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ABSTRACT

This document presents recommendations made to the Administration and Congress concerning future federal funding for vocational education and the staff report reviewing the federal role in vocational education. Part A lists recommendations for federal funds: (1) limitation to appropriations furthering the national interest, (2) use for program improvement and innovation, (3) use at secondary school level for remedial programs for raising functional literacy and employability, (4) use at postsecondary level for increasing accessibility to disadvantaged, (5) establishment of same requirements as for other programs, and (6) reaffirmation of sex equity. Chapter 1 of the report discusses federal interest in vocational education as indicated in the Vocational Education Act and by economic analysis. A summary follows of recent Commission research on the labor market effects of secondary vocational education and postsecondary training, comparing and contrasting results with those found in other studies. Chapter 2 reviews federal interest in occupational information, discusses strengths and weaknesses of techniques used in occupational forecasting, and considers vocational education's role in occupational labor markets. Chapter 3 examines coordination to determine legislative changes to facilitate linkages between the Comprehensive Employment and Training Act and vocational education programs. Concerns include developing a common goal, funding, joint planning, involvement with other organizations, and personnel interaction. (YLB)

National Commission for Employment Policy

The Federal Role in Vocational Education

The National Commission for Employment Policy
Report No. 12
1522 K Street, NW
Suite 300
Washington, D.C. 20005
September 1981

Members of the National Commission for Employment Policy

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Hepburn Professor Emeritus of Economics and Director, Conservation of Human Resources, Columbia University

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Leon H. Sullivan, Pastor of Zion Baptist Church, Philadelphia

Julius B. Thrower, Admissions Director, S.D. Bishop State Junior College, and Vice Chairman, American Association of Minority Veterans Program Administrators

Daniel H. Saks, Director

NATIONAL COMMISSION FOR EMPLOYMENT POLICY
1522 K Street, NW, Suite 300
Washington, D.C. 20005

(202) 724-1545

TO THE PRESIDENT AND THE CONGRESS OF THE UNITED STATES:

I am pleased to forward the recommendations of the National Commission for Employment Policy on vocational education together with the supporting staff chapters.

The Commission will publish shortly a second supporting volume of research. The findings from this research were available to the Commission for the development of its recommendations.

Our principal recommendations follow:

--Federal funds for vocational education should be limited to activities that further the Federal interest, such as adding to the pool of scarce skills essential for defense and economic growth and assisting disadvantaged young people to become self-supporting.

--Federal funds should no longer be used to supplement State appropriations for ongoing programs. Rather, they should be directed to program improvement and innovation.

--Because many young people fail to acquire functional literacy, and therefore encounter difficulties in obtaining and holding jobs, Federal funds should be targeted to areas with large numbers of disadvantaged youth.

--Since at the postsecondary level, vocational education has greater "payoff" various Federal grant, loan and stipend programs for students from low-income families should be used to broaden their access to quality vocational programs that lead to good jobs.

--In drafting future legislation, Congress should aim to establish the same criteria for eligibility, the same funding cycle, and the same reporting requirements for vocational education as for other educational and training programs.

Since vocational education contributes to occupational stereotyping, the Commission reaffirms the recommendations concerning sex equity in its report, Increasing the Earnings of Disadvantaged Women, January 1981.

ELI GINZBERG
Chairman

CONTENTS

Part A

RECOMMENDATIONS

Recommendations on Vocational Education

On the basis of extensive analyses, research, and evaluations and profiting from the contributions of informed individuals and groups, the National Commission for Employment Policy makes the following recommendations to the Administration and the Congress concerning future Federal funding for vocational education:

1. Federal funding for vocational education should be limited to appropriations that further the national interest. Future Federal funds should be directed to achieving the following Federal objectives: Increasing the pool of skilled labor to facilitate the growth of the economy and the Nation's ability to respond to defense needs and reducing the number of economically disadvantaged young people who are unable to secure a regular job with career prospects.

2. In the past, most Federal funds represented supplements to State and local appropriations for ongoing vocational education programs. In the future most Federal funds should be used for program improvement and innovation (including increased access of the disadvantaged to effective vocational programs) and not for program maintenance. Federal funding for vocational education should be directed specifically to contributing to the greater effectiveness of the total national training effort through research and development, data improvement, teacher preparation, curriculum development, developing improved linkages with employers, demonstration programs and evaluation, and assisting the economically disadvantaged to improve their employability and their long-term prospects in the job market.

3. Because many young people enter, advance in, or complete high school without acquiring adequate knowledge of basic literacy, computational, and communication skills (all of which are necessary to secure a good job), Federal funds for vocational education at the secondary school level should be used to stimulate larger State and local expenditures for remedial programs aimed at raising the functional literacy and improving the general employability of these young people. In addition, to assure that disadvantaged and minority students have access to effective vocational education

programs at the secondary level, Federal funds should be targeted on improving programs in local education districts with high concentrations of low income families and in areas with high levels of unemployment.

4. Available evidence indicates that postsecondary training is more clearly associated with economic benefits in terms of employment and earnings than secondary training and that these benefits may be especially high for disadvantaged individuals. Federal funding for postsecondary vocational training should be used to increase the access of economically disadvantaged individuals to training that will prepare them for good jobs, and that is closely linked to the needs of the business community. This training, whether provided by the public or private sector or by community-based organizations of demonstrated effectiveness, should be paid for primarily through the Basic Education Opportunity Grants, student loan programs, and CETA.

5. In drafting future legislation, Congress should aim to establish to the maximum possible degree the same requirements for Federal funding in vocational education as in other related training and employment programs with respect to the categories of eligible persons (economically disadvantaged), funding cycle, coordination, reporting requirements, and other legislative specifications.

6. In an earlier report, Increasing the Earnings of Disadvantaged Women, the Commission found that the vocational education system contributes to occupational stereotyping and low earnings of women because most women are being trained in predominantly female programs in consumer and homemaking, office, and health. Because of its interest in improving the earnings of disadvantaged women, the Commission reaffirms the recommendations concerning sex equity in vocational education made in January 1981.

Part B

THE FEDERAL ROLE IN VOCATIONAL EDUCATION

Preface

This staff report was prepared for the Members of the National Commission for Employment Policy as part of their review of the Federal role in vocational education. The report is based on reviews of existing materials, consultation with other private and public organizations interested in vocational education, discussions at a conference on vocational education held in May 1981, and several research projects sponsored by the Commission. Patricia Brenner coordinated the Commission's activities in this area and is the author of Chapter 1. Chapter 2 was written by Stephen E. Baldwin, and Chapter 3 was written by Janet W. Johnston.

DANIEL H. SAKS
Director

INTRODUCTION

This report is divided into three chapters. The first chapter discusses the Federal interest in vocational education as indicated both in the Vocational Education Act and by economic analysis. From these two perspectives, we suggest that it is reasonable to evaluate vocational education on the basis of its contribution to the labor market success of students. We then summarize recent research sponsored by the Commission on the labor market effects of secondary vocational education, comparing and contrasting the results with those found in other studies. We also consider more limited research on the effects of postsecondary training. Finally, the chapter suggests some implications of the research evaluations for policy. Some mechanisms that the Federal Government could use to assist the vocational education system are further explored in Chapter 2 on projecting labor market demand and supply and in Chapter 3 on coordination between vocational education and the Comprehensive Employment and Training Act (CETA).

An Overview of Federal Involvement in Vocational Education

Vocational education, as supported by the Vocational Education Act, includes everything from home economics to welding; from a student taking a single shop course to one taking an integrated set of courses leading to a licensed occupation; from training in a cosmetology program to training in numerous programs at a large area vocational center; from high school to postsecondary training. In 1978, there were approximately 17 million students enrolled in all these kinds of vocational education.[1] Slightly

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1. These figures are taken from the most recent data available from the Office for Vocational and Adult Education (OVAE) contained in Status of Vocational Education in 1978, a report to the Congress by the U.S. Commissioner of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C. The publication of data for more recent program years has been delayed because of the transition to a new Vocational Education Data System (VEDS) mandated in the 1976 Vocational Education Act. The first formal presentation of VEDS data to Congress is contained in A Statistical Overview of Vocational Education, testimony of Rolf M. Wulfsberg, Assistant Administrator for Research and Analysis, National Center for Education Statistics, before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor of the House of Representatives, September 17, 1980.

over half of those enrolled were women; 23 percent, minorities; 12 percent, educationally disadvantaged; and 2 percent, handicapped. Approximately 60 percent of enrollments were in high schools, 14 percent in postsecondary institutions (primarily junior colleges), and 26 percent in short-term and long-term adult continuing education. While there were 17 million enrollees in vocational education in 1978, only 4.8 million of these students were described as being in occupationally specific programs.[2] Included in this count are students above the tenth grade enrolled in programs designed to train individuals for specific occupations.

Although private institutions are technically eligible to receive Federal funds through the Vocational Education Act, very few do. This emphasis on public institutions is less important at the secondary level than at the postsecondary level because 97 percent of the secondary schools that offer vocational education are public institutions. Almost all of the 16,000 public secondary schools that offer vocational education receive some Federal funds under the Vocational Education Act.

A larger proportion of the institutions that offer postsecondary training are private profit and nonprofit institutions, and almost none receives any Vocational Education Act funds. Thus a significant segment of the institutions that provide postsecondary vocational education are not affected by the provisions of the Vocational Education Act.[3] Much of the Federal support for postsecondary vocational education is channeled through individuals in programs such as the Basic Education Opportunity Grant Program (BEOG), the Guaranteed Student Loan Program, and the Veterans Administration.

A Federal role in vocational education was first adopted in the Smith-Hughes Act of 1917, the precursor of the current Vocational Education Act. Originally and currently, a major intent of Federal legislation was to stimulate State support for vocational education by making grants to the States to encourage schools to provide more practical occupational training to all students and to avoid being too narrowly academic. Not until the Vocational Education Act of 1963 did Federal aid to vocational education begin to be

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2. A Statistical Overview of Vocational Education, Testimony of Rolf M. Wulfsberg, Table 6, p. 22. We have excluded adult short-term enrollees.

3. Ibid., p. 9.

targeted toward particular disadvantaged groups. The 1968 vocational education amendments specified that at least 15 percent of each State's basic grant be used for disadvantaged students, at least 10 percent for handicapped students, and at least 10 percent for postsecondary and adult enrollees. The 1976 Vocational Education Act retained the set-aside for the handicapped and increased the set-aside for the disadvantaged (to 20 percent) and for postsecondary and adult education (to 15 percent). It also introduced, for the first time, a set of sex equity provisions.[4] The two major goals of the vocational education legislation appear to be to promote vocational education for all students, and to enable disadvantaged students to use vocational education as a mechanism for overcoming barriers to labor market success.

Vocational education is popular among students and is one of the fastest growing segments of the educational sector. Most of the growth in vocational education funding during the last 10 years has come from State and local governments. State and local expenditures for vocational education more than doubled from about $2.5 billion in 1973 to about $5.9 billion in 1979, while Federal expenditures under the Vocational Education Act did not even keep up with inflation, barely rising from $480 million in 1973 to $550 million in 1979.[5]

In recent years, expenditure trends have generally paralleled trends in Administration requests for vocational education funds. However, in March 1981, the Reagan Administration requested rescissions of almost $200 million (close to the 25 percent cut that was recommended for all Federal education programs) [illegible]ng that "continued high levels of funding for vocational education can no longer be justified on the grounds that Federal funds either stimulate State and local revenues to increase the availability of

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4. During 1980, the Commission devoted considerable attention to how Federal employment and training and education programs could be used to improve the earnings of disadvantaged women. For material concerning women in vocational education see two NCEP publications: Education, Sex Equity and Occupational Stereotyping: Conference Report, Special Report No. 38, October 1980, and Increasing the Earnings of Disadvantaged Women, Report No. 11, January 1981.

5. Wulfsberg, A Statistical Overview, p. 75.

vocational programs or provide increased access to vocational training for special populations."[6] In explaining the proposed cuts, the Administration also noted that research results were inconclusive about whether vocational program graduates experience sustained economic benefits.

Congress gave the President half of the cuts he had requested, resulting in a final 1981 budget for the Vocational Education Act of $678 million. Recently, Congress extended the Vocational Education Act through fiscal year 1984, and set a ceiling of $735 million in budget authority for each of the years 1982-84.[7] It is likely, however, that both Congress and the Administration will be reexamining the Federal role in vocational education well before the 1984 technical expiration date for the current legislation.

With this brief overview of Federal involvement in vocational education, we turn to a discussion of the Federal interest in vocational education from an economic perspective and to the research on the labor market effects of vocational education on students.

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6. Fiscal Year 1982 Budget Revisions, Additional Details on Budget Savings, Executive Office of the President, Office of Management and Budget, April 1981, p. 105.

7. Excludes $7 million in a permanent appropriation for vocational education included in P.L. 67-347.

CHAPTER 1

THE FEDERAL INTEREST IN VOCATIONAL EDUCATION: THEORY AND EXPERIENCE*

Criteria For Evaluation

In this section we will describe the provisions of the Vocational Education Act that address the Federal purpose, and outline some economic arguments that could be made for the Federal Government's involvement in vocational education. The aim is to develop appropriate evaluation criteria for determining whether the Federal interest in vocational education has been served. In the following section we will describe what some of the research based on these evaluation criteria tell us about the actual effects of vocational education. Finally, we will suggest some implications of the research evaluations for policy.

It is sometimes argued that vocational education should be supported because it is popular among students and their parents, and studies confirm this popularity.[1] It is not surprising, then, that vocational education programs enjoy considerable support at the State and local levels. For our purposes, however, the question is, should vocational education be the recipient of the largest contribution of Federal funds to the secondary education system?[2]

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*The author of this chapter is Patricia Brenner. She wishes to thank Robert Schmid for research assistance and Henry David of the National Institute of Education and Ralph Bregman of the National Advisory Council on Vocational Education for helpful comments on an earlier draft. Opinions are those of the author.

1. Donna M. Mertens et al., The Effects of Participating in Vocational Education: Summary of Studies Reported Since 1968 (Columbus, Ohio: The National Center for Research in Vocational Education, May 1980), p. 51.

