent of Positive Judgments	Number of Judgments	Number of Positive Judgments	Percent of Positive Judgments
Academic Ability Tests	311	262	84	86	67	78
Multiple Ability Tests	121	108	89	168	159	95
Interest Inventories	150	136	91	35	32	91

The institutions, which reported no administration of standardized tests to students in vocational-technical programs, were asked to cite their reasons for not doing so. The data presented in Table 18 show that the one reason most often cited for not administering tests to vocational-technical students was "none appropriate for type of student." (This result parallels the most

common reason for standardized instruments being judged inadequate by institutions administering them.) Those institutions not administering standardized instruments were asked whether or not their possible future use would provide useful information. Table 19 shows that the majority of institutions indicated such instruments would be useful.



**Table 18**

**Reasons for Not Administering Standardized Instruments**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Not Useful	15	18	5	17
Too Costly for Student	11	13	3	10
Too Costly for Institution	15	18	6	20
None Appropriate for Type of Student	35	42	17	57
Other	40	48	11	37
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	84	89	30	97

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

**Table 19**

**Potential Usefulness of Standardized Instruments**

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Would Be Useful	48	74	16	70
Would Not Be Useful	17	26	7	30
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	65	70	23	74

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the number of institutions to whom the item applies.

## Institutional Research

In order to gain information regarding the extent to which 2-year colleges and schools offering post-high school vocational-technical training involve themselves in institutional research, three items dealing with this topic were included in

the questionnaire. First, the institutions were asked to indicate how often they conducted studies of student satisfaction and/or success while in school. As the data presented in Table 20 indicate, over 80% of both types of institutions reported conducting such studies. However, a greater proportion of vocational-technical schools than community colleges reported doing this regularly.

Table 20

Frequency of Studies of Student In-school Satisfaction and/or Success

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	<b>N</b>	<b>%<sup>a</sup></b>	<b>N</b>	<b>%<sup>a</sup></b>
Never	92	19	44	18
Rarely	187	37	71	28
Regularly	220	44	137	54
	<b>N</b>	<b>%<sup>b</sup></b>	<b>N</b>	<b>%<sup>b</sup></b>
Institutions Responding to Item	499	89	252	83

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of usable questionnaires.

A second question asked how frequently institutions conducted follow-up studies on vocational students who had left school and taken jobs. Here again the majority of institutions reported doing so. However, as the figures presented in Table 21 show follow-up studies were conducted regularly by a greater proportion of both types of institutions than were studies of student satisfaction and/or success. Also the differences between com-

munity colleges and vocational-technical schools were more pronounced in regard to follow-up studies than they were in the case of satisfaction and/or success studies. While only 10% more of the vocational-technical schools than the community colleges regularly conducted studies of student satisfaction and/or success, the difference between the two with respect to follow-up studies widened to 18%.

Table 21

Frequency of Follow-up Studies

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	N	% <sup>a</sup>	N	% <sup>a</sup>
Never	92	18	29	11
Rarely	141	28	33	12
Regularly	285	55	197	73
	N	% <sup>b</sup>	N	% <sup>b</sup>
Institutions Responding to Item	518	92	259	93

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of usable questionnaires.

The last question concerning involvement in institutional research dealt with the compilation and usefulness of demographic data. Institutions were asked how frequently they summarized demographic data (such as age, family income,

race, parents' education, etc.) on students for purposes such as an annual report. The results presented in Table 22 indicate that community colleges more often engaged in this type of research than did vocational-technical schools.

Table 22

Frequency with Which Institutions Summarize Demographic Data

	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	N	% <sup>a</sup>	N	% <sup>a</sup>
Never	104	21	74	32
Rarely	130	26	85	36
Regularly	271	54	76	32
	N	% <sup>b</sup>	N	% <sup>b</sup>
Institutions Responding to Item	505	90	235	85

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of the usable questionnaires.

Of both types of institutions who regularly conducted in-school studies of students, 99% reported they were useful. Similarly high proportions of institutions rarely or never conducting studies of student satisfaction or success indicated

that such studies were or would be useful. Thus, regardless of the frequency with which these studies are conducted, the overwhelming majority of both types of institutions judged them as providing useful information (see Table 23).

**Table 23**

**Perceived Usefulness of Different Types of Studies**

Types of Studies	<i>Community Colleges (Vo-Tech Divisions)</i>		<i>Vocational-Technical Schools</i>	
	N	% <sup>a</sup>	N	% <sup>a</sup>
Students' Satisfaction and/or Success	454	98	225	97
Follow-up Studies	460	99	243	98
Demographic Summaries	420	93	169	80

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

Follow-up studies of students after leaving school were judged to be useful sources of information by 99% of the community colleges and 98% of the vocational-technical schools. The proportions of positive judgments did not vary appreciably between the two types of institutions in regard to the frequency with which such studies were conducted.

Judgments concerning the usefulness of demographic information for both types of institutions were directly related to the frequency with which such summaries were conducted. Overall, 93% of the community colleges and 80% of the vocational-technical schools indicated that demographic information is or would be useful. As indicated in Table

23, the information provided by all three types of studies was judged to be useful by the majority of the responding institutions. However, in relative terms the information provided by demographic studies appears to be viewed as being the least useful of the three types of information.

**Educational Outcomes**

**Questionnaire results.** Two sets of questions, one for community colleges and the other for vocational-technical schools, comprised the final sections of the questionnaires. In responding to the

Table 24

Responses of Community Colleges

	<i>Mean Percent</i>	<i>Standard Deviation</i>	<i>Number Reporting Information</i>		<i>Information Not Known</i>		<i>Number Responding</i>	
			<i>N</i>	<i>%<sup>a</sup></i>	<i>N</i>	<i>%<sup>a</sup></i>	<i>N</i>	<i>%<sup>b</sup></i>
Students Completing College Parallel Programs	49.9	21.2	305	59	216	41	521	93
Students Transferring from College Parallel Program to Vo-Tech Program	11.5	12.5	211	41	304	59	515	92
Students Transferring from One Vo-Tech Program to Another	13.5	14.5	230	45	281	55	511	91
Vo-Tech Students Completing Some Program	59.1	23.4	331	62	201	38	532	95
Vo-Tech Graduates that Acquire Jobs Directly Related to Their Training	80.3	15.4	272	53	238	47	510	91

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of usable questionnaires.

Table 25

Responses of Vocational-Technical Schools

	<i>Mean Percent</i>	<i>Standard Deviation</i>	<i>Number Reporting Information</i>		<i>Information Not Known</i>		<i>Number Responding</i>	
			<i>N</i>	<i>%<sup>a</sup></i>	<i>N</i>	<i>%<sup>a</sup></i>	<i>N</i>	<i>%<sup>b</sup></i>
Students Transferring from One Vo-Tech Program to Another	6.3	6.4	193	76	62	24	255	92
Students Completing Program in Which Initially Enrolled	70.3	18.0	222	83	44	17	266	96
Graduates That Acquire Jobs Directly Related to Their Training	81.7	16.8	223	84	42	16	265	95

<sup>a</sup>These percentages are based on the number of institutions who responded to the item.

<sup>b</sup>These percentages are based on the total number of usable questionnaires.

questions, institutions were asked to respond "Not known" to the question if at least approximate information was not available. Community colleges were asked five questions and vocational-technical schools were asked three. The two additional questions asked community colleges dealt with students pursuing college parallel programs and were therefore deemed inappropriate for vocational-technical schools. However, the last three questions asked community colleges and those asked vocational-technical schools were quite similar and were used as a basis for comparing the tangible outcomes achieved by the two types of institutions. These questions dealt with transfer rates, program completion, and vocational-technical graduates' success in gaining employment directly related to their training. Tables 24 and 25 give summaries of the answers to these questions.

Vocational-technical graduates from both types of institutions were equally likely to gain employment related to their training. However, we noted differences between community colleges and vocational-technical schools with respect to students transferring from one vocational-technical program to another and vocational-technical students completing programs. The mean rate of students transferring from one vocational-technical program to another was higher for community colleges than vocational-technical schools. Mean program completion rates for the two types of institutions also appeared to differ. On the average, only 59.1% of the vocational-technical students enrolled in community colleges eventually completed some program, however, at least 70.3% of the vocational-technical students enrolled in vocational-technical schools were reported as having completed their programs.

Two questions concerned only community colleges. The mean completion rate for students enrolled in college parallel programs was 49.9% and the mean percentage of students initially enrolled in college parallel courses and subsequently transferring to vocational-technical programs was 11.5%.

Perhaps as significant as any of the figures already cited were the relative number of institutions able to supply the requested information.

Apparently vocational-technical schools had greater access to the data requested than did community colleges. The proportions of institutions indicating "Not known" varied, according to the specific question, and ranged from 38 to 59% of the community colleges as compared to only 16 to 24% of the vocational-technical schools.

**Results from institutional follow-up studies.** Institutions were asked to return copies of any follow-up studies done on their students. Of the 838 institutions returning questionnaires, 103 returned some form of additional information. Often this information consisted of either a list of firms in which their vocational-technical graduates were currently employed or a copy of a form issued by each state's department of education. States using such forms collate the information they receive from individual institutions and forward it to the vocational-technical branch of the United States Office of Education. The latter, but not the former, were included along with more complete research studies to give a total of 45 usable sources of follow-up information about students (see Appendix E).

Summarizing the data contained in the studies received revealed that overall, at graduation, 68% of the graduates from vocational-technical programs were either employed or available for employment. This figure is, however, somewhat depressed by the finding that 9% of the graduates entered the military and approximately 13% continued their schooling as full-time students. Of those graduates who were employed or available for employment, 83% were working in the occupation for which they had been trained or a closely related field. Only 2.5% of those completing vocational-technical programs were unemployed at the time of the follow-ups.

