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ABSTRACT

This document presents information from and about two 1999 surveys conducted by the National Center for Education Statistics: "Vocational Programs in Secondary Schools" and "Occupational Programs in Postsecondary Education Institutions." The first 25% of the document consists of an introduction and selected findings. The introduction provides overviews of the various policy initiatives that have intensified the push for standards and accountability in occupational education and the methods and assumptions underlying the two surveys. The selected findings focus on the following three areas: (1) use of skill competencies (large proportions of secondary and postsecondary schools had developed or adopted skill competency lists for some or all of their programs); (2) industry input in skill competency development (substantial proportions of secondary and postsecondary institutions had at least some industry input in developing skill competency lists); and (3) skill certificates and industry-related credentials (half of secondary schools and most postsecondary institutions offering one or more occupational programs reported that at least one of their programs prepared students to earn skill certificates or work toward industry-related credentials). The remainder of the document contains 35 tables summarizing the study findings and three appendixes that include the following: methodology and technical notes; and survey instruments examining vocational programs in secondary and postsecondary schools. (MN)

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E.D. TAB **February 2000**

Occupational Programs and the Use of Skill Competencies at the Secondary and Postsecondary Levels, 1999

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Occupational Programs and the Use of Skill Competencies at the Secondary and Postsecondary Levels, 1999

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INTRODUCTION

This E.D. TAB report presents part of the data collected from two 1999 surveys: *Vocational Programs in Secondary Schools* and *Occupational Programs in Postsecondary Education Institutions*.[1] The surveys were conducted to provide the Office of Vocational and Adult Education (OVAE) with national estimates on occupational program activities. The summaries in this report focus on the use of skill competency lists in occupational programs, the extent of industry involvement in developing or adopting the competency lists, and the credentialing of skill proficiencies.[2]

The surveys on occupational programs were conducted in response to an increasing national concern over the gap between existing workforce skills and expanding workplace demands. That concern was triggered by the "workforce crisis" described in *America's Choice: High Skills or Low Wages* (Commission on the Skills of the American Workforce 1990). It was also spurred by the recognition that with changing technology and work organizations, schools need to do more to equip students with the more sophisticated and higher level skills that today's workplace requires (Grubb 1995). These concerns have set in motion a growing demand for clearer and higher standards in occupational education, and increased industry input in the development of those standards (Lankard 1995).

The push for standards and accountability in occupational education was also intensified by several policy initiatives over the past decade. The 1990 Carl D. Perkins Vocational and Applied Technology Act created a requirement that states establish systems of standards and measures to assess vocational education programs. The 1990 Act also authorized federal support for business and education standards projects. In the early 1990s, the Departments of Education and Labor supported 22 projects to create skill standards for a wide variety of occupations and industries. The National Skills Standards Board (NSSB), authorized in 1994 by the Goals 2000: Educate America Act, builds on these projects and the efforts of many other industrial and occupational groups that have established skill standards. Its purpose is to stimulate the development of a voluntary national system of skill standards by creating a framework of career clusters within which skill standards can be developed. To achieve this goal, NSSB supports partnerships of business, trade associations, education, community organizations, and other stakeholders to develop skill standards. It also endorses skill standards systems developed by industry-labor-education partnerships.

The 1998 Perkins Act builds on the above efforts by expanding the requirements for states to develop performance accountability systems, including state-level measures of student skill attainment. In keeping with the legislation, performance accountability systems are intended to:

- Include four core indicators that measure student performance and post-vocational education experiences in further education, training, and employment;

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[1] This report presents an early release of the data for Office of Vocational and Adult Education (OVAE) to meet its Government Performance and Results Act (GPRA) reporting requirements. The full report will be published in late winter, 2000.

[2] For the secondary survey, a vocational program was defined as a sequence of courses designed to prepare students for an occupation (e.g., nurses' aide) or occupation area (e.g., health care) that typically requires education below the baccalaureate level. This definition did not include career exploration or other introductory courses that prepare students for adult life or for work in general (e.g., consumer and homemaking, industrial arts). A similar definition was used at the postsecondary level, except that a noncredit occupational program could have consisted of only one course or more than one course. For both surveys, a skill competency was defined as a concept, skill, or attitude that is essential to an occupation; the level of attainment or performance established for a skill competency is a skill standard. Because these terms tend to be used interchangeably in practice, the term "skill competencies" was used to refer to both skill competencies and skill standards.

- Set performance levels for the four vocational outcomes, including student attainment of skill proficiencies; and

- Measure and report the performance of the states on the indicators.

Increased accountability is also sought at the federal level. The Government Performance and Results Act of 1993 (GPRA) requires that federal departments and agencies prepare annual performance goals, starting with a performance plan for the 1999 fiscal year (Groszyk 1995). To meet its GPRA reporting requirements, OVAE is required to submit an annual report comparing the status of occupational programs with the goals identified in its annual performance plan. One indicator of occupational program activities listed in OVAE's 1998–1999 Annual Plan is the following:

> *Skill Proficiencies. By fall 2000, there will be an increasing proportion of vocational programs with skill competencies and related assessments, and with industry-recognized skill certificates in secondary and postsecondary institutions.*[3]

The summary tables in this report present statistics relevant to this OVAE performance indicator. It should be noted that although skill competencies are often used as or with skill standards, the focus of the surveys is on *skill competencies*, and the measure of skill standards includes the use of *any* skill competency lists. Typically, these competencies might incorporate skill standards that were developed by the state and/or those developed locally through consultation between teachers and local employers. Although some programs might have also integrated existing national standards,[4] the use of such standards cannot be determined from these surveys. The surveys also focus on the role of industry in the development or adoption of skill competencies. Industry involvement is critical to ensure that students are learning the skills currently required by industry, particularly in fast-changing industries such as information technology, health, and manufacturing.

Secondary schools were defined as regular and vocational schools that include grades 11 and 12 (i.e., schools that may offer upper level occupational programs), and the schools were asked about program activities in 28 selected occupations within 6 broad occupational areas. The postsecondary survey included 2-year and less-than-2-year postsecondary institutions with Title IV eligibility, and the institutions were asked to report on 32 similar occupations (see appendix D for the list of occupations and occupation areas). For the secondary school survey, questionnaires were mailed to a national sample of 1,200 public secondary schools, comprising 600 vocational schools (including area or regional vocational schools) and 600 comprehensive schools. A total of 508 vocational and 567 comprehensive schools responded to the survey. The resulting secondary sample represents about 1,800 vocational schools and 15,000 comprehensive schools (table 1). For the postsecondary survey, some 1,289 less-than-4-year institutions, comprising 689 2-year and 600 less-than-2-year institutions, were sampled. A total of 595 2-year institutions and 505 less-than-2-year institutions completed the survey. The postsecondary sample represents about 2,000 2-year and 1,600 less-than-2-year institutions (table 1).[5]

The secondary school survey was conducted through the National Center for Education Statistics (NCES) Fast Response Survey System (FRSS), and the postsecondary survey was conducted through the NCES Postsecondary Education Quick Information System (PEQIS) during spring 1999. FRSS and

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[3] The Office of Vocational and Adult Education (OVAE), Annual Performance Plan, 1998–1999.

[4] Although there are some existing national standards (e.g., the ASE automobile standards), the NSSB skill standards do not yet exist.

[5] National estimates are based on adjustments for out-of-scope schools and reported school type for the secondary sample, and out-of-scope institutions and recent school closings for the postsecondary sample. See appendix B for more details on methodology.

PEQIS are survey systems designed to collect small amounts of issue-oriented data with minimal burden on respondents and within a relatively short time frame. Survey data have been weighted to produce national estimates. Significant differences are presented by school type (vocational, comprehensive) for the FRSS survey, and level of institution (2-year, less-than-2-year) for the PEQIS survey. All comparative statements made in this report have been tested for statistical significance through chi-square tests or *t*-tests adjusted for multiple comparisons using the Bonferroni adjustment and are significant at the 0.05 level or better. However, not all significant comparisons have been presented in the report.

SELECTED FINDINGS

This report examines survey data on occupational program activities at the secondary and less-than-4-year postsecondary levels. It presents data on the use of skill competency lists for occupational programs, industry input in developing or adopting those competencies, and the credentialing of skill proficiencies. The findings on these indicators are based on schools and institutions that offered one or more occupational programs that prepared students for occupations examined in the surveys.

Overall, a majority (66 percent) of secondary schools offered one or more occupational programs that prepared students for the selected occupations: 35 percent of the schools offered 1 to 5 programs, 18 percent offered 6 to 10 programs, and another 13 percent offered more than 10 programs (table 2). However, about one-third (34 percent) of the schools did not offer any program that prepare students for these occupations.[6] On average, vocational schools offered more occupational programs than did comprehensive schools; for example, 44 percent of vocational schools compared with 9 percent of comprehensive schools offered more than 10 programs for the listed occupations.

