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#### **ABSTRACT**

The United States has no coherent postsecondary vocational education delivery system. A basic definition of postsecondary vocational programs includes those programs which: are limited to high school graduates or post-high school age individuals; are classroom based; are vocational; lead to a recognized certificate or degree; and are provided by an accredited school. Despite a lack of data on student enrollments, 3.8 million full-time-equivalent students in postsecondary vocational education can be identified in private career schools, community colleges, private two-year colleges, Job Corps, public vocational-technical schools, and Job Training Partnership Act programs. The vocational students equal roughly half the total number of traditional higher education students, yet the \$18 billion in expenditures for postsecondary vocational education is only 13.4 percent of the total spent on higher education. States are the major source of funding, with the federal government a close second. Student aid is the major form of federal support. The number of less than bac ureate certificates and degrees granted annually exceeds the num. baccalaureate degrees awarded. (Six tables are provided.) (YLL)

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### I. INTRODUCTION

The purpose of this report is to define the nation's current capacity to provide postsecondary vocational education. There is no comprehensive information available on the number of students, money spent and graduates in postsecondary vocational education. The numbers presented here are estimates, extrapolations, and guesses. They are not definitive, but do provide a guide to the magnitude and importance of postsecondary vocational education.

Most of the recent national education reform efforts have overlooked the importance of job specific education. That omission is just beginning to be rectified. Recently a number of reports and commissions have identified the lack of meaningful pathways available to youth who want to go directly to work out of high school. Others have stressed the importance of greater skills required of front line workers in almost all areas of the economy.

This new interest is hampered by the fact that there is no system of postsecondary vocational education. A system is defined in the dictionary as a combination of parts forming a complex or unitary whole. There are many parts to postsecondary job specific education, but no unitary whole.



The quickest way to understand the problem is to ask a series of simple questions which cannot be easily answered with existing information.

- How many people are enrolled in less than baccalaureate vocational education programs after high school?
- How much money is being spent on postsecondary vocational education?
- How many degrees and certificates are awarded to students in these programs each year?

All three of these questions are relatively easy to answer about traditional higher education. The first responsibility assigned to the newly chartered Department of Education in 1867 was to prepare a census of education in the nation. It has done so successfully since that time with the single omission of vocational and technical education.

There have been unsuccessful attempts to collect and report information about our nation's vocational education. Currently, two efforts are underway to improve the quality of data. The National Academy of Sciences is implementing a million dollar study to sort out these questions. The Department of Education is revising its annual data collection efforts to provide better



information about noncollegiate postsecondary education. The first report should be available in 1993.

Before presenting specific numbers, it is necessary to provide some basic definitions.



### II. DEFINITIONS

In order to make estimates of some of these enrollment, cost and graduation numbers, it is important to identify which programs are included. The basic definition includes those programs which:

- o are postsed adary in that they are limited to participants who are either high school graduates or beyond the traditional high school age.
- o are classroom based. This excludes on-the-job-training, home study, and informal job preparation.
- are vocational. This excludes avocational programs such as ball-room dancing and modeling schools.
- lead to a recognized certificate or degree. This
  excludes short-programs such as preparation for a real
  estate test or training seminars to improve sales
  techniques.
  - o are provided by an accredited school.

This definition excludes a great deal of the nation's ongoing training and education, but provides a fair estimate of formal



postsecondary school based programs. These programs are at least three months in length and prepare students for a job.

Who provides postsecondary vocational and technical programs that fit this definition? The list includes community colleges, private career schools, public vocational/technical schools, notfor-profit institutions, and second-chance programs funded by the Department of Labor. Each one of these institutions raises unique problems in defining which students should be included in the postsecondary vocational category.

community colleges make no consistent distinction among vocational, academic transfer, and nondegree students. The diverse mission of the community colleges makes these student classifications difficult to agree upon. My estimate starts with the fact that there are about 2.25 million full-time-equivalent (FTE) students in community colleges. Between 50 and 65 percent are estimated to be in terminal degree or certificate programs. By my calculation, somewhere between 1.1 and 1.5 million FTE students receive vocational training in community colleges.

No national study has ever provided a valid comprehensive estimate of the number of students in private career schools and colleges. There are two reasons for this:



- These schools do not follow the traditional college enrollment periods, but enroll students year round. ED enrollment counts are done at a point in time which underestimates the annual enrollment, especially in short programs.
- Most states do not involve private career schools in their planning and, thus, do not include them in their state data collection efforts which form the basis of national education reports.

