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ABSTRACT

The National Assessment of Vocational Education (NAVE) examined how the federal law was implemented and federal funds were distributed under the Carl D. Perkins Vocational Education Act of 1984. Data were reported on targeting of resources among and within states and on the uses of federal funds, and implications were drawn from the findings. The study found that the rates at which states allocated Perkins Act funds among secondary and postsecondary sectors varied greatly in 1986-87, with postsecondary shares ranging from 8 to 100 percent. In addition, separate area vocational school districts appeared to receive a disproportionate share of the federal funds in secondary education. In contrast, most school districts received grants that were too small to mount new initiatives of any size. For the disadvantaged set-aside alone, school districts with the highest poverty rates had a greater likelihood of receiving an award, and their per-student disadvantaged and handicapped set-aside awards were larger than those in other districts. A substantial amount of Perkins Act funds were used for assessments and other types of vocational counseling. Handicapped set-asides go to students with individualized education plans at the secondary level and to students with physical and cognitive impairments at the postsecondary level. Recommendations were made for improvements in fund allocation. (KC)

FINAL REPORT
Volume II

IMPLEMENTATION OF THE PERKINS ACT

NAE

NATIONAL ASSESSMENT OF VOCATIONAL EDUCATION
UNITED STATES DEPARTMENT OF EDUCATION

THE IMPLEMENTATION OF THE CARL D. PERKINS ACT

Lana D. Muraskin

National Assessment of Vocational Education

John G. Wirt, Director

May 1989

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Many people in several organizations contributed to this study of the implementation of the Perkins Act. This was truly a cooperative enterprise. At Abt Associates, Inc., Mary Ann Millsap was the project director for the survey of eligible recipients and the case studies of Perkins Act implementation in 9 states and 27 communities. Janet Swartz worked on design of the survey, instruments, and analysis, and wrote the report of findings. Michael Battaglia was responsible for sample design and selection. The case study report was written by Mary Ann Millsap, Joann Jastrzab, Christine Wood, and Camille Marder, the latter two under a subcontract with RMC Research Corporation. Also participating in the field work and writing of the individual case studies were Sheila Rosenbaum, Nancy Brigham, Sanda Spiegel, Marc Moss, and Judy Holdaway. Matthew Miles and Stuart Rosenfeld served as senior consultants in the design of the studies. The Advisory Panel for the Abt Associates studies included Patricia Flynn, Phyllis McClure, Marvin Lazerson, Robert Sorensen, Carrol Burchinal, and the late Gordon Ascher.

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An earlier set of case studies was conducted under a contract with E. H. White and Co. Regina Kyle was the project director, and case studies in 18 communities were conducted and written by Cheryll May, Edwin Herr, Elchanan Cohn, Jerome Kapes, and the late Keith Goldhammer. Dorothy Shuler started the project in the U.S. Department of Education Planning and Evaluation Service, before the NAVE got started.

A related study of vocational education for adults with limited-English proficiency was conducted by Development Associates. The project director was Howard Fleishman. Analysis of the potential population for services was conducted by JoAnne Willette at Development Associates and Carl Haub and Stephen Todella at Decision Demographics.

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The entire NAVE staff--John Wirt, David Goodwin, Robert Meyer, and Dorothy Shuler--read and commented on drafts of these chapters. John Wirt conducted the analysis of the relationship between school district grants under the formula-based set-asides and program improvement. Robert Meyer helped design the analyses of GEPA and the interstate formula.

Finally, the author owes a tremendous debt to Mary Ann Millsap, Jane Swartz, and Stephen Barro, whose work and ideas she has borrowed freely. These people are in no way responsible, however, for any errors in this document.

PREFACE

The National Assessment of Vocational Education (NAVE) was mandated by Congress in the Carl D. Perkins Act of 1984 (Section 403[a]). The mandate calls for "descriptions and evaluations" of the vocational education services delivered to special populations, the effects of the Act in modernizing the vocational education system, the impact of vocational education on academic skills and employment opportunities, and other topics.

The final report from the National Assessment consists of five volumes.

Volume I: *Summary of Findings and Recommendations* summarizes the main findings and conclusions of the National Assessment.

Volume II: *Implementation of the Perkins Act* examines how the federal law was implemented and federal funds were distributed and used under the Perkins legislation.

Volume III: *Secondary Vocational Education* analyzes high school vocational education enrollments, academic achievement and employment outcomes, and recommends federal policy.

Volume IV: *Postsecondary Vocational Education* analyzes postsecondary vocational education enrollments, employment outcomes, issues of finance in relation to federal support for vocational education, and recommends federal policy.

Volume V: *Handicapped and Disadvantaged Students--Access to Quality Vocational Education* describes and analyzes the participation of handicapped and disadvantaged students in vocational education.

These reports were based on a series of studies commissioned by the NAVE. Copies of the NAVE reports and a list of all the contractor reports can be obtained by contacting: NAVE-Room 3141, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC, 20202.

A distinguished panel of experts met four times to advise the National Assessment and review drafts of the interim and final reports. The members of the panel, who gave generously of their time and sound advice, were: Charles Benson (University of California at Berkeley), Sue E. Berryman (Teachers College, Columbia University), James Campbell (MISSCO Corporation), Edwin Herr (Pennsylvania State University), Dorothy Horrell (Red Rocks Community College), James Kadamus (State Department of Education, New York), Willis McCleod (Petersburg Public Schools), Milbrey McLaughlin (Stanford University), Daniel Morley (State Street Bank and Trust Company), William Morrill (Math Tech, Inc.), Lawrence Palmer (Cornell University), Robert Scot (North Carolina System of Community Colleges), and David Wise (Harvard University).

NAVE staff began to implement the National Assessment in January 1987, after the study plan was reviewed by congressional staff members in both the House and Senate education committees. The key staff members were Lana Muraskin, David Goodwin, Robert Meyer, and Dorothy Shuler. Specific acknowledgements of all staff and contractor contributions to the final reports are contained in each of the reports.

The National Assessment of Vocational Education was generously supported by the Office of Planning, Budget, and Evaluation of the Department of Education. Key officials of the Office and the Department granted NAVE staff both the funds required and the independence necessary to carry out the study. Special gratitude is owed in this regard to Alan S. Ginsburg of the Planning and Evaluation Service and Thomas M. Corwin of the Budget Service.

However, all conclusions and recommendations of this report are strictly those of the National Assessment, and do not necessarily represent views of the Department of Education.

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EXECUTIVE SUMMARY

BACKGROUND

This report examines the implementation of the Perkins Act in states and localities. It seeks to describe how well legislative goals have been translated into practice among recipients of funds. The primary goals of the Perkins Act are to improve and modernize vocational education to meet the needs of the work force and promote economic growth, and to assure that disadvantaged and handicapped students, and other special populations have access to quality vocational education programs. To accomplish these goals the Act identifies various target populations, funds allocation mechanisms, and required or desired services. In this report we examine the effects of those requirements.

OVERVIEW OF FINDINGS

Across the country, the rates at which states allocated Perkins Act funds among secondary and postsecondary sectors varied greatly in 1986-87, with postsecondary shares ranging from 8 to 100 percent. In addition, separate area vocational school districts appeared to receive a disproportionate share of the federal funds that flowed to secondary education. Area vocational school districts and postsecondary institutions received much larger grants than school districts on a per-pupil basis. There is some evidence that funds have been targeted to school districts with higher rates of poverty but not to districts with higher rates of minority population. If Pell Grants are used as a measure of need, there is no evidence of comparable targeting at the postsecondary level.

Most school districts received awards that were too small to mount new initiatives of any size. Half of all school districts received $7,910 or less, and three-quarters of the districts received $25,000 or less, insufficient resources to pay for even one full-time teaching position. By contrast, area vocational school districts and postsecondary institutions received median grants exceeding $90,000.

For the *disadvantaged set-aside* alone, school districts with the highest poverty rates had a greater likelihood of receiving an award, and their per-student disadvantaged (and handicapped) set-aside awards were larger than those in other districts. Within districts, however, our case studies were unable to uncover any systematic means for funds distribution or service provision based on student or programmatic characteristics. Many districts did not know how many students were eligible for services, and some did not know how many were actually served. The only systematic distribution mechanism we uncovered through the case studies was a tendency to locate services in facilities other than comprehensive high schools--such as area vocational facilities, vocational high schools, and alternative schools.

The substantial use of Perkins Act funds for assessments and other types of vocational counseling suggests that the Act served to increase these activities. We found that districts with support under the disadvantaged set-aside were more likely to indicate that they provided assessments to all or most academically disadvantaged students. Conversely, districts with greater funds were no more likely than those with low or no set-aside funds to provide other potentially additional services including academic remediation, summer jobs, alternative schools, curriculum modifications, and guidance and counseling.

Services under the *handicapped set-aside* go to students with Individualized Education Plans (IEPs) at the secondary level and to students with physical and cognitive impairments at the postsecondary level. Perkins Act resources under the handicapped set-aside are used

primarily to help pay for the instructional costs of vocational education for handicapped students in both mainstreamed and separate settings, and to provide assessments and other forms of guidance. Instructional spending was divided between mainstreamed and separate classes at rates of about 1.5 to 1 in school districts and 2 to 1 in area vocational districts. The Perkins Act appears to pay for services to two types of handicapped students at the postsecondary level: (1) physically disabled persons enrolled in vocational education and (2) cognitively impaired students (generally, students who had IEPs when in high school).

Sex equity grants are small in size and spread among a substantial number of activities. At the secondary level, common uses included in-service training, recruitment, and counseling. Area vocational schools had similar patterns but somewhat less support for in-service education and more for instructional salaries. Postsecondary institutions had spending patterns similar to those of area vocational schools. Case studies revealed a substantial share of resources for student recruitment, workshops, seminars, counseling, and, at the postsecondary level, a small amount for direct economic assistance. Most of the activities supported under the set-aside appear to be additional to those that districts and institutions would undertake on their own, particularly at the secondary level.