2. The Congressional Budget Office has pointed out that only about $1 billion, or about 8 percent, of Federal education expenditures go to students at the secondary level (youth aged 14 to 22 not in college or graduate school).

When the Federal Government first became involved in vocational education in 1917, it was successfully argued that there was a national interest in having a supply of skilled labor to meet the demands of a national labor market, and that vocational education could help provide the needed skills. Ordinarily, marginal investments in training that will increase the Nation's output will be taken without governmental intervention because the individuals taking the training will experience earnings gains. Implicit in Federal involvement was an argument that the private market may not always respond adequately to economic incentives. Firms may underinvest in training because they are afraid workers will move, and individuals may underinvest in training because they are unaware of opportunities elsewhere. The Federal interest in correcting such failures, if they occur, derives from the mobility of the labor force. Maximizing national output may require government subsidy of training or of the provision of guidance and information. This argument alone does not tell us what institutions should be subsidized or how the subsidy should be provided, but it suggests a general rationale for supporting the vocational education system.

The productivity argument also does not tell us what level of government should subsidize the training. In the United States public education was a function reserved by the Constitution to the States, and there has been a long tradition that basic schooling--including secondary vocational education--is provided primarily by the local education system and funded primarily from State and local sources of revenue. The Vocational Education Act appears to recognize the State prerogative in the "Declaration of Purpose," which emphasizes that the purpose is to "assist the States" in providing vocational education.

"Vocational education is by far the largest source--about 53 percent--of Federal support for youth education," Congressional Budget Office, Youth Employment and Education: Possible Federal Approaches, Budget Issue Paper for Fiscal Year 1981, July 1980, p. 17. Also see the discussion in Barry Stern, Toward a Federal Policy on Education and Work (Washington, D.C.: U.S. Department of Health, Education, and Welfare, March 1977), which notes (p.61) that "A picture of studied Federal neutrality with respect to the comparative worth of school-based vocational training is far from the actual case, however. Since the early 1960's, the Federal Government has given vocational education a priority accorded to no other kind of high school education."

In addition to the efficiency or national productivity argument for vocational education, there is a general economic argument that programs to promote a more equitable distribution of income can most effectively be conducted at the most inclusive level of government or, in the United States, by the Federal Government. If a smaller unit of government were to undertake a redistribution of income, there would be an incentive for high-income families to move out, and low-income families to move in. Eventually, there might be nothing to redistribute!

In the last 20 years, equity has been recognized by the Congress, the courts and the executive branch of Government as a legitimate argument for Federal involvement in elementary and secondary education. The passage of the Elementary and Secondary Education Act of 1965 launched a new era in the Federal Government's involvement in education that had previously been confined to vocational education and a few very specific programs.[3] This Act was a primary component of the "War on Poverty" and its major title, Title I, provided substantial funds to school districts for compensatory purposes, that is, to redress the educational disadvantage experienced by minority and poor youth. With the exception of vocational education, almost all of the Federal programs that provide funds to secondary education are addressed primarily to equity issues.[4]

The equity argument for the Federal Government's involvement in vocational education was first recognized in the Vocational Education Act of 1963, which directed that special attention be given to the needs of disadvantaged groups.

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3. Henry Levin, "A Decade of Policy Developments in Improving Education and Training for Low-Income Populations," in A Decade of Federal Antipoverty Programs, Robert Haveman, ed. (New York: Academic Press, 1977), p. 133.

4. See Congressional Budget Office, Youth Employment and Education, p. xviii, for a table listing Federal expenditures on these programs. Even Impact Aid is justified on equity grounds as compensation to school districts for educating children from families that do not contribute to the local tax base because their parents work for the Federal Government.

As described earlier, the equity provisions were strengthened by the set-asides in both the 1968 and 1976 renewals.[5]

In addition to efficiency and equity, there is a third general economic argument for Federal involvement in vocational education. Because of externalities and economies of scale, there is an economic argument that the Federal Government should fund research and provide technical support for the development of programs that can be implemented in many places that would be too expensive or risky for any one State or locality to undertake by itself. In terms of helping generate and disseminate information about such topics as curriculum improvement, it is reasonable for the Department of Education to support vocational education just as it does academic education.

The preceding arguments are quite general and are certainly not arguments that would be made only for Federal involvement in vocational education. However, the major purpose that is set out in the Vocational Education Act is even more general than those listed above. The Declaration of Purpose for grants to the States says in part that it is the intent of the Act to assist the States "so that persons of all ages in all communities of the State...will have ready access to vocational training or retraining which is of high quality...(and) is realistic in the light of actual or anticipated opportunities for gainful employment..." Section 101.(4).

This purpose is quite general but it does indicate that programs are to be evaluated on employment grounds, so far as the Federal interest is concerned. Following the Declaration of Purpose there are five subparts. Most of the funds allocated to the States are distributed under the Basic Grants (Subpart 2) provisions. It is possible for almost all of the funds under the Basic Grant to be used for maintenance of existing programs. Indeed, while 15 separate uses for which States "may" spend money are listed, the

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5. Some would argue that vocational education has always served the disadvantaged because those who take vocational education are generally not bound for college. Whether vocational education is well targeted on the disadvantaged appears to depend on how narrowly one defines disadvantaged. The Congressional Budget Office estimated that only about 25 percent of all vocational education high school students had family incomes of less than $10,000 during the 1977-1978 school year.

first of these is simply "(A) vocational education programs" Section 120.(b)(1)(A). (An exception is that $50,000 must be used for a full-time sex equity coordinator.)

Out of their Basic Grant, States are required to devote at least 20 percent (they may devote more) to program improvement and supportive services as described under Subpart (3). This subpart includes the exemplary and innovative programs (including "programs designed to develop high quality vocational education programs for urban centers with high concentrations of economically disadvantaged individuals, unskilled workers, and unemployed individuals; establishment of cooperative arrangements between public education and manpower agencies, designed to correlate vocational education opportunities with current and projected needs of the labor market") curriculum development, improvement of vocational guidance and diagnostic services, and personnel retraining of vocational education teachers in new fields.

Thus, what we find is that while there are numerous apparent restrictions on the allocation of funds, the legislation is really quite permissive and gives the States wide discretion in the use of Federal funds.[6] It appears that Congress would be satisfied with contributing to vocational education as long as it can be shown that these programs contribute to employment.

The evaluation provisions of the 1976 Act were strengthened because several sources of testimony presented during the reauthorization hearings, especially the Government Accounting Office, were critical of the failure of the States to conduct adequate program evaluation.[7] The evaluation criteria listed in the Act for occupational programs are that each State shall evaluate:

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6. Another example of nonbinding requirements occurs in Section 106.(5)(A). States are told (1) that they should give priority to local applicants that are located in economically depressed areas and areas with high rates of unemployment and (2) propose programs to meet new and emerging manpower needs. It is hard to imagine a school superintendent who could not file an application satisfying one of these conditions.

7. For an account of the evaluation requirements in the 1976 Act and subsequent regulations, and of their impact on program improvement and national accounting, see Gerry Hendrickson, Evaluating Vocational Education: The Federal Stimulus, Vocational Education Study Publication No. 5 (Washington, D.C.: National Institute of Education, March 1981).

the extent to which program completers and leavers--(i) find employment in occupations related to their training, and (ii) are considered by their employers to be well-trained and prepared for employment, Section 112.(b)(1).[8]

In summary, we have been able to identify several potential economic arguments for Federal involvement in vocational education. That market failures exist seems to have been implicitly accepted by the legislation. First, because of the mobility of the labor force and the national scope of certain labor markets, it has been deemed appropriate for the Federal Government to be concerned with adequate supplies of skilled labor. Second, it has been deemed appropriate for the Federal Government to consider the use of vocational education to overcome barriers to employment for disadvantaged individuals. Third, it has been deemed appropriate for the Federal Government to serve as a resource for research, demonstration programs, and program improvement in vocational education.

All of these arguments for Federal involvement in vocational education are based on the premise that vocational education contributes to the labor market success of students. In the next section, we will review studies that evaluate vocational education on measures of labor market success that could give policymakers some guidance about whether the employment purposes of the legislation are being met. Before turning to these findings, however, we will discuss briefly an alternative set of criteria for evaluating vocational education. Although it has not done so, Congress could conceivably change its focus to viewing vocational education as primarily an education program and not primarily an employment program.

Vocational Education as an Education Program

If a major revision of the Vocational Education Act were seen as desirable, we think it would be important to make a much clearer distinction between secondary and postsecondary vocational education than is currently done. The most important difference is that we think that secondary vocational education is most appropriately thought of as primarily an education program that may teach specific skills that are potentially occupationally relevant. We think that it is

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8. The legislation also suggests that nonoccupational programs, primarily industrial arts and home economics, should be evaluated but does not provide evaluation criteria for these programs.

reasonable for postsecondary vocational education to reverse the emphasis: It may primarily aim to teach skills that can be sold directly in the labor market to individuals who already have at least some basic skills. Concomitantly, basic skills may be enhanced.

It is often argued that it is unfair to evaluate secondary vocational education programs on the basis of economic outcomes for students because such programs should be viewed primarily as education programs and not as employment and training programs.[9] Many proponents, as well as critics, of vocational education suggest that schools should provide skills that can be applied to several jobs within an occupational cluster, good work habits, and basic literacy and computational skills, and should not attempt to provide students with very narrow job skills. These arguments imply that the desired outcome for secondary vocational education students should be similar to that for all secondary students: They should be able to read, write, compute, and solve problems. Postsecondary students may be better able to take advantage of specific skill training because they are older, are more likely to have family responsibilities, to have acquired basic skills, and to have thought seriously about career options.

There are other reasons to view secondary and postsecondary training differently. Because high school attendance is compulsory, decisions by students about how much secondary vocational education to take are largely decisions about how many vocational hours to take compared with hours in academic courses, not decisions about how much education to undertake overall.[10] Attendance in postsecondary training is not compulsory. Thus, subsidy of postsecondary vocational education could increase the total amount of training that individuals undertake, not just the type of training.

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9. John Walsh, "Vocational Education: Education or Short-Run Training Program?" The Planning Papers for the Vocational Education Study (Washington, D.C.: National Institute of Education, April 1979), pp. 229-242.

10. This statement should be qualified because vocational students are generally found to take more total courses than students in the academic or college preparatory tracks. Still, absolute differences are small, so that there is clearly a tradeoff between the number of vocational and academic courses that a student takes. Also, it is doubtful that compulsory attendance is completely effective and ends at age 16.

For these reasons it appears that Federal purposes and evaluation criteria for vocational education as outlined in the current Vocational Education Act are more suited to postsecondary training than they are to secondary education. If the legislation were to be substantially rewritten with an orientation of evaluation of secondary vocational education toward its contribution to students' acquisition of basic skills and employability, we suggest that greater attention would have to be paid to such questions as:

(1) What are the effects of different high school curricula on the likelihood that a student will attain and retain basic skills, job seeking skills, and personal traits regarded by employers as evidence of employability?

(2) What is the appropriate measure of vocational education, given that almost all students take some academic courses and some vocational courses? Would it be desirable for all students to take more academic (vocational) courses or should certain students take more academic (vocational) courses?

(3) Is there an independent curriculum effect on the likelihood that a student will drop out of high school?

(4) Is there an independent curriculum effect on the likelihood that a student will undertake post-secondary training?

(5) Are disadvantaged students disproportionately placed in vocational education, thus dampening their aspirations and reducing their lifetime earnings?

(6) Or instead, can it be shown that disadvantaged students have a comparative advantage at experiential or "hands-on" learning so that encouraging them to take more vocational courses or a vocational program improves their lifetime earnings?

If one thinks of vocational education as an education program, it seems almost peculiar that the Federal Government subsidizes vocational, but not academic, secondary education. Yet, in 1917 when vocational education was first funded, universal secondary education did not exist, and only about 6 percent of young persons graduated from high school. In short, providing job-related training may have been a more effective strategy for helping people to acquire basic skills than it is now.

Even if Congress were to change its focus and view vocational education primarily as an education program, the evidence about economic outcomes would not be irrelevant. Contributions to economic outcomes could occur not only because a vocational curriculum imparts specific salable skills to participants, but also because it encourages certain students to stay in school and acquire basic skills and a high school degree. Vocational training may also help students acquire good work habits and attitudes that are attractive to employers. If these effects exist, they should show up in enhanced economic outcomes for youth who participated in vocational education programs after adjusting for other differences, such as scholastic aptitude and socioeconomic status.

Along these lines, Lester Thurow has commented:

> Thus there is a three-pronged role for vocational education. (1) In some limited areas actual salable skills can be created. (2) Upon completion of vocational education, literacy standards must be as high or higher than those of students who come from academic educational tracks. (3) Upon completion of vocational education, standards of industrial discipline must be as high or higher than those of students from academic educational tracks. If these latter two conditions are not met, or cannot be met, then much of vocational education should be abandoned. It costs more than conventional education and is not delivering a superior economic product.[11]

Secondary and Postsecondary Vocational Education--The Evaluations

In the preceding section, we discussed criteria for evaluating whether the Federal interest is being achieved in vocational education. We concluded that the implicit and explicit intent of the Vocational Education Act is that programs are to be evaluated on the basis of their contribution to economic outcomes for students. In this section we will review recent research sponsored by the Commission on the labor market effects of secondary vocational education that

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11. Lester C. Thurow, "Vocational Education as a Strategy for Eliminating Poverty," The Planning Papers for the Vocational Education Study (Washington, D.C.: National Institute of Education, April 1979), p. 328.

improves on some of the shortcomings of existing studies. We will compare and contrast the results with those found in other studies.[12]

We also think it is appropriate to evaluate secondary vocational education on the basis of its effect on the likelihood that an individual will undertake postsecondary education, and we will describe research findings on this measure. Postsecondary training is often associated with long-run earnings gains for participants,[13] and the evaluation part of the legislation explicitly says that "in no case can pursuit of additional education or training by program completers or leavers be considered negatively in these evaluations," Section 112.(b)(1).