Very few studies surveyed those students who had dropped out of vocational-technical programs. However, according to the information that was available, the attrition rate for vocational-technical students appeared to be between 35% and 40%. Apparently, dissatisfaction with the institution is not the only or even main reason for which vocational-technical students withdraw. A study undertaken by one institution, Greenville

Technical Education Center (1969), revealed that only 14% of those who withdrew did so because they were not making any progress or getting anywhere and only 12% of the withdrawals thought their courses had been of "little use" in preparing them for work. Of those who withdrew, 61% planned to re-enroll at some later date. In this and other studies at Harrisburg Area Community College (Snyder & Blocker, 1970) and Arizona Western College (Mitchell & Moorehead, 1968), the following were among the reasons vocational-technical students had for discontinuing before completing their programs: to attend another college, volunteered or was drafted for the Armed Forces, obtained employment, or completed objectives. At one school, the above reasons accounted for 55% of the withdrawals during the period under study.

Vocational-technical students tended to be extremely favorable in their evaluations of their institutions in preparing them for employment. According to a study conducted by Harrisburg Area Community College (Snyder & Blocker, 1969) 92% of the vocational-technical graduates indicated they would recommend the institution to a person seeking training in the program they had completed—a higher proportion of favorable reactions than found among graduates from the college parallel program. In general, the studies dealing with students' evaluation of their training indicated that vocational-technical students valued the training they had received at the institution they had attended, especially the part closely related to their chosen occupational fields.

Only one study, a survey conducted by Brandywine College (Devilbiss, 1969), provided employer reactions to the graduates of vocational-technical programs in their employ. This study indicated that 80% of the employers contacted judged graduates' performance on the job to be "exceptional" or "good" and 90% thought the vocational-technical graduates they employed had been adequately prepared for their positions.

Six institutions provided studies containing information about salaries earned by their former students (Eastern New Mexico, 1969; Hazard, 1968; Ochs, 1969; Quint, 1969, Snyder & Blocker,

1969, U.S. Office, 1969). Despite regional differences in salaries and costs of living, certain results regarding factors affecting the salaries of graduates of vocational-technical programs appeared consistently. Graduates employed in the field for which they were trained earned higher monthly salaries than those who were employed outside their field. Also former students taking jobs outside of the state in which they received their training acquired higher paying positions than those who remained in or near the area in which their school was located.

One study of students completing programs in 1968 (Quint, 1969), undertaken by American River College, indicated that salaries earned by vocational-technical program graduates may be related to age. In general, younger graduates tended to earn lower starting salaries than did older graduates.

Another study, a survey of students completing or withdrawing from vocational-technical programs during the 1968-1969 school year conducted by Wisconsin's District 11 Area Board of Vocational, Technical, and Adult Education (U.S. Office, 1969), reported that although the salaries earned by students enrolled in degree programs (2-year programs) were higher if they graduated and accepted employment within their field of training, the same did not hold true for students enrolled in diploma programs (less than 2-year programs). Salaries of students enrolled in diploma programs seemed to be the same whether or not they completed a program or accepted employment in occupations related to their training.

Institutions reported return rates for follow-up studies between 30% and 85%; the mean return rate was approximately 60%.

In general, post-high school institutions conducting follow-up studies on vocational-technical students viewed employment rates as being important indicators of successful programs. Beyond this, however, there appears to be little agreement among institutions in regard to the kinds of information about their graduates that would be useful in evaluating the programs which they offer.

## Discussion

The findings reported in the preceding section indicated that community colleges and vocational-technical schools differed in a number of respects. Differences were observed in practices and outcomes achieved with vocational-technical students.

### Counseling Services

Community colleges appeared to maintain counseling services that were more heavily staffed and broader in scope than those offered by vocational-technical schools. In addition to vocational-educational counseling, which was provided by almost all community colleges and vocational-technical schools maintaining counseling programs of any type, community colleges were more likely to include personal adjustment counseling and use faculty members as advisors. Also, among the institutions using standardized instruments as part of the counseling process, community colleges tended to use a wider range of instruments and more often administered personality measures and interest inventories than did vocational-technical schools.

The fact that more community colleges than vocational-technical schools appeared to maintain "open door" admissions policies (see Table 14) may help to explain the differences found between the two types of institutions. It is likely that such institutions attract substantial numbers of students who are essentially undecided as to which program they should enter. Ease of admission, low tuition costs, and other related factors common to most community colleges probably combine to attract some students without strong commitments to specific career goals and therefore in need of extensive counseling. Also, allowing or encouraging intra-institutional program changes would seem to

increase the need for extensive counseling programs. In addition, community colleges deal with the group whom Burton Clark (1960) termed "latent terminals." These are students enrolled in college parallel programs who never actually transfer or graduate from 4-year institutions. According to Clark's study such students comprised 50% of all students enrolling at San Jose Junior College which in this respect appears to be fairly typical of community colleges in general. Counseling has been suggested as the necessary means to help and encourage this sizable group of students make more productive and profitable educational decisions. Since these factors appear to have less importance for vocational-technical schools it is not surprising that community colleges have felt a greater need to emphasize counseling than have vocational-technical schools.

### Standardized Information

The two types of institutions differed in the extent to which standardized data were used. While similar proportions of both types of institutions tested all their students, a greater proportion of vocational-technical schools tested students in some programs and used test scores from high school records. Thus, overall, the vocational-technical schools made more use of standardized test scores.

There are several possible explanations for this result. One is that community colleges may not feel that high school records contain test scores relevant to students' potential for success in vocational-technical programs. Another is that if students are allowed to apply and are accepted for admission right up until courses begin, the time necessary for processing and effectively analyzing information would simply not be available. Community colleges for whom these considerations apply may therefore choose to allot their time and resources to other guidance practices.



On the other hand, Gleazer (1966) has suggested that some community colleges tend to treat vocational-technical education as an educational accommodation appropriate primarily for less able students. If Gleazer's observation is accurate, such colleges may view the use of standardized test information about vocational-technical students as unnecessary because it merely affirms their already accepted impression of low ability on the part of these students.

Vocational-technical schools, however, not faced with the problem of comparing vocational-technical curricula with college parallel programs, may use test scores to assess the diverse ability they see in their prospective students. Since vocational-technical schools, more often than community colleges, used standardized information for selection purposes, they may maintain admissions deadlines prior to actual course enrollment. This would allow them to use standardized information in developing curricula and enrolling suitable students.

Among those institutions that administered standardized instruments, community colleges and vocational-technical schools differed in regard to the types of instruments, their satisfaction with these instruments, and the relationships between their choice of instruments and their judgments as to the adequacy of these instruments. Community colleges relied more heavily on academic ability tests for their vocational-technical students than did vocational-technical schools. The latter were more likely to administer multiple ability tests. Both community colleges and vocational-technical schools generally judged the instruments they administered to be adequate. However, vocational-technical schools most often judged their most-used type of instrument (multiple ability tests) to be adequate while community colleges judged their most-used type of instrument (academic ability tests) to be adequate slightly less often than the multiple ability tests. Thus, community colleges more frequently used one type of test while more frequently judging another type of test as being adequate.

These findings may in part be related to the different organizational structures of the two types of institutions. While vocational-technical schools are for the most part concerned with preparing

their students for entry into the work world, community colleges typically serve several functions. In addition to providing occupational training, community colleges also provide lower division college work for students planning to transfer to 4-year colleges or universities and in many instances provide continuing education of various types for adult members of the communities in which they are located. While vocational-technical schools can base decisions concerning testing practices, counseling, and institutional research solely in terms of the requirements of vocational-technical students, community colleges must consider the overall needs of their more diverse student populations in making such decisions.

It is likely that when the needs and interests of the various groups served by community colleges conflict, those of the majority, in most instances students enrolled in college parallel programs, dominate. This may explain why community colleges more often than vocational-technical schools choose to administer academic ability tests rather than multiple ability tests even while more often judging multiple ability tests to be adequate for vocational-technical students.

### **Institutional Research**

Vocational-technical schools seem to be more involved in institutional research than are community colleges. Higher proportions of vocational-technical schools than of community colleges reported that they regularly conducted studies of student satisfaction and/or success while in school and follow-up studies of students after they left school and took jobs. However, community colleges were found to be more likely than vocational-technical schools to regularly collect and summarize demographic data.

Several possible explanations for these differences can be suggested. Vocational-technical schools may be more closely allied to the industries and businesses for which their students are being trained. Both more active job placement programs and greater accountability for the on-the-job success of their students could lead naturally to

student follow-up. On the other hand, perhaps it is simply federal reporting requirements which account for the greater likelihood of vocational-technical schools to follow up. Since vocational-technical schools appear to use selective admissions more often than community colleges, they may view studies of student satisfaction and/or success and follow-up studies as necessary to provide information for the evaluation of their selection procedures. While community colleges indicated that information of this type was useful they may have accorded it lower priority because they are not completely free to act on such information if they are to retain their "open door" character. In other words, many community colleges may have to deal with students regardless of their potential or probability for future success. The fact that community colleges rated follow-up studies as useful indicates that they recognize potential value of such studies for program development and the evaluation of instruction. Another possible reason for the lower level of involvement in institutional research on the part of community colleges may be related to the rapid growth in numbers of these institutions in recent years. It has been estimated that 50 new community colleges have been established each year for the past decade (Gleazer, 1968). It is likely that many of the institutions contacted for this study have not been in existence long enough to develop a comprehensive program for institutional research.

Demographic studies may be considered more necessary and useful by community colleges than by vocational-technical schools because of the community service orientation of many community colleges (Fields, 1962). In general, community colleges are expected to serve the interests and needs of the various subgroups residing within the communities in which they are located. Demographic studies may provide the means through which community colleges can judge their performance in this respect. Vocational-technical schools having a more specialized function, may not attach the same importance to demographic data as do community colleges.

Another factor that may result in the greater use of demographic data by community colleges is that a higher proportion of community colleges than vocational-technical schools reported participating in The American College Testing Program.