A large majority of less-than-4-year postsecondary institutions (90 percent) offered one or more programs for the selected occupations (table 2). About half of the institutions offered 1 to 5 programs, another 11 percent offered 6 to 10 programs, and an additional 27 percent offered more than 10 programs. Two-year institutions offered considerably more programs than less-than-2-year institutions; for example, 43 percent of 2-year institutions compared with 5 percent of less-than-2-year institutions offered more than 10 programs that prepared students for the occupations. The large differences between 2-year and less-than-2-year institutions in the number of programs offered may skew the results for analyses based on "all of their programs" or "at least half of their programs," i.e., since less-than-2-year institutions offer fewer programs, it is easier to meet the criteria for "all of their programs" or "at least half of their programs." For this reason, comparisons between 2-year and less-than-2-year institutions will be discussed in relation to whether institutions meet the various criteria for "at least one of their programs."

Use of Skill Competencies

To provide a description of the use of skill competencies in occupational programs, respondents in both surveys were asked whether skill competency lists had been developed or adopted for programs that prepare students for each occupation considered in the surveys.

Most secondary schools with one or more of the relevant occupational programs had developed or adopted skill competency lists for their programs.

- About three-fourths (77 percent) of the schools had developed or adopted skill competency lists for all of their programs, 91 percent had competencies for at least half their programs, and 94 percent had them for at least one program (table 3).

[6] One possible reason for this finding is that the definition of vocational programs used in this survey excluded lower level vocational programs that typically do not prepare students for at least entry-level jobs within the occupations considered in the survey. For example, it excluded career exploration and other introductory courses that prepare students for adult life or work in general (e.g., industrial arts). Another explanation is that some of the schools might be sending their students to area vocational schools for technical education training.

- A large majority of secondary schools had developed or adopted skill competencies for programs offered in each of the six occupation areas. For example, 85 percent of the schools had competencies for all of their programs in business and marketing occupations, and 89 percent had competencies for at least one program in this occupation area (table 4).

- Vocational schools were somewhat more likely than comprehensive schools to develop or adopt skill competencies for at least one program offered (99 versus 93 percent; table 3). However, differences among vocational and comprehensive schools were not significant when all their programs or at least half of their programs were considered.

As with secondary schools, a large proportion of 2-year and less-than-2-year postsecondary institutions with one or more of the relevant occupational programs reported that skill competency lists had been developed or adopted for their programs.

- Seventy-seven percent of the institutions had developed or adopted skill competencies for all of the programs offered, 89 percent for at least half the programs offered, and 93 percent for at least one program (table 5).

- A large majority of the institutions had skill competency lists for programs within each of the six occupation areas. For example, 75 percent had competencies for all of the programs offered for business and marketing occupations, and 82 percent used competencies for at least one program in the occupation area (table 6).

- There were no significant differences among 2-year and less-than-2-year institutions in the use of skill competencies for *at least one* program offered by the institution (92 compared with 96 percent; table 5). As pointed out earlier in this section of the report, large differences among 2-year and less-than-2-year institutions in the use of skill competencies for *all of their programs* or *at least half of their programs* are likely to be confounded by differences in the number of programs offered.

Industry Input in Skill Competency Development

Schools and postsecondary institutions were asked to indicate the extent of industry input in skill competency development, i.e., whether the skill competency lists were developed exclusively by individual course instructors, exclusively by group(s) of educators, primarily by educators with industry input, with about equal educator and industry input, or primarily/exclusively by industry. These variables were used to construct three measures of industry input: *at least some industry input, at least equal input,* and *primary or exclusive industry input.*[7]

Among secondary schools that offered one or more occupational programs for occupations covered in the study, a substantial proportion had *at least some industry input* in developing skill competency lists for their occupational programs. Relatively fewer schools indicated that industry was *at least equally*

[7] The last three points on the industry-input scale were combined to measure *at least some industry input* (i.e., industry provided either some input, equal input as educators, or primary or exclusive input in the development of skill competencies). The last two points on the scale were combined to measure *at least equal industry input* (i.e., industry was either as involved as educators, or it held primary or exclusive responsibility for developing skill competencies). The highest level of industry input is measured as *primary or exclusive industry input* (i.e., industry took primary or exclusive responsibility for developing or adopting skill competency lists).

involved as educators in the procedure. There were too few schools reporting *primary or exclusive industry input* to show the data in tables.[8]

- About half (52 percent) of the schools had *at least some industry input* in skill competency development for all the programs offered, 70 percent of schools had this level of industry input for at least half their programs, and 77 percent for at least one program (table 7).

- Compared with the proportion of schools reporting at least some industry input in skill competency development, relatively few schools indicated that industry was *at least equally involved* (as educators) in the procedure (tables 7 and 9). Seventeen percent of schools had at least equal industry input in skill competency development for all occupational programs offered, 25 percent for at least half their programs, and 35 percent for at least one program (table 9).

- Overall, the likelihood of industry involvement in skill competency development was greater for vocational than comprehensive schools; for instance, vocational schools were more likely than comprehensive schools to report *at least some industry input* in skill competency development for at least one program offered (93 versus 74 percent; table 7). This difference was consistent for programs that prepared students for each occupation area except health occupations and service occupations (table 8).

- Considering *at least equal industry input* in skill competency development, vocational schools were more likely than comprehensive schools to report this level of industry involvement in at least one program offered by the school (50 versus 32 percent; table 9). However, this difference was consistent only for programs that prepared students for building trades (39 versus 22 percent; table 10).[9]

As with secondary schools, a majority of 2-year and less-than-2-year postsecondary institutions with one or more relevant occupational programs reported *at least some industry input* in developing or adopting skill competency lists for their programs. Relatively fewer institutions indicated that industry was *at least equally involved* in the procedure, and the institutions with *primary or exclusive industry input* in skill competency development were too few to be reported.[10]

- About two-thirds of postsecondary institutions had *at least some industry input* in skill competency development for all programs offered, 77 percent reported this level of industry involvement for at least half their programs, and 83 percent for at least one program (table 11).

- Compared with the percentage of institutions reporting some industry input, fewer institutions offered programs for which industry was *at least equally involved* (as were educators) in skill competency development (tables 11 and 13). Twenty-six percent reported equal industry involvement for all occupational programs offered, 34 percent for at least half the programs, and 47 percent for at least one program (table 13).

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[8] For example, the proportion of schools with programs for which industry had primary or exclusive input in skill competency development was less than 5 percent for the programs that prepared students for 23 of the 28 occupations considered in the study.

[9] Because of the large standard errors surrounding some of the estimates of industry involvement in skill competency development for the various occupations, differences that may appear large may not be statistically significant.

[10] For example, the proportion of institutions with programs for which industry had primary or exclusive input in skill competency development was less than 10 percent for the programs that prepared students for 25 of the 32 occupations considered in the study.

- Two-year institutions were somewhat more likely than less-than-2-year institutions to report *at least some industry input* in skill competency development for *at least one program* offered (88 versus 78 percent, table 11). However, this difference did not hold when *equal industry input* was considered (table 13).

Credentialing: Skill Certificates and Industry-Related Credentials

The secondary school survey asked whether occupational programs for each occupation prepared students to earn skill certificates. Because credentialing procedures are different at the postsecondary level, postsecondary institutions were asked whether occupational programs prepared students to earn various credentials, including institutional-based credentials (e.g., associate's degrees) and industry-related credentials (e.g., company certificates, industry/trade certificates or diplomas and state registrations, licenses or certificates). Because of the focus of this report, only industry-related credentials are examined here.[11]

Of the secondary schools that offered one or more occupational programs, about half reported that at least one of their programs prepared students to earn skill certificates.

- About one-third (31 percent) of secondary schools reported that all their occupational programs prepared students to earn skill certificates, 43 percent provided this type of student credentialing for at least half of the programs offered, and 55 percent did so for at least one program (table 15).

- Vocational schools were more likely than comprehensive schools to offer programs that prepared students to earn skill certificates. For example, 52 percent of vocational schools compared with 27 percent of comprehensive schools reported that all of their programs prepared students to earn skill certificates (table 15). Similar differences were observed when programs for each occupation area were examined (table 16).

Most of the 2-year and less-than-2-year postsecondary institutions offering one or more occupational programs reported that students in at least one program could work toward industry-related credentials.

- About half (53 percent) of the institutions reported that students in all the programs offered could work toward industry-related credentials. In addition, 76 percent indicated that at least half of their programs prepared students for industry-related credentials, and 87 percent had at least one program that prepared students for those credentials (table 17).

- Overall, 2-year institutions did not differ significantly from less-than-2-year institutions in offering *at least one program* in which students could work toward industry-related credentials (table 17). However, for each occupation area (with the exception of service occupations), 2-year institutions were less likely than less-than-2-year institutions to report that students could work toward industry-related credentials for at least one program (table 18).

[11]Industry-related credentials include company certificates, industry/trade certificates or diplomas, and state registrations, licenses, or certificates.