The low estimate of private career school and college enrollment is 1.2 million and the high estimate for this sector is 1.6 'million.

some states support public postsecondary vocational technical institutions. There is a great deal of variation among states in how the programs are offered. Some states have established separate vocational technical schools, while others operate in a community college facility, or as an extension of a high school program. There is less national information about this sector than almost any other. We estimate there are 233,250 FTE students enrolled in this sector.

Other types of programs enroll a modest number of postsecondary vocational students. These include some not-for-profit



vocational schools and second chance vocational programs offered by public agencies.

Not-for-profit two year schools probably enroll about 55,000 vocational students annually. That number represents about half of their 110,000 annual enrollment. The US Department of Labor sponsors a number of education programs under JTPA. Technically, these programs should not be included under this definition of postsecondary vocational education because they do not necessarily lead to a degree or certificate. They are included here because they are often suggested as an appropriate model for vocational education to use.

The JTPA includes Job Corps and some other JTPA programs. The majority of JTPA clients are not in classroom training, but in on-the-job training and programs to prepare them to apply for a job. In addition, many of these students are in high school level programs that do not qualify for postsecondary status.

Job Corps enrolls 104,000 high risk students each year. Most receive vocational training. JTPA enrolls about one third of the program's annual participants or 396,000 students in classroom training. The other two-thirds are placed in job search or onthe-job training.

Looking at Table 1, we can identify just under 4 million full-time-equivalent students in postsecondary vocational education.

This is the high estimate; the low estimate would be just over 3 million.

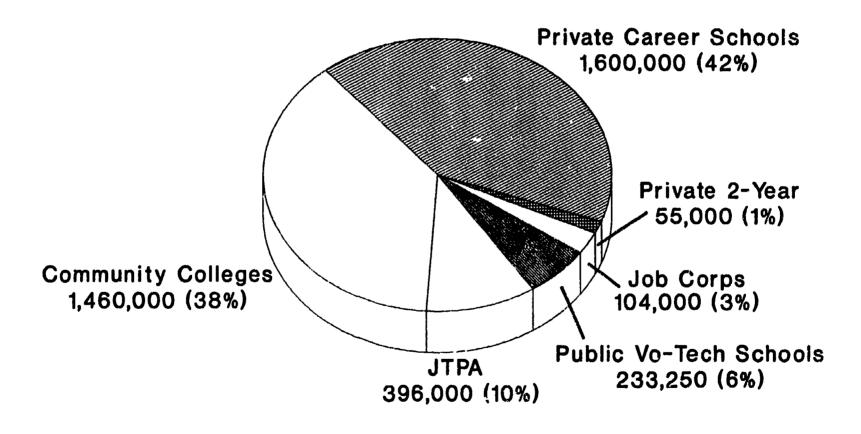
Programs outside of community colleges and private career schools represent a relatively small share of the postsecondary education vocational enrollment.



## Table 1 Who Provides Postsecondary Vocational Training?

Number of Students in School Per Year

Total = 3.8 Million





### III. SPENDING

In 1989-90, total education expenditures were \$368 billion or 7.0 percent of the gross national product. Elementary and secondary education accounted for \$215.5 billion and higher education \$134.2 billion of that total. Postsecondary vocational education represents \$18 billion or about 5 percent of the total. (See Table 2).

The \$18 billion in expenditures for postsecondary vocational education is distributed as follows:

- o Community colleges spend between \$7.5 and \$9.0 billion on vocational education annually.
- o Private career schools represent about \$6.75 billion.
- The federal government spends roughly \$1.1 billion on postsecondary vocational education programs.
- States spend another \$1.2 billion on postsecondary on vocational technical schools.

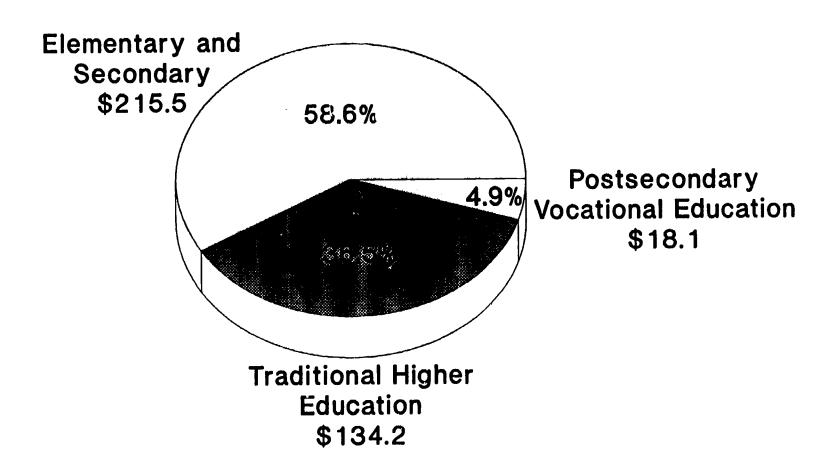
The higher estimates have been used as the basis for the graph. See Table 3).