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12. The major studies reviewed for this staff report were: John T. Grasso and John R. Shea, Vocational Education and Training: Impact on Youth, technical report for the Carnegie Council on Policy Studies in Higher Education (Washington, D.C.: Carnegie Foundation for the Advancement of Teaching, 1979); Alan L. Gustman and and Thomas L. Steinmeier, "The Relation Between Vocational Training in High School and Economic Outcomes" (Washington, D.C.: U.S. Department of Education, Office of Technical and Analytic Systems, Division of Technical Systems, Revised, July 1981); Sandra L. Hofferth, High School, Occupational Choice, and Sex Equity (Washington, D.C.: The Urban Institute, September 1980); David E. Wiley and Annegret Harnischfeger, "High School Learning, Vocational Tracking, and What Then?" (Evanston, Illinois: ML-Group for Policy Studies in Education, CEMREL, Inc., February 1980). In addition, several surveys of evaluations of vocational education were consulted, including Mertens et al., The Effects of Participating in Vocational Education; and John T. Grasso and John R. Shea, "Effects of Vocational Education Programs: Research Findings and Issues," in The Planning Papers for the Vocational Education Study (Washington, D.C.: National Institute of Education, April 1979), pp. 131-195.

13. For studies of the effects of noncollegiate postsecondary training, see Duane E. Leigh, An Analysis of the Determinants of Occupational Upgrading (New York: Academic Press, 1978) and John Fredland and Roger Little, "Longterm Returns to Vocational Training: Evidence from Military Sources," Journal of Human Resources, Winter 1980, pp. 49-67.

In its Fifth Annual Report, the Commission reviewed current knowledge about the roles of vocational education, career education, and compensatory education in improving the labor market experiences of youth.[14] Concerning vocational education, most studies based on nationally representative samples of students could not find convincing evidence of positive labor market effects of secondary vocational education on males, compared to alternative uses of students' time. Nor was there convincing evidence that males taking vocational education were less likely to drop out of high school than comparable students in the general curriculum.

Female students in the business and office area of the vocational education curriculum were more likely to finish high school, have higher hourly wages and higher annual earnings than their counterparts from general programs. The initial positive return to women appeared to disappear over time, however, as the earnings profile of this largely secretarial group failed to rise after a few years. In striking contrast, for both men and women, postsecondary vocational training appeared to be positively related to earnings.

How reliable are these evaluations? Many questions have been raised about the quality of existing evaluations of vocational education. Some of the shortcomings are (a) disagreement about the appropriate measure of outcome, (b) inadequate and inaccurate data, and (c) inadequate controls that result in biased estimates. This latter problem--sometimes called selection bias--is perhaps the most difficult of all to resolve. While the better studies attempt to correct for such differences as scholastic aptitude and socioeconomic status between, for example, vocational and general students, there may be motivational or other differences between them that have not been captured. We rely on studies that do the best job of avoiding selection bias.

The Commission funded two kinds of studies--a case study based on the 1969 graduates of the Worcester, Massachusetts, public school system, and a study based on a large nationally representative sample of high school graduates--that

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14. National Commission for Employment Policy, Fifth Annual Report, Expanding Employment Opportunities for Disadvantaged Youth, "Vocational, Career, and Compensatory Education Programs--A Review of the Experience," (Washington, D.C.: U.S. Government Printing Office, 1979), pp. 109-129.

analyze labor market outcomes for secondary vocational education students. Each study also investigates other questions that each data base could answer and that were potentially pertinent to Federal policy.

We will discuss first the results of the case study.[15] This study has two significant advantages compared with studies based on the large national data sets. First, it permits a fairly clear distinction between graduates from the vocational, general, and academic curricula.[16] Second, very detailed information was collected for each job, including: starting and leaving date, starting and leaving wages, occupation, industry and location of employer, size of employer, job satisfaction, and reason for leaving the job. The study was especially intended to shed light on the question of whether small firms rely on vocational programs to train students in industry specific (as contrasted with firm specific) skills because their size prevents them from training workers themselves. The major disadvantage of the case study approach is that the results are strictly applicable only to the graduates of the particular school system studied. One cannot make statements about the national effects of vocational education from a single case study.

The Worcester study finds that high school curriculum does influence employment outcomes--in both the initial (1969) and later (1977) survey, men and women were found to be employed in different occupations and industries than were their nonvocational counterparts.[17] In particular,

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15. Donna Olszewski and Philip Moss, "The Impact of Vocational Training and the Role of Size of Firm" (Cambridge, Mass.: Report prepared for the NCEP, May 1981). This study has data for the 1969 graduates of Worcester's four comprehensive high schools and two vocational trade schools and data generated by a 1977 followup survey.

16. Analysis of school records from the city's four comprehensive high schools resulted in assignment of their students to the general, academic, and business curricula. The graduates from the city's two trade schools were assigned to the vocational curriculum.

17. Analyses in the Worcester study were limited to youth who did not subsequently attend college. Background characteristics controlled in the regression analysis were family income, father's education, and father's socioeconomic status.

vocational males were found to be predominantly employed in blue-collar occupations and in construction and manufacturing industries. Vocational women were most heavily concentrated in service occupations. These different occupations and industries were not, however, strongly associated with either large or small employers--no significant difference was found among the graduates of the different curricula in the firm size of employment. Most importantly, and confirming the finding from other studies, it was found that for males a vocational degree did not result in any significant initial wage advantage or differential wage growth. Although the difference was not statistically significant, women in the business curriculum initially had higher wages than those of academic and general women. Eight years later the real wages of business curriculum women had barely grown, while those for both academic and general women had grown substantially and exceeded business women's wages.

The results of the second study of vocational education outcomes recently sponsored by the Commission that we will describe was conducted by Robert Meyer, using the National Longitudinal Survey of the High School Class of 1972.[18] Before addressing the results of this study, it may be helpful to describe briefly the data bases typically used in national vocational education evaluation.

Data Bases

Program data on vocational education are collected by the National Center for Education Statistics (NCES) of the Department of Education, but have not proven very useful for evaluation because they have been quite aggregated and not designed to provide information about individual students.

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18. Robert H. Meyer, "An Economic Analysis of Vocational Education" (Washington, D.C.: The Urban Institute, prepared for the National Commission for Employment Policy, August 1981). There are four parts to Meyer's study:

I. Vocational Education: How Should It Be Measured?
II. The Determinants of Participation in Vocational Education: The Role of Schools and Personal Characteristics
III. The Effect of Vocational Education on Postsecondary School and Training Choices
IV. The Labor Market Effects of Vocational Education.

The new Vocational Education Data Systems (VEDS) may turn out to be an improvement, but will still not provide information about individual students.[19]

The most useful data bases for national evaluations of vocational education have been several major national longitudinal surveys of American youth conducted by several different sources. These surveys are not intended solely or even mainly to elicit information about the effects of vocational education, but they turn out to be valuable for this purpose because they provide extensive information about students' backgrounds, scholastic aptitudes, high school studies, and postschool experiences including additional schooling, wages, and other employment experiences. The initial data collection establishes a cohort or panel of students, and this is typically followed by several waves or followup reinterviews of the same youth in later years.

We will focus our attention on the studies based on the most useful--because they are the most extensive and most current--data bases. Unfortunately, while the two data base projects have been conducted quite separately, they are often identified by confusingly similar acronyms. One of these data base projects is sponsored by the U.S. Department of Labor, and the original cohort was called the National Longitudinal Survey of Labor Market Experience (NLS).[20] The Grasso and Shea study (see footnote 12), to which we will refer frequently, is based on this cohort of the NLS and its followup reinterviews. We regard it as one of the best studies of vocational education outcomes for students.

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19. VEDS also faces a major problem shared by any new data system. Even if its definitions of particular categories (for example, of students) are conceptually superior to existing ones, it may be impossible to apply the definitions to old data. Hence, valid comparisons may not be possible between old data and new data. This problem was vividly illustrated when VEDS had to withdraw testimony before the House Subcommittee on Elementary, Secondary, and Vocational Education concerning changes in the numbers and proportions of handicapped and disadvantaged students served by vocational education programs between 1977-78 and 1978-79.

20. While sponsored by the Department of Labor, the project is conducted jointly by the Center for Human Resource Development at Ohio State University and the Census Bureau. There is now a new 1979 cohort of this survey.

The second data base project is called the National Longitudinal Survey of the High School Class of 1972 (NLS72), and is sponsored by the National Center for Education Statistics (NCES) of the Department of Education. The original cohort consists of over 22,000 1972 high school graduates in over 1,000 schools, and has extensive information on individual coursework and program enrollment. The Meyer study sponsored by the Commission is based on the NLS72 cohort and the followup surveys conducted through 1979.

Design of Evaluations

Most of the current national studies are based on either the NLS or NLS72. Although, of course, they vary in exact design, the studies that evaluate secondary vocational education are generally designed as follows. First, they are limited to individuals who have never attended post-secondary school. (Analyses may be conducted separately of the effects of curriculum on postsecondary attendance.) Second, they control for various aspects of students' background, such as socioeconomic status, parents' incomes, and test scores. They may also control for certain labor market conditions such as presence or absence of collective bargaining, and geographical location. Finally, they compare outcomes for students that take different curriculums. Usually the comparison is made between vocational and general students because they tend to be more similar in background than those who take an academic curriculum.

If one were analyzing training provided in a private market, one would expect to find the returns to various kinds of training to be the same, thus assuring that the right mix of training is undertaken. Those who argue for Federal subsidy of vocational education on economic grounds are implicitly claiming that either the supply or the demand of vocational education is limited in such a way that the return is held above the market return to other uses of high school students' time. Hence, the econometric procedure of comparing the returns to different curricula is testing to see if there is an inefficient restriction on the amount of high school vocational education--should government supply more or less vocational training?

If the returns (wages, earnings, etc.) are not significantly different among students in the different curricula, one might conclude that sufficient resources have been invested in vocational education to bid the returns down to the level experienced by students in other curricula. There is, then, no strong economic argument for increased funding. More radically, one might speculate about whether a differential existed before funding was increased.

A major contribution of Meyer's study is the development of a new, more objective, and accurate measure of participation in vocational education--the percentage of a student's courses that are vocational. This is important because it resolves some of the criticism of other studies, and therefore should give policymakers greater confidence in the findings, many of which turn out to be familiar.[21]

Prior to Meyer's study, classification of students as vocational, academic, or general varied across the studies, depending on whether (a) students specified their own curriculum, (b) school administrators specified curriculum choice, and (c) the researchers looked at courses taken and developed their own taxonomy. What the measures had in common was that they were categorical or based on broad definitions. Instead of this either/or framework, Meyer developed a continuous variable to represent vocational education. All high school students take some academic courses and almost all students also take vocational courses. Hence, it is somewhat artificial to classify students as being in one curriculum or another, whatever the classification scheme. There is no standard academic, general, or vocational program.

In analyzing the data, Meyer finds that the categorical definitions of vocational education in the NLS72 do not agree well with each other nor with the continuous variable percentage of courses taken that are vocational.

Participation Rates

Meyer finds that the average high school senior takes 22 to 23 class hours per week. Women take slightly more coursework than men, 22.7 hours compared to 22.0 hours. Men take somewhat more mathematics and science but less fine arts and languages. Women take slightly less academic coursework than men, 15.6 hours compared to 16.1 hours. The balance of

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21. In a study of measures of participation in vocational education, it was concluded that "the strikingly different patterns of educational exposure in the various occupational program areas strongly suggest that future studies of the effectiveness of vocational education should look at individual students and their activities rather than analyze averages computed over nonhomogeneous groups." Lawrence L. Brown, III, and Kevin J. Gilmartin, Measures of Participation in Vocational Education: Enrollments, Students, and Exposure (Washington, D.C.: Office of Technical and Analytic Systems, Office of Planning and Budget, U.S. Department of Education, Report No. 1, August 1980), p. 2.

the coursework is vocational, 7.1 hours for women and 5.9 hours for men. Women tend to take somewhat heavier course loads in their primary vocational field, 3.64 hours per week compared to 3.04 hours for males. The vocational percentage for both men and women, is higher for Hispanics than for blacks, and higher for blacks than for whites. Hispanics seem to be especially likely to take heavier vocational education course loads and are least likely to take no vocational education.

These findings concerning overall participation in vocational education are consistent with findings from other studies. For women, blacks, native Americans, Asians, and Hispanics, overall participation in vocational education appears to equal or to exceed representation in all public education programs. Handicapped students and those with limited English skills are considerably underrepresented in vocational education programs.[22]

Effects on Postsecondary Choices

Meyer also analyzes the effects of vocational education on postsecondary school choices. Separate analyses are conducted for men and women, and for blacks, Hispanics, and whites by sex. The postsecondary alternatives considered are college, junior college, vocational, or never attended postsecondary school.[23]

Meyer finds that after accounting for specific personal and family characteristics, for all ethnic and sex groups combined, secondary vocational education is negatively related to postsecondary school attendance.[24] The

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22. According to a survey of vocational education institutions conducted by the Office for Civil Rights in 1979, handicapped students are about 10 percent of students in all grades but account for only 2.6 percent of enrollments in vocational education. Limited English speaking students are 2.5 percent of students in all grades but only .6 percent of those in vocational education.

23. The measure of vocational education is percentage of a student's courses that were vocational. Thus statements are made comparing students who took larger percentages of vocational coursework compared with those who took smaller percentages of vocational coursework.

24. This finding is consistent with that in several other studies, including Grasso and Shea. See Mertens et al., The Effects of Participating in Vocational Education, p. 80.

strongest negative effect is for the likelihood of attending college. In addition, the highest occupational course percentage (35 percent and over) is associated with a reduced probability of attending junior college. Higher rates of participation in vocational education are associated with a greater probability of never taking postsecondary training. Only with the postsecondary alternative of vocational training for Hispanic and white males is there some mild complementarity of secondary vocational education to postsecondary training. Even this effect is not present for blacks or for females of any race.