Table 1.—Number and percent of public secondary schools and less-than-4-year postsecondary institutions in the study sample, and the estimated number and percent of public secondary schools and less-than-4-year postsecondary institutions the sample represents, by type of school and level of institution: 1999

School/institution	Respondent sample		National estimates	
	Number	Percent	Number	Percent
All public secondary schools*	1,078	100	16,821	100
Vocational	517	48	1,816	11
Comprehensive	561	52	15,005	89
All less-than-4-year postsecondary institutions	1,100	100	3,660	100
2-year	595	54	2,073	57
Less-than-2-year	505	46	1,587	43

*Definitions of public secondary schools as vocational and comprehensive were based on school type reported in the questionnaire.

NOTE: Percents are computed within each classification variable. Details may not sum to totals because of rounding. Estimates are based on public secondary schools with 11th and 12th grades (i.e., schools that may offer upper level vocational programs) and 2-year and less-than-2-year postsecondary institutions with Title IV eligibility.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 2.—Percent of public secondary schools and less-than-4-year postsecondary institutions offering occupational programs, by the number of programs offered for selected occupations, and by the type of school and level of institution: 1999

School/institution	Number of programs offered overall			
	0	1-5	6-10	More than 10
All public secondary schools[1]	34	35	18	13
Vocational[2]	2	15	39	44
Comprehensive	37	38	16	9
All less-than-4-year postsecondary institutions	10	52	11	27
2-year	12	30	15	43
Less-than-2-year	9	81	5	5

[1]Definitions of public secondary schools as vocational and comprehensive were based on school type reported in the questionnaire.

[2]Two percent of vocational schools did not offer any program that prepared students for the occupations examined in this survey. (These were focused vocational schools.)

NOTE: Percents are computed across each row, but may not sum to 100 because of rounding. Estimates are based on public secondary schools with 11th and 12th grades (i.e., schools that may offer upper level occupational programs) and 2-year and less-than-2-year postsecondary institutions with Title IV eligibility. For public secondary schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the postsecondary institutions, the programs could include credit and noncredit courses, and the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999

Table 2a.—Standard errors of the percent of public secondary schools and less-than-4-year postsecondary institutions offering occupational programs by the number of programs offered for selected occupations, and by the type of school and level of institution: 1999

School/institution	Number of programs offered overall			
	0	1-5	6-10	More than 10
All public secondary schools	2.1	2.1	1.7	0.9
Vocational	0.4	3.4	4.1	3.9
Comprehensive	2.3	2.4	1.8	1.0
All less-than-4-year postsecondary institutions	1.1	1.1	0.9	0.9
2-year	1.5	1.5	1.4	1.7
Less-than-2-year	1.2	1.3	0.5	0.4

NOTE: Estimates are based on public secondary schools with 11th and 12th grades (i.e., schools that may offer upper level occupational programs) and 2-year and less-than-2-year postsecondary institutions with Title IV eligibility. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the postsecondary institutions, the programs could include credit and noncredit courses, and the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999

Table 3.—Percent of public secondary schools developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by school type: 1999

Schools had developed or adopted skill competency lists for:	Percent of all schools*	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	51	77	84	76
At least half of their occupational programs.....	61	91	96	90
At least one of their occupational programs.....	63	94	99	93

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 3a.—Standard errors of the percent of public secondary schools developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by school type: 1999

Schools had developed or adopted skill competency lists for:	Percent of all schools	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	2.1	2.3	3.8	2.6
At least half of their occupational programs.....	2.1	1.5	1.9	1.8
At least one of their occupational programs.....	2.1	1.2	1.0	1.5

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 4.—Percent of public secondary schools developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and school type: 1999

Schools had developed or adopted skill competency lists for:	Percent of all schools*	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	48	85	90	84
Technical occupations	33	83	93	81
Mechanical occupations	28	89	95	87
Building trades	31	85	94	82
Health/life sciences occupations	30	94	97	93
Service occupations	29	90	96	88
At least one occupational program offered in:				
Business and marketing occupations	50	89	92	89
Technical occupations	35	88	94	86
Mechanical occupations	29	91	97	89
Building trades	32	89	97	86
Health/life sciences occupations	30	95	99	94
Service occupations	30	91	98	90

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 4a.—Standard errors of the percent of public secondary schools developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and school type: 1999

Schools had developed or adopted skill competency lists for:	Percent of all schools	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	2.3	2.0	4.2	2.2
Technical occupations	1.8	2.5	2.5	3.2
Mechanical occupations	1.6	2.1	2.1	2.8
Building trades	1.8	2.4	2.8	3.1
Health/life sciences occupations	1.6	1.6	1.3	2.2
Service occupations	1.3	2.6	1.3	3.4
At least one occupational program offered in:				
Business and marketing occupations	2.5	1.8	4.2	1.9
Technical occupations	1.7	2.1	2.5	2.6
Mechanical occupations	1.6	2.0	2.1	2.5
Building trades	1.8	2.0	1.9	2.7
Health/life sciences occupations	1.6	1.4	1.3	1.9
Service occupations	1.3	2.3	1.3	3.1

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 5.—Percent of less-than-4-year postsecondary institutions developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by level of institution: 1999

Institutions had developed or adopted skill competency lists for:	Percent of all institutions*	Percent of institutions with one or more occupational programs		
		All	2-year	Less-than-2-year
All of their occupational programs.....	69	77	66	91
At least half of their occupational programs.....	79	89	83	95
At least one of their occupational programs.....	84	93	92	96

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 5a.—Standard errors of the percent of less-than-4-year postsecondary institutions developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by level of institution: 1999

Institutions had developed or adopted skill competency lists for:	Percent of all institutions	Percent of institutions with one or more occupational programs		
		All	2-year	Less-than-2-year
All of their occupational programs.....	1.4	1.3	2.1	1.7
At least half of their occupational programs.....	1.4	1.1	1.9	1.4
At least one of their occupational programs.....	1.3	0.9	1.5	1.4

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 6.—Percent of less-than-4-year postsecondary institutions developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and level of institution: 1999

Institutions had developed or adopted skill competency lists for:	Percent of all institutions*	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	40	75	70	92
Technical occupations	36	77	75	87
Mechanical occupations	24	81	78	97
Building trades	23	84	82	96
Health/life sciences occupations	46	85	82	94
Service occupations	47	81	72	94
At least one occupational program offered in:				
Business and marketing occupations	44	82	79	94
Technical occupations	40	86	84	91
Mechanical occupations	26	88	86	99
Building trades	24	90	88	99
Health/life sciences occupations	50	92	90	97
Service occupations	50	87	82	94

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 6a.—Standard errors of the percent of less-than-4-year postsecondary institutions developing or adopting skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and level of institution: 1999

Institutions had developed or adopted skill competency lists for:	Percent of all institutions	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	1.6	1.9	2.4	2.1
Technical occupations	1.3	1.5	1.9	2.8
Mechanical occupations	1.1	1.9	2.3	0.2
Building trades	0.9	1.8	2.2	1.0
Health/life sciences occupations	1.3	1.3	1.7	1.3
Service occupations	1.4	1.5	2.1	2.2
At least one occupational program offered in:				
Business and marketing occupations	1.5	1.7	2.1	1.7
Technical occupations	1.3	1.4	1.7	2.4
Mechanical occupations	1.1	1.8	2.1	0.1
Building trades	0.9	1.4	1.7	0.6
Health/life sciences occupations	1.4	1.1	1.5	0.9
Service occupations	1.5	1.5	2.2	2.2

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 7.—Percent of public secondary schools indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by school type: 1999

Schools had developed or adopted skill competency lists *with at least some industry input* for:	Percent of all schools*	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	35	52	71	48
At least half of their occupational programs.....	46	70	84	67
At least one of their occupational programs.....	51	77	93	74

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 7a.—Standard errors of the percent of public secondary schools indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by school type: 1999

Schools had developed or adopted skill competency lists with *at least some industry input* for:	Percent of all schools	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	1.9	2.6	3.9	3.0
At least half of their occupational programs.....	2.2	2.3	4.0	2.5
At least one of their occupational programs.....	2.1	2.3	2.2	2.7

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 8.—Percent of public secondary schools indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and school type: 1999

Schools had developed or adopted skill competency lists with *at least some industry input* for:	Percent of all schools*	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	35	63	77	60
Technical occupations	25	63	79	59
Mechanical occupations	23	73	87	68
Building trades	23	64	89	56
Health/life sciences occupations	25	77	87	74
Service occupations	23	71	82	68
At least one occupational program offered in:				
Business and marketing occupations	38	68	82	65
Technical occupations	28	70	83	67
Mechanical occupations	24	77	91	72
Building trades	25	69	92	62
Health/life sciences occupations	25	79	91	75
Service occupations	24	74	84	71

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 8a.—Standard errors of the percent of public secondary schools indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and school type: 1999