At the secondary level, the bulk of funds under the *single-parent and homemaker set-aside* appear to have flowed to a small number of school districts and a larger number of area vocational districts. From case studies it appears that most of the funds were used in programs for teenage parents, particularly for counseling. Only a subset of districts used funds for instructional services. School districts with funds had lower poverty rates than districts without funds. Median expenditures in school districts were small in comparison with those in area vocational districts.

At the postsecondary level, grants are about the same size as in area vocational districts. From case studies we have learned that, in a number of the community college sites, the funds support a portion of the costs of centers for displaced homemakers. Services were similar across sites and included recruitment, counseling, courses or group sessions aimed at building assertiveness and self esteem, referral to child care and other social services, referral for student aid, referral to training, and, in a small number of sites, instructional services or direct financial support.

It appears that the *adult and corrections set-asides* pay for general operating support of educational offerings. Few states have established priorities for the funds. The set-aside for adults helps support vocational programs in school districts (including area vocational schools) and postsecondary institutions. In the case studies, community colleges were more likely to identify a specific use of adult set-aside funds, but overall, few specific purposes were identified.

A substantial (but unknown) share of *program improvement* funds have been retained for statewide activities. Most statewide projects involved assistance to secondary vocational education. In states in which case studies were conducted, the amounts retained ranged from less than 10 to 40 percent. Of funds that flowed to local eligible recipients, slightly more than half were spent by postsecondary institutions. A little over a quarter of school districts and about half of area vocational school districts spent funds. Median expenditures in area vocational districts were 2.5 times the size of those in school districts. Well over half of postsecondary institutions spent funds, and median expenditures in postsecondary institutions were twice the size of those in area vocational school districts.

Funds retained at the state level were most commonly used for curriculum development. Other uses included establishing and maintaining regional resource centers for vocational education and staff development (in-service and preservice education). Almost all state-level

activities supported through the Perkins Act were concerned with secondary vocational education. A subset of states appears to have been using federal resources to develop curricula aimed at general vocational skills or at curriculum and model program development for vocational-academic integration. All states visited in the case studies belonged to interstate consortia supported with federal funds.

At both secondary and postsecondary levels, most program improvement funds were used to purchase equipment. Equipment purchases described in the case studies appeared to be about equally divided among computers (and related software and printers) and technical equipment for specific vocational programs. School districts were more likely to purchase computers, with area vocational schools and postsecondary institutions somewhat more likely to purchase technical equipment. In the few states that forbade the use of the funds for equipment, funds were used for a wide range of activities including adoption of the Principles of Technology curriculum, support of student organizations, and in-service training. Few program improvement funds were targeted on programs or services for special populations.

RECOMMENDATIONS FOR CHANGES IN FEDERAL POLICY

1. **Interstate formula: Eliminate the minimum allotment.** Our research suggests that the minimum allotment has resulted in per-pupil awards over twice as high in some of the smallest as in some of the most populous states.

2. **Interstate formula: Take into account the distribution of disadvantaged students and other students with special needs across the states.** At present, the distribution of funds is not correlated with the extent of youth poverty, one indicator of disadvantage.

3. **Within states, establish rules for allocation of funds among secondary and postsecondary education.** At present, the destination of Perkins Act funds varies greatly according to state politics. State agencies charged with administering the Act often restrict the access of sectors or institutions not under their control to Perkins Act funds.

4. **Direct greater resources to places of greater disadvantage.** At present it appears that although the funds that flow to school districts may tend toward places of greater poverty, the increment is not large. At the postsecondary level no comparable increment seems to exist. The intrastate formula appears to have done nothing to increase funds to poor school districts. Ways in which greater targeting could take place include the following:

   a. Clarifying the rules for allocating funds under the intrastate formula. More than half the states now establish "cuts" of these funds among sectors or sets of institutions before implementing the formula, although it does not appear that such procedures were intended by Congress.

   b. Ensuring that funds allocated under other portions of the Act also flow to places of greatest need (or at least do not offset the effects of the formula). Although we did not conclude that other portions of the Act offset the formula in grants to school districts, there is little evidence that nonformula grants are directed to places of greatest economic need.

c. Establishing predetermined rates of support for general and specialized institutions. At present, specialized institutions at the secondary level appear to obtain a disproportionate share of Perkins Act funds. Although disadvantaged and handicapped students are represented in specialized institutions at relatively high rates, most students enroll in vocational education in comprehensive high schools. Many have argued that comprehensive high schools are also the places most in need of programmatic upgrading.

5. **Match all Basic Grant funds at the state level, or match services directly, and distribute returned handicapped and disadvantaged set-aside funds by the same rules as the original distributions.** In states without a full state match, some school districts have had to return funds because no additional local funds were available. We also recommend the elimination of the ability of states or localities to match federal funds simply by identifying districts, institutions, or programs that are already overspending on special populations.

6. **Define a statewide project.** At present, states retain substantial amounts of Perkins Act funds. Some funds are spent on activities that are clearly innovative and additive whereas other funds are spent on activities for which the state assumes responsibility in areas other than vocational education.

7. **Establish minimum grants of sufficient size to purchase services.** Most grants to school districts are simply too small to carry out any but the most marginal activities. When broken down further among several set-asides, the amounts are no more than tokens. We recommend a minimum overall grant of at least $25,000 to an eligible recipient, that amount being the least that could be expected to hire a full-time-equivalent staff person. In order to deal with the set-asides, we recommend a minimum amount per student served (i.e, a concentration rule).

8. **Target resources on schools with the greatest need for services.** At present, there is confusion about targeting not only because the eligibility definitions are too loose, but also because the definitions do not explain how economic disadvantage and the "need for special assistance in vocational education" should be taken into account in providing services. The way out of this dilemma is to focus federal resources on improving vocational education in schools with concentrations of disadvantaged students.

9. **If current individual-based targeting is maintained, tie services provided with federal funds to vocational offerings that are upgraded or otherwise altered.** As currently designed, services are provided to persons who meet the eligibility definitions without regard to the program in which they are enrolled. Under the alternative proposed here, services such as vocational tutoring, academic remediation, or counseling could be federally subsidized only when they enabled a student to succeed in a *better* vocational education program than the one in which the student would have been enrolled otherwise.

10. **If targeting to individuals is maintained, eliminate the "requires special services... to succeed in" portion of the definitions.** This portion of the definition makes little sense, because it fails to acknowledge that a student's need for assistance depends on the program in which the student is placed. In practice, it could well result in no federal support for students in the least

challenging vocational programs, because these programs would be the easiest in which to succeed.

11. **If targeting to individuals is maintained, refine the definitions in such a way that priorities are established for assistance to those students with the greatest needs.** At present, there are no systematic state or local rules for whom to serve.

12. **If targeting to individuals is maintained, restrict eligibility to students enrolled in organized programs of occupational training.** Such students would be those who are enrolled in an organized program or sequence of courses or might otherwise be considered vocational "concentrators." Also, these students would be the ones counted for apportioning funds among eligible recipients.

13. **Limit ancillary services in favor of vocational instruction.** At present, sizable amounts of federal funds are used for services that are peripheral to instruction. To deal with these problems, we recommend the following:

    a. **Eliminate Section 204(c).** Although assessments are a reasonable service, this mandate encourages the provision of this service at a high level. At the same time, there is lack of clarity at the local level about how to use the results of the assessments.

    b. **If Section 204(c) is retained, reduce the incentive to spend disadvantaged and handicapped set-aside funds on noninstructional or ancillary services.** Because the Department of Education has asserted that local education agencies are obliged to provide these assessments and other ancillary services only to the extent that federal funds are available to pay for them, many recipients use their Perkins Act funds to provide assessments but do not follow up with instructional services.

14. **Limit the proportion of funds for basic skills remediation or link the service to the vocational offerings in which the student is enrolled.** Changes of these kinds not only would reduce the opportunities for substitution but also would ensure, once again, that federal funds were directed to vocational education.

15. **Limit federal program improvement funds to true program improvement activities, as distinguished from the costs of program operation.** Under current rules, grantees may use federal resources to cover ordinary expenses of running programs. Under this proposed option, a sharper distinction would be drawn between the costs of program operation and program improvement activities.

16. **Limit expenditure of federal aid for equipment and materials.** Many of the current outlays have little to do with improving programs except in the sense that a program with new equipment is "better" than one with old equipment.

17. **Establish specific purposes for the adult set-aside.** At present, this set-aside is general aid for adult programs. Unless Congress specifies some purposes for this aid, it will continue to be used in this manner, and much of it will probably substitute for state and local funds.

18. **Increase the size of sex equity grants.** Despite the use of competitions and other discretionary means to distribute funds, awards are small and services marginal. Unless Congress provides a major additional subsidy and specifies uses of funds, this situation is likely to continue.

19. **Strengthen the nonsupplanting provision.** As an alternative to the various current provisions, we propose three tests or criteria for establishing that Perkins Act funds do not supplant other resources:

    a. In districts or institutions with more than one school, schools aided under this grant should receive at least the same level of funding per student from other sources as schools that do not receive assistance under this grant.

    b. In all districts, schools receiving aid under this grant should receive at least the same level of "real support" per student (dollars adjusted for inflation) from other sources as they received in the prior year.

    c. Schools receiving grants and students participating in programs should receive their equitable shares of services funded under other federal, state, and local programs for the disadvantaged or other special populations.

    If these provisions are adopted, match, excess-cost and maintenance-of-effort requirements could be eliminated. The only other way to address the nonsupplanting issue would be to provide mandatory guidelines on how to compute the costs of vocational education in each school or district.

20. **Ensure equal access to programs and services.** The regulations effectively nullified the Perkins Act by stating that the equal access provision applied only to programs that received federal support. Language should be included in legislation that makes it clear that this provision applies to all vocational programs of local recipients whether the programs are federally funded or not.