The finding that secondary vocational education adversely affects the probability of obtaining further education could simply reflect a prior decision not to attend college rather than any independent effect of secondary vocational education on the likelihood of attending college. In other words, perhaps students choose a vocational curriculum partly because they do not aspire to continue their educations after high school. Grasso and Shea concluded that the vocational curriculum had a separate negative effect on postsecondary educational attainment,[25] and Rosenbaum cites several studies that support this conclusion.[26] Perhaps the most disturbing preliminary finding is that some noncollege-track students are not adequately informed by guidance counselors that they may be foreclosing options for more education by not taking more academic courses. In light of this possibility, it would seem that caution should be taken in recommending vocational education for disadvantaged students.[27]

Labor Market Effects: Secondary Vocational Education

We turn now to the results produced by Meyer on the labor market effects of vocational education. The labor market outcomes considered are hourly wages, weekly earnings, and annual weeks worked. Together these

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25. Grasso and Shea, Vocational Education Training, p. 69.

26. James E. Rosenbaum, "Track Misperceptions and Frustrated College Plans, An Analysis of the Effects of Tracks and Track Perceptions in the National Longitudinal Survey," Sociology of Education, April 1980, p. 84.

27. An alternative view is that the vocational curriculum serves as a useful cooling out mechanism, discouraging less able students from going to college. The danger is that we may prejudge the ability of students to profit from further education.

variables give information about an individual's annual earnings, which appears to be a reasonable measure of the effects of training.

Economists would generally argue that the best measure of an individual's benefits from training would be long-term earnings over a lifetime. However, such data are rarely available for a large sample of students. Even if they were, the results would be out of date and less helpful to policymakers who want to know the effects of recent programs and legislation.

Another alternative measure of the effects of training, placement, represents the most immediate labor market effect of training, and is one of the evaluation criteria listed in the Vocational Education Act. Placement, however, is probably not a good indicator of long-term earnings, especially for recent high school graduates because quick placement may be related to high turnover and unstable earnings.

Finally, the annual weeks worked measure used by Meyer and others is superior to the unemployment rate as a measure of economic outcome for recent high school graduates because it adjusts for the length of any spells of unemployment, and because the labor force attachment of youth is more erratic than that of older individuals.[28]

Meyer provides a simple comparison of the mean values of two labor market outcomes--weekly earnings and annual weeks worked--by race, sex, and percentages of courses that are vocational. He also presents regression analyses with the labor market outcomes as dependent variables and the vocational measures as independent variables.[29]

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28. For an extensive analysis of how to measure employment and unemployment see the series of publications produced by the National Commission on Employment and Unemployment Statistics, which concluded its deliberations in 1979. The summary volume is National Commission on Employment and Unemployment Statistics, Counting the Labor Force (Washington, D.C.: U.S. Government Printing Office, 1979). For a discussion of the labor force behavior of youth, see Ralph E. Smith and Jean E. Vanski, "The Volatility of the Teenage Labor Market: Labor Force Entry, Exit, and Unemployment Flows," in Conference Report on Youth Unemployment: Its Measurement and Meaning (Washington, D.C.: U.S. Department of Labor, 1978), pp. 35-65.

29. The analysis controls for ability, class rank, high school work experience, parents' income, family factors, experience, on-the-job training, and a set of local labor market indicators and regional dummies.

Tables 1 and 2 show the mean values of the labor market measures for each of the groups by level of participation in vocational education. In every case, the value for women of the labor market measure for the group with highest participation in vocational courses is higher than that for the group with lowest participation in vocational courses. The largest absolute differences (gains) are generally seen for Hispanic women.

The regression results for women distinguish three different types of vocational education: commercial, technical, and home economics. The regressions control for a set of socioeconomic, labor market, and geographic variables.[30]

For each of the groups--white, black, and Hispanic women--there are statistically significant and positive economic gains in the years immediately following high school graduation to those who take more course work in commercial classes.

Because data were available for a span of 8 years, Meyer was able to provide some evidence about the longer term effects of participation in commercial courses. In one other study it had been found that apparent short-term gains for women in the commercial curriculum were lost by 10 years after high school graduation.[31] This finding is consistent with the women remaining in occupationally segregated secretarial positions that fail to provide long-term earnings gains.[32]

Meyer's findings support the hypothesis that there are initial large gains to women of taking commercial courses, but that these gains decline over time. The gains for women were substantially higher in the years immediately following graduation from high school, but by 1979 had almost disappeared.

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30. Readers interested in the details of the study and the econometric procedures may request a copy of the full study from the Commission.

31. Hofferth, High School, Occupational Choice and Sex Equity.

32. For a more extensive discussion of the causes and consequences for women of taking training for occupations that are predominantly female see the Commission's report, Increasing the Earnings of Disadvantaged Women, Report No. 11 (Washington, D.C.: Government Printing Office, 1981).

Table 1

Average Weekly Earnings and Annual Weeks Worked by Level of Participation in Vocational Education

Vocational Level By Group	Weekly Earnings ($ 1972) 1974	1976	1979	Annual Weeks Worked 1974	1976	1979
Black Women						
Low 0-15	88.32	88.62	90.44	27.90	29.48	35.29
	(41.97)	(39.28)	(38.19)	(20.44)	(21.61)	(20.56)
	115	126	98	178	172	117
Medium 15-35	86.94	93.98	97.44	26.99	32.29	40.19
	(33.42)	(36.88)	(49.83)	(21.67)	(21.21)	(18.52)
	112	133	120	174	171	134
High 35+	92.24	103.24	91.98	32.75	36.47	35.36
	(27.15)	(42.48)	(35.97)	(20.34)	(20.68)	(20.90)
	95	98	65	126	119	77
Hispanic Women						
Low 0-15	87.71	81.53	86.73	29.04	32.26	36.73
	(37.88)	(22.06)	(23.58)	(21.49)	(22.48)	(19.34)
	30	25	22	44	38	25
Medium 15-35	88.73	99.97	84.24	29.73	31.83	35.00
	(34.80)	(41.44)	(36.19)	(21.19)	(20.90)	(20.20)
	39	38	35	52	52	40
High 35+	94.36	103.10	90.13	38.80	41.97	38.34
	(26.64)	(32.82)	(35.03)	(18.71)	(16.74)	(17.99)
	53	51	43	64	58	50
White Women						
Low 0-15	87.36	87.83	85.05	31.69	28.99	31.49
	(36.76)	(37.93)	(41.24)	(21.04)	(21.86)	(22.01)
	431	406	368	660	638	465
Medium 15-35	85.66	93.64	88.60	32.88	30.85	30.91
	(30.23)	(40:37)	(40.26)	(20.82)	(21.64)	(22.02)
	590	538	495	878	850	657
High 35+	88.80	97.88	93.00	35.93	33.65	33.48
	(27.54)	(36.43)	(41.44)	(20.44)	(21.49)	(22.08)
	782	782	617	1,074	1,058	835

Notes: For each year, average earnings have been deflated by the October Consumer Price Index (CPI) to October 1972 dollars. Standard errors are in parentheses below each mean. The sample size for each statistic is below the standard error. The vocational level for women does not include courses in home economics. The sample includes individuals with 12 years of schooling as of 1976. A number of individuals who attended school for the first time after 1976 were also excluded from the 1979 calculations.

SOURCE: Robert H. Meyer, "The Labor Market Effects of Vocational Education," Table 1.c., p. 16.

Table 2

Average Weekly Earnings and Annual Weeks Worked by Level of Participation in Vocational Education

Vocational Level Group	Weekly Earnings ($ 1972) 1974	1976	1979	Annual Weeks Worked 1974	1976	1979
Black Men						
Low 0-15	121.00	125.82	123.68	39.33	43.53	45.56
	(64.30)	(56.01)	(60.98)	(18.49)	(14.85)	(13.61)
	86	89	55	100	94	57
Medium 15-35	118.51	125.25	129.08	44.41	44.07	45.91
	(52.36)	(55.35)	(55.26)	(13.48)	(14.19)	(13.26)
	181	183	129	189	181	128
High 35+	120.75	119.24	138.05	41.03	40.53	44.87
	(55.14)	(54.93)	(61.76)	(15.89)	(17.39)	(14.22)
	142	141	95	154	155	95
Hispanic Men						
Low 0-15	112.57	124.00	152.66	44.89	48.26	43.62
	(45.73)	(45.24)	(48.31)	(12.86)	(10.96)	(17.15)
	24	27	15	27	23	16
Medium 15-35	125.69	135.72	148.10	45.26	45.16	47.55
	(56.32)	(58.54)	(50.03)	(11.74)	(13.12)	(11.70)
	49	50	31	53	51	29
High 35+	131.21	144.17	149.84	38.82	43.00	47.28
	(61.12)	(68.62)	(74.38)	(18.54)	(13.75)	(12.41)
	65	59	49	66	62	53
White Men						
Low 0-15	133.25	144.46	157.16	45.76	44.69	48.39
	(58.08)	(54.98)	(61.19)	(11.78)	(12.82)	(9.17)
	421	407	271	433	440	279
Medium 15-35	132.28	146.09	159.43	45.40	45.10	48.06
	(54.91)	(57.37)	(64.21)	(12.56)	(12.78)	(9.54)
	707	714	496	741	740	517
High 35+	135.59	150.12	162.97	45.04	45.68	47.76
	(56.46)	(61.93)	(66.64)	(12.36)	(11.65)	(9.53)
	960	954	699	999	999	730

Note: See notes on previous table.
SOURCE: Robert H. Meyer, "The Labor Market Effects of Vocational Education," Table 1.b., p. 15.

Meyer found that course work in home economics was associated with a significant decrease in income throughout the period 1972 to 1979, for all women, but especially for black and Hispanic women.

Unfortunately, the data were too weak to provide meaningful results about the outcome for women of taking vocational education programs that are predominantly male. While trade and industry, for example, is a category that is predominantly male (86 percent male in 1978), the 50 subcategories of this program range from cosmetology (6.5 percent male) to plumbing and pipefitting (98.5 percent male). In 1972, there were nationally too few women in the predominantly male subcategories to determine whether there were subsequent economic benefits to these women.[33]

Meyer did test for the effects on women of taking technical (agriculture, retail sales, trade and industrial, health) courses. Combining all these technical courses, there were no estimated effects on employment and earnings, except for Hispanic women, who may benefit not only from taking commercial courses but other vocational courses as well. In addition, Hispanic women seemed to gain more from commercial courses than either black or white women.

We turn now to the results for men. Looking at the means in Table 2, the effects of higher participation in vocational education show little consistency in the direction of change over time or in the direction of change in any given year with respect to the two different economic measures, weekly earnings and annual weeks worked. White males with higher participation in vocational education have higher weekly earnings than white males with low participation in vocational education. This appears to be the only consistent positive earnings result in the table.

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33. It should also be remembered that the sex equity provisions of the Vocational Education Act that were partly intended to encourage female students to increase their participation in predominantly male programs were not put into the legislation until 1976. Generally, it is not yet possible to comment on the effects of the provisions of the Vocational Education Act that were newly added in 1976, and, due to delays in the development of regulations, not implemented until 1978 or 1979. The new cohorts of the national longitudinal surveys should be useful for this purpose, but it will be several years before we can tell anything about the long-run effects.

The regression analysis for males, again controlling for a series of socioeconomic and labor market variables, failed to show any positive return to vocational education, pooled over all kinds of vocational courses. In regressions conducted separately for white, black, and Hispanic males, the coefficients were sometimes positive, sometimes negative, but not statistically significant. This is consistent with the findings by Grasso and Shea.

Meyer also tried to determine if there were significant effects in any of the separate program areas for males. As did Gustman and Steinmeier, Meyer found significant initial positive effects on weekly income for males in the trade and industry category. The positive effects on earnings came primarily from an increase in wages and only slightly from an increase in weeks worked per year. Like the findings for women who took commercial courses, the positive effects for males in trade and industry courses declined over time and had become negative (but insignificant) by 1979. Commercial course work and course work in other vocational subjects were not significantly related to earnings or employment for men.

Meyer was also able to test for the quality of area vocational centers. This is of particular importance because it has been argued that disadvantaged youth (who are disproportionately black) are excluded from good quality area vocational centers because these centers are not located in the urban areas where most of the disadvantaged youth live.[34]

The relatively low availability of secondary and postsecondary vocational facilities in central cities can be seen by a comparison of the population that lives there with the facilities located in those cities. While 22.8 percent of the population and 29 percent of the youth population aged 16 to 24 lived in cities with populations over 500,000 in 1977, only 11 percent of the secondary vocational stations and 13 percent of postsecondary vocational stations

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34. See, for example, Phyllis McClure, "Race and Sex Compliance Issues in Vocational Education," in The Planning Papers for the Vocational Education Study (Washington, D.C.: National Institute of Education, April 1979), pp. 309-323.

were located there.[35] According to the 1979 Office for Civil Rights Survey, while blacks constitute about 15 percent of enrollment in vocational education, they are only about 10 percent of enrollments in area vocational centers, thus confirming underrepresentation of blacks in these centers.

Meyer was able to compare the effects of vocational education taken in area vocational schools with that taken in comprehensive high schools.[36] Enrollment in an area vocational school did seem to improve the likelihood of positive economic gains for males (but not for females), although the gains were small. Thus, there is limited evidence that underrepresentation in area vocational centers may reduce the effect of vocational education for black males.

Postsecondary Evaluations

National studies of postsecondary vocational education are fewer and less satisfactory than studies of secondary vocational education for purposes of evaluating the average impact of programs that receive Vocational Education Act funds. This is partly because the range of institutions that provide postsecondary vocational training is more diverse than those that provide such training at the secondary level. As noted in the introduction, almost all secondary schools that offer vocational education receive Vocational Education Act funds. In contrast, postschool training is provided by junior colleges, business colleges, technical institutes, correctional facilities, proprietary trade schools, in apprenticeships, in the military and in company-sponsored programs. Only the public institutions receive Vocational Education Act funds, while private institutions receive Federal funds under the Basic

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35. Institutional Development Associates, Inc., Westat, Inc., and Financial System Planners, Inc., National Study of Vocational Education Systems and Facilities, Volume 1, Technical Report, prepared for the Office of Planning, Budget and Evaluation, U.S. Office of Education, October 1978. The availability of institutions in these cities is even more limited (8.1 percent of the secondary institutions and 9.3 percent of the postsecondary institutions), but because the institutions are generally larger, comparison of the proportion of stations is more appropriate.