Schools had developed or adopted skill competency lists with *at least some industry input* for:	Percent of all schools	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	2.0	2.6	5.3	2.9
Technical occupations	1.7	3.1	4.5	3.6
Mechanical occupations	1.3	2.6	3.1	3.5
Building trades	1.6	3.2	2.9	4.1
Health/life sciences occupations	1.5	3.1	4.4	3.8
Service occupations	1.2	3.5	4.9	4.3
At least one occupational program offered in:				
Business and marketing occupations	2.1	2.5	4.8	2.8
Technical occupations	1.6	2.8	4.5	3.2
Mechanical occupations	1.2	2.6	2.5	3.4
Building trades	1.6	2.9	2.2	3.8
Health/life sciences occupations	1.6	3.2	4.2	3.9
Service occupations	1.2	3.5	5.0	4.3

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 9.—Percent of public secondary schools indicating that industry provided at least equal input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by school type: 1999

Schools had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all schools*	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	11	17	27	15
At least half of their occupational programs.....	17	25	33	24
At least one of their occupational programs.....	23	35	50	32

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 9a.—Standard errors of the percent of public secondary schools indicating that industry provided at least equal input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by school type: 1999

Schools had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all schools	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	1.1	1.7	3.3	1.9
At least half of their occupational programs.....	1.4	2.2	3.5	2.5
At least one of their occupational programs.....	1.7	2.6	4.4	2.9

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 10.—Percent of public secondary schools indicating that industry provided at least equal industry input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and school type: 1999

Schools had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all schools*	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	12	22	30	20
Technical occupations	9	23	30	21
Mechanical occupations	9	29	36	26
Building trades	9	24	35	21
Health/life sciences occupations	12	39	43	37
Service occupations	9	28	35	25
At least one occupational program offered in:				
Business and marketing occupations	13	24	34	22
Technical occupations	11	27	35	25
Mechanical occupations	10	32	41	29
Building trades	10	27	39	22
Health/life sciences occupations	13	41	47	40
Service occupations	10	31	40	28

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 10a.—Standard errors of the percent of public secondary schools indicating that industry provided at least equal industry input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and school type: 1999

Schools had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all schools	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	1.4	2.5	3.7	2.8
Technical occupations	0.9	2.5	3.3	3.0
Mechanical occupations	1.1	3.1	3.0	3.9
Building trades	1.0	2.6	3.6	3.4
Health/life sciences occupations	1.2	3.3	4.0	4.0
Service occupations	0.8	2.6	4.7	3.0
At least one occupational program offered in:				
Business and marketing occupations	1.4	2.6	3.9	2.9
Technical occupations	0.9	2.7	3.4	3.3
Mechanical occupations	1.0	3.0	3.1	3.8
Building trades	1.1	2.7	3.7	3.3
Health/life sciences occupations	1.3	3.7	4.1	4.4
Service occupations	0.8	2.6	4.8	2.9

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 11.—Percent of less-than-4-year postsecondary institutions indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least some industry input* for:	Percent of all institutions*	Percent of institutions with one or more occupational programs		
		All	2-year	Less-than-2-year
All of their occupational programs.....	57	63	57	72
At least half of their occupational programs.....	69	77	77	77
At least one of their occupational programs.....	75	83	88	78

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 11a.—Standard errors of the percent of less-than-4-year postsecondary institutions indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least some industry input* for:	Percent of all institutions	Percent of institutions with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	1.5	1.7	2.2	2.8
At least half of their occupational programs.....	1.6	1.6	2.0	2.7
At least one of their occupational programs.....	1.3	1.4	1.7	2.7

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 12.—Percent of less-than-4-year postsecondary institutions indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least some industry input* for:	Percent of all institutions*	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	35	66	62	83
Technical occupations	32	69	66	79
Mechanical occupations	22	76	73	89
Building trades	21	78	75	91
Health/life sciences occupations	42	77	75	83
Service occupations	39	68	65	72
At least one occupational program offered in:				
Business and marketing occupations	39	74	71	85
Technical occupations	38	81	79	86
Mechanical occupations	25	84	82	94
Building trades	23	84	82	96
Health/life sciences occupations	47	86	85	87
Service occupations	43	75	76	72

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 12a.—Standard errors of the percent of less-than-4-year postsecondary institutions indicating that industry provided at least some input in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least some industry input* for:	Percent of all institutions	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	1.4	2.0	2.4	2.7
Technical occupations	1.4	1.9	2.3	3.2
Mechanical occupations	1.1	2.0	2.4	3.0
Building trades	0.9	2.2	2.6	1.3
Health/life sciences occupations	1.3	1.8	2.0	2.3
Service occupations	1.6	2.4	2.5	4.4
At least one occupational program offered in:				
Business and marketing occupations	1.3	1.8	2.1	2.5
Technical occupations	1.2	1.6	1.9	2.8
Mechanical occupations	1.0	1.7	2.0	2.9
Building trades	0.9	1.8	2.2	0.6
Health/life sciences occupations	1.3	1.6	1.9	2.1
Service occupations	1.7	2.4	2.5	4.4

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 13.—Percent of less-than-4-year postsecondary institutions indicating that industry provided at least equal input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all institutions*	Percent of institutions with one or more occupational programs		
		All	2-year	Less-than-2-year
All of their occupational programs.....	23	26	18	36
At least half of their occupational programs.....	31	34	29	41
At least one of their occupational programs.....	42	47	49	44

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 13a.—Standard errors of the percent of less-than-4-year postsecondary institutions indicating that industry provided at least equal input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all institutions	Percent of institutions with one or more occupational programs		
		All	2-year	Less-than-2-year
All of their occupational programs.....	1.7	1.8	1.7	2.9
At least half of their occupational programs.....	1.7	1.8	1.8	2.7
At least one of their occupational programs.....	1.6	1.7	2.2	2.9

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 14.—Percent of less-than-4-year postsecondary institutions indicating that industry provided at least equal input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all institutions*	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	11	21	18	34
Technical occupations	12	26	24	36
Mechanical occupations	9	30	26	48
Building trades	9	34	32	46
Health/life sciences occupations	18	33	30	41
Service occupations	18	31	22	42
At least one occupational program offered in:				
Business and marketing occupations	14	27	25	35
Technical occupations	17	37	35	43
Mechanical occupations	12	43	40	55
Building trades	12	43	42	51
Health/life sciences occupations	24	43	42	46
Service occupations	21	37	33	43

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 14a.—Standard errors of the percent of less-than-4-year postsecondary institutions indicating that industry provided at least equal input as educators in the development or adoption of skill competency lists for occupational programs that prepare students for selected occupations, by occupation area and level of institution: 1999

Institutions had developed or adopted skill competency lists with *at least equal industry input* for:	Percent of all institutions	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	0.7	1.4	1.5	2.5
Technical occupations	0.8	1.6	1.8	3.2
Mechanical occupations	0.6	2.0	2.1	3.4
Building trades	0.7	2.2	2.6	2.6
Health/life sciences occupations	1.1	1.8	2.1	2.7
Service occupations	1.4	2.3	2.1	4.0
At least one occupational program offered in:				
Business and marketing occupations	0.9	1.6	1.7	2.8
Technical occupations	0.9	1.6	1.9	3.2
Mechanical occupations	0.8	2.3	2.5	3.9
Building trades	0.7	2.3	2.7	2.7
Health/life sciences occupations	1.1	1.8	2.3	2.7
Service occupations	1.5	2.4	2.5	4.0

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 15.—Percent of public secondary schools indicating that their occupational programs prepared students to earn skill certificates, by school type: 1999

Schools with programs prepare students to earn skill certificates for:	Percent of all schools*	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	20	31	52	27
At least half of their occupational programs.....	29	43	70	38
At least one of their occupational programs.....	36	55	81	50

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 15a.—Standard errors of the percent of public secondary schools indicating that their occupational programs prepared students to earn skill certificates, by school type: 1999

Schools with programs prepare students to earn skill certificates for:	Percent of all schools	Percent of schools with one or more occupational programs		
		All	Vocational	Comprehensive
All of their occupational programs.....	1.3	2.1	4.8	2.3
At least half of their occupational programs.....	1.4	2.0	5.1	2.2
At least one of their occupational programs.....	1.5	1.8	4.5	1.9

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 16.—Percent of public secondary schools indicating that their occupational programs prepared students to earn skill certificates, by occupation area and school type: 1999

Schools with programs prepare students to earn skill certificates for:	Percent of all schools*	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	23	40	65	36
Technical occupations	14	36	62	30
Mechanical occupations	16	52	70	45
Building trades	17	46	68	39
Health/life sciences occupations	15	47	69	40
Service occupations	16	48	68	42
At least one occupational program offered in:				
Business and marketing occupations	25	45	69	41
Technical occupations	17	43	67	37
Mechanical occupations	17	55	73	49
Building trades	18	49	70	42
Health/life sciences occupations	17	52	77	44
Service occupations	17	54	76	47

*Percent of all public secondary schools whether or not the school offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 16a.—Standard errors of the percent of public secondary schools indicating that their occupational programs prepared students to earn skill certificates, by occupation area and school type: 1999

Schools with programs prepare students to earn skill certificates for:	Percent of all schools	Percent of schools with one or more programs in the occupation area		
		All	Vocational	Comprehensive
All occupational programs offered in:				
Business and marketing occupations	1.6	2.5	5.9	2.8
Technical occupations	1.1	2.6	4.5	3.1
Mechanical occupations	1.2	3.1	4.1	4.2
Building trades	1.1	2.5	5.2	3.3
Health/life sciences occupations	1.2	3.6	4.5	4.4
Service occupations	1.3	4.0	6.0	4.8
At least one occupational program offered in:				
Business and marketing occupations	1.5	2.3	6.0	2.5
Technical occupations	1.0	2.3	4.9	2.7
Mechanical occupations	1.2	3.2	4.2	4.3
Building trades	1.1	2.5	5.3	3.2
Health/life sciences occupations	1.2	3.5	4.5	4.4
Service occupations	1.3	3.8	4.9	4.8

NOTE: Estimates are based on public secondary schools with 11th and 12th grades, i.e., schools that may offer upper level occupational programs. For schools that offer programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 28.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Survey on Vocational Programs in Secondary Schools, 1999.