INTRODUCTION

This report on the implementation of the Carl D. Perkins Act examines the major goals and policy mechanisms in the Act and the ways in which they have been translated into practice. The report addresses the following questions:

- How well were legislative aims translated into policy mechanisms through the Act and regulations?
- Do states change or add to federal policies in ways that affect federal goals?
- Do Basic Grant funds flow to localities, institutions, and students that need assistance or improvement?
- What activities are nominally carried out with federal resources?
- Are the services directed to the intended beneficiaries, and do they seem appropriate to deal with the problems that gave rise to federal concern?
- Do federal funds pay for services and activities that are different from, or greater than, those that would have occurred in their absence?
- Have federal resources improved or otherwise changed the ways in which vocational education is delivered in general or for particular groups?

A negative conventional wisdom has developed about the effects of federal policy. That "wisdom" holds that although federal goals may be virtuous, state and local conditions and alternative goals make the implementation of federal policy impossible at worst, uneven at best. With respect to vocational education it is further held that the small percentage of total funds flowing from the federal government makes implementation of federal goals unlikely to occur.

The positive view of failed federal policy implementation is that it would have been undesirable anyway, because state and local officials are more in touch with students' educational needs and hence their goals are more appropriate. States and localities know best, and the federal government ought to supply some additional resources but trust those "on the ground." The negative view is that states and localities are unwilling to implement federal policies that seek to redistribute federal (as well as state and local) resources to disadvantaged persons, for example, or that draw attention to the weaknesses of existing practices by calling for programmatic or institutional reform.

There is little doubt that the Perkins Act seeks to change the local practice of vocational education. Although many educators persist in calling federal vocational education policy a program of "cost sharing," in principle, the Perkins Act is no such thing. One of the major goals of the Act is to provide additional services to "special populations," on the assumption that states and localities are either unwilling or unable to do so in the absence of federal incentives. The Act includes the framework for an entitlement to specific services for handicapped and disadvantaged students enrolled in secondary vocational education. Although the provisions could undoubtedly be stronger, the Act seeks to direct resources to places of economic need. In contrast to previous vocational education legislation, the Perkins Act is blunt about the need for reforms in the vocational education enterprise and directs resources to program improvement. And although the provision has been effectively nullified in regulation, the Act is fundamentally committed to equal access for all students to high-quality vocational education.

As expressed in the legislation, the goals of the Perkins Act are as follows:

> expand, improve, modernize, and develop quality vocational education programs in order to meet the needs of the Nation's existing and future work force for marketable skills and to improve productivity and promote economic growth;
>
> assure that individuals who are inadequately served under vocational education programs are assured access to quality vocational education programs, especially individuals who are disadvantaged, handicapped, entering nontraditional occupations for their sex, adults in need of training or retraining, single parents or homemakers, individuals with limited proficiency in English, and individuals who are incarcerated.

To accomplish these ends, the Act identifies what might be called enabling goals as well. Those goals are as follows:

> promote greater cooperation between public agencies and the private sector in preparing individuals for employment, in promoting the quality of vocational education ... and in making the vocational system more responsive to the labor market ... ;
>
> improve the academic foundations of vocational students and aid in the applications of new technologies ... ;

> provide vocational education services to train, retrain and upgrade employed and unemployed workers in new skills for which there is a demand in that state or employment market;
>
> assist the most economically depressed areas of a State to raise [the] employment and occupational competencies of its citizens;
>
> assist the State to utilize a full range of supportive services, special programs, and guidance, counseling and placement to achieve the basic purposes of this Act;
>
> improve the effectiveness of consumer and homemaking education and ... reduce the limiting effects of sex-role stereotyping on occupations, job skills, levels of competency, and careers; and
>
> authorize national programs designed to meet designated vocational education needs and to strengthen the vocation l education research process.

The goals imply a set of social, economic, and educational concerns that the Act is intended to address. At the most basic level, the goals imply the need for improvement in the quality of vocational offerings for all students, as well as for special measures to overcome poorer access to high-quality vocational offerings on the part of special groups. To implement these goals, the Act specifies a set of policy mechanisms. Among the most important of these policy mechanisms are those that direct resources in particular ways and those that enumerate the populations to be served and the services to be provided.

This report traces policy and funds from the federal to the local level, drawing a portrait of who is served, how, where, and at what level. The first chapter identifies the policy mechanisms that affect the distribution of funds from the federal government to the states, and from states to eligible recipients. It identifies potential problems in the Act's implementation and describes the actual results of the distribution of funds. The second chapter examines how the resources have been used, by whom, in what settings. The final chapter summarizes the findings, assesses the amount and appropriateness of the services provided, and considers whether the Act has stimulated activity that would not have taken place in its absence. The final chapter also presents a set of policy recommendations designed to strengthen the provisions of the current Act.

The implementation report is based on several sources of data. The studies that are summarized in this report include the following:

- A set of secondary and postsecondary case studies in 18 communities conducted early in the National Assessment under a contract with E. H. White and Co. The case studies, conducted during the 1986-87 school year, emphasized the implementation of the Perkins Act in districts and institutions in those 18 communities.

- A set of nine state-level case studies and three community-level case studies in each of the nine states (or 27 communities) conducted by Abt Associates, Inc. The case studies, conducted during the 1987-88 school year, were designed to examine not only Perkins Act implementation but the role of federal policy in the practice of vocational education in those states.

- A survey of local vocational education practices in school districts and postsecondary institutions during 1986-87 conducted by Abt Associates. The survey, conducted in 18 states, was designed to be nationally representative, obtain systematic information on the uses of Perkins Act resources, and gain broader systematic information on change and reform in vocational education over the past five years.

- An analysis of school district allocations of federal vocational education funds from 1981 to 1986 conducted by Decision Resources Corporation using data collected through the General Education Provisions Act.

- Additional analysis of the Abt Associates survey of local vocational education practices conducted by Decision Resources Corporation.

- An analysis of the resource allocation and targeting provisions of the Perkins Act conducted by SMB Economic Research, Inc.

- An analysis of allocations to states under the interstate formula conducted by Pelavin Associates, Inc.

- A survey of state administration of the Perkins Act conducted by Westat, Inc.

Results of all these studies are integrated into the discussion that follows. In places where results from a particular study are reported at length, there is a reference to that study in a note in the text. All the contractor reports are available from the National Assessment of Vocational Educatio·

CHAPTER 1

TARGETING OF RESOURCES AMONG AND WITHIN STATES

The Perkins Act includes provisions designed to direct resources to places with economic need and to students with particular characteristics, but these provisions are broad. In this chapter we describe the provisions and explore their effectiveness, beginning with the distribution of funds from the federal government to the states. Then we address the distribution of funds among categories of the Basic Grant and types of eligible recipients within states. The complex issue of how resources are distributed and spent within a recipient district is addressed in the next chapter.

INTERSTATE DISTRIBUTION OF BASIC GRANT FUNDS[1]

What the Act Prescribes

The federal policy on division of resources among the states has remained largely unchanged since it was first introduced in the Vocational Education Act of 1963 (VEA). The federally specified formula allocates funds in proportion to a weighted sum of state population in specified age brackets, except that a factor modifies the allocation in an inverse relationship to state per capita income. Some preference is given to populations in the 15 to 19, 20 to 24, and 25 to 65 age ranges, with the largest additional weight for the youngest group. The Perkins Act made minor changes to the formula, including a "hold harmless" provision guaranteeing a state at least the funds it received in FY 1984, a minimum allotment for the smallest states, and a provision to limit to 50 percent the increase in any one year for states benefiting from the minimum allotment.

Concerns About Distribution of Funds Among States

Concerns have been repeatedly voiced about the rationality and equity of the formula just described.[2] Critics have argued that, because enrollment-to-population ratios are not uniform across the country, the use of broad population counts rather than indicators of need

or demand for vocational education serves to give proportionately more support to students in some states than in others. Although the interstate formula makes some allowances for differences in per capita income, it does not recognize differences in the costs of vocational services in different regions. Furthermore, population weights in the formula may result in less aid, relative to services provided, for states that emphasize postsecondary vocational education, because there are greater weights for young people. In addition, the formula does not allow for the fact that "special populations" and "program improvement" needs specified in the Act are not randomly distributed across the nation, an issue that has taken on greater significance under the Perkins Act than under its predecessor.[3]

In short, previous criticisms of the federal distribution of funds among states seem even more important as the goals of the Act have changed and narrowed over time. To determine whether these concerns were justified, we compared actual state allocations with information on student enrollments, poverty levels, elementary/secondary education expenditures, and limited English proficiency (LEP).

Findings

Comparing interstate Basic Grant allocations with secondary and postsecondary student enrollments, we found that allocations ranged from $31 in California to $127 in Vermont and $178 in the District of Columbia (see table 1.1). Enrollments here mean combined enrollments in grades 9 through 12 and at two-year public institutions in each state, not "vocational" enrollments. The state-to-state differences are, in part, attributable to differences in rates of enrollment across states (particularly in two-year postsecondary institutions), but also appear to be the result of interstate formula adjustments, especially the minimum allotment. Nine of the 10 states with highest per-pupil Perkins Act allocation benefited from the minimum allotment in FY 1989.[4]

Table 1.1

Secondary and Postsecondary Combined Per-Pupil Allocation of Perkins Act Basic Grants to States, FY 1989

State	Amount
States with highest per-pupil dollars	
District of Columbia	$ 178
Vermont	127
South Dakota	114
Delaware	110
North Dakota	97
Wyoming	94
Montana	84
Louisiana	78
Alaska	74
Rhode Island	74
States with lowest per-pupil dollars	
Connecticut	$ 44
Virginia	44
Oregon	44
Maryland	42
New Jersey	42
Michigan	40
Arizona	39
Illinois	38
Washington	37
California	31

SOURCE: Enrollment data from National Center for Education Statistics, *The Digest of Education Statistics*, U.S. Department of Education, 1988.

NOTE: Enrollments are combined "head count" enrollments in grades 9 through 12 and two-year public postsecondary institutions.