36. The NLS72 data base is able to provide information on this point because it is stratified by school. Twenty-five area vocational schools were identified in the sample.

Educational Opportunity Grant Program (BEOG), the Guaranteed Student Loan Program, and the Veterans Administration.[37]

Grasso and Shea provide some findings concerning "post-high school, noncollegiate forms of training,"[38] but their analysis of such training is much less extensive than their analysis of secondary vocational education, and is not focused on the particular kinds of postsecondary vocational education that receive Vocational Education Act funds.[39] With this in mind, their findings generally support greater encouragement of postschool training. They found higher hourly rates of pay for those who had taken postschool training, compared with those who had not, after adjusting for preexisting differences between the two groups.

Grasso and Shea also found that postschool training for men in the NLS was associated with a larger percentage increase in pay for blacks than for whites. Combining this finding with the fact that blacks are a smaller percentage of those in postsecondary training than in secondary training, encouraging them to undertake more postsecondary training could be an avenue toward greater income equality. In addition, for both men and women, postschool training was associated with higher hourly wages both for high school dropouts and for graduates. Postschool training may provide a second chance for those not able to succeed in regular high schools.

37. For a listing of these postsecondary schools with occupational programs that are eligible to receive funds from these sources, see Evelyn R. Kay, Directory of Postsecondary Schools with Occupational Programs 1978 (Washington, D.C.: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, 1979).

38. Grasso and Shea, Vocational Education and Training: Impact on Youth, p. 161.

39. We point this out not as a criticism of the study, but because the study is sometimes referenced as though it contains as much analysis of postsecondary as of secondary vocational education. Most of the commentary on the effects of postschool training is contained on pages 161 and 162, and no regressions are presented in the Carnegie Council volume.

Another study, by Duane Leigh, examined the effects of five kinds of postschool training on occupational advancement for black and white males.[40] Leigh found that "company-sponsored training has a consistently positive impact on occupational advancement for both blacks and whites, with blacks generally appearing to benefit more than whites. Similarly, business college-technical institute training is seen to have a significant effect on (occupational mobility) for blacks but not whites."[41] No significant relationship was apparent for the other sources of training.

Fredland and Little have conducted a study of the long-run returns to vocational training from military sources.[42] They conclude that "The results provide support for the proposition that those who take and subsequently use military vocational training receive long-term earnings premiums....In contrast, military training taken but not used in subsequent civilian employment appears to yield no premium, indicating that the vocational training is job-specific."[43]

The three studies of postsecondary training to which we have referred are based on the original cohort of the NLS (Ohio State) data base and followup reinterviews. Major studies using the NLS72 data base have not yet addressed postsecondary training, partly because insufficient time had elapsed to assess the effects of postsecondary training.

Conclusions

We have argued that the appropriate evaluation measure for the Federal role in vocational education ought to be its contribution to economic outcomes for students, compared to what they would have experienced from academic or general

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40. Leigh, An Analysis of the Determinants of Occupational Upgrading. The sources of training are (a) business college or technical institute, (b) company training of 6 weeks or more, (c) Armed Forces, (d) vocational, technical, or apprenticeship programs, and (e) other training programs.

41. Leigh, An Analysis of the Determinants of Occupational Upgrading, p. 95

42. Fredland and Little, "Longterm Returns to Vocational Training."

43. Ibid, p. 64.

education. We think that policymakers should base their decisions on how well the average vocational program is performing, since Federal funds primarily go toward general program maintenance and not toward specific program areas.

Summarizing the results of the research on the labor market effects of the average secondary vocational education program, we find that the previous failure to find convincing evidence of a positive return to males is not changed when vocational education is measured as a continuous variable. Neither does the finding of significant positive short-run returns to women in the business and office curriculum depend on how participation in that curriculum is defined.

It appears that the positive effects of the trade and industry program, which is the largest program for men, are not sufficiently robust as to carry over to an overall positive effect for taking vocational courses for men. For women, the positive effect of the business and office program dominates the neutral effects of other programs, and positive returns are found to the average secondary vocational program for females. Positive returns are found separately for white, black, and Hispanic females. While positive returns are found for women in business and office programs 4 years after high school graduation, the long-run effects of occupational segregation seem to retard earnings for these women.

We would assess the findings about the effects of vocational education on Hispanic males and females as quite tentative, because of data limitations. The new cohorts of the longitudinal surveys conducted by the Ohio State Center for Human Resource Research in 1979, and by the National Center for Education Statistics in 1980, are designed to oversample Hispanics to increase knowledge about a variety of educational and employment characteristics and outcomes for this group.

We would also assess the findings about the effects of secondary vocational education on black males as inconclusive, although more data has been available on black males than on Hispanic males. From the study by Grasso and Shea, it does not appear that secondary vocational education improves the labor market experiences of black male youth compared to what they might have experienced if they had taken alternative courses, and reduces the likelihood that they will undertake postsecondary training of any kind. Meyer also finds that black males who take a higher proportion of secondary vocational courses are less likely to undertake any postsecondary training. However, there is a

tentative finding from the 1979 cohort of the Ohio State Longitudinal Survey that black males with exactly 12 years of schooling from a vocational curriculum had a considerably lower average unemployment rate than black males whose high school curriculum was general or academic.[44] On the other hand, these same black vocational males had a lower labor force participation rate than the black general and academic males.

We do not doubt that there are many good vocational programs in which black males do well. We simply cannot assume from current information that additional dollars contributed to the average secondary vocational education program will improve the labor market experience of black males. This may be partly because they are systematically excluded from the best vocational programs.

We find that the evaluations of postschool training provide more support that such training results in earnings gains for students, although we need to know more about just what kinds of postschool training are most effective. Judging from findings for black males, it appears that specific occupational training can more easily be targeted on disadvantaged individuals and capitalized upon at the postsecondary level than at the secondary level. We would suggest that a revised Vocational Education Act should give more attention to distinguishing the rationale for support of secondary and postsecondary vocational education.

There appears to be little economic payoff from a simple Federal financial contribution to the maintenance of the average secondary vocational program for males. Hence, we think that Federal funds should be concentrated on program improvement in secondary vocational education rather than on program maintenance.

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44. The findings are described in the report as preliminary and are simple cross-tabulations without any controls or regression analysis. It is expected that additional analysis of this data base will be conducted and should be especially valuable as the followup survey data becomes available. See Michael E. Borus et al., Pathways to the Future: A Longitudinal Study of Young Americans, Preliminary Report: Youth and the Labor Market - 1979 (Columbus: The Ohio State University, Center for Human Resource Research, 1980), Table 15.3, p. 261.

The findings for females are more positive. It appears that business and office skills can be taught effectively in high schools, and that the process is complementary to the acquisition of basic skills. We think that support for these programs should be combined with the present Federal effort to encourage women to try a wider variety of vocational programs as a mechanism for reducing occupational stereotyping.

CHAPTER 2

OCCUPATIONAL INFORMATION AND VOCATIONAL EDUCATION*

In the 1976 amendments to the Vocational Education Act, the Congress took several actions to meet its mandate that federally assisted programs be "realistic in the light of actual or anticipated opportunities for gainful employment."[1] The Congress mandated that State and local advisory councils are to evaluate programs, and that State plans are to include assessments of occupational need. Most relevant to this Chapter, the 1976 legislation established The National Occupational Information Coordinating Committee (NOICC) and its State affiliates (SOICC's).

This chapter will briefly review the Federal interest in occupational information, discuss the strengths and weaknesses of the techniques employed in occupational forecasting, and consider the role of vocational education in occupational labor markets.

The Federal Interest in Training and Job Market Information

A national interest in information on training and job opportunities is justifiable on somewhat different grounds than those discussed in Chapter 1 for vocational education. Persons involved in vocational education are part of the clientele for labor market data that have a broader range of applicability. In addition, specific kinds of information are mandated under the vocational education legislation for planning purposes.

The Federal interest, however, stems from the nature of data collection and dissemination activities, and the dimensions of the United States labor market. American workers, especially young and recently trained workers, are mobile. This mobility is an important mechanism of desirable labor market adjustment, if the information on which it is based is accurate. Collection of labor market and training data on a less than national scale has three main problems: Overhead costs are duplicated, insofar as multiple jurisdictions collect and process similar data; job openings and opportunities for training may not become known to people

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* The author of this chapter is Stephen E. Baldwin.

1. Vocational Education Act of 1963, Section 101., as amended under P.L. 94-482.

outside the dissemination area for the statistics; the data collectors may miss outside openings and opportunities which would be of interest to residents of their areas. In sum, a labor market and training information system of national scope is needed to aid in diagnosing occupational training problems and assessing programs.[2]

Vocational education, on the other hand, can be said to help meet the Federal interests defined in Chapter 1 in two ways: First, by providing basic competencies and other general employability-enhancing attributes; second, by teaching specific occupational skills. It is the need to determine which skills to teach that connects the issues of occupational information and program responsiveness.

Forecasting Data Sources and Techniques

This section focuses on occupational projections at the State and local labor market levels. Such an emphasis is appropriate because of the State and local orientation of vocational education programs as well as the limited impact national estimates of future supply and demand have on the decisions of workers or firms.

There are, however, two major national dimensions which should be kept in mind. The first is that the focal point in methodology and data development is represented at the national level by NOICC and its four institutional members (Bureau of Labor Statistics, Employment and Training Administration, National Center for Education Statistics, and Office of Vocational and Adult Education). The second is that the national interest in solving labor market imbalances may well diverge from the interests of the employers and workers in the local labor market. This divergence exists because labor market imbalances may be reduced by immigration or outmigration of workers or firms, as well as by altering training enrollments. The need remains, however, for workers, firms, educators, and others to have available some techniques for local area analysis.

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2. Excellent reviews of many issues related to this chapter are: Leonard A. Lecht, "Occupational Projections for National, State, and Local Areas," and Harold Wool, "Some Analytical Shortcomings of Occupational Data on Employed and Unemployed Workers." These are pp. 510-534 and 540-568, respectively, of National Commission on Employment and Unemployment Statistics, Concepts and Data Needs, Counting the Labor Force, Appendix Volume I (Washington, D.C.: Government Printing Office, 1980).

Harvey A. Goldstein of Columbia University has recently completed a study of such forecasting techniques.[3] The following summary of Goldstein's report is the starting point for analysis of how important accurate projections are to vocational planners. He considered four general types of projections based on:

1. The BLS Occupational Employment Statistics program
2. Econometric models
3. Input-output models
4. Surveys of employers

Following Goldstein's taxonomy, there are five major steps in any occupational projection system:

1. Forecasting target year employment by industry, using Standard Industrial Classification categories. The method used to accomplish this step is the main differentiating factor among the four projection types listed above.
2. Converting industry employment to occupational employment subtotals. Except for those employer surveys that collect the estimates directly, all other approaches use a "staffing matrix," in which a given cell consists of the proportion of employment in a particular industry accounted for by a specific occupation. Each industry's target year employment is broken down by occupation, and the occupational estimates are added across industries to yield the projected occupational distribution for the labor market.
3. Occupational data for the base year are subtracted from the target year figures to obtain estimated job openings due to employment growth.

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3. Harvey A. Goldstein, Occupational Employment Projections for Labor Market Areas: An Analysis of Alternative Approaches. R & D Monograph 80 (Washington, D.C.: Employment and Training Administration, U.S. Department of Labor, 1981).

4. In addition to these net job openings projections, a substantial proportion of total vacancies (a majority in many cases) occurs because of turnover in the labor market. Workers leave jobs for personal reasons, such as retirement, injury, or returning to school, as well as employment-related causes such as promotion or relocation. Consequently, employers need to replace departing workers. Many vacancies are filled by promotion within the firm, setting off a chain reaction that results in an opening at the "entry level."[4]

   Changes in job openings due to occupational mobility and geographic relocation are the least developed parts of any projection system. BLS does make estimates of job openings due to retirement and death, based on age-sex group "work life" distributions, but these are not differentiated by occupation or labor market. Some State Occupational Information Coordinating Committees, e.g., Massachusetts, have made efforts to quantify mobility.

5. To obtain estimates of average annual openings by occupation, available replacement data are combined with the gain in jobs due to growth, and divided by the number of years between base and target dates.

Currently, the major projection techniques differ mainly on how the method estimates net employment growth by industry. The techniques share the staffing matrix approach for translating employment growth into occupational projections. Unfortunately, they also share the neglect of replacement demand as a major source of jobs, especially for young workers.

Goldstein's summary judgment is that while employer surveys are definitely inferior in terms of accuracy, there is no clearly superior technique among the other three.[5]

Goldstein concludes that a choice among BLS-OES, econometric models, and input-output models depends heavily on the characteristics of the local labor market. In particular

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4. Peter B. Doeringer and Michael Piore, Internal Labor Markets and Manpower Analysis (Lexington, Mass.: D.C. Heath, 1971).

5. Goldstein, Occupational Employment Projections, p. 33.

the more complex and costly econometric or input-output approaches would be most worth using in areas with net migration rates (in or out) well above average, with highly unstable "export" sales outside the labor market, and with strong linkages among local industries.