Table 17.—Percent of less-than-4-year postsecondary institutions indicating that their occupational programs prepared students to earn industry-related credentials, by level of institution: 1999

Institutions with programs that prepare students to earn industry-related credentials for:	Percent of all institutions*	Percent of institutions with one or more occupational programs		
		All	2-year	Less-than-2-year
All of their occupational programs.....	47	53	28	84
At least half of their occupational programs.....	68	76	68	88
At least one of their occupational programs.....	78	87	86	89

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 17a.—Standard errors of the percent of less-than-4-year postsecondary institutions indicating that their occupational programs prepared students to earn industry-related credentials, by level of institution: 1999

Institutions with programs that prepare students to earn industry-related credentials for:	Percent of all institutions	Percent of institutions with one or more occupational programs		
		All	2-year	Less-than-2-year
All of their occupational programs	1.4	1.5	2.2	2.0
At least half of their occupational programs	1.3	1.3	1.9	2.0
At least one of their occupational programs	1.2	1.1	1.6	2.0

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 18.—Percent of less-than-4-year postsecondary institutions that their occupational programs prepared students to earn industry-related credentials, by occupation area and level of institution: 1999

Institutions with programs that prepare students to earn industry-related credentials for:	Percent of all institutions*	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	31	58	50	92
Technical occupations	24	50	43	85
Mechanical occupations	20	69	66	89
Building trades	20	72	69	88
Health/life sciences occupations	29	53	41	89
Service occupations	37	65	52	84
At least one occupational program offered in:				
Business and marketing occupations	40	75	70	95
Technical occupations	35	74	71	89
Mechanical occupations	25	85	83	97
Building trades	23	86	85	93
Health/life sciences occupations	45	83	79	92
Service occupations	45	78	74	85

*Percent of all 2-year and less-than-2-year postsecondary institutions whether or not the institution offers a program that prepares students for the occupations examined in this survey.

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32. For the list of occupations, see appendix D.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Table 18a.—Standard errors of the percent of less-than-4-year postsecondary institutions that their occupational programs prepared students to earn industry-related credentials, by occupation area and level of institution: 1999

Institutions with programs that prepare students to earn industry-related credentials for:	Percent of all institutions	Percent of institutions with one or more programs in the occupation area		
		All	2-year	Less-than-2-year
All occupational programs offered in:				
Business and marketing occupations	1.2	1.7	2.2	1.9
Technical occupations	1.1	1.9	2.2	2.3
Mechanical occupations	1.0	2.0	2.5	1.8
Building trades	1.0	2.4	2.7	2.2
Health/life sciences occupations	1.1	1.6	2.1	1.1
Service occupations	1.5	2.1	2.5	3.2
At least one occupational program offered in:				
Business and marketing occupations	1.3	1.7	2.1	1.3
Technical occupations	1.2	1.9	2.4	2.1
Mechanical occupations	1.0	1.5	1.8	1.5
Building trades	1.0	1.4	1.7	1.6
Health/life sciences occupations	1.2	1.4	1.8	0.9
Service occupations	1.5	1.9	2.0	3.2

NOTE: Estimates are based on 2-year and less-than-2-year institutions with Title IV eligibility. For institutions that offer occupational programs that prepare students for the occupations examined in this study, the number of programs could range from 1 to 32.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System, Survey on Occupational Programs in Postsecondary Education Institutions, 1999.

Appendix A

Methodology and Technical Notes

METHODOLOGY AND TECHNICAL NOTES

Surveys and Samples

The tabular statistics in this E.D. TAB report present a subset of the data collected from the surveys *Vocational Programs in Secondary Schools* and *Occupational Programs in Postsecondary Education Institutions*. The surveys were conducted through the Fast Response Survey System (FRSS) and the Postsecondary Education Quick Information System (PEQIS), respectively. To select a nationally representative sample of public secondary schools for the FRSS survey, a stratified sample of 1,200 public secondary schools, including 600 vocational schools and 600 comprehensive (regular) schools, was selected from the 1996-97 Quality Education Data (QED) National Education Database. The QED database is compiled from a variety of sources, including the National Center for Education Statistics' Common Core of Data (CCD) public school universe file. Almost 16,000 comprehensive secondary schools and 1,300 vocational schools met the eligibility requirement for this study; that is, they had 11th or 12th grade. Excluded from the sampling frame were private schools (the CCD does not include private schools), nonregular schools such as special education and alternative/other schools, and schools in the outlying U.S. territories.

For the PEQIS survey, the sample of postsecondary institutions was restricted to 2-year and less-than-2-year institutions that were eligible for federal financial aid under Title IV. A stratified random sample of 1,289 institutions was selected, including 689 2-year institutions and 600 less-than-2-year institutions. The sample of 2-year postsecondary institutions was drawn from the Postsecondary Education Quick Information System (PEQIS) panel, which was constructed from the 1995-96 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC) file. The PEQIS frame included 4-year, 2-year, and less-than-2-year institutions of higher education located in the 50 states and the District of Columbia: a total of 5,353 institutions. Only 2-year institutions that were eligible for federal financial aid were included for selection from the PEQIS panel.

The sampling frame for the supplementary sample of less-than-2-year institutions was the 1996-97 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics file. The institutions eligible for the supplementary sample were all less-than-2-year institutions in the 50 states and the District of Columbia (the same geographic area used for the PEQIS panel) that reported eligibility for Title IV. A total of 1,898 institutions met these requirements.

Respondents and Response Rates

For the FRSS survey, questionnaires with letters explaining the purpose of the study were mailed to school principals in early April 1999. The questionnaires were to be completed by the person who was most knowledgeable about vocational education at the school. Telephone followup of nonrespondents was conducted during May and June 1999. Of the 1,200 schools selected for the survey, 50 were found to be out of scope for the study (29 of these were postsecondary institutions). A total of 1,078 eligible schools completed the survey for an overall unweighted response rate of 94 percent. The weighted response rate was 95 percent.

The postsecondary questionnaires were mailed in mid-April 1999 to PEQIS coordinators at 2-year institutions and administrators at less-than-2-year institutions. As with the FRSS survey, the questionnaire was to be completed by the person most knowledgeable about occupational programs at the institution. Telephone followup of nonrespondents started in late May, and data collection ended in early July 1999. Of the 1,289 postsecondary institutions sampled for the study, 103 were out of scope for the study; 57 of these institutions were closed, and 38 did not have Title IV eligibility. The survey was completed by 1,100 2-year and less-than-2-postsecondary institutions, yielding an overall unweighted response rate of 94 percent. The weighted response rate was also 94 percent.

Sampling and Nonsampling Errors

The responses were weighted to produce national estimates. The weights were designed to adjust for the variable probabilities of selection and differential nonresponse. The findings in this report are based on the sample selected and, consequently, are subject to sampling variability.

The survey estimates are also subject to nonsampling errors that can arise because of nonobservation (nonresponse and noncoverage) errors, errors of reporting, and errors made in data collection. These errors can sometimes bias the data. Nonsampling errors may include such problems as misrecording of responses; incorrect editing, coding, and data entry; differences related to the particular time the survey was conducted; or errors in data preparation. While general sampling theory can be used in part to determine how to estimate the sampling variability of a statistic, nonsampling errors are not easy to measure and, for measurement purposes, usually require that an experiment be conducted as part of the data collection procedures or that data external to the study be used.

A number of actions were taken to minimize nonsampling error. The questionnaire was pretested with respondents like those who completed the survey. During the design of the survey and survey pretest, an effort was made to check for consistency of interpretation of questions and to eliminate ambiguous items. The questionnaire and instructions were extensively reviewed by the National Center for Education Statistics and the Office of Vocational and Adult Education, U.S. Department of Education. Manual and machine editing of the questionnaire responses were conducted to check the data for accuracy and consistency. Cases with missing or inconsistent items were recontacted by telephone. Data were keyed with 100 percent verification.