As part of this participation they are routinely supplied demographic summaries of their student populations through the ACT Class Profile Service.

### **Educational Outcomes**

**Questionnaire results.** The responses given by community colleges and vocational-technical schools to similar questions concerning program completion and transfer rates suggest that the two types of institutions differ in regard to outcomes as well as various practices. The fact that vocational-technical schools were more often able to answer these questions than were community colleges is consistent with, and may be a direct result of, the former's greater involvement with institutional research. Specific differences in outcomes between community colleges and vocational-technical schools may be explained in a number of ways. The finding that students attending vocational-technical schools have higher completion rates than those enrolled in community college vocational-technical programs may mean that vocational-technical schools deal with vocational-technical education in a more efficient and effective manner than do community colleges. However, since vocational-technical schools appear to be more selective than are community colleges, the two types of institutions may be dealing with dissimilar vocational-technical student populations. Community colleges may be serving a higher proportion of the less well prepared students than are vocational-technical schools. If this is true, it is not surprising that community college completion rates would, on the average, be somewhat lower than those of vocational-technical schools. Furthermore, the results indicating that students enrolled in community college vocational-technical programs more often transfer from one program to another than do students attending vocational-technical schools suggest that students in vocational-technical schools are more vocationally mature, in the sense that they have made firmer vocational decisions at an earlier stage, than their counterparts in community colleges. Students having strong commitments to an occupational goal would probably exhibit a greater tendency to complete

the programs in which they enroll.

However, although community colleges and vocational-technical schools offer programs with similar titles some aspects of these programs may differ considerably. For example, community colleges may require more general education courses than do vocational-technical schools. In fact some observers (Venn, 1964 and Thornton, 1966) have concluded that occupational education may be better carried out by comprehensive community colleges than vocational-technical schools because the latter have tended to neglect the importance of general education. While these courses may have no particular effect on the completion rates of students enrolled in some programs such as business, health occupations, or engineering technology, such academic course work may serve to discourage students who might otherwise succeed in programs emphasizing manual skills such as welding, auto body repair work, or plumbing.

**Results of institutional follow-up studies.** Due to the relatively low number of institutions sending copies of their follow-up studies and the fact that individual institutions pursued different questions regarding their vocational-technical graduates, only limited conclusions can be drawn. The success of graduates in acquiring employment related to their training was, however, one area with which virtually all of the studies dealt. In this respect the findings reported in the follow-up studies supported those revealed by the questionnaires. Both sources indicated that approximately 80% of the students completing vocational-technical programs were able to secure jobs that were closely related to their training.

Additional information derived from the follow-up studies indicated that only 2.5% of the graduates available for employment at the time of the follow-ups were unemployed. This figure is lower than the national unemployment rate as of January, 1969 which was 3.3% and is substantially lower than the 5.2% national unemployment rate for persons between 20 and 24 years of age (Unemployment Rates, 1970). If representative, these statistics provide a favorable commentary on the worth of vocational-technical education in assisting the individual in finding employment.

Although only a few institutions sent follow up studies dealing specifically with students who had dropped out of vocational-technical programs, the studies available suggested that care should be employed in interpreting the meaning of attrition in regard to vocational-technical education. While for academic education "dropping out" has come to connote failure on the part of the student or the institution, this appears to be less true of vocational-technical education. According to the studies received, relatively few students withdrew due to dissatisfaction with their school or lack of progress in their programs. Over 20% of those withdrawing at one school reported doing so because they had completed their objectives or had gained employment. Another 15% volunteered for or were drafted by the Armed Forces; a slightly larger percentage withdrew in order to attend another college or school. These findings, although very limited, suggest that probably most students who withdrew from vocational-technical programs had neutral or even positive reasons for doing so. If this is generally true, it would not seem adequate to judge the success or effectiveness of an institution's involvement in occupational education only in terms of its program completion rates.

Of the studies conducted only one attempted to assess employers' evaluations of the graduates of vocational-technical programs they had in their employ. The apparent lack of interest in this area is surprising since it is likely that detailed evaluations of program graduates by employers would provide institutions with valuable information concerning the effectiveness and relevance of their occupational curricula. While in this one study the results were quite positive, this may not be the case for all institutions or all programs. To assume that success in training and on-the-job success are synonymous can be misleading. Institutions not engaging in this area of research may be ignoring an important source of information.

A few institutions conducted studies that gained information concerning the salaries earned by their graduates. One study contained data indicating that the starting salaries earned by graduates were strongly related to age; younger graduates averaged lower starting salaries than did older graduates. Another study revealed that although starting salaries of students who had enrolled in 2-year programs were higher if they

completed their programs and accepted employment related to their training, this was not true of students enrolling in 1-year programs. In the latter starting salaries appeared to be unaffected by whether or not programs had been completed or employment was in occupations related to training.

Since size of salary is one important criterion of personal as well as social and economic success it is odd that it has been afforded so little attention. As the first study suggests, earnings may

be related to a number of factors other than the individual's competence and training in a particular area. It would be useful for institutions to know what these factors are and which ones are within their control or the control of their students and which ones are not. The second study suggests that in some occupational areas, those requiring relatively little training, there may be a natural ceiling limiting the financial reward any formal specialized educational program can bring.

## Conclusion

While the results of this study illustrate several differences in the two types of postsecondary institutions offering vocational-technical education, they actually raise many more questions than they answer. Community colleges and vocational-technical schools are often quite different in structure, function, and purpose, but the effect and meaning of these differences are only

speculative. With more information on what the schools presently do, the kind of information available in this study, we can begin to assess the more important questions of why they do what they do and what the effects of their actions are on students in vocational-technical education programs.

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APPENDIXES

**APPENDIX A  
ACT VOCATIONAL-TECHNICAL SCHOOL QUESTIONNAIRE**

Name of Institution \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

1. How many students (head count) are enrolled in your institution? \_\_\_\_\_
2. How many of your students are enrolled in vocational-technical programs preparing them for first entry into an occupation? \_\_\_\_\_
3. Does your institution use scores from standardized tests available from the student's high school record?  Yes  No
4. Does your institution systematically acquire information about your students through the use of standardized instruments (tests, inventories, questionnaires, etc.)?

Yes, on all students  
 Yes, on students in some programs  
 Please specify which programs: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

No

*Please check instruments used; write in those not listed.*

<input type="checkbox"/> ACT	<input type="checkbox"/> Kuder Preference Record
<input type="checkbox"/> CGP	<input type="checkbox"/> Edwards Personality Inventory
<input type="checkbox"/> DAT	Others: _____
<input type="checkbox"/> GATB	_____
<input type="checkbox"/> MMPI	_____
<input type="checkbox"/> SAT	_____
<input type="checkbox"/> SCAT	_____
<input type="checkbox"/> SVIB	_____

*When are these instruments administered?*

Before enrollment  
 Immediately after enrollment  
 When the student comes for counseling  
 Other; please explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*How is this information used? (check as many as apply)*

For selection  
 For counseling  
 For placement  
 For summary descriptive data about the institution  
 Other; please explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Are some of the instruments adequate for your purposes?*

Yes  No

*Which ones?* \_\_\_\_\_ *Which ones?* \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Why not?*

Too difficult to use  
 Too costly for student  
 Too costly for institution  
 Inappropriate for our students  
 Other; explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Why not?*

Not useful  
 Too costly for student  
 Too costly for institution  
 None appropriate for type of student  
 Other; explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Would the use of standardized instruments provide helpful information?*

Yes  No

*What types of instruments?*

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**THE AMERICAN COLLEGE TESTING PROGRAM**



5. Does your institution provide counseling for its students?

Yes

No

<p><i>What type?</i></p> <p><input type="checkbox"/> Vocational-educational</p> <p><input type="checkbox"/> Personal adjustment</p> <p><input type="checkbox"/> Faculty advising</p> <p><input type="checkbox"/> Other</p>	<p><i>Are standardized instruments used in counseling your students?</i></p> <p><input type="checkbox"/> Yes, ability tests</p> <p><input type="checkbox"/> Yes, personality tests</p> <p><input type="checkbox"/> Yes, interest inventories</p> <p><input type="checkbox"/> Yes, other: _____</p> <p><input type="checkbox"/> No</p>
<p><i>How many professional counselors do you have?</i> _____</p>	

<p><i>Would counseling be significantly useful to your students?</i></p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes; in what way? _____</p> <p>_____</p> <p>_____</p> <p>_____</p>
--

6. How frequently does your institution conduct studies of student satisfaction and/or success while in school?

Never

Rarely

Regularly

<p><i>Would such studies be useful?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
---

<p><i>Are such studies useful?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
--

7. How frequently does your institution conduct follow-up studies on its vocational-technical students after they leave school and take a job?

Never

Rarely

Regularly

<p><i>Would such follow-up studies be useful?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
---

<p><i>Are such follow-up studies useful?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
--

8. How frequently does your institution summarize demographic information on its student body (such as age, family income, race, parents' education, etc.) for purposes such as an annual report?

Never

Rarely

Regularly

<p><i>Would such summary demographic information be useful?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
---

<p><i>Is such summary demographic information useful?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
---

For questions 9 through 11 give approximate answers if precise data are not available. If approximate information is not available, check "Not known."

- 9. What percentage of your students complete the programs in which they initially enroll? \_\_\_\_\_ Not known
- 10. What percentage of your students transfer out of their original program to another one at your institution? \_\_\_\_\_ Not known
- 11. Of the students who complete programs, what percentage acquire jobs directly related to their training? \_\_\_\_\_ Not known

Thank you for your cooperation. Please mail the questionnaire in the envelope provided to: Research and Development Division  
The American College Testing Program  
P. O. Box 168  
Iowa City, Iowa 52240



**APPENDIX B**  
**ACT COMMUNITY COLLEGE QUESTIONNAIRE ON VOCATIONAL-TECHNICAL STUDENTS**

Name of Institution \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

1. How many students (head count) are enrolled in your institution? \_\_\_\_\_
2. How many of your students are enrolled in vocational-technical programs preparing them for first entry into an occupation? \_\_\_\_\_
3. Does your institution use scores from standardized tests given on vocational-technical students' high school record?  Yes  No
4. Does your institution systematically acquire information on your vocational-technical students through the use of standardized instruments (tests, inventories, questionnaires, etc.)?