Occupational forecast accuracy is the major criterion for evaluating usefulness to planners and training program administrators. It is possible that policymakers may also have an interest in evaluating potential impacts of particular situations or programs, such as labor requirements for proposed defense and energy projects in the West. For such simulations, a sophisticated local econometric model, properly constructed, has an edge over the less flexible BLS or input-output techniques, as well as over the employer survey.[6]

The inferior accuracy of the employer survey approach was noted above. Such surveys were in considerable vogue in the 1960's, but as evidence accumulated of their defects, they became less common and are now generally discouraged. The main problem is not the survey structure itself, but the fact that few employers have any factual basis for projecting their own labor needs other than a continuance of present trends.[7] A striking instance of this failing is documented by Harold Wool, in research conducted for NCEP.[8]

Wool studied how the State's training institutions responded to anticipated employment growth in West Virginia coal mines. The State relied heavily on an employer survey conducted in 1975 by the West Virginia Coal Association, asking for projected labor requirements over a 5-year horizon. However, instead of the aggregate gain of over one-third projected from this survey, employment in the 1980 target year was actually slightly below the 1975 base. In addition to the overestimate of demand growth, Wool found

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6. Models along these lines have been developed by researchers at the University of Arizona. See Carol A. Taylor, Arthur T. Denzau, and Ronald L. Oaxaca, "Local Labor Market Econometric Forecasting Models," Final Report under DOL Contract 20-04-76-55, 1979.

7. See Odessa Dubinsky, "A Review of Employer Forecasting Methods and Data," NOICC Administrative Report No. 4, February 1981.

8. Harold Wool, "Vocational Education for Coal Mining Occupations: The West Virginia Experience" (Washington, D.C.: Report prepared for NCEP, April 1981).

that vocational education administrators paid insufficient attention to training provided by the coal companies themselves. This illustrates the need to project supply responses as well as demand shifts, both of which might have been incorporated into an econometric model.

A major theme in virtually every study of projections reviewed for this chapter is the paucity of data on replacement demand--particularly on occupational and geographic mobility. The techniques reviewed by Goldstein are strongest in the area of employment growth projections, but even here, the accuracy of any forecast depends on the fulfillment of the underlying assumptions about national and local economic situations.

A further problem is the uneven quality and prevalence of data across labor markets. The NOICC/SOICC organization was established under the 1976 amendments to develop an Occupational Information System (OIS) which would incorporate available data and help define data needs. Among the policies adopted by NOICC in the effort to improve the quality of labor market data are:

- Using the Labor Department's Occupational Employment Statistics program as the principal source of current and projected occupational employment data.
- Using the Federal and State program reporting systems for training, supply, and other labor market information.
- Using the labor market area, generally a defined metropolitan area (SMSA) or a single nonmetropolitan county as the basic geographic unit.
- Retaining data in the most detailed classifications of their original systems, especially for program planning uses, although the Federal Standard Occupational Classification is preferred.
- Using the OIS as the primary source for federally provided career information.
- Not using employer "skill surveys" for projections, but as possible sources of current data.
- Obtaining and processing data under the usual confidentiality provisions.

Volumes 1 and 2 of the Occupational Information System (OIS) Handbook were issued in draft form by NOICC in January 1981. It is, therefore, too early to tell anything about improvements in the planning process and labor market operations attributable to the OIS.

The Role of Vocational Education in Occupational Labor Markets

This section considers the role played by occupational projections in determining curriculum decisions for vocational education. Administrators and planners must decide whether to initiate, expand, maintain, contract, or eliminate programs teaching particular skills. Among the factors to be considered, in addition to projections of job openings, are student course preferences and enrollment, personnel and equipment commitments, and alternative suppliers of the training.

It should be noted that these considerations are valid only where preemployment skills training has labor market value in and of itself, which seems most significant in the postsecondary sector and for females in secondary clerical programs. The use of secondary vocational education as a method to transmit general employability skills and appropriate attitudes would not necessarily depend on correspondence of the coursework with demand by employers for specific skills.

A recent monograph by Marcia Freedman and Anna Dutka identifies two groups for which preemployment training is customary. These are professional jobs, for which a bachelor's degree is a minimum, and those technical, clerical, and service jobs for which a minimum of 3 months' vocational preparation is necessary. Freedman and Dutka, along with many earlier writers, stress the importance of the employer's attitude toward the training institution's graduates.[9]

> Ultimately, the most important external factor in the success of all occupational curricula is a linkage between training and employing institutions.... Where this relationship is poorly developed, student prospects are uncertain, even when openings may be available in the occupational categories for which they were trained.[10]

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9. Marcia Freedman and Anna Dutka, Washington, D.C.: Training Information for Policy Guidance, R & D Monograph 76, (Washington, D.C.: Employment and Training Administration, U.S. Department of Labor, 1980).

10. Freedman and Dutka, Training Information, p. 28.

This consideration may help reconcile the observation that there are effective vocational programs with the research findings (summarized in Chapter 1) that secondary vocational graduates have no consistent earnings differentials over comparable persons in other curricula. If, on average, linkages are not well developed with employers, secondary vocational graduates would not be expected to have any particular labor market advantages over other new entrants. That is, skill transfer is a necessary, but not sufficient, condition for vocational education to improve the career prospects of its graduates.

As already mentioned, vocational education administrators are mandated to plan their offerings in light of anticipated labor market trends. The 1976 Vocational Education amendments (P.L. 94-482) were in part responding to evidence that consideration of future demand was pro forma and had little effect on program offerings.[11]

Promoting responsiveness of the vocational education system is related to several national policy issues, such as inflation, efficient utilization of the work force, and sex stereotyping of jobs. These vary in importance depending on particular labor market situations. Among possible situations are:

Occupations for which demand at prevailing wage rates significantly exceeds supply. The theoretically expected response would be for wages to rise more rapidly than average, signalling workers to shift into these fields. If training facilities are limited, or other barriers exist, growth in supply will not be adequate. Since wage structures are interconnected in complex ways, an inflationary twist may affect wages generally, as other groups seek to restore customary differentials among occupational wages. Program expansion by the vocational education system would benefit the additional individuals who secure jobs, the firms whose wage costs increase less rapidly, and the general economy which avoids accelerating a wage-price spiral.

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11. D.W. Drewes and D.S. Katz, Manpower Data and Vocational Education: A National Study of Availability and Use (Raleigh, N.C.: Center for Occupational Education, North Carolina State University, 1975).

Occupations for which the inflow of trained workers from all sources significantly exceeds demand at prevailing wages. While competitive wages would theoretically adjust in the long run, custom and equity argue against the kind of substantial reduction needed to reduce the surplus rapidly. It is not necessarily true that an excess supply of workers is a sufficient reason to curtail a given vocational program. If the program is good, its graduates may have favorable placement and career progression records. Less favorable jobs may be held by individuals from outside the area, or those who acquired the skill in other ways, such as on-the-job training. Regardless of whether vocational students or others are more adversely affected, there is some underutilizaton of training if alternative jobs of equivalent skill are not available.

Students of vocational education systems have concluded that programs with substantial equipment and facilities, tenured faculty, and reasonable student demand are very difficult to reduce or end.[12] Programs producing graduates who have little difficulty in finding jobs should not be expected to curtail their operations rapidly, since the work force is being upgraded.

If vocational education's potential contribution to national growth is considered, training for already adequately supplied occupations has a weaker justification. While the persons trained for such occupations may have benefited the return to them and to the Nation could well be greater if resources were transferred to programs training for occupations where demand exceeds supply.

Occupations for which employment projections are stable, but which are large sources of job openings because of replacement needs. Important among these jobs, both in terms of employment as well as instances of vocational programs, are the office clerical occupations disproportionately filled by women. The annual availability of new workers graduating from programs helps keep pay and status of these jobs low, which encourages exit after a few years. Preparation for office clerical work through vocational programs may be viewed as a "defensive" strategy by young women who anticipate intermittent labor force participation. The extent of occupational stereotyping and direction of girls into office clerical programs has

12. Lecht, "Occupational Projections," pp. 521-522.

[illegible] of particular concern to the Commission in its study of [illegible]disadvantaged women.[13]

Overall, the Federal interest in training in general, and vocational education in particular, comes from the goals of enhancing economic growth and reducing barriers to individual utilization of talents. Upgrading and fuller use of the skills of all labor force members (through job mobility as well as fuller employment) serve both efficiency and equity objectives. Fulfilling these objectives, in turn, depends on the availability of education and training programs to produce the preemployment skills that employers demand. Accurate local occupational forecasts are a necessary, but not sufficient, ingredient for the success of such policies.

Given limited resources, shifts in demand as perceived through forecast data will lead to new or expanded programs only if offerings are cut back in other instructional areas, or if skills appropriate to several occupations can be taught in a common program with flexible emphasis. Since the individual education system has to bear the costs of realignment, while the work force and Nation as a whole receive more diffused benefits, incentives strongly favor maintaining the status quo. Under the Vocational Education Act, systems may receive support for experimental or new programs, but they must incorporate them into their regular budgets to continue them.

In general, adjustment to new labor market conditions may be harder for secondary than for postsecondary programs. High schools have the added responsibility of trying to retain less academically oriented students, for whom certain vocational courses may be stressed.

In a recent guide for persons involved with vocational planning, Harold Starr and his colleagues take an equivalent approach to utilizing employment data:

> An example of a flexible approach to planning instructional programs might be to formulate three lists of programs. The first list would contain instructional programs which can be considered for expansion because there are an insufficient number of trained persons available to meet employers' needs for workers. The second list would contain instructional programs which

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13. National Commission for Employment Policy, Increasing the Earnings of Disadvantaged Women, Report No. 11 (Washington, D.C.: Government Printing Office, 1981).

should not be supported with Federal/state vocational education funds because employment data indicate the existence of more trained persons available for employment than there are jobs, that is, supply exceeds demand. The third list would contain other instructional programs for which supply balances demand.

These lists would be given to local administrators before local applications for funds under the Act are prepared. If local administrators desire to implement any programs on the first list (demand exceeds supply), employment data assembled at the state level can be used to support the need for the program. If local administrators desire to implement any programs on the second list (supply exceeds demand), reasons why the program should be implemented at that local site would be required, e.g., local surveys justifying local employment demand, or needs of special populations.[14]

In planning vocational programs, administrators have concerns other than responding to forecasts of occupational openings. Local employers, students and their parents, taxpayers, and faculty and staff are among the constituencies with an interest in forming occupational curricula.

One student of the issue feels that giving greater weight to labor market projections requires a different set of incentives and disincentives facing planners. In this view, planners can comply with requirements in a "perfunctory" manner while retaining more freedom of action. To improve the responsiveness of the system to labor market trends requires "consummate" cooperation. This will not be forthcoming if planners and administrators have more to lose than to gain from the shift in program.[15]

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14. Harold Starr, Daniel Dunham, William Woolf, and James Harris, Developing State Plans for Vocational Education, Research and Development Series No. 145 (Columbus: The National Center for Research in Vocational Education, 1978), p. 64.

15. David W. Stevens "Employment Projections for Planning Vocational-Technical Education Curricula: Mission Impossible?" (Columbia: Human Resources Research Program, University of Missouri-Columbia, January 1976), p. 39.

The presence of specialized equipment and tenured faculty is frequently termed a barrier to introducing new programs.[16] In the long run, teachers will retire and equipment will not be replaced, but substantial costs would be incurred to make rapid adjustments. If resources should be reallocated away from lower priority programs, some consideration might be given to securing cooperation at the local level through Federal lump-sum "redundancy payments" to compensate systems for these costs.

Even if these institutional barriers did not exist, other problems limit the utility of projections. In research recently conducted for the Commission, Joyce Shackett and David Stevens examined some basic conceptual issues in the use of occupational projections.[17] They conclude that employers seek persons with particular skills for a given job. In many cases, the skills may be obtained in a variety of ways, e.g., formal training, on-the-job learning, or transferability from other jobs. The "requirements" approach to occupational forecasting, embodied in the BLS-OES model previously discussed, assumes that the occupational composition of an industry is fixed over the projection period.

Shackett and Stevens point out that the implications of responding to an occupational shortage depend on the supply situation. If workers can shift rapidly from similar jobs, there is less pressure on wages and less restriction of output than if new workers must be trained, which takes more time.

Both the usefulness and validity of forecasts depend on how occupations are defined. If classifications include jobs with heterogeneous skills, the projections will be inadequate for program planning purposes, even though they will show "accurate" results. If the classifications are very narrow, overlaps and possible substitutions will make the forecasts more prone to error, but will also ignore the applicability of

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16. Stevens, Employment Projections, p. 37.

17. Joyce Shackett and David Stevens, "Elasticity of Substitution Across Occupations, Occupational Coding, and Accountability in Vocational Education" (Columbia, Mo.: Report prepared for NCEP, June 1981).

training to a variety of jobs.[18] In sum, the responses of training programs and of workers interact with the job dimensions specified by employers.

Given that there are a number of different classification systems extant, substantial efforts have been made by NOICC and other bodies to provide relevant "crosswalks" among them. Since these efforts mix systems with various levels of skill specificity, Shackett and Stevens conclude that there is no way to judge the extent of forecast errors due to improper occupational classification.

Classification is important because a standard measure of program performance has been the rate of "training-related" placement. To call one job training related and another not assumes that someone can assess on the basis of job titles alone the extent to which the skills acquired are used in the production process. This seems unwarranted. As Shackett and Stevens explain, skill utilization is really continuous, rather than a set of boxes into which jobs can be filed. They recommend complementing the necessary work being done by NOICC/SOICC with research on the extent to which skills can really be acquired by people before entering specific jobs. This point reinforces Freedman and Dutka's conclusion: Only a minority of jobs require preemployment training of the type provided by vocational education. Even with training, some direct linkage with an employer is needed to secure a lasting labor market advantage over graduates of other curricula.[19]

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18. See Lester Thurow, "Vocational Education as a Strategy for Eliminating Poverty," The Planning Papers for The Vocational Education Study (Washington, D.C.: National Institute of Education, April 1979), pp. 323-336. Thurow argues that the potential for substitution limits both the feasible detail of projections and the appropriate level of specificity of training programs.

19. One reason that "training-related" placement has been used is lack of a better measure of program effectiveness. In a paper funded by NCEP, J. Atteberry and colleagues explored the potential for using vocational education, CETA, and unemployment insurance administrative records to trace individuals' employment and earnings over time. They conclude that such analysis is feasible for most States, and the technique may provide a superior way to assess long-term program effectiveness. See J.W. Atteberry, C.M. Bender, D.W. Stevens, and A.B. Tacker, "Vocational Education, CETA Program Participation and Subsequent Earnings" (Columbia, Mo.: Report prepared for NCEP, June 1981).