There were no substantively or statistically significant relationships between per-pupil allocation under the Perkins Act and either percentages of the youth in poverty or overall elementary/secondary per-pupil expenditures on education The correlation between Perkins Act per-pupil allocation and overall per-pupil expenditures was .16. The correlation of Perkins Act per-pupil allocation and poverty rate of persons 5 to 17 was .17. Because of the

minimum allotment, however, some of the states with the highest per-pupil allocations under the Perkins Act were among the highest spenders on elementary/secondary education.[5]

With respect to the distribution of children and youth (aged 5 to 17) with limited English proficiency (LEP), they were found primarily in states that receive relatively low per-pupil Basic Grant allocations, in part because those states have relatively higher per capita income. Seventy-five percent of LEP youth were concentrated in four states: California, New York, Texas, and Illinois. As we have seen, two of those states (California and Illinois) receive among the lowest per-pupil Perkins Act allocations. New York and Texas received only slightly greater shares ($46 and $49, respectively). Of the four states, only New York had a relatively high overall level of per-pupil expenditures for elementary/secondary education (local, state and federal combined).

INTRASTATE DISTRIBUTION OF THE PERKINS ACT BASIC GRANT

What the Act Prescribes

With respect to the Basic Grant, which accounts for about 93 percent of all Perkins Act funds, the Act mandates that more than 50 percent be spent in economically depressed or high-unemployment areas (generally referred to as EDAs), that state administrative expenses consume no more than 7 percent of the funds, and that the rest of the Basic Grant be divided in the following manner:

Part A: Vocational Education Opportunities	
Handicapped persons	10%
Disadvantaged persons	22
Adults in need of training or retraining	12
Single parents or homemakers	8.5
Participants in programs to eliminate sex bias and stereotyping	3.5
Criminal offenders in correctional institutions	1
Part B: Vocational Education Program Improvement, Innovation and Expansion	43

The Act also specifies that up to 20 percent of the Basic Grant (including the 7 percent for state administration) may be retained for statewide projects, but no portion of the set-asides

for handicapped and disadvantaged students may be so retained. The set-asides for handicapped and disadvantaged students are to be distributed to eligible recipients (school districts and postsecondary institutions) through a formula, spelled out in the Act, that takes into equal consideration the number of economically disadvantaged students in the district or institution and (depending on the set-aside) the number of handicapped students or the number of academically and economically disadvantaged students enrolled in vocational education. Throughout the Act, no distinction is made between types of institution or levels of education in the distribution of funds.

On procedures for distributing funds within states, the Perkins Act is both more prescriptive and more permissive than previous legislation. The VEA identified but gave no specific weights to criteria that states were required to incorporate in distributing the entire Basic Grant (although they could add others). The regulations mandated that formulas be developed to govern the intrastate distribution of all Basic Grant funds. The legislation was thus permissive in allowing states to prescribe criteria and weights, but the use of formulas meant that distribution of a portion of funds was unlikely to be offset by distribution of the rest.

In specifying more than 50 percent of the funds for economically depressed areas and in establishing the formula for handicapped and disadvantaged set-asides, the Perkins Act is prescriptive. It addresses a major criticism of the VEA, namely, that the state-developed formulas did not direct resources to places of greatest economic need. In not establishing rules for the distribution of the other two-thirds of the funds, however, the Perkins Act provides states with considerable discretion in the overall distribution of funds. The following section examines the potential issues and the effects of the federal policy for the distribution of funds within states.

Issues in Intrastate Implementation of the Basic Grant

Overall Distribution of Funds

Because the Perkins Act does not distinguish between secondary and postsecondary education in the distribution of funds, such decisions are left entirely to states. Whereas the formula for distribution of handicapped and disadvantaged set-asides implies concern with population and disadvantage as criteria for funds distribution, there is no requirement that all Basic Grant funds be distributed on that basis. States could, in fact, decide to allocate all funds other than handicapped and disadvantaged set-asides to one sector or the other.[6] As was reported in the NAVE *Second Interim Report*, the percentages of Perkins Act funds allocated to secondary and postsecondary levels vary widely among the states. Through case studies we have learned that states can also decide to allocate the funds to particular sets of institutions such as area vocational schools or community colleges.

Within states then, the Perkins Act does not require any systematic means for distributing approximately two-thirds of the funds. As noted previously, the Act removes the obligation of states to allocate all funds through any one method. States may use formulas or discretion to allocate all or portions of each nonformula set-aside and program improvement. The *Second Interim Report* also reported the finding that states use competition and other discretionary means as their primary allocation mechanisms.[7] As a result, funds could well be directed to places and institutions without regard to population size, need, or other such criteria.

Targeting to Economically Depressed Areas (EDAs)

Although the Perkins Act expresses a clear intent to direct funds to economically depressed or high-unemployment areas, its policy mechanism to obtain that end may still be inadequate. First, mandating that each state spend at least 50 percent plus $1 in places identified as depressed does not take into account the variations in the extent and incidence of economic distress among the states. Second, there are few controls on definitions of EDAs.

Because a state may identify a large portion of its territory as depressed, the provision may prove meaningless to targeting resources in practice. In addition, area vocational schools, technical institutes and community colleges draw students from wide geographic areas, so it is difficult to determine which, among these eligible recipients, are distressed solely on the basis of their geographic location. In its study of six states, the General Accounting Office (GAO) found that some relatively affluent areas of states have been designated as EDAs.[8]

Distribution of Funds by Formula

Carrying out the intrastate formula for distribution of funds under the set-asides for handicapped and disadvantaged students may also pose problems. First, the formula does not take into account differences in costs associated with handicapped and disadvantaged students across educational levels or among different institutions. For example, the costs of training a physically handicapped student for a specific job at a postsecondary area school may be quite different from the costs of a learning disabled student enrolled in a prevocational class at a comprehensive high school. In fact, some states assign different weights to secondary students enrolled in different vocational programs for purposes of distributing state aid to education, suggesting that differential costs are an important issue.

Furthermore, the formula may have been undermined by the state practice of preallocation of funds. Survey and case study information indicates that more than half the states establish *a priori* amounts of formula funds for secondary and postsecondary education (or for different types of institutions, such as school districts, area vocational facilities, technical institutes, and community colleges) before implementing the formula provisions.[9] This practice of "pooling" the disadvantaged set-aside is discussed in the NAVE *Second Interim Report*. One effect appears to be to bias the distribution of funds toward postsecondary education.

It appears that Congress did not intend this practice to occur. The Senate report accompanying the legislation was particularly concerned about how to ensure fairness in

implementing the intrastate formula across secondary and postsecondary sectors, noting that each sector has different procedures for counting students. The report stressed that the formula should use full-time-equivalent (FTE) vocational enrollments in counting students across sectors to ensure that, within a state, each sector received a similar per-pupil share. Ironically, however, vocational enrollments were not specifically defined in law.

A further potential difficulty in ensuring equitable implementation of the formula lies with the definitions of "handicapped" student, "disadvantaged" student, and "vocational program" that form the basis for the student counts that, in turn, determine formula allocations. The broad definitions in the legislation and regulations could result in funding for students with different levels of need at widely varying rates, depending on interpretation by each state or locality. The definition of a handicapped student at the secondary level could be expected to be a student with an individualized education program (IEP), but IEPs do not exist at the postsecondary level. The "academically disadvantaged" category is potentially highly elastic, because it could include anywhere from a small fraction to a majority of students (see Chapter 2).

The definition of enrollment in vocational education also is elastic. In one district, being enrolled in vocational education might apply to anyone taking a single vocational course, while in another it might be limited to students enrolled in a multicourse sequence or a multihour program. At the postsecondary level, it might mean a "major" in a vocational subject, independent of the courses in which the student was enrolled at any particular time. These and other differences could significantly influence student counts and, hence, the distribution of funds.

Another potential problem arises from combined requirements for a 50-50 match and the use of funds solely for excess costs attached to formula-based funds. These requirements were designed (1) to ensure that federal funds were additional to state and local contributions to the education of handicapped and disadvantaged students and (2) to bring state and local resources to bear on federal goals. The requirements mean, however, that places receiving

greater shares of formula than nonformula funds incur a greater financial burden. They must supply more state and local resources in order to use federal resources. Because these districts and institutions are the ones with the largest numbers of the disadvantaged students, many of them are likely to be poor. As a result, one might find substantial amounts of formula funds returned to the state (or carried over from one year to the next, if so allowed).

Finally, because neither the Act nor the regulations establishes a minimum level of grant under the formula, and the federal dollars, on a national basis, are small, there is the potential for very small awards. Under the regulations, states may establish minimum awards of $1,000 but they are under no obligation to do so. Even this minimum hardly seems sufficient to ensure a reasonable level of service.

Distribution of Nonformula Funds Within States

After deducting state administrative costs, the Perkins Act specifies a formula for 32 percent of the Basic Grant but is mute with respect to the distribution of the other 68 percent. As a result, concern has been expressed that the formula does little to direct greater resources overall to places of economic need. States may attempt to do as little "harm" as possible to allocation patterns from year to year, using the nonformula funds to compensate districts and institutions that receive low rates of assistance under the formula with larger shares of other Perkins Act funds. In general, the legislation and regulations take no position with respect to the allocation of funds within states other than the set-asides for handicapped and disadvantaged students.

The Act makes suggestions on targeting nonformula funds, but contains no requirements. It indicates that the distribution of Title II(B) funds (43 percent of the Basic Grant) should favor economically depressed urban and rural areas, but there are no regulations on this point. The Act also states that aid distributions should take into account local labor market demands, student needs, program quality, and grantees' capacities, but there are no accompanying regulations specifying any of these factors. Nor do regulations define the

statutory provision that federally funded projects be "of sufficient size, scope, and quality" to give reasonable promise of meeting students' needs. As noted earlier, there is nothing to prevent states from using nonformula funds to offset intrastate formula distributions.

Findings on the Distribution of Basic Grant Funds within States

Overall Distribution of Funds: Secondary/Postsecondary Sectors

As reported in the NAVE *Second Interim Report*, approximately 40 percent of federal funds were allocated by states to postsecondary education, but the states differ greatly in their distribution of funds between secondary and postsecondary levels. Of the 48 states for which 1986-87 program-year data are available, allocations to postsecondary education (i.e., education beyond grade 12) varied from 8 percent to 100 percent. Table 1.2 shows the overall range of Basic Grant allocations.