### Table 2 How Much Are We Spending?

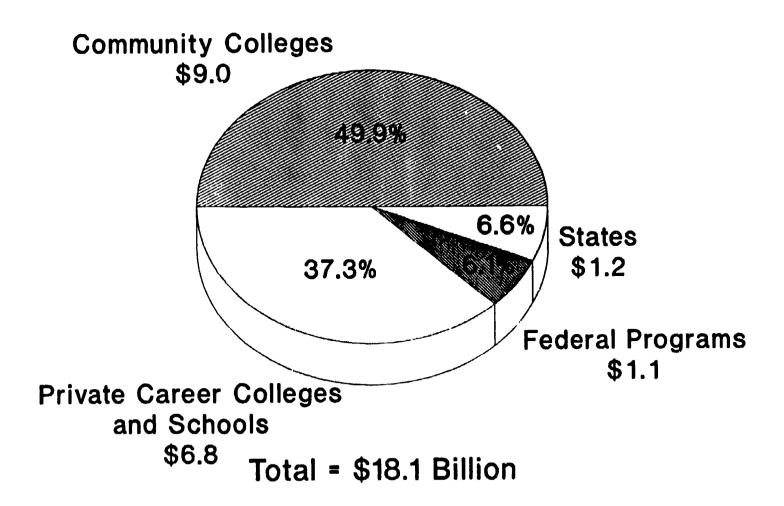
Total U.S. Spending on Education (in billions per year)

Total = \$367.8 Billion



### Table 3 How Much Are We Spending?

Total U.S. Spending on Postsecondary Vocational Education (in billions per year)



The picture is complicated by federal student aid which helps students pay their tuition and living costs. Students in vocational specific programs probably received \$7.15 billion in student loans and grants, most of it from the federal government. Community college vocational students received \$1.9 billion in student aid. Private career school and college students were awarded \$4.73 billion in student aid. Other vocational students received \$520 million in student aid. (See Table 4).

The student aid dollars cannot simply be added to the institutional expenditure because financial aid is used to pay both tuition and living costs. In addition, roughly half of the total student aid is in the form of subsidized loans of which the principal is repaid by the borrowers.

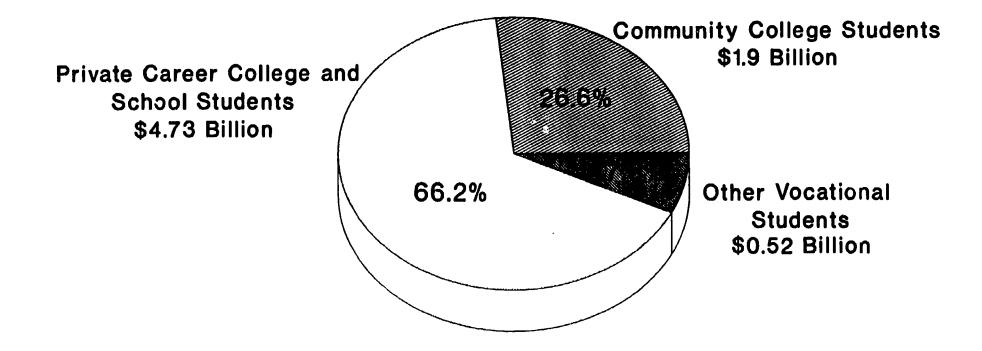
Student financial aid is the largest source of federal support for postsecondary vocational education. Congress appropriates \$4.9 billion to generate student loans and grants of \$7.2 billion. Students in JTPA, Job Corps or other second chance programs do not participate in Department of Education student aid programs except under some very limited circumstances.