Conclusions

While the state of the art of occupational employment projections has advanced in recent years, it is definitely still an art. The diversity of local labor markets and of vocational education programs makes it impossible to mandate a national approach to program planning and occupational guidance. State and local governments and school systems will find it in their interest to support analysis of the labor markets most relevant to them. The national interest would seem to be best served by supporting a consistent locally oriented framework in which diversity among states and regions could be reconciled with the benefits from using well-tested methods and uniformly defined data sets.

Such a framework includes data on the current state of the labor market as well as forecasts of future developments. Since it takes time to revise vocational education curricula, the attention of administrators and the focus of studies of the system have been on projections of occupational demand and supply. It is important to recognize that short-run information is valuable to both workers and employers; labor market adjustments can be made by workers shifting from related occupations and by employers widening their areas of recruitment, for instance.

It is particularly important, in terms of the most flexible and efficient use of our national work force, that there are accurate methods of anticipating structural changes in occupational demand and supply patterns. Coordination between the institutional suppliers of training and the demanders of trained (or trainable) labor, the employers, is necessary. Policy implications for vocational education consistent with the themes developed in this chapter are:

(1) The NOICC/SOICC network should receive continued funding for implementing and enhancing the Occupational Information System (OIS). The OIS Handbook was issued by NOICC early in 1981 and many other innovative projects, such as the computerized OIS developed by the Maine SOICC, are in early stages. These ventures need to be continued to establish their relative worth.

(2) Vocational program administrators should reduce reliance on initial placement experience in program decisions. Research funded by NCEP suggests that it is feasible to use data from ongoing administrative and statistical programs to follow workers over time. Labor markets that cross State lines, thus involving multiple data sources, need special attention.

(3) Research and demonstration projects should be encouraged that address questions of how job-related and employability-enhancing attributes are best taught; in particular, what is best taught in pre-employment programs and what is most effectively transmitted on the job.

(4) Since the vocational education system prepares new entrants for a minority of job openings, it should not be expected to be the main balancing mechanism between projected demand and supply in a given labor market. Administrators should neither ignore labor market trends nor seek to adjust their programs solely on the basis of projections. A large part of the benefit of the NOICC/SOICC program may come from the development of an improved analytic capability for specific labor markets. Federal funding should enhance the ability of policymakers, workers, and employers in local labor markets to make informed decisions.

(5) Legislation should allow use of Federal funds to pay part of the costs associated with terminating redundant programs. The presence of tenured teachers and specialized equipment may make appropriate adjustments more difficult for the local administrator. A more flexible system would make greater returns to society possible by channeling scarce resources to more effective uses.

CHAPTER 3

COORDINATING VOCATIONAL EDUCATION AND CETA PROGRAMS*

The 1978 Amendments to the Comprehensive Employment and Training Act (CETA) of 1973 carry forward the original Act's statement of purpose: The provision of job training and employment opportunities for economically disadvantaged, unemployed, or underemployed persons. In addition, the Amendments expand upon this purpose by stressing the importance of coordinated service delivery:

> It is further the purpose of this Act to provide for the maximum feasible coordination of plans, programs, and activities under this Act with economic development, community development, and related activities, such as vocational education, vocational rehabilitation, public assistance, self-employment training, and social service programs.

In accordance with this statement, specific coordination requirements involving vocational education appear throughout the Act. They range from including vocational education representatives on CETA planning councils to setting aside a specific portion of program funds for local education agencies to use in providing classroom instruction to CETA eligibles. The rationale for these requirements, though not explicitly stated, is to provide an integrated program of services to the designated target groups and to make the most efficient use of Federal tax dollars in that process, sharing resources where appropriate and eliminating unplanned and unwarranted duplication of effort.

A similar concern for the development of a coordinated approach to meeting the vocational education and training needs of the area or community is manifested in the Vocational Education Act (VEA) of 1963, as amended (section 106), where annual program plans submitted to the State Boards of Vocational Education are required to describe how the proposed activities relate to programs conducted by CETA prime sponsors. The 5-year State plans must also set out criteria developed for coordinating CETA and vocational education programs (section 107).

Under these mutual legislative mandates, it would appear that, in most cases, there has been little or no difficulty in securing the necessary cooperative relationships among

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*The author of this chapter is Janet W. Johnston.

prime sponsors and vocational educators for the purpose of planning and delivering educational services to CETA eligibles. In some cases, however, coordination has proven elusive because of problems that run the gamut from legitimate program design variations to the effects of mutual distrust and turf protection.

With reauthorization of both the Vocational Education Act and CETA to be considered by the Congress within the next 12 months, it is appropriate to examine the issue of coordination to determine what legislative changes might facilitate linkages between CETA and vocational education programs. Two general caveats should be stated at the outset: First, there are many occupational training programs besides vocational education that operate at the local level, including some developed by community-based organizations and others offered by private proprietary schools on a fee basis. In addition, employers, unions, the military, correctional facilities, State departments of rehabilitation,[1] and other public agencies may all be involved in providing training opportunities within given localities. Limiting this review to CETA and vocational education, therefore, should not obscure the more general need for developing coherent programs that make appropriate use of all available training resources in a community.

Second, the stress on improving coordination should not be taken as prima facie evidence of a total lack of effective linkage efforts under the current legislation. Indeed, many of the most recent studies to focus on CETA/vocational

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1. Although this chapter focuses specifically on the problems of coordinating CETA and vocational education, the Commission has also funded research that has examined the relationship between vocational rehabilitation units and other training programs such as vocational education and CETA. Generally, the same difficulties that impair working relationships between CETA and vocational education administrators adversely affect their coordination with vocational rehabilitation personnel. Lack of consistent definitions for handicapped persons in relevant legislation and ambiguity over administrative responsibility for coordinated efforts have resulted in a lack of attention to serving handicapped persons under most social service legislation, including both vocational education and CETA. See Kathaleen M. Shaffer, David W. Stevens, and Lynda L. West, The Role Of Federal Vocational Education Funding in Promoting Successful Reemployment of Workers' Disability Payment Recipients (Columbia, Mo.: University of Missouri-Columbia, June 1981).

education coordination cite examples of exemplary linkages that already exist at State and local levels.[2] Some have included multiple linkages involving apprenticeship, private employers, and others with an active interest in occupational training. Moreover, these same studies point out that coordination between CETA and vocational education has been improving over time, with at least some of the impetus for that improvement emerging from the various legislative mandates for funding setasides and other provisions for creating institutional linkages that appear in both the Vocational Education Act Amendments of 1976 and the CETA Amendments of 1978.[3]

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2. For a useful summary of several of these studies, see U.S. Conference of Mayors (USCM), CETA Vocational Education Coordination: Highlights of Selected Studies (Washington, D.C.: U.S. Conference of Mayors, for the U.S. Department of Labor, 1981). Since 1973, under contractual arrangements with the Department of Education (formerly Office of Education) through the National Advisory Council on Vocational Education (NACVE) and the Department of Labor, the U.S. Conference of Mayors has traced the development of coordination between CETA and vocational education. Reports of the successive surveys of CETA prime sponsors and vocational educators, which indicate a growing cohesiveness in their relationships, were published in 1974, 1976, 1977, and 1979. The National Commission for Employment Policy contracted with the Conference of Mayors for a followup survey, conducted in May 1981. Much of the material in this chapter is based on findings from this survey (see footnote 3).

3. Evidence for overall improved program linkages in response to the 1978 CETA Amendments was found in a nationwide survey of a sample of CETA prime sponsors and vocational educators that was conducted for the National Commission for Employment Policy by the U.S. Conference of Mayors. For the survey, telephone interviews were conducted with 120 CETA prime sponsors who made up a 25-percent stratified random sample of the current universe of 481 prime sponsors. Similar discussions were held with vocational educators named by the CETA administrators as persons with whom they worked on program planning or operation (110 were interviewed). For a summary of findings from this study, see U.S. Conference of Mayors, Analysis of CETA and Vocational Education Relationships, Based on Perceptions of Program Administrators (Washington, D.C.: U.S. Conference of Mayors, for the National Commission for Employment Policy, June 1981)--to be printed in a forthcoming volume of NCEP research papers.

Notwithstanding the overall improved relations, there are a number of basic differences between the two systems that may interfere with coordination efforts:

- CETA is legislatively mandated to serve the economically disadvantaged, while vocational education serves a broader population.

- Federal funds make up most, if not all, the monies received by CETA prime sponsors, and there are no matching requirements. Matching of Federal funds is required under the Vocational Education Act, although States and localities have routinely overmatched so that presently only about 10 percent of the total funding for programs authorized under the VEA originates at the Federal level. Some additional Federal funding is also received by State and local education agencies through the CETA program, primarily under titles II and IV.[4]

- Reflecting these differences in the source of funds, CETA has experienced much greater Federal control than vocational education, despite its original premise of decentralized management. Prime sponsor plans are approved in the Department of Labor's 10 regional offices, and Federal representatives act as technical assistants and monitoring agents. In contrast, under VEA, local plans are approved at the State level, and State education agencies supervise the local school systems and community colleges that receive vocational and adult education funds.

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4. CETA, title II, section 202, requires the allocation of 6 percent of funds available for title II-A/B and C activities be made available only for grants for supplemental vocational education assistance; 4 percent be used for the Governors' coordination and special services activities; and 1 percent be made available to State Governors for encouraging coordination and establishing linkages between prime sponsors and educational agencies and for services to eligible participants delivered jointly by the two. Title IV, section 433, of CETA requires that 22 percent of the funds available for Youth Employment and Training Programs be used for programs serving in-school youth carried out pursuant to agreements between prime sponsors and local education agencies. In addition, previously, a sizeable proportion of PSE funds was allocated to schools for educational positions, but this program is being discontinued.

- CETA prime sponsors are the chief elected officials of State, city, or county governments, whereas the local school system and community college districts generally operate independently from these officials and are often more receptive to the concerns of school boards, private employers, and their own neighborhood constituencies.

- The jurisdictions of CETA prime sponsors, local school systems, and community college districts do not correspond. There are currently fewer than 500 prime sponsors but about 16,000 school districts. Accordingly, CETA prime sponsor jurisdictions, especially Balance-of-State areas, usually include several local school systems and community college districts.

- The planning and funding cycles of the two programs also vary, with funding beginning for the school year on July 1 and for the CETA fiscal year, 3 months later, on October 1.

- CETA administrators and vocational educators frequently differ in both background and program outlook. CETA personnel tend to be younger, with different educational profiles than vocational educators in equivalent positions. The relatively low salary levels and program funding uncertainties under CETA make staff turnover more commonplace than among vocational educators.

- Because of the different program mandates, CETA officials tend to favor short, intensive training courses that lead to immediate job entry, while educators may prefer longer programs that prepare students for broad occupational choices.

Not all problem-creating differences in the preceding list are amenable to change, but some possible means for overcoming the barriers to coordination where they exist may be suggested by further discussion of particular concerns.

Developing a Common Goal

For CETA administrators and vocational educators to cooperate fully in the development of programs, each must have a stake in the outcome of the process and there must be an acknowledgement that they share a common goal, viz., assisting the disadvantaged to acquire a combination of basic educational and occupational skills necessary for securing gainful employment.

The Vocational Education Act of 1963 established two service priorities: First, vocational education was to serve the needs of all persons in the community and, second, special attention was to be directed to those who could not succeed in a regular vocational program because of academic or economic handicaps. The 1968 VEA Amendments strengthened the second priority by mandating that 15 percent of Federal vocational education funds be budgeted for helping disadvantaged persons, who continued to be defined by their inability to succeed in mainstream vocational education programs. The current legislation--section 195(16)--maintains that definition.

Since the major aim of vocational education programs is to serve the larger community and "disadvantaged" has a broader meaning than it does for CETA (see the Appendix), there is less common ground on which to base joint activities than might be supposed. To facilitate the development of a common goal and to encourage administrators of both programs to see their activities as part of a mutual training effort, the Congress should consider developing for use in all training programs, including vocational education, a single definition of disadvantaged that is consistent with that now employed in CETA or other substitute employment and training legislation. This would have the added benefit of helping to minimize the burden of Federal reporting requirements through the development of common data elements and should facilitate the development of performance standards for both programs.

Funding

Federal dollars have constituted a decreasing share of vocational education funds available to local education agencies and community colleges. The present, approximately 10 percent, Federal share of total VEA program funds will be even further diminished by the Administration's budget reductions for fiscal year 1982.

Beyond the Federal funding for basic grant programs, however, local education agencies receive additional funds through CETA, most commonly from two sources: Under CETA title II, from individual agreements negotiated with prime sponsors and through State vocational education boards as a result of the 6-percent set-aside for "Supplemental Vocational Educational Assistance;" and under title IV's "Youth Employment and Training Programs" (YETP), in which a minimum

of 22 percent of the funds available to in-school youth must be carried out pursuant to agreements between CETA prime sponsors and local education agencies.

The YETP 22-percent set-aside has become an important incentive for collaboration. "It has set in motion the forces necessary for genuine collaboration between the education establishment and the employment and training establishment,"[5] according to one recent study, a statement borne out by the fact that, during fiscal year 1980, 31 percent of all YETP funds made available to prime sponsors under title IV supported jointly developed programs--considerably more than the 22-percent minimum. Nevertheless, the same study questions whether financial incentives alone can inspire the long-lasting institutional changes necessary to move from "administrative detente" to "substantive collaboration."

One difficulty that may interfere even with the first step of "detente" arises because of problems associated with mismatched Federal, State, and local funding cycles that frequently have impaired the development of cooperative working relationships between CETA administrators and vocational educators. This is especially true in the case of CETA title IV youth programs, which have been operating as 1-year demonstration efforts with no statutory guarantee of refunding.[6]

The school budget year usually begins in July (sometimes January or September); the CETA fiscal year begins in October. Owing to the annual budget authority of YETP programs, schools frequently have been asked to commit resources to CETA programs in advance without assurances that CETA funding will be forthcoming later on. In addition, education authorities may be asked to make important decisions about

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5. Joseph Colmen and Gregory Wurzburg, Involving Schools in Employment and Training Programs for Youth (Washington, D.C.: For the U.S. Department of Labor, May 31, 1979).