Yes, on all such students  
 Yes, on students in some programs  
 Please specify which programs: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

No

*Please check instruments used; write in those not listed.*

<input type="checkbox"/> ACT	<input type="checkbox"/> Kuder Preference Record
<input type="checkbox"/> CGP	<input type="checkbox"/> Edwards Personality Inventory
<input type="checkbox"/> DAT	Others: _____
<input type="checkbox"/> GATB	_____
<input type="checkbox"/> MMPI	_____
<input type="checkbox"/> SAT	_____
<input type="checkbox"/> SCAT	_____
<input type="checkbox"/> SVIB	_____

*When are these instruments administered?*

Before enrollment  
 Immediately after enrollment  
 When the student comes for counseling  
 Other; please explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*How is this information used? (check as many as apply)*

For selection  
 For counseling  
 For placement  
 For summary descriptive data about the institution  
 Other; please explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Are some of the instruments adequate for your purposes?*

Yes  No

*Which ones?* \_\_\_\_\_ *Which ones?* \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Why not?*

Too difficult to use  
 Too costly for student  
 Too costly for institution  
 Inappropriate for type of student  
 Other; explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Why not?*

Not useful  
 Too costly for student  
 Too costly for institution  
 None appropriate for type of student  
 Other; explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Would the use of standardized instruments provide helpful information?*

Yes  No

*What types of instruments?*  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



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5. Does your institution provide counseling for vocational-technical students?

Yes

No

*What type?*  
 Vocational-educational  
 Personal adjustment  
 Faculty advising  
 Other

*Are standardized instruments used in counseling these students?*  
 Yes, ability tests  
 Yes, personality tests  
 Yes, interest inventories  
 Yes, other:  
 No

*How many professional counselors do you have for these students?* \_\_\_\_\_

*Would counseling be significantly useful to vocational-technical students?*  
 No  
 Yes; in what way? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

6. How frequently does your institution conduct studies of student satisfaction and/or success while in school?

Never

Rarely

Regularly

*Would such studies be useful?*  
 Yes  No

*Are such studies useful?*  
 Yes  No

7. How frequently does your institution conduct follow-up studies on its vocational-technical students after they leave school and take a job?

Never

Rarely

Regularly

*Would such follow-up studies be useful?*  
 Yes  No

*Are such follow-up studies useful?*  
 Yes  No

8. How frequently does your institution summarize demographic information on its student body (such as age, family income, race, parents' education, etc.) for purposes such as an annual report?

Never

Rarely

Regularly

*Would such summary demographic information be useful?*  
 Yes  No

*Is such summary demographic information useful?*  
 Yes  No

For questions 9 through 13 give approximate answers if precise data are not available. If even approximate information is not available, check "Not known."

9. Of the students who enroll in college parallel programs, what percentage successfully complete them? \_\_\_\_\_ Not known
10. What percentage of college-parallel students transfer from college parallel to vocational-technical programs? \_\_\_\_\_ Not known
11. What percentage of vocational-technical students transfer out of their original program to another program at your school? \_\_\_\_\_ Not known
12. What percentage of vocational-technical students complete some program at your school? \_\_\_\_\_ Not known
13. Of the students who complete vocational-technical programs, what percentage acquire jobs directly related to their training? \_\_\_\_\_ Not known

Thank you for your cooperation. Please mail the questionnaire in the envelope provided to: Research and Development Division  
 The American College Testing Program  
 P. O. Box 168  
 Iowa City, Iowa 52240



## Appendix C Community and Junior Colleges

### ALABAMA

Alexander City State Jr. College, Alexander City  
Enterprise State Jr. College, Enterprise  
Gadsden State Jr. College, Gadsden  
Jefferson Davis State Jr. College, Brewton  
Jefferson State Jr. College, Birmingham  
John C. Calhoun Technical School, Decatur  
Northwest Alabama State Jr. College, Phil Campbell  
Patrick Henry State Jr. College, Monroeville  
Wenonah State Jr. College, Birmingham  
William L. Yancey State Jr. College, Bay Minette

### ALASKA

Anchorage Community College, Anchorage  
University Alaska Juneau Douglas Community College, Juneau

### ARIZONA

Arizona Western College, Yuma  
Cochise College, Douglas  
Eastern Arizona College, Thatcher  
Glendale Community College, Glendale  
Maricopa Technical College, Phoenix  
Mesa Community College, Mesa  
Missionary Aviation Institute, Glendale  
Phoenix College, Phoenix

### ARKANSAS

Arkansas State University—Beebe Branch, Beebe  
Phillips County Community College, Helena  
Westark Jr. College, Fort Smith

### CALIFORNIA

Allan Hancock College, Santa Maria  
American River College Main Campus, Sacramento  
American River College Placerville Center, Placerville  
Antelope Valley College, Lancaster  
Bakersfield College, Bakersfield  
Barstow College, Barstow  
Butte Jr. College, Durham

Cabrillo College, Aptos  
Canada College, Redwood City  
Cerritos College, Norwalk  
Chabot College, Hayward  
Chaffey College, Alta Loma  
Citrus College, Azusa  
City College of San Francisco, San Francisco  
College of the Desert, Palm Desert  
College of Marin, Kentfield  
College of the Redwoods, Eureka  
College of San Mateo, San Mateo  
College of the Sequoias, Visalia  
College of the Siskiyous, Weed  
Columbia Jr. College, Columbia  
Compton College, Compton  
Contra Costa College, San Pablo  
Cuesta College, San Luis Obispo  
Cypress College, Cypress  
De Anza College, Cupertino  
Diablo Valley College, Pleasant Hill  
El Camino College, Torrance  
Foothill College, Los Altos Hills  
Fresno City College, Fresno  
Fullerton Jr. College, Fullerton  
Gavilan College, Gilroy  
Glendale College, Glendale  
Golden West College, Huntington Beach  
Grossmont College, El Cajon  
Hartnell College, Salinas  
Laney College, Oakland  
Lassen College, Susanville  
Long Beach City College, Long Beach  
Los Angeles City College, Los Angeles  
Los Angeles Harbor College, Wilmington  
Los Angeles Pierce College, Woodland Hills  
Los Angeles Southwest College, Los Angeles  
Los Angeles Trade & Technical College, Los Angeles

Los Angeles Valley College, Van Nuys  
Merced Jr. College, Merced  
Merritt College, Oakland  
Minitt College, Oakland  
Mira Costa College, Oceanside  
Modesto Jr. College, Modesto  
Monterey Peninsula College, Monterey  
Moorpark Jr. College, Moorpark  
Mount San Antonio College, Walnut  
Mt. San Jacinto College, Gilman Hot Springs  
Ohlone College, Fremont  
Orange Coast College, Costa Mesa  
Palomar College, San Marcos  
Palo Verde College, Blythe  
Pasadena City College, Pasadena  
Porterville College, Porterville  
Reedley College, Reedley  
Rio Hondo Jr. College, Whittier  
Riverside City College, Riverside  
Sacramento City College, Sacramento  
San Bernardino Valley College, San Bernardino  
San Diego Jr. College, San Diego  
San Joaquin Delta College, Stockton  
San Jose City College, San Jose  
Santa Ana College, Santa Ana  
Santa Barbara City College, Santa Barbara  
Santa Monica City College, Santa Monica  
Santa Rosa Jr. College, Santa Rosa  
Shasta College, Redding  
Sierra College, Rocklin  
Solano College, Vallejo  
Southwestern College, Chula Vista  
Taft College, Taft  
Victor Valley College, Victorville  
West Hills College, Coalinga  
West Valley College, Campbell

#### **COLORADO**

Aims College, Greeley  
Arapahoe Jr. College, Littleton  
Colorado Mountain College, Glenwood Springs

Lamar Jr. Community College, Lamar  
Mesa College, Grand Junction  
Otero Jr. College, La Junta  
Trinidad State Jr. College, Trinidad

#### **CONNECTICUT**

Housatonic Community College, Stratford  
Manchester Community College, Manchester  
Mattatuck Community College, Waterbury  
Middlesex Community College, Middletown  
Norwalk Community College, Norwalk  
South Central Community College, New Haven

#### **DELAWARE**

Delaware Technical & Community College, Georgetown  
Wesley College, Dover

#### **DISTRICT OF COLUMBIA**

Washington Technical Institute, Washington

#### **FLORIDA**

Brevard Jr. College, Cocoa  
Broward Jr. College, Ft. Lauderdale  
Central Florida Jr. College, Ocala  
Chipola Jr. College, Marianna  
Daytona Beach Jr. College, Daytona Beach  
Edison Jr. College, Fort Myers  
Florida Jr. College at Jacksonville, Jacksonville  
Gulf Coast Jr. College, Panama City  
Hillsborough Jr. College, Tampa  
Lake City Jr. College & Forest Ranger School, Lake City  
Lake-Sumter Jr. College, Leesburg  
Manatee Jr. College, Bradenton  
Miami-Dade Jr. College, Miami  
North Florida Jr. College, Madison  
Palm Beach Jr. College, Lake Worth  
Pensacola Jr. College, Pensacola  
Polk Jr. College, Winter Haven  
Santa Fe Jr. College, Gainesville  
Seminole Jr. College, Sanford  
South Florida Jr. College, Avon Park  
St. Johns River Jr. College, Palatka

St. Petersburg Jr. College, St. Petersburg  
Tallahassee Jr. College, Tallahassee