Variances

The standard error is a measure of the variability of estimates due to sampling. It indicates the variability of a sample estimate that would be obtained from all possible samples of a given design and size. Standard errors are used as a measure of the precision expected from a particular sample. If all possible samples were surveyed under similar conditions, intervals of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the true population parameter being estimated in about 95 percent of the samples. This is a 95 percent confidence interval. Estimates of standard errors for this report were computed using the jacknife replication method.

Terms and Variables

For the secondary school survey, a **vocational program** was defined as a sequence of courses designed to prepare students for an occupation (e.g., nurses' aide) or occupation area (e.g., health care) that typically requires education below the baccalaureate level. Because the focus of the surveys is on preparation for jobs within specific occupations, the definition of vocational programs did not include career exploration or other introductory courses that prepare students for adult life or for work in general (e.g., consumer and homemaking, industrial arts). At the postsecondary level, an **occupational program** was defined as a sequence of courses designed to prepare students for an occupation (e.g., nurses' aide) that typically requires education below the baccalaureate level. To allow institutions to report noncredit courses, a noncredit occupational program could have included only one course or more than one course. For both surveys, a **skill competency** was defined as a concept, skill, or attitude that is essential to an occupation; the level of attainment or performance established for a skill competency is a skill standard. Because these terms tend to be used interchangeably in practice, "skill competencies" was used to refer to both skill competencies and skill standards.

The main classification variable was school type (vocational, comprehensive) for the secondary school survey, and level of institution (2-year, less-than-2-year) for the postsecondary survey. For the tabular analyses, several variables were constructed to measure the number of programs offered, skill competencies used for the programs offered, and skill certificates or industry-related credentials available for programs offered. The variables were constructed for all programs offered and for programs offered within the six broad occupation areas examined in the study.

Background Information

The secondary survey was conducted under contract with Westat, using the Fast response Survey System (FRSS), and the postsecondary survey was conducted using the Postsecondary Education Quick Information System (PEQIS). Westat's Project Director was Elizabeth Farris, and the Survey Manager was Basmat Parsad. Bernie Greene was the NCES Project Officer. The data were requested by the Office of Vocational and Adult Education, U.S. Department of Education.

The following individuals reviewed this report:

Outside NCES

- Vickie Schray, Office of Vocational and Adult Education
- Doris Werwie, Office of Vocational and Adult Education
- Cynthia Brown, Office of Vocational and Adult Education
- Sharon Belli, Office of Vocational and Adult Education

Inside NCES

- Lisa Hudson, Early Childhood, International, and Crosscutting Studies Division
- Ellen Bradburn, Early Childhood, International, and Crosscutting Studies Division
- Michael Cohen, Statistical Standards Program
- John Wirt, Early Childhood, International, and Crosscutting Studies Division
- Jeff Williams, Postsecondary Studies Division

For more information about the surveys, Vocational Programs in Secondary Schools and Occupational Programs in Postsecondary Education Institutions, contact:

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Appendix B

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Appendix C

Survey Instruments

U.S. DEPARTMENT OF EDUCATION
NATIONAL CENTER FOR EDUCATION STATISTICS
WASHINGTON, D.C. 20208-5651

SURVEY ON VOCATIONAL PROGRAMS IN SECONDARY SCHOOLS

FAST RESPONSE SURVEY SYSTEM

FORM APPROVED
O.M.B. NO.: 1850-0733
EXPIRATION DATE: 07/1999

This survey is authorized by law (P.L. 103-382). While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate, and timely.

DEFINITIONS USED IN THIS SURVEY

Vocational Program: For this survey, a vocational program is defined as a sequence of courses designed to prepare students for an occupation (e.g., nurses' aide) or occupation area (e.g., health care) that typically requires education below the baccalaureate level. It does not include career exploration or other introductory courses that prepare students for adult life or for work in general (e.g., consumer and homemaking, industrial arts).

Skill competency: A skill competency is a concept, skill, or attitude that is essential to an occupation; the level of attainment or performance established for a skill competency is a skill standard. In this survey, we use the term "skill competencies" to refer to both skill competencies and skill standards.

Note:
- This questionnaire asks about vocational programs and courses offered by your school only. Do not include vocational programs and courses taken by your students at other schools (for example, regional vocational high schools that serve your school).
- The focus of this survey is the vocational programs and courses taken by secondary students. If your school offers any programs and courses that are taken only by other types of students (e.g., only postsecondary students), do not include those programs and courses.

LABEL

IF ABOVE INFORMATION IS INCORRECT, PLEASE MAKE CORRECTIONS DIRECTLY ON LABEL.

Name of person completing form:_____ Telephone:_____

Title/position:_____ E-mail:_____

Best days and times to reach you (in case of questions):_____

THANK YOU. PLEASE KEEP A COPY OF THIS SURVEY FOR YOUR FILES.

PLEASE RETURN COMPLETED FORM TO:	IF YOU HAVE ANY QUESTIONS, CONTACT:
WESTAT Attention: Parsad, 716606 . 1650 Research Boulevard Rockville, Maryland 20850	Basmat Parsad at Westat 800-937-8281, ext. 8222 or 301-251-8222 Fax: 1-800-254-0984 E-mail: Parsadb1@westat.com

FRSS Form No. 72, 3/1999

1. Does your school offer a **vocational program** that prepares students for any of the occupations listed in question 2?

Yes ..... ☐ *(Continue with question 2.)*
No ..... ☐ Thank you. Please complete the respondent section on the front of the questionnaire and return the questionnaire to Westat.

2. For each of the following occupations:

- Indicate in **column A** whether your school offers a **vocational program** that prepares students for that occupation. **NOTE:** A vocational program may include a sequence of courses in a single occupation (e.g., carpentry) or a cluster of courses in an occupational area (e.g., construction, healthcare). If it is a cluster program, check each occupation covered by the cluster.
- Indicate in **columns under B** what procedures are used to ensure that courses teach relevant job skills. (Procedures may not be the same for all occupation areas.)

Occupation area/occupation	A. Check if program offered (see NOTE above)	B. Procedures used to ensure that courses teach relevant job skills				
		Industry advisory committee	Survey of employers' skill needs	Followup survey of graduates	Student work experience (e.g., internship)	Faculty externship (work experience)
		(Check ALL that apply in each row.)				
Business & Marketing Occupations						
a. Accountant/bookkeeper	☐	☐	☐	☐	☐	☐
b. Administrative assistant/secretary	☐	☐	☐	☐	☐	☐
c. Restaurant/food service manager	☐	☐	☐	☐	☐	☐
d. Sales associate	☐	☐	☐	☐	☐	☐
Technical & Mechanical Occupations						
a. AC/heating/refrigeration repair technician	☐	☐	☐	☐	☐	☐
b. Auto body repairer	☐	☐	☐	☐	☐	☐
c. Automotive mechanic/technician	☐	☐	☐	☐	☐	☐
d. Computer programmer	☐	☐	☐	☐	☐	☐
e. Computer graphic designer	☐	☐	☐	☐	☐	☐
f. Computer/electronics technician	☐	☐	☐	☐	☐	☐
g. Engineering technician	☐	☐	☐	☐	☐	☐
h. Drafter or CADD operator	☐	☐	☐	☐	☐	☐
i. Machinist	☐	☐	☐	☐	☐	☐
Building Trades						
a. Bricklayer or mason	☐	☐	☐	☐	☐	☐
b. Carpenter	☐	☐	☐	☐	☐	☐
c. Electrician	☐	☐	☐	☐	☐	☐
d. Plumber	☐	☐	☐	☐	☐	☐
e. Welder	☐	☐	☐	☐	☐	☐
Health/Life Sciences Occupations						
a. Emergency medical technician	☐	☐	☐	☐	☐	☐
b. Medical or dental assistant	☐	☐	☐	☐	☐	☐
c. Nurse or nurses' aide	☐	☐	☐	☐	☐	☐
d. Medical/life science lab technician	☐	☐	☐	☐	☐	☐
e. Agriscience technician	☐	☐	☐	☐	☐	☐
f. Veterinary assistant	☐	☐	☐	☐	☐	☐
Service Occupations						
a. Chef/cook	☐	☐	☐	☐	☐	☐
b. Cosmetologist	☐	☐	☐	☐	☐	☐
c. Childcare worker or teachers' aide	☐	☐	☐	☐	☐	☐
d. Paralegal/legal assistant	☐	☐	☐	☐	☐	☐

3. For each of the occupations for which your school offers a **vocational program:**

- Indicate in **column A** whether a list of **skill competencies** has been developed or adopted for the program.
- If a skill competency list has been developed or adopted, indicate which one of the **columns under B** best describes how educators and industry (business, labor, and/or employers) were involved in developing or adopting the competencies. (Involvement may not be the same for all occupation areas.)