States are the largest source of funding for postsecondary vocational education. State and local governments provide an estimated \$7.4 billion for community college and other vocational/technical education. The federal government is second



# Table 4 Distribution of Student Aid to Postsecondary Vocational Students by Sector

Total = \$7.15 Billion





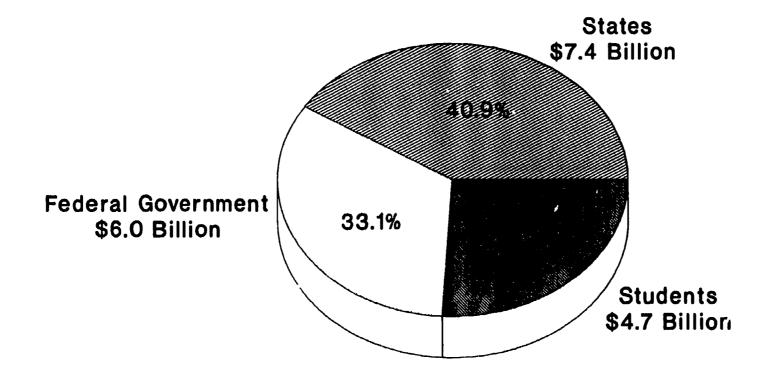
with \$4.9 billion in appropriations for student aid plus \$1.1 billion in JTPA funding for a total of \$6.0 billion. The remaining \$4.7 billion is paid by students and their families. Dividing the enrollments by expenditures results in an annual cost per student of \$4,500 across all of these programs. (See Table 5).

The cost of enrollment is a helpful way to compare different programs, but the costs become more meaningful when outcomes are included. The next section reviews the sub-baccalaureate degrees and certificates awarded by schools in the different sectors.



# Table 5 Who Pays the Cost of Postsecondary Vocational Education?

State, Federal and Student Contributions



Total = \$18.1 Billion



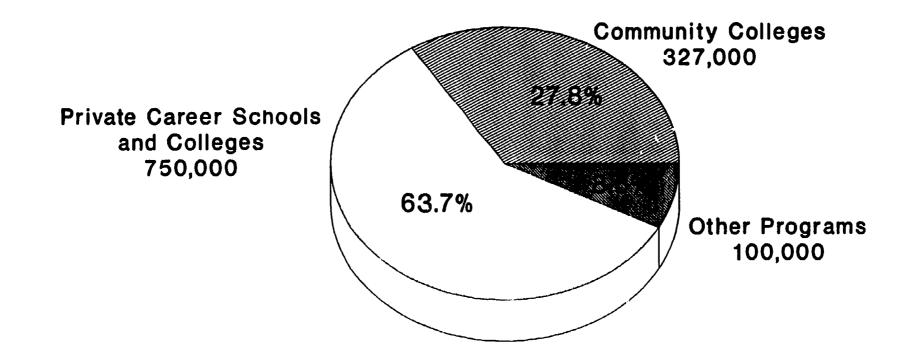
### IV. DEGREES AND CERTIFICATES

Again, the problem is complicated because there is no systematic national reporting system which allows us to identify the number of terminal degrees and certificates awarded annually. Community colleges awarded 436,000 Associate degrees in 1989. It is difficult to know how many of the degree recipients are terminal and which transfer. It is estimated that 3/4 or 327,000 are terminal degrees. Private career schools award an estimated 750,000 degrees and certificates annually. That is a decrease from previous years when enrollments were higher. Other programs deliver another 100,000 completions a year. Roughly 1.2 million students are entering the labor market annually with a new certificate or degree (see Table 6). Many of the Department of Labor programs and some of the state programs do not use a formal certificate, but competency levels, to determine successful completion.

Obviously, no detailed report of these degrees or certificates is available. For example, completion by program specialty, state, or length of program is not reported. In contrast, the latest <a href="Digest of Education Statistics">Digest of Education Statistics</a> includes 50 tables providing detailed descriptions of higher education degrees dating back to 1869.

# Table 6 Number of Degrees and Certificates Awarded Per Year by Sector

Total = 1,177,000





### V. CONCLUSIONS

We do not have a coherent postsecondary vocational delivery system in this nation. It has not received anywhere close to the funding or attention more traditional higher education has received.

It is a truism that we measure and report those things we believe to be important. The lack of meaningful information about postsecondary vocational education indicates our nation's historic disinterest in the topic.

Even though postsecondary vocational education is largely invisible because of the missing data, it is a significant part of the educational capacity of this nation. The 3.9 million vocational students equal roughly half the total number of traditional higher education students. The number of less than baccalaureate certificates and degrees granted annually exceeds the number of baccalaureate degrees awarded. Postsecondary vocational education is a vital part of our nation's ability to prepare people for a rapidly changing employment market.

The \$18 billion spent on postsecondary vocational education is not insignificant, but it is only 13.4 percent of the total spent on higher education. States are the major source of funding with



the federal government a close second. Student aid is the major form of federal support.

The time for ignoring postsecondary vocational education is obviously passing. As policy makers and economic necessity give these programs an increasingly higher priority, education reports will begin to define it with the same detail as is typical of traditional education.



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