### **GEORGIA**

Abraham Baldwin Agriculture College, Tifton  
Albany Jr. College, Albany  
Brunswick Jr. College, Brunswick  
Dalton Jr. College, Dalton  
DeKalb College, Clarkston  
Emmanuel College, Franklin Springs  
Gainesville Jr. College, Gainesville  
South Georgia College, Douglas

### **HAWAII**

Honolulu Community College, Honolulu  
Kapiolani Community College, Honolulu  
Kauai Community College, Lihue  
Leeward Community College, Pearl City

### **IDAHO**

College of Southern Idaho, Twin Falls  
North Idaho Jr. College, Coeur d'Alene  
Ricks College, Rexburg

### **ILLINOIS**

Belleville Jr. College, Belleville  
Black Hawk College, Moline  
Carl Sandburg College, Galesburg  
Central YMCA Community College, Chicago  
Chicago City College—Bogan Campus, Chicago  
Chicago City College—Southeast Campus, Chicago  
Chicago City College—Wright Campus, Chicago  
College of Dupage, Naperville  
College of Lake County, Grayslake  
Danville Jr. College, Danville  
Elgin Community College, Elgin  
Highland Community College, Freeport  
Illinois Central College, East Peoria  
Illinois Valley Community College, Oglesby  
John A. Logan College, Carterville  
Kankakee Community College, Kankakee  
Kaskaskia College, Centralia

Kishwaukee College, Malta  
Lake Land College, Mattoon  
Lincoln Land Community College, Springfield  
Malcom X College, Chicago  
McHenry County Jr. College, Crystal Lake  
Moraine Valley Community College, Palos Hills  
Morton College, Cicero  
Olney Central College, Olney  
Rend Lake College, Mt. Vernon  
Robert Morris College of Carthage, Carthage  
Rock Valley College, Rockford  
Sauk Valley College, Dixon  
Spoon River College, Canton  
Thornton Jr. College, Harvey  
Triton College, River Grove  
Wabash Valley College, Mt. Carmel  
Waubensee Community College, Sugar Grove  
William Rainey Harper College, Palatine  
Winston Churchill College, Pontiac

### **INDIANA**

Indiana University at Kokomo, Kokomo  
Vincennes University, Vincennes

### **IOWA**

Area XV Community College, Centerville  
Des Moines (Area Eleven) Community College, Ankeny  
Des Moines Community College, Boone  
Eastern Iowa Community College, Clinton  
Eastern Iowa Community College, Muscatine  
Eastern Iowa Community College—Scott Campus, Davenport  
Ellsworth College, Iowa Falls  
Iowa Central Community College, Eagle Grove  
Iowa Central Community College, Fort Dodge  
Iowa Central Community College, Webster City  
Iowa Lakes Community College, Estherville  
Iowa Western Community College, Council Bluffs  
Kirkwood Community College, Cedar Rapids  
Marshalltown Community College, Marshalltown  
North Iowa Area Community College, Mason City  
Southeast Iowa Community College, Burlington

Southeast Iowa Community College, Keokuk  
Southwestern Community College, Creston

#### **KANSAS**

Allen County Community Jr. College, Iola  
Barton County Community Jr. College, Great Bend  
Butler County Community Jr. College, El Dorado  
Central College, McPherson  
Cloud County Community Jr. College, Concordia  
Coffeyville Community Jr. College, Coffeyville  
Colby Community Jr. College, Colby  
Cowley County Community Jr. College, Arkansas City  
Dodge City Community Jr. College, Dodge City  
Donnelly College, Kansas City  
Fort Scott Community Jr. College, Fort Scott  
Hesston College, Hesston  
Hutchinson Community Jr. College, Hutchinson  
Independence Community Jr. College, Independence  
Kansas City Kansas Community Junior College, Kansas City  
Labette Community Jr. College, Parsons  
Neosho County Community Jr. College, Chanute  
Pratt Community Jr. College, Pratt

#### **KENTUCKY**

Ashland Community College, Ashland  
Elizabethtown Community College, Elizabethtown  
Fort Knox Community College, Fort Knox  
Hazard Community College, Hazard  
Henderson Community College, Henderson  
Hopkinsville Community College, Hopkinsville  
Jefferson Community College, Louisville  
Maysville Community College, Maysville  
Northern Community College, Covington  
Paducah Community College Paducah  
Prestonsburg Community College, Prestonsburg  
Somerset Community College, Somerset  
Southeast Community College, Cumberland  
University of Kentucky Community College, Lexington

#### **LOUISIANA**

Louisiana State University--Alexandria, Alexandria

#### **MAINE**

University of Maine--Augusta, Augusta

#### **MARYLAND**

Allegheny Community College, Cumberland  
Anne Arundel Community College, Arnold  
Catonsville Community College, Catonsville  
Cecil Community College, Elkton  
Charles County Community College, La Plata  
Chesapeake College, Wye Mills  
Community College of Baltimore, Baltimore  
Essex Community College, Baltimore County  
Frederick Community College, Frederick  
Hagerstown Jr. College, Hagerstown  
Harford Jr. College, Bel Air  
Kirkland Hall College, Easton  
Montgomery Jr. College, Rockville  
Montgomery Jr. College, Takama Park  
Prince Georges Community College, Largo

#### **MASSACHUSETTS**

Bay Path Jr. College, Longmeadow  
Becker Jr. College, Worcester  
Berkshire Community College, Pittsfield  
Bristol Community College, Fall River  
Cape Cod Community College, Hyannis  
Dean Jr. College, Franklin  
Fisher Jr. College, Boston  
Garland Jr. College, Boston  
Greenfield Community College, Greenfield  
Holyoke Community College, Holyoke  
Lasell Jr. College, Auburndale  
Leicester Jr. College, Leicester  
Massachusetts Bay Community College, Watertown  
Massasoit Community College, West Bridgewater  
Newton Jr. College, Newtonville  
Northern Essex Community College, Haverhill  
Quinsigamond Community College, Worcester  
Wentworth Institute, Boston  
Worcester Jr. College, Worcester

#### **MICHIGAN**

Alpena Community College, Alpena  
Davenport College of Business, Grand Rapids  
Delta College, University Center

Flint Community Jr. College, Flint  
Glen Oaks Community College, Centreville  
Gogebic Community College, Ironwood  
Grand Rapids Jr. College, Grand Rapids  
Henry Ford Community College, Dearborn  
Jackson Community College, Jackson  
Kalamazoo Valley Community College, Kalamazoo  
Kellogg Community College, Battle Creek  
Lansing Community College, Lansing  
Macomb County Community College, Warren  
Monroe County Community College, Monroe  
Montcalm Community College, Sidney  
Muskegon County Community College, Muskegon  
North Central Michigan College, Petoskey  
Northwestern Michigan College, Traverse City  
Schoolcraft College, Livonia  
Southwestern Michigan Community College, Dowagiac  
St. Clair County Community College, Port Huron  
Washtenaw Community College, Ypsilanti  
West Shore Community College, Scottville

#### **MINNESOTA**

Anoka-Ramsey State Jr. College, Coon Rapids  
Austin State Jr. College, Austin  
Bethany Lutheran College & Theological Seminary, Mankato  
Brainerd State Jr. College, Brainerd  
Fergus Falls State Jr. College, Fergus Falls  
Golden Valley Lutheran College, Minneapolis  
Itasca State Jr. College, Grand Rapids  
Mesabi State Jr. College, Virginia  
Metropolitan State Jr. College, Minneapolis  
Normandale State Jr. College, Bloomington  
North Hennepin State Jr. College, Minneapolis  
Northland State Jr. College, Thief River Falls  
Rainy River State Jr. College, International Falls  
Rochester State Jr. College, Rochester  
Worthington State Jr. College, Worthington

#### **MISSISSIPPI**

Copiah-Lincoln Jr. College, Wesson  
East Central Jr. College, Decatur  
Gulf Park Jr. College, Long Beach

Holmes Jr. College, Goodman  
Itawamba Jr. College—Vocational & Technical Center, Tupelo  
Jackson County Jr. College, Gautier  
Jones County Jr. College, Ellisville  
Meridian Jr. College, Meridian  
Mississippi Delta Jr. College, Moorhead  
Mississippi Gulf Coast Jr. College, Gulfport  
Northeast Mississippi Jr. College, Booneville  
Northwest Mississippi Jr. College, Senatobia  
Pearl River Jr. College, Poplarville  
Perkinston College—Main Campus, Perkinston  
Saints Jr. College, Lexington  
Southwest Mississippi Jr. College, Summit  
Utica Jr. College, Utica

#### **MISSOURI**

The Junior College District, St. Louis  
Metropolitan Jr. College, Kansas City  
Three Rivers Jr. College, Poplar Bluff

#### **MONTANA**

Dawson College, Glendive  
Flathead Valley Community College, Kalispell  
Miles Community College, Miles City

#### **NEBRASKA**

Central Nebraska Tech., Hastings  
Nebraska Western College, Scottsbluff  
North Platte College, North Platte  
Platte Jr. College, Columbus

#### **NEW HAMPSHIRE**

Colby Jr. College, New London

#### **NEW JERSEY**

Atlantic Community College, Mays Landing  
Bergen Community College, Paramus  
Burlington County College, Pemberton  
Camden County College, Blackwood  
Essex County College, Newark  
Gloucester County College, Sewell  
Mercer County Community College, Trenton  
Middlesex County College, Edison  
Monmouth College—Jr. College Division, West Long Branch