Occupation area/occupation	A. Has a skill competency list been developed or adopted?		B. If yes, which best describes how educators and industry were involved in developing or adopting the competency list?				
	Yes	No	Done exclusively by individual course instructors	Done exclusively by group(s) of educators	Done primarily by educators with industry input	Done with about equal educator and industry input	Done primarily/ exclusively by industry
			(Check only ONE in each row.)				
Business & Marketing Occupations							
a. Accountant/bookkeeper	☐	☐	☐	☐	☐	☐	☐
b. Administrative assistant/secretary	☐	☐	☐	☐	☐	☐	☐
c. Restaurant/food service manager	☐	☐	☐	☐	☐	☐	☐
d. Sales associate	☐	☐	☐	☐	☐	☐	☐
Technical & Mechanical Occupations							
a. AC/heating/refrigeration repair technician	☐	☐	☐	☐	☐	☐	☐
b. Auto body repairer	☐	☐	☐	☐	☐	☐	☐
c. Automotive mechanic/technician	☐	☐	☐	☐	☐	☐	☐
d. Computer programmer	☐	☐	☐	☐	☐	☐	☐
e. Computer graphic designer	☐	☐	☐	☐	☐	☐	☐
f. Computer/electronics technician	☐	☐	☐	☐	☐	☐	☐
g. Engineering technician	☐	☐	☐	☐	☐	☐	☐
h. Drafter or CADD operator	☐	☐	☐	☐	☐	☐	☐
i. Machinist	☐	☐	☐	☐	☐	☐	☐
Building Trades							
a. Bricklayer or mason	☐	☐	☐	☐	☐	☐	☐
b. Carpenter	☐	☐	☐	☐	☐	☐	☐
c. Electrician	☐	☐	☐	☐	☐	☐	☐
d. Plumber	☐	☐	☐	☐	☐	☐	☐
e. Welder	☐	☐	☐	☐	☐	☐	☐
Health/Life Sciences Occupations							
a. Emergency medical technician	☐	☐	☐	☐	☐	☐	☐
b. Medical or dental assistant	☐	☐	☐	☐	☐	☐	☐
c. Nurse or nurses' aide	☐	☐	☐	☐	☐	☐	☐
d. Medical/life science lab technician	☐	☐	☐	☐	☐	☐	☐
e. Agriscience technician	☐	☐	☐	☐	☐	☐	☐
f. Veterinary assistant	☐	☐	☐	☐	☐	☐	☐
Service Occupations							
a. Chef/cook	☐	☐	☐	☐	☐	☐	☐
b. Cosmetologist	☐	☐	☐	☐	☐	☐	☐
c. Childcare worker or teachers' aide	☐	☐	☐	☐	☐	☐	☐
d. Paralegal/legal assistant	☐	☐	☐	☐	☐	☐	☐

4. For each of the occupations for which your school offers a **vocational program:**

- Indicate in **columns under A** the criteria used to determine whether a student is a **vocational program completer** (criteria may not be the same for all programs).
- Indicate in **columns under B** whether the program is designed to prepare students to (1) take a state or industry regulatory exam (i.e., to attain a state or industry certificate, license, or registration), and/or (2) earn a vocational/occupational skill certificate.

Occupation area/occupation	A. Criteria used to determine whether a student is a vocational program completer					B. Program prepares students to:			
	No criteria used – program completers not identified	End of program exam (not course or graduation exam)	Pass specific vocational courses	Minimum grade point average in program	Pass specific academic courses, different from graduation requirements	Take state or industry regulatory exam (e.g., to attain state license)		Earn a vocational/ occupa-tional skill certificate	
	(Check ALL that apply in each row.)					Yes	No	Yes	No
Business & Marketing Occupations									
a. Accountant/bookkeeper	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Administrative assistant/secretary	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Restaurant/food service manager	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Sales associate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Technical & Mechanical Occupations									
a. AC/heating/refrigeration repair tech.	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Auto body repairer	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Automotive mechanic/technician	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Computer programmer	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. Computer graphic designer	☐	☐	☐	☐	☐	☐	☐	☐	☐
f. Computer/electronics technician	☐	☐	☐	☐	☐	☐	☐	☐	☐
g. Engineering technician	☐	☐	☐	☐	☐	☐	☐	☐	☐
h. Drafter or CADD operator	☐	☐	☐	☐	☐	☐	☐	☐	☐
i. Machinist	☐	☐	☐	☐	☐	☐	☐	☐	☐
Building Trades									
a. Bricklayer or mason	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Carpenter	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Electrician	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Plumber	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. Welder	☐	☐	☐	☐	☐	☐	☐	☐	☐
Health/Life Sciences Occupations									
a. Emergency medical technician	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Medical or dental assistant	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Nurse or nurses' aide	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Medical/life science lab technician	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. Agriscience/technician	☐	☐	☐	☐	☐	☐	☐	☐	☐
f. Veterinary assistant	☐	☐	☐	☐	☐	☐	☐	☐	☐
Service Occupations									
a. Chef/cook	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Cosmetologist	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Childcare worker or teachers' aide	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Paralegal/legal assistant	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. Which of the following best describes your school's structure? *(Check one only.)*

- ☐ Area or regional vocational school (with exclusively or predominately vocational programs)
- ☐ Focused vocational high school (with academic and vocational programs focused on a specific occupation area)
- ☐ Vocational high school (with a broad range of both academic and vocational programs)
- ☐ Comprehensive high school served by an area/regional vocational school
- ☐ Comprehensive high school not served by an area/regional vocational school

U.S. DEPARTMENT OF EDUCATION NATIONAL CENTER FOR EDUCATION STATISTICS WASHINGTON, D.C. 20208-5651 **SURVEY ON OCCUPATIONAL PROGRAMS IN POSTSECONDARY EDUCATION INSTITUTIONS** POSTSECONDARY EDUCATION QUICK INFORMATION SYSTEM	FORM APPROVED O.M.B. NO.: 1850-0733 EXPIRATION DATE: 07/1999

This survey is authorized by (P.L. 103-382). While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate, and timely.

DEFINITIONS USED IN THIS SURVEY

Occupational program: For this survey, an occupational program is defined as a sequence of courses designed to prepare students for an occupation (e.g., nurses' aide) that typically requires education below the baccalaureate level. A non-credit occupational program may consist of only one course or more than one course.

Skill competency: A skill competency is a concept, skill, or attitude that is essential to an occupation; the level of attainment or performance established for a skill competency is a skill standard. In this survey, we use the term "skill competencies" to refer to both skill competencies and skill standards.

Note: This questionnaire asks about occupational programs and courses taken by postsecondary students. If your school offers any programs and courses that are taken only by other types of students (e.g., only secondary students), do not include those programs and courses.

LABEL

IF ABOVE INSTITUTION INFORMATION IS INCORRECT, PLEASE UPDATE DIRECTLY ON LABEL.

Name of person completing form:_____ Telephone:_____

Title/position:_____ E-mail: _____

Best days and times to reach you (in case of questions):_____

THANK YOU. PLEASE KEEP A COPY OF THIS SURVEY FOR YOUR RECORDS.

PLEASE RETURN COMPLETED FORM TO:	IF YOU HAVE ANY QUESTIONS, CONTACT:
WESTAT Attention: Parsad, 716608 1650 Research Boulevard Rockville, Maryland 20850	Basmat Parsad at Westat 800-937-8281, ext. 8222 or 301-251-8222 Fax: 1-800-254-0984 E-mail: Parsadb1@westat.com

PEQIS Form No. 11, 3/1999

1. Does your institution offer an **occupational program** that prepares students for any of the occupations listed in question 2?

Yes ..... ☐ *(Continue with question 2.)*
No ..... ☐ Thank you. Please complete the respondent section on the front of the questionnaire and return the questionnaire to Westat.

2. For each of the following occupations for which your institution offers a program in the school year 1998-1999:

- Indicate in **column A** whether non-credit courses are offered in the occupational program.
- Indicate in **column B** whether courses are offered for credit in the occupational program.
- Indicate in **columns under C** what procedures are used to ensure that the courses teach relevant job skills. (Procedures may not be the same for all occupation areas.)