6. See the discussion in ibid., p. 8, and William H. Wilken and Lawrence L. Brown III, Manpower-Education Coordination: Two Decades of Frustration, Technical Analysis Report Series, Report No. 4 (Washington, D.C.: Office of Technical and Analytic Systems, Office of Planning and Budget, U.S. Department of Education, January 1981), pp. 38-39. Problems of mismatched funding cycles are not unique to the CETA vocational education interface. See also the discussion of economic development programs in NCEP's Sixth Annual Report, (Washington, D.C.: Government Printing Office, 1980), pp. 12-13.

youth training programs in October, the start of the Federal fiscal year, at a time when their workload is at its peak and long after their own annual plans are expected to be completed. The uncertainties of CETA funding, coupled with that program's often-changing regulations, program priorities, and planning instructions, make the development of a long-term stable relationship between the two systems difficult to achieve. While enterprising administrators who genuinely seek to accommodate one another may not find such difficulties insurmountable, wherever there is less desire to work together harmoniously, mismatched funding cycles and other impediments may serve as a convenient reason for avoiding active collaboration.

An average of 90 percent of all CETA prime sponsors (N=120) and vocational educators (N=110) responding to the U.S. Conference of Mayors' 1981 survey called for steps to be taken to bring the CETA and vocational education funding cycles into alignment. Among the specific remedies offered was the provision for forward funding of CETA training programs to match the vocational education funding cycle.[7] Because of CETA's unfortunate history of last-minute funding and resultant patchwork planning, the Congress should carefully consider this proposition in its deliberations over CETA reauthorization.

Joint Planning

True collaboration involves much more than developing agreements for the use of particular program set-asides. It requires that representatives of both systems work together to plan how their activities can complement one another most effectively. Presently, however, requirements for joint planning are rather one-sided, with the burden placed more heavily on CETA administrators.[8]

At the local level, CETA prime sponsors are required to show in their long-term master plans and annual plans a detailed description of the steps taken to coordinate their activities with vocational education and other occupational

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7. USCM, Analysis of CETA and Vocational Education Relationships, pp. 26, 29.

8. See Harold Starr et al., Coordination in Vocational Education Planning--Barriers and Facilitators, Research and Development Series No. 187 (Columbus, Ohio: The National Center for Research in Vocational Education, 1980).

training programs in the area, including provisions for the use of skill centers and other public vocational education facilities and the arrangements made to ensure that administrators of local schools consult with the prime sponsor. In addition, the law requires that a representative of local vocational education agencies be designated a member of the prime sponsor's planning council. The Vocational Education Act asks that annual plans from local school officials describe how proposed activities will relate to CETA programs conducted in the area, but there is no provision for consultation with prime sponsors in developing plans, and local vocational education advisory councils are not required to have CETA sponsor membership. Insofar as any mandated consultation can lead toward mutual understanding of problems and help to avoid costly duplication of effort, it would seem advisable for local educators to be required to consult with CETA administrators in developing their own yearly service plans, particularly with regard to the expenditure of Federal funds earmarked for the disadvantaged.

A majority of all prime sponsors and vocational educators contacted in the U.S. Conference of Mayors' 1981 survey indicated that over time there had emerged much greater mutual involvement in planning programs, but both groups also called for increased flexibility in developing programs, simplification of administrative requirements affecting joint activities, and clarification of the role of CETA and vocational education in such joint activities. Most of the CETA administrators who offered suggestions for legislative revisions (in contrast to only a few of the vocational educators who volunteered suggestions) thought that CETA/vocational education coordination should be mandated in the vocational education legislation as it is now in the CETA legislation. In other words, development of a mutual responsibility for consultation and joint planning would, it was believed, result in more integrated program efforts, better able to serve local needs.[9]

Involvement with Other Organizations

A major aim of all CETA prime sponsors is to move clients from training programs to employment in the private sector. To do so effectively, sponsors must utilize all available community resources. The 1981 survey of prime sponsors and vocational educators conducted for the Commission by the U.S. Conference of Mayors gathered

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9. USCM, Analysis of CETA and Vocational Education Relationships, pp. 28, 30-31.

information on the perceived value of job development and placement assistance provided by Private Industry Councils (PIC's), the Job Service, and organized labor groups.[10]

Most prime sponsors in the sample (60 percent of the 120 contacted) said that PIC's had been either effective or very effective in the development of private sector job opportunities for CETA clients and vocational education students. The remaining 40 percent of those sponsors interviewed held a more negative view of the accomplishments of Private Industry Councils, although many explained that the PIC's were improving and had good potential. In contrast to the PIC's, the Job Service was not considered effective in matching clients with job opportunities by the majority of prime sponsors queried, although some sponsors cited limitations on the effectiveness of the public employment services such as the poor economy and noted that the Job Service had been cooperative. Labor unions received a low achievement rating from prime sponsors who were asked about union efforts to assist CETA and vocational education trainees to find jobs in their communities. Many sponsors cited only minimal union participation on CETA planning councils.

In contrast to the prime sponsors, most vocational educators had a favorable impression of the contributions of PIC's, the Job Service, and labor unions in linking vocational education trainees to the labor market. Seventy-four, 73 and 53 percent, respectively, of the vocational educators rated these groups effective in their activities.

In the reauthorization of the vocational education and CETA legislation, consideration should be given by the Congress to encouraging these three organizations to become as actively involved as possible in CETA/vocational education programs. If PIC's are assigned a larger role under new or revised training legislation, specific requirements for consultation with other community organizations, including educational agencies and institutions, should be mandated. Similarly, vocational educators should be expected to include PIC's among the groups consulted in devising their annual plans.

Interaction of Personnel

In the last analysis, effective coordination is usually the result of good personal relationships. Evidence of improved coordination since the 1976 VEA Amendments can be

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10. Ibid., pp. 14-16, 23-25, 30.

attributed, at least in part, to the opportunities for staff from CETA and vocational education programs to work together and learn from one another.

One means for increasing this type of interaction is to encourage joint in-service training workshops and other activities that strengthen integration between the two programs. The 1980 youth employment and education bill, introduced by Representative James Jeffords (R-Vt.), suggested the establishment of an Academy of Education and Work to foster professional improvement and the interchange of ideas. Whether or not so formal a training apparatus is ever developed, activities that increase interaction and promote understanding among program administrators are worthwhile and should be explicitly encouraged in the legislation.

The CETA-local education agency agreement required for the allocation of 22 percent of YETP funds under title IV of CETA has been cited as one device for creating a joint vested interest in the development of a program. The Congress might consider requiring a similar device in the allocation of the 15 percent of VEA funds to pay for special programs for the disadvantaged. Continuing requirements for joint planning and efforts to develop common definitions of special target groups are other ways to create mutual involvement in training for the economically disadvantaged.

Conclusions

This paper has focused on a few specific problem areas that have forestalled the development of a close working relationship between vocational educators and CETA administrators in some areas. It has suggested several possibilities for overcoming institutional and other barriers to the coordinated effort called for under both CETA and VEA. In the simplest of terms, this requires opening up as many avenues of communication as possible between the two systems; establishing a mutual interest in a common goal through devices such as joint-funding agreements and common definitions for target groups; and eliminating, wherever possible, actual barriers to cooperation that now exist including different funding cycles, planning requirements, or other discrepancies that make it difficult to develop a comprehensive, integrated program of services to the disadvantaged.

The development of block grants to the States for education and employment and training activities would probably eliminate some of the current difficulties in coordinating the two systems. State Governments would then occupy the central role in overseeing the new employment and

training system as they now do for vocational education. Accordingly, many problems of institutional coordination at the State level would become moot issues.

Nevertheless, under most possible funding scenarios, some new problems related to coordination undoubtedly would develop, and, at the local level, some of the old problems discussed above would certainly remain. To be more specific, questions arise concerning the following:

(1) State funds for coordination. Under current CETA legislation, State Governors receive 6 percent of the funds available for title II-A, B, and C activities to be used for supplemental vocational education assistance; 4 percent, to support coordination and special services activities that involve prime sponsors, State education agencies, and other appropriate institutions of vocational and higher education; and 1 percent, to be allocated for encouraging coordination and establishing linkages between prime sponsors and appropriate educational agencies and institutions. A block grant for training programs would eliminate this specific earmarking of funds to promote coordination and to provide a specific amount of funds designated for the purchase of vocational education services. Conceivably, Governors could elect to use far more than 6 percent of the total training block grant for vocational education (depending upon the amount of discretion allowed in passing funds on to local prime sponsors), but they might also choose to use less. The other funds currently designated for coordination activities would also be swallowed up in the overall grant and, under conditions of reduced funding generally, are likely to be used for purposes other than coordination.

(2) Merging CETA title IV activities (youth programs) with programs authorized under title II-B/C (services for the economically disadvantaged, upgrading and retraining). The 22-percent set-aside for YETP programs for in-school youth established through joint agreements between CETA prime sponsors and local education agencies has been established as a positive force in the development of coordination between the two systems.[11] The merger of youth program funds with those for the regular title II-B/C programs, together with the proposed reduction of total II-B/C monies, might well be expected to undermine the cooperative relationships that have developed as a result of the earlier mandate for joint agreements, particularly since under a true block grant arrangement, specific set-asides are unlikely to be continued.

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11. Colmen and Wurzburg, Involving Schools.

(3) Additional funding for Private Industry Councils (PIC's). Assuming that under revised CETA legislation PIC's receive more funding and are assigned an even greater role in the development of private sector job opportunities at the local level, there will be a need to concentrate on efforts to improve coordination among not only the local vocational educators and prime sponsors, but the Private Industry Councils, as well. Judging by responses to the 1981 USCM survey and other evaluations of the councils, PIC's have potential, but they need to develop further before taking on the role of chief coordinators for employment and training activities at the local level. If they are to assume an expanded role, more specific requirements for involving the vocational education system in PIC activities should be added to the legislation.

(4) Elimination of Public Service Employment (PSE). Previously, about one-fifth of CETA funds for public service employment was allocated to local educational agencies for the funding of additional staff. With the demise of the PSE program, a natural link between local schools and CETA has been eliminated. On the positive side, however, the elimination of one source of CETA funds may provide the impetus for educators to seek out additional funding from prime sponsors by contracting to provide services to the disadvantaged.

In sum, the changes that are likely to occur in employment and training legislation--whether it takes the form of a block grant or some other modification--could increase the opportunities for development of a truly integrated system of training services involving vocational educators and prime sponsors by permitting more flexibility in the use of training funds. On the other hand, under a completely flexible system, specific mandates for coordination are less likely to be included. In a time when uncertainties abound, it is to be hoped that the groundwork for cooperation between the two systems that has already been laid will prove lasting and that there will be built into any block grant legislation some combination of incentives and mandates that will draw educators and training program administrators together in the creation of a well-integrated and efficient training program that can meet the needs of the disadvantaged.

APPENDIX

Definition of Disadvantaged

Comprehensive Employment and Training Act of 1973, as amended.

As cited in section 3(8) of CETA, the term "economically disadvantaged" means a person who (1) receives, or is a member of a family that receives, cash welfare payments under a Federal, State, or local welfare program, or (2) had a family income during the 6-month period prior to program application that would have qualified the family for welfare payments; (3) has, or is a member of a family that has, received a total family income for the 6-month period prior to application for the program (exclusive of unemployment compensation and welfare payments), which, in relation to family size, was not in excess of the higher of the OMB poverty level or 70 percent of the BLS lower living standard income level; (4) is a foster child on behalf of whom State or local government payments are made; or (5) in cases permitted by regulations of the Secretary of Labor, is a handicapped individual living at home or is an individual who is institutionalized or receiving services in, or is a client of, a sheltered workshop, prison, hospital, or similar institution or in community care.

Vocational Education Act of 1963, as amended.

Under section 195(16) of VEA, the term "disadvantaged" means persons (other than handicapped persons) who have academic or economic handicaps and who require special services and assistance in order to enable them to succeed in vocational education programs.

As further defined in the regulations (Federal Register, volume 42, number 191, section 104.804, Appendix A), academic disadvantage means that a person (1) lacks reading and writing skills, (2) lacks mathematical skills, or (3) performs below grade level, while economic disadvantage is apparent when: (1) family income is at or below the national poverty level; (2) participant, or parent or guardian of the participant is unemployed; (3) participant, or parent of participant is a recipient of public assistance; or (4) participant is institutionalized or under State guardianship.

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An Interim Report to the Congress of the National Commission for Manpower Policy. *Job Creation Through Public Service Employment*, Report No. 6, March 1978 (NTIS Accession No.. PB 292538)*

Third Annual Report to the President and the Congress of the National Commission for Manpower Policy: *An Assessment of CETA*, Report No. 7, May 1978. (NTIS Accession No.: PB 296829)*

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Fifth Annual Report to the President and the Congress of the National Commission for Employment Policy: *Expanding Employment Opportunities for Disadvantaged Youth*, Report No. 9, December 1979.*

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National Commission for Employment Policy: Increasing the Earnings of Disadvantaged Women, Report No. 11, January 1981. *

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* Reports are available from National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22151. Use accession numbers when ordering

• Reports listed above are available from the Commission at 1522 K Street, N.W., Washington, D.C. 20005.

Books Published for the National Commission for Employment Policy

which may be obtained from the publishers at the adresses indicated below:

From School to Work: Improving the Transition, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, August 1976. Stock No. 040-000-00364-9. Price $3.00.

Employability, Employment and Income: A Reassessment of Manpower Policy, Olympus Publishing Company, Salt Lake City, Utah 84105, September 1976.

Jobs for Americans, Prentice-Hall, Inc., Englewood, Cliffs, New Jersey 07632, October 1976.

Youth Employment and Public Policy, Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632, 1980.

Public Service Employment: A Field Evaluation, The Brookings Institution, Washington, D.C. 20036, 1981.