Ocean County College, Toms River  
Somerset County College, Green Brook

#### **NEW MEXICO**

Eastern New Mexico University, Roswell  
New Mexico Jr. College, Hobbs

#### **NEW YORK**

Adirondack Community College, Glens Falls  
Auburn Community College, Auburn  
Broome Technical Community College, Binghamton  
Community College of Finger Lakes, Canandaigua  
Concordia College, Bronxville  
Corning Community College, Corning  
CUNY Bronx Community College, Bronx  
CUNY Manhattan Community College, New York  
CUNY New York City Community College, Brooklyn  
Dutchess Community College, Poughkeepsie  
Erie Community College, Buffalo  
Fulton-Montgomery Community College, Johnstown  
Genesee Community College, Batavia  
Herkimer County Community College, Ilion  
Hilbert College, Hamburg  
Hudson Valley Community College, Troy  
Jamestown Community College, Jamestown  
Jefferson Community College, Watertown  
Maria College of Albany, Albany  
Maria Regina College, Syracuse  
Mohawk Valley Community College, Utica  
Monroe Community College, Rochester  
Nassau Community College, Garden City  
Niagara County Community College, Niagara Falls  
North Country Community College, Saranac Lake  
Onondaga Community College, Syracuse  
Orange County Community College, Middletown  
Queensborough Community College, Queens  
Rockland Community College, Suffern  
Suffolk Community College, Selden  
Sullivan County Community College, South Fallsburg  
SUNY Agricultural & Technical, Alfred  
SUNY Agricultural & Technical, Canton  
SUNY Agricultural & Technical, Cobleskill

SUNY Agricultural & Technical, Delhi  
SUNY Agricultural & Technical, Morrisville  
Tompkins-Cortland Community College, Groton  
Trocaire College, Buffalo  
Westchester Community College, Valhalla

#### **NORTH CAROLINA**

Central Piedmont Community College, Charlotte  
Chowan College, Murfreesboro  
College of the Albemarle, Elizabeth City  
Davidson County Community College, Lexington  
Gardner-Webb College, Boiling Springs  
Gaston College, Dallas  
Kittrell College, Kittrell  
Lees-McRae College, Banner Elk  
Lenoir County Community College, Kinston  
Mitchell College, Statesville  
Mount Olive Jr. College, Mount Olive  
Peace College, Raleigh  
Rockingham Community College, Wentworth  
Sandhills Community College, Southern Pines  
Southeastern Community College, Whiteville  
Surry Community College, Dobson  
Wayne Community College, Goldsboro  
Western Piedmont Community College, Morganton

#### **NORTH DAKOTA**

Bismarck Jr. College, Bismarck  
Lake Region Jr. College, Devils Lake  
North Dakota School of Forestry, Bottineau  
North Dakota State School of Science, Wahpeton

#### **OHIO**

Cuyahoga Community College—Metropolitan, Cleveland  
Lakeland Community College, Mentor  
Lorain County Community College, Elyria  
Sinclair Community College, Dayton

#### **OKLAHOMA**

Bacone College, Bacone  
Eastern Oklahoma State College, Wilburton  
Murray State College—Agric. & Applied Science, Tishomingo  
Northeastern Oklahoma A & M College, Miami

Northern Oklahoma College, Tonkawa

#### **OREGON**

Central Oregon Community College, Bend  
Clackamas Community College, Oregon City  
Judson Baptist College, Portland  
Lane Community College, Eugene  
Linn-Benton Community College, Albany  
Mt. Hood Community College, Gresham  
Portland Community College, Portland  
Southwestern Oregon Community College, Coos Bay  
Treasure Valley Community College, Ontario  
Umpqua Community College, Roseburg

#### **PENNSYLVANIA**

Bucks County Community College, Newtown  
Butler County Community College, Butler  
Community College of Allegheny County Boyce, Monroeville  
Community College of Beaver County, Freedom  
Community College of Delaware County, Media  
Community College of Philadelphia, Philadelphia  
Harcum Jr. College, Bryn Mawr  
Harrisburg Area Community College, Harrisburg  
Lackawanna Jr. College, Scranton  
Lehigh County Community College, Schnecksville  
Luzerne County Community College, Wilkes-Barre  
Manor Jr. College, Jenkintown  
Montgomery County Community College, Conshohocken  
Mount Aloysius Jr. College, Cresson  
Northampton County Area Community College, Bethlehem  
Peirce Jr. College, Philadelphia  
Penn Hall Jr. College, Chambersburg  
Penn State Univ. Berks Center, Wyomissing  
Penn State Univ. Dubois Campus, Dubois  
Penn State Univ. Fayette Campus, Uniontown  
Penn State Univ. Hazleton Campus, Hazleton  
Penn State Univ. Mont Alto Campus, Mont Alto  
Penn State Univ. Schuylkill Campus, Schuylkill Haven  
Penn State Univ. Shenango Valley Campus, Sharon  
Penn State Univ. Wilkes Barre Campus, Wilkes Barre  
Penn State Univ. Worthington Scranton Campus, Dunmore  
Williamsport Area Community College, Williamsport

#### **RHODE ISLAND**

Rhode Island Jr. College, Providence  
Roger Williams College, Bristol  
Roger Williams College, Providence

#### **SOUTH CAROLINA**

Anderson College, Anderson  
Palmer College—Main Campus, Charleston  
Spartanburg Jr. College, Spartanburg  
University of South Carolina, Conway  
University of South Carolina—Florence, Florence  
University of South Carolina—Spartanburg, Spartanburg  
University of South Carolina—Union, Union

#### **SOUTH DAKOTA**

Freeman Jr. College, Freeman

#### **TENNESSEE**

Aquinas Jr. College, Nashville  
Columbia State Community College, Columbia  
Jackson State Community College, Jackson

#### **TEXAS**

Alvin Jr. College, Alvin  
Amarillo College, Amarillo  
Bee County College, Beeville  
Blinn College, Brenham  
Brazosport Jr. College, Freeport  
Central Texas College, Killeen  
Cisco Jr. College, Cisco  
Clarendon College, Clarendon  
College of the Mainland, Texas City  
Cooke County Jr. College, Gainesville  
Del Mar College, Corpus Christi  
El Centro College, Dallas  
Frank Phillips College, Borger  
Galveston Community College, Galveston  
Grayson County Jr. College, Denison  
Henderson County Jr. College, Athens  
Hill Jr. College, Hillsboro  
Howard County Jr. College, Big Spring  
Kilgore College, Kilgore  
Laredo Jr. College, Laredo

Lee College, Baytown  
McLennan Community College, Waco  
Navarro Jr. College, Corsicana  
Odessa College, Odessa  
Paris Jr. College, Paris  
San Antonio College, San Antonio  
San Jacinto College, Pasadena  
Southwest Texas Jr. College, Uvalde  
Tarrant County Jr. College, Fort Worth  
Temple Jr. College, Temple  
Texarkana College, Texarkana  
Texas Southmost College, Brownsville  
Weatherford College, Weatherford  
Wharton County Jr. College, Wharton

#### **UTAH**

College of Eastern Utah, Price  
Dixie College, St. George

#### **VERMONT**

Green Mountain College, Poultney  
Vermont Technical College, Randolph Center

#### **VIRGINIA**

Bluefield College, Bluefield  
Blue Ridge Community College, Weyers Cave  
Central Virginia Community College, Lynchburg  
Danville Community College, Danville  
John Tyler Community College, Chester  
Marymount College of Virginia, Arlington  
Northern Virginia Community College, Annandale  
Patrick Henry College, Martinsville  
Southern Sem. Jr. College, Buena Vista  
Southwest Virginia Community College, Richlands  
Thomas Nelson Community College, Hampton  
Tidewater Community College, Portsmouth  
University of Virginia--Eastern Shore Branch, Wallops Island  
Virginia Intermont College, Bristol

Virginia Western Community College, Roanoke  
Wytheville Community College, Wytheville

#### **WASHINGTON**

Big Bend Community College, Moses Lake  
Centralia College, Centralia  
Clark College, Vancouver  
Edmonds Community College, Lynnwood  
Everett Community College, Everett  
Fort Steilacoom Community College, Tacoma  
Grays Harbor College, Aberdeen  
Green River Community College, Auburn  
Highline Community College, Midway  
Lower Columbia College, Longview  
Olympic College, Bremerton  
Peninsula College, Port Angeles  
Seattle Central Community College, Seattle  
Shoreline Community College, Seattle  
Skagit Valley College, Mount Vernon  
Walla Walla Community College, Walla Walla  
Wenatchee Valley College, Wenatchee  
Yakima Valley College, Yakima

#### **WEST VIRGINIA**

Potomac State College of West Virginia University, Keyser  
West Virginia Institute of Technology, Montgomery

#### **WISCONSIN**

Madison Vocational-Technical & Adult School, Madison  
Milwaukee Technical College, Milwaukee

#### **WYOMING**

Casper College, Casper  
Central Wyoming College, Riverton  
Eastern Wyoming College, Torrington  
Northwest Community College, Powell  
Sheridan College, Sheridan  
Western Wyoming Community College, Rock Springs

## Appendix D

### Vocational-Technical Schools

#### ALABAMA

Alabama School of Trades, Gadsden  
Bessemer State Technical Institute, Bessemer  
Calhoun County Vocational-Technical School, Jacksonville  
Carver State Technical Trade School, Mobile  
MacArthur State Technical Institute, Opp  
Opelika State Vocational-Technical Institute, Opelika  
Southwest State Technical Institute, Mobile

#### ARIZONA

DeVry Institute of Technology, Phoenix

#### ARKANSAS

Crowley's Ridge Vocational-Technical School, Forrest City

#### CALIFORNIA

Center for Early Education, Los Angeles  
Cogswell Poly College, San Francisco  
Don Bosco Technical Institute, Rosemead  
West Valley Occupational Center, Woodland Hills

#### COLORADO

Boulder Valley Area Vocational-Technical Center, Boulder  
Colorado College of Medical and Dental Assistants, Denver

#### CONNECTICUT

Henry Abbott Regional Vo.-Tech. School, Danbury  
Horace C. Wilcox Regional Vo.-Tech. School, Meriden  
Norwalk State Technical College, Norwalk  
Thames Valley State Technical College, Norwich  
Windham Regional Technical School, Willimantic

#### DELAWARE

Sussex County Vocational-Technical Center, Georgetown

#### FLORIDA

Lewis M. Lively Vocational-Technical School, Tallahassee  
Massey Business College, Jacksonville  
Mid-Florida Technical Institute, Orlando