Table 1.2

Percentages of Federal Vocational Basic Grant Funds Distributed to Postsecondary Education Among the States, 1986-87

Percentage of Federal Funds	Number of States
0-10%	1
11-20	7
21-30	7
31-40	10
41-50	9
51-60	5
61-70	6
71-80	1
81-90	0
91-100	2
	48

SOURCE: NAVE, *Second Interim Report*, (Washington, DC: U.S. Department of Education, 1988).

NOTE: The number of states (and the District of Columbia) totals less than 51 because of missing information.

Although differences in allocations to sectors may reflect actual differences in rates of participation in vocational education, as best as we can determine, the relationship is not strong. We compared the relative amounts of funds to secondary education by region in 1986-87 in relation to regional rates of participation in vocational education for the high school class of 1982. What we found was that the highest rates of participation in vocational education occurred in the Central region, followed by the Southeast. In contrast, the greatest percentage allocation of Perkins funds to secondary education occurred in the Northeast, followed by the Southeast (see table 1.3).

When we compared the reported percentage of Perkins Act funds spent at the secondary and postsecondary levels with actual enrollments we also found wide variation. Comparing the percentages of Perkins Act funds allocated to postsecondary education and the "head count" enrollments in public two-year institutions, per-pupil expenditures varied between $20 and $742 across the states (see table 1.4). At the secondary level, the comparison of Perkins Act funds to enrollment in grades 9 through 12 yielded results ranging from nothing to $132. An analysis of the relative effects of enrollments as opposed to share of Perkins Act funds to postsecondary education revealed that it was the latter that accounted for most of the variation in per-pupil allocations at the postsecondary level.[10]

Our survey of school districts and postsecondary institutions indicated the sector and institutional proportions of funds that were spent directly by eligible recipients at the local level. Figure 1.1 shows that, in 1986-87, approximately 62 percent of the funds available locally were spent for secondary and 38 percent for postsecondary education. Postsecondary recipients included technical institutes (including area schools), community colleges, school districts, and some four-year institutions.[11] These figures probably do not take into account a share of the funds retained for statewide projects, unless spent by local authorities in the recipients polled. In general, however, the congruence of findings on the secondary-postsecondary division of funds across the two surveys suggests that roughly 38 to 40 percent of Perkins Act funds are spent at the postsecondary level nationally. The tremendous

Table 1.3

Comparison of Secondary Vocational Course Taking and State Allocation of Perkins Act Funds to Secondary Education, 1987

	Vocational Credits and Vocational Share of Total Credits, Class of 1987		Percentage of Perkins Basic Grant Funds Allocated to Secondary Education, 1986-87			
	Average Vocational Credits (Units)	Vocational Credits as Percentage of All Credits	Disadvantaged Set-aside	Handicapped Set-aside	Sex Equity Set-aside	Program Improvement
East	3.65	15.7%	75%	85%	64%	70%
Central	4.75	20.9	68	72	54	57
South	4.36	19.4	80	86	64	80
West	3.86	16.6	55	59	45	56

SOURCE: National Center for Education Statistics, Survey Report, State Policies Concerning Vocational Education, 89-420 (Washington, DC U.S. Department of Education, 1988); and MPR Associates, Course Taking Patterns in Secondary Schools (forthcoming).

Table 1.4

Range of Per-Pupil Perkins Act Funds Distributed to Secondary and Postsecondary Levels Among the States, FY 1989 (Based on Head Count Enrollment and Within-State Basic Grant Allocations)

Dollars Per Pupil	Number of States
Secondary level[a/]	
0-$20	6
21-40	18
41-60	19
61-80	6
81 and over	2
	51
Postsecondary level[a/]	
0-$20	9
51-100	18
100-150	4
151-200	6
201-250	5
251-300	1
301 and above	4
	47[b/]

SOURCE: National Center for Education Statistics, *Survey Report, State Policies Concerning Vocational Education* 89-420 (Washington, DC, November 1988).

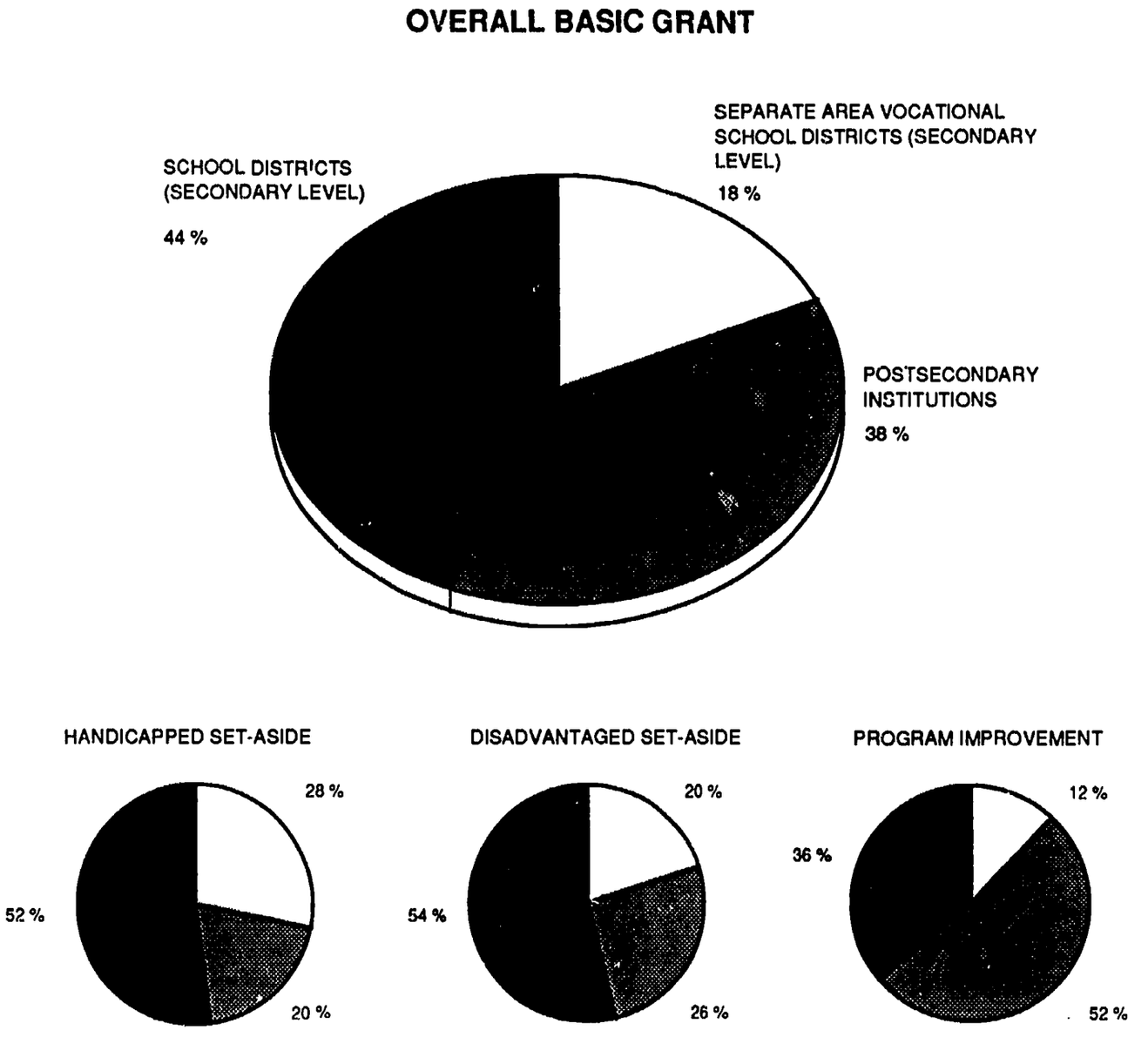
a/ Within-state allocations drawn from 1986-87 data. Postsecondary enrollments are head counts at two-year public institutions

b/ Column does not add to 51 states because of missing data.

differences among states in their allocations for secondary and postsecondary education described earlier suggest strongly that states make a wide variety of political decisions about allocation of federal funds.

FIGURE 1.1

Expenditures Of Perkins Act Basic Grant Funds By School Districts, Separate Area Vocational School Districts, And Postsecondary Institutions, 1986-87



SOURCE: Janet P. Swartz, State and Local Response to the Carl D. Perkins Act, Survey Analysis, Final Report (Cambridge, MA: Abt Associates, Inc., 1989)

The State Role in Funds Allocation

To try to explain the state-to-state differences, we examined the direct role of the state in determining the distribution of funds. As in earlier federal vocational education legislation, the Perkins Act mandates that a "sole state agency" be established to administer the Act. In each of the nine states visited in case studies, the sole state agency had administrative authority for secondary vocational education, but in only one of the nine states did the office have administrative authority for all secondary and postsecondary vocational education.[12] Administrative responsibility for postsecondary vocational education was shared by multiple offices at the state level. Although there were both community colleges and postsecondary area vocational schools or technical institutes in five of the states, in only two were all of these institutions administered by the same agency.

With administrative authority for vocational education shared, we found that in at least half of the nine case study states, the office administering the Perkins Act was able to limit the Perkins Act funds available to institutions not under its control. For example, one state provided disproportionate funds to its state-administered postsecondary area vocational schools and excluded the community colleges entirely. In another state, where the Perkins Act was administered through a community college board, Perkins Act funds were invested more heavily in community colleges than other educational levels or institutions. Even when funds were directed to institutions not under its control, the office administering the Act provided less guidance and oversight to those institutions. Eight of the nine states either established an overall proportion of funds for secondary and postsecondary sectors or limited eligibility for some set-asides by type of institution. Limiting eligibility for federal vocational education funds appears to be longstanding policy in most of the states visited.