Occupation area/occupation	A. Check if non-credit courses are offered	B. Check if for-credit courses are offered	C. Procedures used to ensure that courses teach relevant job skills				
			Industry advisory committee	Survey of employers' skill needs	Followup survey of graduates	Mechanisms for faculty to get recent work experience	Periodic internal review
			(Check ALL that apply in each row.)				
Business & Marketing Occupations							
a. Accountant/bookkeeper	☐	☐	☐	☐	☐	☐	☐
b. Administrative assistant/secretary	☐	☐	☐	☐	☐	☐	☐
c. Restaurant/food service manager	☐	☐	☐	☐	☐	☐	☐
d. Sales associate/manager	☐	☐	☐	☐	☐	☐	☐
Technical & Mechanical Occupations							
a. AC/heating/refrigeration repair technician	☐	☐	☐	☐	☐	☐	☐
b. Auto body repairer	☐	☐	☐	☐	☐	☐	☐
c. Automotive mechanic/technician	☐	☐	☐	☐	☐	☐	☐
d. Computer programmer	☐	☐	☐	☐	☐	☐	☐
e. Computer graphic designer	☐	☐	☐	☐	☐	☐	☐
f. Computer technician	☐	☐	☐	☐	☐	☐	☐
g. Electronics technician	☐	☐	☐	☐	☐	☐	☐
h. Engineering technician	☐	☐	☐	☐	☐	☐	☐
i. Drafter or CADD operator	☐	☐	☐	☐	☐	☐	☐
j. Machinist	☐	☐	☐	☐	☐	☐	☐
Building Trades							
a. Bricklayer or mason	☐	☐	☐	☐	☐	☐	☐
b. Carpenter	☐	☐	☐	☐	☐	☐	☐
c. Electrician	☐	☐	☐	☐	☐	☐	☐
d. Plumber	☐	☐	☐	☐	☐	☐	☐
e. Welder	☐	☐	☐	☐	☐	☐	☐
Health/Life Sciences Occupations							
a. Emergency medical technician	☐	☐	☐	☐	☐	☐	☐
b. Medical or dental assistant	☐	☐	☐	☐	☐	☐	☐
c. Nurses' aide or home health aide	☐	☐	☐	☐	☐	☐	☐
d. Licensed practical (vocational) nurse	☐	☐	☐	☐	☐	☐	☐
e. Registered nurse	☐	☐	☐	☐	☐	☐	☐
f. Medical/life science lab technician	☐	☐	☐	☐	☐	☐	☐
g. Agriscience technician	☐	☐	☐	☐	☐	☐	☐
h. Veterinary assistant	☐	☐	☐	☐	☐	☐	☐
Service Occupations							
a. Chef/cook	☐	☐	☐	☐	☐	☐	☐
b. Cosmetologist	☐	☐	☐	☐	☐	☐	☐
c. Childcare worker	☐	☐	☐	☐	☐	☐	☐
d. Teachers' aide	☐	☐	☐	☐	☐	☐	☐
e. Paralegal/legal assistant	☐	☐	☐	☐	☐	☐	☐

3. For each of the occupations for which your institution offers an **occupational program** in 1998-1999:

- Indicate in **column A** whether a list of **skill competencies** has been developed or adopted for the program.
- Indicate which one of the **columns under B** best describes how educators and industry (business, labor, and/or employers) were involved in developing or adopting the competencies. (Involvement may not be the same for all programs.)

Occupation area/occupation	A. Has a skill competency list been developed or adopted?		B. Which best describes how educators and industry were involved in developing or adopting the competency list?				
	Yes	No	Done exclusively by individual course instructors	Done exclusively by group(s) of educators	Done primarily by educators with industry input	Done with about equal educator and industry input	Done primarily/ exclusively by industry
			(Check only ONE in each row.)				
Business & Marketing Occupations							
a. Accountant/bookkeeper	☐	☐	☐	☐	☐	☐	☐
b. Administrative assistant/secretary	☐	☐	☐	☐	☐	☐	☐
c. Restaurant/food service manager	☐	☐	☐	☐	☐	☐	☐
d. Sales associate/manager	☐	☐	☐	☐	☐	☐	☐
Technical & Mechanical Occupations							
a. AC/heating/refrigeration repair technician	☐	☐	☐	☐	☐	☐	☐
b. Auto body repairer	☐	☐	☐	☐	☐	☐	☐
c. Automotive mechanic/technician	☐	☐	☐	☐	☐	☐	☐
d. Computer programmer	☐	☐	☐	☐	☐	☐	☐
e. Computer graphic designer	☐	☐	☐	☐	☐	☐	☐
f. Computer technician	☐	☐	☐	☐	☐	☐	☐
g. Electronics technician	☐	☐	☐	☐	☐	☐	☐
h. Engineering technician	☐	☐	☐	☐	☐	☐	☐
i. Drafter or CADD operator	☐	☐	☐	☐	☐	☐	☐
j. Machinist	☐	☐	☐	☐	☐	☐	☐
Building Trades							
a. Bricklayer or mason	☐	☐	☐	☐	☐	☐	☐
b. Carpenter	☐	☐	☐	☐	☐	☐	☐
c. Electrician	☐	☐	☐	☐	☐	☐	☐
d. Plumber	☐	☐	☐	☐	☐	☐	☐
e. Welder	☐	☐	☐	☐	☐	☐	☐
Health/Life Sciences Occupations							
a. Emergency medical technician	☐	☐	☐	☐	☐	☐	☐
b. Medical or dental assistant	☐	☐	☐	☐	☐	☐	☐
c. Nurses' aide or home health aide	☐	☐	☐	☐	☐	☐	☐
d. Licensed practical (vocational) nurse	☐	☐	☐	☐	☐	☐	☐
e. Registered nurse	☐	☐	☐	☐	☐	☐	☐
f. Medical/life science lab technician	☐	☐	☐	☐	☐	☐	☐
g. Agriscience technician	☐	☐	☐	☐	☐	☐	☐
h. Veterinary assistant	☐	☐	☐	☐	☐	☐	☐
Service Occupations							
a. Chef/cook	☐	☐	☐	☐	☐	☐	☐
b. Cosmetologist	☐	☐	☐	☐	☐	☐	☐
c. Childcare worker	☐	☐	☐	☐	☐	☐	☐
d. Teachers' aide	☐	☐	☐	☐	☐	☐	☐
e. Paralegal/legal assistant	☐	☐	☐	☐	☐	☐	☐

4. For each of the occupations for which your institution offers an **occupational program** in 1998-1999:

- Indicate in **column A** whether that program is accredited by an industry, business, or trade organization (e.g., the National Automotive Technicians Education Foundation).
- Indicate in **columns under B** what credentials students in each program can work toward. (For example, if a nursing program prepares students to take a state licensing exam, check that a "state registration, license, or certificate" is available.) Include credentials that may be attained through non-credit courses.

Occupation area/ occupation	A. Check if program is accredited by industry, business, or trade	B. Credentials that students in each program can work toward:				
		Associate's degree	Institutional certificate/ diploma	State registration, license, or certificate	Industry/ trade certificate or diploma	Company certificate (e.g., NOVELL)
		(Check ALL that apply in each row.)				
Business & Marketing Occupations						
a. Accountant/bookkeeper	☐	☐	☐	☐	☐	☐
b. Administrative assistant/secretary	☐	☐	☐	☐	☐	☐
c. Restaurant/food service manager	☐	☐	☐	☐	☐	☐
d. Sales associate	☐	☐	☐	☐	☐	☐
Technical & Mechanical Occupations						
a. AC/heating/refrigeration repair technician	☐	☐	☐	☐	☐	☐
b. Auto body repairer	☐	☐	☐	☐	☐	☐
c. Automotive mechanic/technician	☐	☐	☐	☐	☐	☐
d. Computer programmer	☐	☐	☐	☐	☐	☐
e. Computer graphic designer	☐	☐	☐	☐	☐	☐
f. Computer technician	☐	☐	☐	☐	☐	☐
g. Electronics technician	☐	☐	☐	☐	☐	☐
h. Engineering technician	☐	☐	☐	☐	☐	☐
i. Drafter or CADD operator	☐	☐	☐	☐	☐	☐
j. Machinist	☐	☐	☐	☐	☐	☐
Building Trades						
a. Bricklayer or mason	☐	☐	☐	☐	☐	☐
b. Carpenter	☐	☐	☐	☐	☐	☐
c. Electrician	☐	☐	☐	☐	☐	☐
d. Plumber	☐	☐	☐	☐	☐	☐
e. Welder	☐	☐	☐	☐	☐	☐
Health/Life Sciences Occupations						
a. Emergency medical technician	☐	☐	☐	☐	☐	☐
b. Medical or dental assistant	☐	☐	☐	☐	☐	☐
c. Nurses' aide or home health aide	☐	☐	☐	☐	☐	☐
d. Licensed practical (vocational) nurse	☐	☐	☐	☐	☐	☐
e. Registered nurse	☐	☐	☐	☐	☐	☐
f. Medical/life science lab technician	☐	☐	☐	☐	☐	☐
g. Agriscience technician	☐	☐	☐	☐	☐	☐
h. Veterinary assistant	☐	☐	☐	☐	☐	☐
Service Occupations						
a. Chef/cook	☐	☐	☐	☐	☐	☐
b. Cosmetologist	☐	☐	☐	☐	☐	☐
c. Childcare worker	☐	☐	☐	☐	☐	☐
d. Teachers' aide	☐	☐	☐	☐	☐	☐
e. Paralegal/legal assistant	☐	☐	☐	☐	☐	☐

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