#### GEORGIA

Albany Area Technical School—Monroe Division, Albany  
Athens Area Technical School, Athens  
Atlanta Area Technical School, Atlanta  
Augusta Area Technical School, Augusta  
Lanier Area Technical School, Oakwood  
Macon Area Vocational-Technical School, Macon  
Marietta-Cobb Area Vo.-Tech. School, Marietta  
Moultrie Area Vocational-Technical School, Moultrie  
Pickens County Area Vocational & Technical Schools, Jasper  
South Georgia Vocational & Technical School, Americus  
Swainsboro Area Vocational-Technical School, Swainsboro  
Thomas Area Vocational & Technical School, Thomasville  
Valdosta Area Vocational-Technical School, Valdosta  
Walker Co. Area Vocational & Technical School, Rock Spring

#### HAWAII

Hawaii Technical School, Hilo  
Honolulu Business College, Honolulu

#### IDAHO

Independent School District No. 1, Lewiston

#### ILLINOIS

Allied Institute of Technology, Chicago  
Quincy Technical School, Quincy

#### INDIANA

Indiana Vocational-Technical College, Indianapolis  
Indiana Vocational-Technical College, South Bend  
North Lawrence Vocational School, Bedford  
Southeastern Indiana Vocational School, Versailles

#### IOWA

Area I Vocational-Technical School, Calmar  
Hawkeye Institute of Technology, Waterloo  
Iowa Technical Area XV Community College, Ottumwa  
Northwest Iowa Vocational School—Area IV, Sheldon

## **KANSAS**

Flint Hills Area Vocational-Technical School, Emporia  
Haskell Institute, Lawrence  
Kansas City Area Vocational-Technical School, Kansas City  
Kansas Technical Institute, Salina  
Kaw Area Vocational-Technical School, Topeka  
Liberal Area Vocational-Technical School, Liberal  
Manhattan Area Vocational-Technical School, Manhattan  
North Central Area Vocational-Technical School, Beloit  
Northeast Kansas Area Vocational-Technical School, Atchison  
Northwest Kansas Vocational-Technical School, Goodland  
Salina Area Vocational-Technical School, Salina  
Southeast Kansas Vocational-Technical School, Coffeyville  
Southwest Kansas Vocational-Technical School, Dodge City  
Wichita Area Vocational-Technical School, Wichita

## **KENTUCKY**

Bowling Green Area Vocational School, Bowling Green  
Central Kentucky Area Vocational School, Lexington  
Hazard Area Vocational-Technical School, Hazard  
Jefferson Area Vocational-Technical School, Jeffersontown  
Lexington Technical Institute, Lexington  
Louisville Technical Institute, Louisville  
Madisonville Area Vocational School, Madisonville  
Northern Kentucky Area Vocational School, Covington  
Owensboro Vocational School, Owensboro

## **LOUISIANA**

Baton Rouge Vocational-Technical School, Baton Rouge  
Capitol Area Vocational School, Baton Rouge  
Central Area Trade School, Natchitoches  
Delta Area Vocational School, Monroe  
North Central Area Vocational-Technical School, Farmerville  
Ouachita Valley Technical Institute, West Monroe  
Sabine Valley Vocational-Technical School, Many  
Shreveport-Bossier Vo.-Tech., Shreveport  
South Louisiana Trade School, Houma  
Sowela Technical Institute, Lake Charles  
T. H. Harris Vocational-Technical School, Opelousas

## **MAINE**

Central Maine Vocational-Technical Institute, Auburn  
Eastern Maine Vocational-Technical Institute, Bangor  
Northern Maine Vocational-Technical Institute, Presque Isle  
Southern Maine Vocational-Technical Institute, South Portland

## **MARYLAND**

Carver Vocational-Technical High School, Baltimore

## **MASSACHUSETTS**

Blue Hills Regional Technical School, Canton  
Boston Vocational-Technical Institute, Dorchester  
Fall River Area Vocational-Technical School, Fall River  
Franklin Institute of Boston, Boston  
Greater Lawrence Regional Vo.-Tech. Inst., Andover  
Quincy Vocational-Technical School, Quincy  
Worcester Industrial Technical Institute, Worcester

## **MINNESOTA**

Alexandria Area Technical School, Alexandria  
Anoka Area Vocational-Technical School, Anoka  
Austin Area Vocational-Technical School, Austin  
Bemidji Area Vocational Technical School, Bemidji  
Brainerd Area Vocational-Technical Institute, Brainerd  
Canby Vocational-Technical School, Canby  
Detroit Lakes Vocational-Technical School, Detroit Lakes  
Duluth Area Institute of Technology, Duluth  
Eveleth Area Vocational-Technical School, Eveleth  
Faribault Area Vo.-Tech., Faribault  
Granite Falls Area Technical Institute, Granite Falls  
Hibbing Area Technical Institute, Hibbing  
Jackson Area Vocational-Technical Institute, Jackson  
Mankato Area Vocational-Technical Institute, North Mankato  
Minneapolis Vocational-Technical School, Minneapolis  
Moorhead Area Technical Institute, Moorhead  
Pipestone Area Vocational-Technical Institute, Pipestone  
Rochester Area Vocational-Technical Institute, Rochester  
St. Cloud Area Vocational-Technical School, St. Cloud  
St. Paul Technical-Vocational Institute, St. Paul  
Staples Area Vocational-Technical School, Staples  
Thief River Falls Area Vo.-Tech. School, Thief River Falls

Willmar Area Vocational-Technical Institute, Willmar  
Winona Area Technical School, Winona  
University of Minnesota Technical College, Crookston

#### **MISSISSIPPI**

Biloxi Municipal Separate School District, Biloxi  
Golden Triangle Vocational-Technical Center, Columbus

#### **MISSOURI**

Brookfield R-III Technical-Vocational School, Brookfield  
Cape Girardeau Vocational Technical School, Cape Girardeau  
Central Technical Institute, Kansas City  
Franklin Technical School, Joplin  
Kirksville Area Vocational-Technical School, Kirksville  
Linn Technical College, Linn  
Mexico Area Vocational-Technical School, Mexico  
Monett Area Vocational-Technical School, Monett  
Southeast Missouri Vocational-Technical School, Sikeston  
Southwest Missouri Area Vocational-Technical School, Neosho  
Tri-County Technical School, Eldon

#### **MONTANA**

Helena Vocational-Technical Center, Helena  
Missoula Technical Center, Missoula

#### **NEBRASKA**

Central Nebraska Technical College, Hastings  
Nebraska Vocational-Technical School, Milford  
Western Nebraska Vocational-Technical School, Sidney

#### **NEVADA**

Nevada Technical Institute, Reno  
Southern Nevada Vocational-Technical Center, Las Vegas

#### **NEW HAMPSHIRE**

New Hampshire Vocational Institute, Berlin  
New Hampshire Vocational Institute, Claremont  
New Hampshire Vocational Institute, Concord  
New Hampshire Vocational Institute, Laconia

#### **NEW JERSEY**

Cape May County Vocational-Technical Center, Cape May  
Essex County Vocational & Technical School, East Orange  
Essex County Vocational & Technical School, Irvington

Essex County Vocational & Technical School, Newark  
Salem County Technical Institute, Penns Grove  
Somerset County Technical Institute, Raritan  
Somerset County Vocational-Technical Schools, Somerville  
Sussex County Vocational-Technical School, Sparta  
Union County Technical Institute, Scotch Plains  
Warren County Technical Institute, Washington

#### **NEW MEXICO**

North American Technical Institute, Albuquerque

#### **NEW YORK**

Academy of Aeronautics, Flushing  
Board of Coop. Ed. Serv. Tech. Centers, Yorktown Heights  
Lewis A. Wilson Technological Center, Dix Hills  
RCA Institutes, Inc., New York  
SUNY Ranger School of Forestry, Wanakena  
Voorhees Technical Institute, New York

#### **NORTH CAROLINA**

Anson Technical Institute, Ansonville  
Asheville-Buncombe Technical Institute, Asheville  
Bladen Technical Institute, Elizabethtown  
Caldwell Technical Institute, Lenoir  
Cape Fear Technical Institute, Wilmington  
Carteret Technical Institute, Morehead City  
Catawba Valley Technical Institute, Hickory  
Cleveland County Technical Institute, Shelby  
Craven County Technical Institute, New Bern  
Durham Technical Institute, Durham  
Edgecombe County Technical Institute, Tarboro  
Fayetteville Technical Institute, Fayetteville  
Forsyth Technical Institute, Winston-Salem  
Guilford Technical Institute, Jamestown  
Haywood Technical Institute, Clyde  
James Sprunt Institute, Kenansville  
Montgomery Technical Institute, Troy  
Nash Technical Institute, Rocky Mount  
Pamlico Technical Institute, Alliance  
Pitt Technical Institute, Greenville  
Randolph Technical Institute, Asheboro  
Richmond Technical Institute, Hamlet

Rowan Technical Institute, Salisbury  
Sampson Technical Institute, Clinton  
Technical Institute of Alamance, Burlington  
Tri-County Technical Institute, Murphy  
W. W. Holding Technical Institute, Raleigh  
Wilson County Technical Institute, Wilson

#### **NORTH DAKOTA**

Hanson Mechanical Trade School, Fargo

#### **OHIO**

Canton Area Technical School, Canton  
Clark County Technical Institute, Springfield  
Columbus Technical Institute, Columbus  
Four County Technical Institute, Archbold  
Kent State University--Ashtabula Branch Campus, Ashtabula  
Penta Technical Institute, Perrysburg  
Vanguard Technical Institute, Fremont

#### **OKLAHOMA**

Kiamichi Area Vo.-Tech. School Dist. No. 7, Wilburton  
Oklahoma School of Bus., Account., Law & Finance, Tulsa  
Oklahoma State Tech. Institute, Okmulgee  
Oklahoma State University--Tech. Institute, Oklahoma City