Overall Allocations by Type of Institution

There were sizable differences in the rates at which different types of institutions spent funds under the Basic Grant, as well as in the size of grants. At the secondary level, fewer

regular school districts spent funds and they spent funds at lower rates than separate area vocational school districts. Figure 1.1 shows that school districts account for about 70 percent of the funds that are spent at the secondary level, and separate area vocational districts account for about 30 percent. A total of 62.5 percent of school districts spent funds under the Perkins Act, and the median amount was $7,910 (see table 1.5).[13] The 75th-percentile expenditure was $25,000, meaning that three-quarters of all grants were that amount or less. On the basis of total enrollments in grades 9 through 12, we estimated the average per-pupil Perkins Act expenditure in school districts at $20. With an assumption that 20 percent of credits are earned in vocational educati n, the average vocational full-time equivalent (FTE) expenditure rose to $100 (see figure 1.2).

In contrast, 90.8 percent of area school districts spent funds, with a median expenditure of $91,309 and a 75th-percentile expenditure of $153,629. On the basis of head count enrollments, the average per-pupil expenditure was $86. Assuming that each student earns two credits per year in an area center, the per-pupil FTE expenditure would be $215 for area vocational school districts with an award. Separate area vocational school districts account for about 30 percent of the Perkins Act funds that flowed to secondary education. As the NAVE report on access to high quality education makes clear, comprehensive high schools accounted for approximately 84 percent of the credits earned in secondary vocational education, while all area vocational schools accounted for approximately 8.8 percent. Because separate area vocational school districts are a subset (probably around 60 percent) of all area vocational schools, these districts appear to receive a disproportionate share of federal dollars.[14]

For school districts, size of student body was an important determinant of receiving an award. Enrollment in districts with awards averaged 1,284 students in grades 9 through 12. Enrollment in districts without awards averaged 411 students in grades 9 through 12. For area vocational school districts, size differences were not a significant factor in receipt of funds, and as noted previously, most such districts received awards.

Table 1.5

National Estimates of Amount of Perkins Act Funds Spent by School Districts, Separate Secondary Area Vocational School Districts, and Postsecondary Institutions in 1986-87

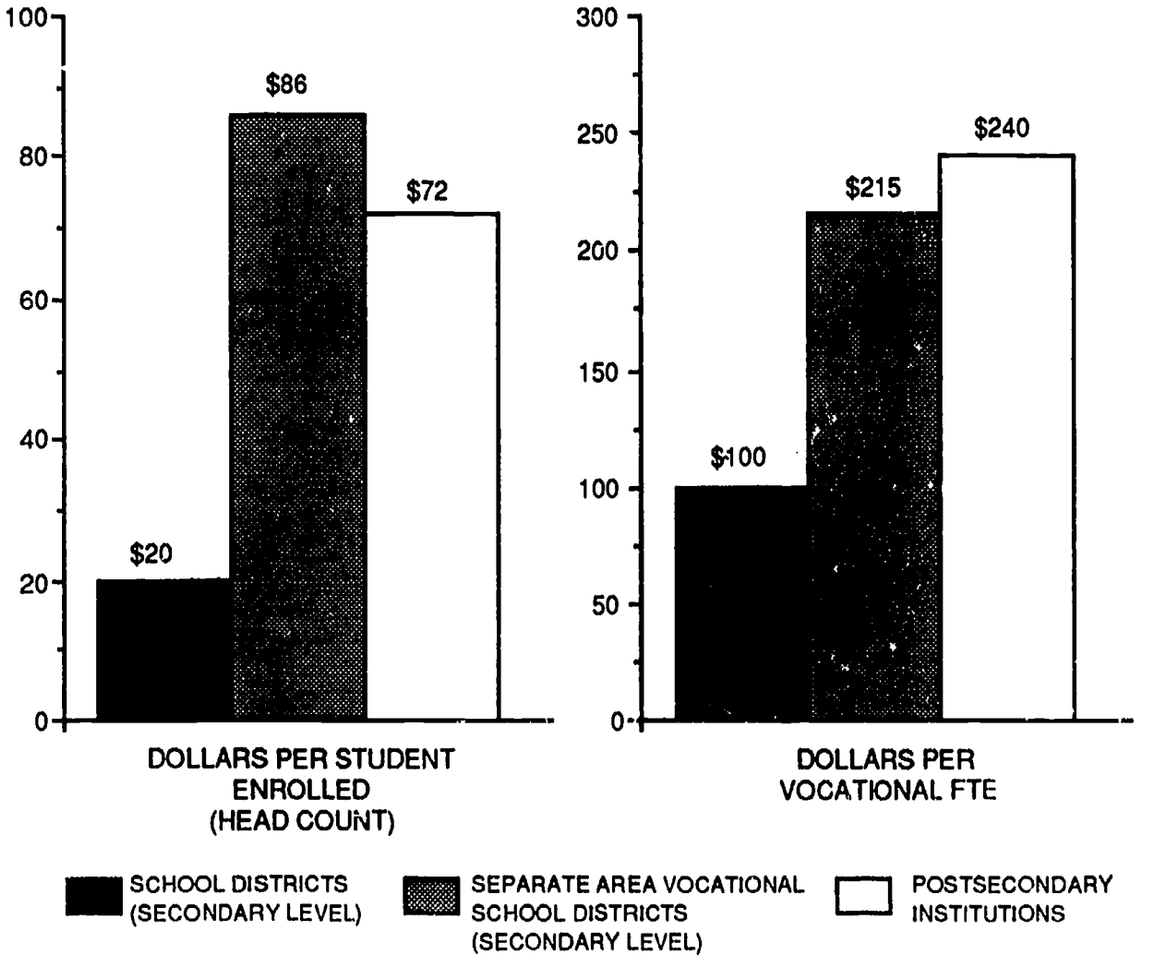
Category of Perkins Act Funds	Type of District/ Institution (Weighted n)	Percentage Spending Funds	Amount of Funds Spent		Enrollment Districts/ Institutions		
			Median	75th Percentile	With Award	Without Award	Total Funds
Handicapped set-aside	School district (5,123)	48.5%	$ 3,000	$ 8,000	1,477	432	$ 53,879,298
	Area school district (687)	82.2	16,929	31,734	1,886	1,294	31,090,071
	Postsecondary institution (1,056)	58.6	11,137	26,400	3,023	4,211	22,022,977
Disadvantaged set-aside	School districts (5,204)	50.2	4,000	14,054	1,385	487	98,461,928
	Area school district (687)	82.8	27,418	62,295	1,853	1,428	37,736,624
	Postsecondary institution (1,136)	63.3	22,734	57,363	3,757	3,185	49,662,807
Limited-English-proficient (LEP) set-aside	School districts (642)	7.0	1,749	7,208	3,615	741	10,160,012
	Area school district (99)	16.4	3,026	8,000	3,786	1,398	1,178,750
Adult set-aside[a/]	School district (355)	3.4	9,500	30,229	6,236	760	22,926,884
	Area school district (224)	29.3	29,718	66,580	2,784	1,283	11,564,235
	Postsecondary institution (612)	37.2	25,900	59,851	3,550	2,751	26,868,671
Single-parent/ homemaker set-aside	School district (531)	5.4	8,000	20,000	4,527	756	11,199,480
	Area school district (227)	31.3	32,696	43,993	2,413	1,443	7,961,[illegible]
	Postsecondary institution (826)	46.9	32,696	45,879	4,216	3,000	30,525,[illegible]
Sex equity set-aside	School district (743)	7.2	3,600	9,369	4,204	708	8,131,965
	Area school district (228)	29.4	8,120	21,721	2,784	1,359	3,582,518
	Postsecondary institution (525)	30.4	9,000	21,721	4,004	3,378	8,453,100
Program improvement	School district (2,660)	26.1	9,887	21,549	1,948	591	73,017,606
	Area school district (408)	51.0	25,000	58,297	2,129	1,370	23,704,783
	Postsecondary institution (1,010)	58.7	50,000	85,000	4,794	1,706	105,402,615
Total	School district	62.5	7,910	25,000	1,284	411	277,777,173
	Area school district	90.8	91,309	153,629	1,731	1,579	116,818,849
	Postsecondary institution	79.2	92,395	190,589	4,001	1,862	242,935,838

SOURCE: Janet P. Swartz, State and Local Response to the Carl D. Perkins Act, Survey Analysis, Final Report (Cambridge, MA: Abt Associates, Inc., January 1989).

a/ Findings for this set-aside indicate that some respondents provided data by institution rather than by the educational level of instruction. As a result, responses are not considered reliable.

FIGURE 1.2

Two Estimates Of Average Per-Student Basic Grant Expenditures In School Districts, Separate Area Vocational School Districts, And Postsecondary Institutions With Basic Grants, 1986-87



SOURCE: See Figure 1.1

FTE ASSUMPTIONS: Twenty percent of student credits in secondary school districts are vocational. Two FTE credits per year are taken by average enrollee in area vocational schools. Thirty percent postsecondary credits are vocational.

Overall, 79.6 percent of the postsecondary institutions in our sample received some support under the Perkins Act. The overall median expenditure was $92,395 and the 75th-percentile expenditure was $190,589. The "head count" enrollment of institutions with support was more than double that of institutions without support. On the basis of head count enrollment, the per-pupil Perkins expenditure in postsecondary institutions with awards was $72. Assuming that vocational course taking accounted for 30 percent of the courses, on average, the per FTE student federal expenditure would be $240 (see figure 1.2). Size of institution was a factor in receiving an award at the postsecondary level, but was not as significant a determinant as for school districts.

Among postsecondary institutions, about 85 percent of community colleges received some support under the Perkins Act (see table 1.6). The median expenditure was $101,450. Other postsecondary institutions with vocational education, including postsecondary area vocational schools, technical institutes, and four-year colleges with less-than-baccalaureate programs, were somewhat less likely to receive support (73.9 percent), but this is such a broad, inclusive category in our data that any conclusions are difficult. The median expenditure for

Table 1.6

National Estimates of Perkins Act Funds Spent
by Postsecondary Institutions, 1986-87

Type of Institution	Median Grant	Percentage with Awards
Community colleges	$101,450	84.8%
Postsecondary area schools, technical institutes, four-year colleges	79,000	73.9

SOURCE: See table 1.5.

this group of institutions was $79,000. The median FTE enrollment of the institutions other than community colleges in our sample was much smaller than that of community colleges (573 as opposed to 1,853) meaning that the per-pupil dollars were probably higher.

Overall Allocations and Economic Need

It is almost impossible to determine definitively whether allocation practices under the Perkins Act have resulted in more funds going to places with greater economic need. Our inability to reach conclusions stems from our lack of reliable measures of economic need for two types of eligible recipients--area vocational school districts and postsecondary institutions. In the case of postsecondary institutions, although we report on the relationship between receipt of Perkins Act funds and receipt of Pell Grants, differences in tuition and other state and institutional policies (as well as student decisions) affect receipt of Pell Grants. Only for regular school districts were systematic measures of poverty available.

Our analysis revealed that school districts that did and did not receive Perkins Act funds varied little by poverty level, but that districts with higher poverty rates did receive more dollars per student. To carry out this analysis, we merged 1980 U.S. Census data on school district poverty rates with data on Perkins Act expenditures from school districts obtained through our local survey.[15] Overall, the average percentage of poverty for persons 5 through 17 years of age in districts spending any Perkins Act funds was 16.2 percent, compared with 15.5 percent among districts without funds (see table 1.7).

We also observed the relationship between poverty and spending funds under different portions of the Act, and for districts that varied by geography and ethnicity. When we examined the relationship between poverty and spending funds under particular set-asides and program improvement, we found that the differences were not powerful. Poverty was positively related to the probability of spending funds under the disadvantaged set-aside, but was negatively related to receiving a grant under the single-parent, sex equity, and program improvement categories. Almost all urban districts (96.9 percent) spent some Perkins Act

Table 1.7

National Estimates of Percentages of Students Below the Poverty Level and Nonwhite Students in School Districts Spending and Not Spending Perkins Act Funds, 1986-87

Category of Perkins Act Funds (Weighted n)	Spent Funds		Did Not Spend Funds	
	Average Percentage Below Poverty Level	Average Percentage Nonwhite	Average Percentage Below Poverty Level	Average Percentage Nonwhite
Handicapped set-aside (11,318)	16.0%	15.9%	15.5%	9.5%***
Disadvantaged set-aside (11,319)	16.6	16.7*	14.9	8.5***
Limited English-proficient set-aside (11,319)	16.2	28.7	15.7	11.4***
Adult set-aside (11,080)	15.0	22.4	15.6	12.2*
Single-parent set-aside (11,231)	12.9	19.8**	16.0	12.1*
Sex equity set-aside (11,300)	13.2	20.0*	15.9	12.0*
Program improvement (11,236)	14.4	17.0*	16.2	11.0***
Total Basic Grant	16.2%	15.4%	15.5%	7.5%***

SOURCE: See table 1.5.

Difference is significant at

* p<.05
** p<.01
*** p<.001

Table 1.8

Per-Pupil Perkins Act Funds 1986-87 in School Districts by District Size and by Poverty Level

	Mean	Standard Deviation		N
Size of district				
Small	$25.29	$48.30		5,282
Medium	14.27	29.62		2,357
Large	32.21	41.64		2,652
Average	$21.94	$41.64	Total	10,291
Poverty level				
Low	$14.96	$32.67		2,574
Medium	19.50	37.52		4,730
High	32.21	52.37		2,901
Average	$21.97	$41.79	Total	10,205

SOURCE: Decision Resources Corporation, Additional Analyses of Survey of Local Vocational Education Practices, Washington, DC, 1989.

NOTE: Poverty levels obtained from 1980 U.S. Census.

funds but considerably fewer suburban and rural districts did (65.6 percent and 59.8 percent respectively). Because urban districts are more likely to have nonwhite students, the average percentage of nonwhite students in districts with Perkins Act funds was 15.4 percent; the proportion was only 7.5 percent in districts without funding (see table 1.7).

Looking at per-student Perkins Act funding in school districts with different rates of poverty, we found that districts with the highest poverty rates spent greater funds on a per-student basis (see table 1.8). For all regular school districts (with and without Perkins Act funds), those with high poverty levels spent, on average, $32.21 per student, while those with medium poverty levels spent $19.50, and those with low poverty levels spent approximately $15. The major reason for the higher per-student grants in districts with greater poverty was

that average per-student awards were higher for poor districts receiving any Perkins Act funding under both the handicapped/disadvantaged set-asides and the program improvement subtitle.

From a somewhat different perspective, the General Accounting Office reported that, in the six states it visited, school districts in economically depressed areas did not receive greater per-student Perkins Act allocations under program improvement (Title II(B)) than other areas of those states.[16] In some cases, they received less program improvement funding, per student, than other areas of the state. The GAO report says nothing about the *overall* per-student funds to those districts under the Basic Grant. Nor does the report assess the likelihood that the "economically depressed area" designation is a meaningful indicator of economic need. Our data indicate that grants under the set-asides for handicapped and disadvantaged students have probably played an important role in equalizing (if not increasing) the federal funds to areas with the highest poverty rates.

In fact, we found that there was little or no relationship between receipt of program improvement grants and poverty (see table 1.9). Our survey revealed that districts receiving both handicapped and disadvantaged set-aside grants tended to receive program improvement grants as well. They received somewhat smaller program improvement grants than other districts but proportional to their poverty rates. For example, small districts with low poverty that received handicapped and disadvantaged grants spent about $14 per student under program improvement, but comparable districts without the set-aside grants spent approximately $54 under program improvement. In general, then, there appears to be some targeting of resources to school districts with the greatest student poverty under the Basic Grant.

Analyses based on state reports of school district allocations substantiate the targeting of resources to districts with the greatest poverty, but the analyses also raise questions about whether the Perkins Act has increased targeting as well as the extent of targeting. Combining state-to-district allocation data supplied by states to the federal government under the General

Table 1.9

School Districts: Probability of Receiving Program Improvement (PI) Awards and Size of Program Improvement Awards by District Size and Poverty Level, 1986-87 (Weighted N's)

District/Poverty Levels	Districts Receiving Handicapped/ Disadvantaged/Set-aside Grants			Districts Not Receiving Handicapped/ Disadvantaged/Set-aside Grants		
	Total Number	Number of PI Grants	Average Per-Pupil Size of PI Grant	Total Number	Number of PI Grants	Average Per-Pupil Size of PI Grant
Small districts						
Low poverty	457	163	$14.60	517	133	$53.88
Medium poverty	1,097	315	32.00	1,495	167	61.68
High poverty	1,012	192	37.68	923	36	22.06
Middle-sized districts						
Low poverty	391	125	6.90	266	80	8.76
Medium poverty	833	154	14.81	596	95	24.95
High poverty	438	103	260.88[a]	257	60	11.00
Large districts						
Low poverty	704	377	15.80	504	39	7.67
Medium poverty	919	537	16.17	233	81	10.46
High poverty	424	248	20.89	95	14	37.15

SOURCE: See table 1.8.

NOTE: Poverty levels obtained from 1980 U.S. Census.

a/ Removing two outliers would significantly lower this number.

Education Provisions Act (GEPA) with 1980 Census data, we found that between 1981 (pre-Perkins Act) and 1986 (Perkins Act), the rate of funding to districts with the greatest poverty did not change (see table 1.10).[17] Over all six years, the quartile of districts with the highest poverty rates received between 25 and 26.5 percent of Basic Grant funds, while enrolling approximately 20 percent of the students. In other words, students in these districts received about 25 percent more funding than they would have received had funds been distributed on a purely per capita basis.

But introduction of the intrastate formula for handicapped and disadvantaged set-asides and the EDA requirement under the Perkins Act did not enhance the targeting of funds to these poor school districts. So while targeting to school districts with the greatest poverty exists, the EDA and intrastate formula requirements do not appear to have increased or otherwise changed the rate at which funds flow to high poverty districts. Once again, these findings are only for regular school districts for which we could combine poverty data and financial reporting data.

Furthermore, according to the GEPA analysis, the funding increment for high-poverty districts is not reflected in equivalent increments for other mixes of districts with substantial proportions of groups that might be expected to benefit from such targeting. The districts in which blacks, Hispanics, persons with limited English proficiency (LEP), and single parents are concentrated did not receive comparable increments. For example, the quartile of districts with the highest percentage of LEP persons includes approximately 40 percent of all students but receives only 33 percent of Perkins Act funds (these figures are approximate over six years). The quartile of districts in which blacks are most concentrated includes 38 percent of all students but receives approximately 35 percent of Perkins Act funds.

In short, school districts with high concentrations of minorities actually received slightly less Perkins Act funds per student than they would have received if funds had been distributed purely on a per capita basis. Because these groups are concentrated in urban areas, we may conclude that, although urban districts receive Perkins Act funding at higher rates

Table 1.10

Federal Vocational Education Basic Grants to Quartile of School Districts with Highest Concentrations of Poor Persons, Limited-English-Proficient Persons, Single-Parent Households, and Minorities, 1980-86

Indicators	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Poverty						
Percentage of state Perkins Act allocation[a/]	24.91	25.43	24.23	25.58	26.85	26.55
Percentage of students[b/]	20.40	19.92	20.09	20.17	19.94	20.64
Index of equality[c/]	4.51	5.51	4.14	5.41	6.91	5.91
Limited English Proficiency						
Percentage of state Perkins Act allocation	35.21	34.60	32.28	33.03	32.08	33.72
Percentage of students	42.09	41.03	40.36	41.71	71.76	39.99
Index of equality	-6.88	-6.43	-8.08	-8.68	-9.68	-6.27
Single Parent Households						
Percentage of state Perkins Act allocation	37.50	40.10	38.10	38.43	38.63	39.14
Percentage of students	40.96	40.99	40.19	41.83	41.65	40.05
Index of equality	-3.46	-0.89	-2.05	-2.40	-3.02	-0.91
Minorities						
Percentage of state Perkins Act allocation	34.36	35.35	33.76	35.25	35.46	35.58
Percentage of students	36.64	36.28	36.60	36.86	36.56	37.03
Index of equality	-2.28	-0.92	-2.84	-1.61	-1.10	-1.45
Blacks						
Percentage of state Perkins Act allocation	34.62	35.50	34.40	36.02	36.27	36.86
Percentage of students	37.83	37.53	37.87	38.23	37.24	38.41
Index of equality	-3.21	-2.03	-3.47	-2.20	-0.87	-1.55