#### **OREGON**

Chemeketa Community College, Salem  
Oregon Technical Institute, Klamath Falls

#### **PENNSYLVANIA**

Altoona Area Vocational-Technical School, Altoona  
Bethlehem Area Vocational-Technical School, Bethlehem  
Bok Area Vocational-Technical School, Philadelphia  
Bucks County Technical School, Fairless Hills  
Central Westmoreland Area Vo.-Tech. School, Youngwood  
Connelley Vocational-Technical High School, Pittsburgh  
Dobbins Area Vocational-Technical School, Philadelphia  
Eastern Northampton Co. Vo.-Tech. School, Easton  
Eastern Westmoreland Vocational-Technical School, Latrobe  
Harrisburg Area Community College, Harrisburg  
Lebanon County Area Vocational-Technical School, Lebanon

Mastbaum Area Vocational-Technical School, Philadelphia  
North Montco Area Vocational-Technical School, Lansdale  
Northumberland Co. Vocational-Technical School, Shamokin  
Steel Valley Technical School, West Mifflin  
Upper Bucks County Vocational-Technical School, Perkasie  
West Side Area Vocational-Technical School, Kingston

#### **RHODE ISLAND**

Coventry Vocational-Technical Facility, Coventry

#### **SOUTH CAROLINA**

Berkeley-Charleston-Dorchester Tech. Ed. Ctr., N. Charleston  
Chesterfield-Marlboro Technical Education Center, Cheraw  
Florence-Darlington Technical Education Center, Florence  
Greenville Technical Education Center, Greenville  
Orangeburg-Calhoun Technical Education Center, Orangeburg  
Piedmont Technical Education Center, Greenwood  
Richland Technical Education Center, Columbia  
Spartanburg County Technical Education Center, Spartanburg  
Sumter Area Technical Education Center, Sumter  
Tri-County Technical Education Center, Pendleton  
York County Technical Education Center, Rock Hill

#### **SOUTH DAKOTA**

Lake Area Vocational-Technical School, Watertown

#### **TENNESSEE**

Athens State Area Vocational-Technical School, Athens  
Bristol-Sullivan Technical School, Bristol  
Chattanooga State Technical Institute, Chattanooga  
Franklin County Technical School, Winchester  
Hume Fogg Technical School, Nashville  
Memphis Area Vocational-Technical School, Memphis  
Morristown Area Vocational-Technical School, Morristown  
Shelbyville Area Vocational-Technical School, Shelbyville  
State Technical Institute at Memphis, Memphis  
Tri-Cities State Area Vocational-Technical School, Blountville  
Vocational-Technical Teacher Institute, Oak Ridge

#### **TEXAS**

Angelina College, Lufkin

**UTAH**

Utah Technical College at Provo, Provo  
Utah Technical College at Salt Lake, Salt Lake City

**VERMONT**

St. Johnsbury Trade School, St. Johnsbury

**VIRGINIA**

Peninsula Vocational-Technical Education Center, Hampton  
Richmond Technical Center, Richmond

**WASHINGTON**

Bellingham Technical School, Bellingham  
Clover Park Vocational-Technical School, Tacoma  
Olympia Vocational-Technical Institute, Olympia  
Tacoma Vocational-Technical Institute, Tacoma

**WEST VIRGINIA**

James Ramsey Vocational-Technical Center, Martinsburg  
Marion County Vocational-Technical Center, Fairmont

McKinley Vocational & Technical Center, Wheeling  
Raleigh County Vocational-Technical Center, Beckley

**WISCONSIN**

Appleton Vocational, Technical, & Adult School, Appleton  
Eau Claire Vocational, Technical, & Adult Education, Eau Claire  
Fond du Lac Technical Institute—District 10, Fond du Lac  
Fox Valley Technical Institute, Neshanic  
Fox Valley Technical, Oshkosh  
Janesville Vocational, Technical, & Adult Education, Janesville  
Kenosha Technical Institute, Kenosha  
Lakeshore Technical Institute, Sheboygan  
Lakeshore Vocational & Technical School, Manitowish  
North Central Technical Institute, Wausau  
Racine Technical Institute, Racine  
Rice Lake School of Vo.-Tech. & Adult Education, Rice Lake  
Superior Technical Institute, Superior  
Waukesha Vocational, Technical, & Adult School, Waukesha  
West Allis Vocational, Technical, & Adult School, West Allis  
Western Wisconsin Technical Institute, La Crosse  
Wisconsin Rapids Vo., Tech., & Adult School, Wisconsin Rapids



## Appendix E

### Institutions Returning Usable Student Follow-Up Data

Alpena Community College  
Alpena, Michigan

American River College  
Sacramento, California

Arapahoe Jr. College  
Littleton, Colorado

Arizona Western College  
Yuma, Arizona

Borough of Manhattan Community College  
New York, New York

Brandywine College  
Wilmington, Delaware

Bucks County Technical School  
Fairless Hills, Pennsylvania

Butler County Community Jr. College  
El Dorado, Kansas

Canby Vocational-Technical School  
Canby, Minnesota

Central Piedmont Community College  
Charlotte, North Carolina

Cerritos Jr. College District, California  
Norwalk, California

College of San Mateo  
San Mateo, California

Copiah-Lincoln Jr. College  
Wesson, Mississippi

Eastern New Mexico University, Roswell Campus  
Roswell, New Mexico

Ellsworth Jr. College  
Iowa Falls, Iowa

Florida Jr. College at Jacksonville  
Jacksonville, Florida

Forsyth Technical Institute  
Winston-Salem, North Carolina

Greenville Technical Education Center  
Greenville, South Carolina

Harrisburg Area Community College  
Harrisburg, Pennsylvania

Hazard Area Vocational-Technical School  
Hazard, Kentucky

Holmes Jr. College  
Goodman, Mississippi

Juneau-Douglas Community College  
Juneau, Alaska

Lehigh County Community College  
Allentown, Pennsylvania

Los Angeles City College  
Los Angeles, California

Macomb County Community College  
Warren, Michigan

Madison Area Technical College  
Madison, Wisconsin

Massachusetts State-Aided Vocational Schools

Milwaukee Technical College  
Milwaukee, Wisconsin

Minneapolis Vocational-Technical School  
Minneapolis, Minnesota

New York City Community College  
New York, New York

North Dakota State School of Science  
Wahpeton, North Dakota

North Idaho Jr. College  
Coeur d'Alene, Idaho

North Montco Area Vocational-Technical School  
Lansdale, Pennsylvania

Northwest Iowa Vocational School  
Sheldon, Iowa

Paducah Tilghman Area Vocational-Technical School  
Paducah, Kentucky

St. Petersburg Jr. College  
St. Petersburg, Florida

San Diego Unified, Community College  
San Diego, California

Southern Maine Vocational-Technical Institute  
South Portland, Maine

Southwest State Technical Institute  
Mobile, Alabama

Spoon River College  
Canton, Illinois

State Board for Vocational Education  
Denver, Colorado

Union County Technical Institute  
Scotch Plains, New Jersey

University of Minnesota, Project Mini-Score  
Minneapolis, Minnesota

Vermont Technical College  
Randolph Center, Vermont

Wisconsin Area Board of Vo., Tech., & Adult Educ., District 11

### ACT Research Reports

This report is the thirty-seventh in a series published by the Research and Development Division of The American College Testing Program. The first 26 research reports have been deposited with the American Documentation Institute, ADI Auxiliary Publications Project, Photoduplication Service, Library of Congress, Washington, D. C. 20540. Photocopies and 35 mm. microfilms are available at cost from ADI; order by ADI Document number. Advance payment is required. Make checks or money orders payable to: Chief, Photoduplication Service, Library of Congress. Beginning with Research Report No. 27, the reports have been deposited with the National Auxiliary Publications Service of the American Society for Information Science (NAPS), c/o CCM Information Sciences, Inc., 22 West 34th Street, New York, New York 10001. Photocopies and 35 mm. microfilms are available at cost from NAPS. Order by NAPS Document number. Advance payment is required. Printed copies may be obtained, if available, from the Research and Development Division, The American College Testing Program. The reports are indexed by the *Current Contents, Education* Institute for Scientific Information, 325 Chestnut Street, Philadelphia, Pennsylvania 19106.

The reports since January 1969 in this series are listed below. A listing of previous reports is included in each of several items published by The American College Testing Program: *Your College Freshmen* (pp. 158-160), *Your College-Bound Students* (pp. 107-109). A complete list of the reports can be obtained by writing to the Research and Development Division, The American College Testing Program, P. O. Box 168, Iowa City, Iowa 52240.

- No. 28 *A Description of Graduates of Two-Year Colleges*, by L. L. Baird, J. M. Richards, Jr. & L. R. Shevel (NAPS No. 11306; photo, \$3.00; microfilm \$1.00)
- No. 29 *An Empirical Occupational Classification Derived from a Theory of Personality and Intended for Practice and Research*, by J. L. Holland, D. R. Whitney, N. S. Cole & J. M. Richards, Jr. (NAPS No. 00505; photo, \$3.00; microfilm, \$1.00)
- No. 30 *Differential Validity in the ACT Tests*, by N. S. Cole (NAPS No. 00722; photo, \$3.00; microfilm, \$1.00)
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- No. 33 *Can Financial Need Analysis Be Simplified?* by M. D. Orwig & P. K. Jones (NAPS No. not available at this time.)
- No. 34 *Research Strategies in Studying College Impact*, by K. A. Feldman (NAPS No. not available at this time.)
- No. 35 *An Analysis of Spatial Configuration and Its Application to Research in Higher Education*, by N. S. Cole & J. W. L. Cole (NAPS No. not available at this time.)
- No. 36 *Influence of Financial Need on the Vocational Development of College Students*, by A. R. Vander Well (NAPS No. not available at this time.)