(continued)

Table 1.10 (continued)

Federal Vocational Education Basic Grants to Quartile of School Districts with Highest Concentrations of Poor Persons Limited-English-Proficient Persons, Single-Parent Households, and Minorities, 1980-86

Indicators	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Asians						
Percentage of state Perkins Act allocation	37.29	38.22	36.75	35.53	35.09	35.12
Percentage of students	47.78	48.13	47.12	47.79	48.97	47.11
Index of equality	-10.49	-9.91	-10.37	-12.26	-13.88	-11.99
American Indians						
Percentage of state Perkins Act allocation	28.37	27.33	27.58	27.61	28.37	27.45
Percentage of students	27.74	27.89	28.01	27.51	27.39	27.70
Index of equality	0.34	-0.56	-0.43	0.10	0.98	-0.25
Hispanics						
Percentage of state Perkins Act allocation	28.65	27.66	25.77	27.12	26.86	28.51
Percentage of students	31.32	30.60	29.34	30.62	31.47	30.69
Index of equality	-2.67	-2.93	-3.57	-3.50	-4.61	-2.18

SOURCE: Decision Resources Corporation, analyses of data from General Education Provisions Act.

a/ Percentage of total state allocations directed to highest concentration quartile of districts on indicator, aggregated across states.
b/ Percentage of all students (grades 9 through 12) in these districts, aggregated across states.
c/ The index is the difference between the percentage of total state allocations and the percentage of students. Higher positive numbers indicate larger allocations of funds to students in these districts than would be the case solely on a per capita basis. Negative numbers indicate smaller allocations of funds to students in these districts than would be the case solely on a per capita basis.

NOTE: Poverty rates, LEP rates, single parenting rates, minority concentrations from 1980 U.S. Census.

than suburban or rural districts, the concentration of students in urban areas remains greater than the concentration of Perkins Act funds.

At the postsecondary level, a small, inverse relationship exists between receipt of Perkins Act funds and one indicator of economic need. As table 1.11 shows, institutions that spent funds under the Perkins Act had lower percentages of students with Pell Grants than institutions without funds. This finding was true for grants overall (although the number of institutions without awards was small), as well as for grants in each of the set-aside categories and program improvement (where the number of institutions without grants was considerably larger). For community colleges, institutions with Perkins Act funds had an overall rate of Pell Grant recipients of 29.6 percent, compared with 40.2 percent in institutions without grants. For other postsecondary institutions (area vocational schools, technical institutes, and four-year colleges), the rate for institutions with funds was 34.1 percent and 54.4 percent for institutions without funds. The inverse relationship held even for the disadvantaged set-aside; the rate of Pell Grants for community colleges was 29.8 percent for those spending disadvantaged set-aside funds and 34.3 percent for institutions without funds. Although the rate of Pell Grant receipt may not be the best indicator (because of state and institutional policies affecting rates of receipt as well as student decisions), the consistency of the findings across institutions and portions of the Perkins Act is significant.

ALLOCATION BY SUBTITLES (SET-ASIDES AND PROGRAM IMPROVEMENT)

Set-aside for Disadvantaged Students

What the Act Prescribes

Federal funds are to be distributed by states through a formula that is based equally on the number of economically disadvantaged students enrolled in the district or institution and the number of disadvantaged students (economically and academically) enrolled in vocational education. Funds are to be used to support up to 50 percent of the excess costs of services to

Table 1.11

National Estimates of Percentage of Pell Grants Awarded in Community Colleges and Other Postsecondary Institutions Spending and Not Spending Perkins Act Funds, 1986-87

Type of Institution	Category of Perkins Act Funds (Weighted total n)	Spent Funds % Pell Grant	Spent Funds (Unweighted n)	Did Not Spend Funds % Pell Grant	Did Not Spend Funds (Unweighted n)	t-test of Group Difference
Community colleges	Handicapped set-aside (859)	29.8	(216)	34.3	(54)	-1.08
	Disadvantaged set-aside (848)	29.8	(224)	35.5	(44)	-1.41
	Adult set-aside (830)	32.6	(160)	31.0	(102)	0.29
	Single parent set-aside (850)	26.8	(189)	37.5	(80)	-1.92
	Sex equity set-aside (837)	26.7	(141)	34.2	(125)	-1.72
	Program improvement (860)	30.6	(217)	32.5	(55)	-0.47
Average		29.6	(251)	40.2	(17)	-2.33*
Postsecondary area vocational schools, technical institutes, four-year colleges	Handicapped set-aside (688)	38.7	(45)	40.6	(38)	-0.40
	Disadvantaged set-aside (682)	38.9	(54)	41.1	(28)	-0.46
	Adult set-aside (649)	30.9	(32)	43.4	(47)	-2.85**
	Single-parent set-aside (663)	31.2	(29)	44.3	(51)	-2.98**
	Sex equity set-aside (682)	40.6	(20)	39.6	(62)	0.14
	Program improvement (685)	35.6	(43)	46.4	(39)	-2.68**
Average		34.1	(64)	54.4	(19)	-3.41**
Average for All Postsecondary Institutions		31.5	(315)	48.6	(36)	-4.17**

SOURCE: See table 1.5. * $p<.05$
** $p<.01$

disadvantaged students enrolled in vocational education, and none of the funds may be reserved for statewide initiatives.

Additional State Rules

As described earlier, in 54 percent of the states, funds under the set-aside for disadvantaged students are divided among secondary and postsecondary sectors before the intrastate formula is implemented. States that make such *a priori* decisions tend to spend fewer set-aside funds on secondary education--64 percent in states that decided *a priori* on the secondary and postsecondary "pools" and 76 percent in states that implemented the formula uniformly across secondary and postsecondary institutions and students.

Findings

The effects of state decisions on sectors and institutions can be seen in local expenditure figures derived from our survey of school districts and postsecondary institutions. As table 1.5 shows, 50.2 percent of school districts and 82.8 percent of separate area vocational districts spent approximately 74 percent of funds under the disadvantaged set-aside in 1986-87. Of that 74 percent that flowed to secondary education, school districts spent 54 percent and area school districts spent 20 percent of the funds (see figure 1.1). The secondary total (74 percent) is slightly more than a state-reported 69 percent of state allocations to secondary education for the same period (the state survey results are reported in NAVE's *Second Interim Report*), but may be accounted for by differences between allocations and expenditures, state differences in definition of secondary education, or other factors.

Regular school districts and separate area vocational districts differed substantially in their rates of disadvantaged set-aside spending (see figure 1.1). Of the funds that flowed to secondary education, separate area districts spent approximately 27 percent. This figure is slightly lower than the 30 percent of total awards that flow to area vocational school districts, and means that disadvantaged set-aside funds are more likely than other parts of the Basic Grant to be spent in regular school districts. As a point of comparison, on average,

academically disadvantaged students in the class of 1987 earned 13.44 percent of their vocational credits in all area vocational schools, of which the separate districts in our sample account for around 60 percent.

Turning to regular school districts alone, 50.2 percent of the school districts in the survey spent funds under this set-aside (table 1.5), although most districts (93.1 percent) reported enrolling disadvantaged students.[18] The median district expenditure was $4,000, and three-fourths of all districts spent less than $14,054. Most urban school distri s (94 percent) spent some resources under this set-aside, but far fewer suburban and rural districts (54 percent and 44 percent, respectively). The typical district spending funds had approximately three times the total enrollment in grades 9 through 12 of the typical district that did not spend funds--1,385 students, as opposed to 487 (table 1.5). Not surprisingly, districts without funds indicated most often that they did not apply primarily because they expected to receive only small awards (62 percent of those without funds) (see table 1.12).

Poverty rates and minority enrollments differed in districts with and without funds under the disadvantaged set-aside (see table 1.7). Districts with funds had approximately 16.6 percent of students 5 to 17 years of age living below the poverty line, while districts without funds had 14.9 percent in poverty--a statistically significant difference. Districts with funds were significantly more likely to enroll nonwhite students.

Although 19 percent of districts and 26 percent of area vocational school districts reported that they had LEP students enrolled in vocational education, only 7 percent of school districts and 16 percent of area vocational schools spent disadvantaged set-aside funds for LEP students (see table 1.5). School districts spending funds for LEP students were similar to those not spending funds with respect to the percentage of students below the poverty level.

For the subset of area vocational school districts in the survey, the pattern is one of more set-aside dollars per student enrolled and greater concentration of resources.[19] First, area vocational school districts were more likely to spend funds under the disadvantaged set-aside, with 83 percent reporting that they spent funds (see table 1.5). Second, expenditures were

Table 1.12

National Estimates of Reasons Perkins Act Funds Not Received by School Districts
Separate Secondary Area Vocational School Districts, and Postsecondary Institutions, 1986-87

Category of Perkins Act Funds	Reasons Funds Not Received	School Districts	Secondary Area School Districts	Postsecondary Institutions
Handicapped set-aside	Did not know about program	7.0%	7.9%	50.2%
	Not eligible for these funds	12.4	39.4	6.6
	Application rejected	2.7	1.7	0.0
	Did not apply:			
	Award too small	62.8	21.0	15.1
	Unsure of match	8.7	17.2	16.9
	Could not identify eligible students	2.0	0.0	8.9
	Could not match	12.8	4.6	8.6
	Could not identify excess costs	3.1	17.3	1.8
	Weighted n:	2,733	65	273
	Unweighted n:	111	18	38
Disadvantaged set-aside	Did not know about program	8.0%	7.4%	53.9%
	Not eligible for these funds	12.9	24.5	7.7
	Application rejected	2.9	0.0	2.0
	Did not apply:			
	Award too small	61.8	28.2	16.9
	Unsure of match	10.9	20.3	18.5
	Could not identify eligible students	2.7	0.0	5.9
	Could not match	15.8	4.3	9.3
	Could not identify excess costs	4.6	17.8	1.0
	Weighted n:	2,524	70	250
	Unweighted n:	115	19	31
Adult set-aside	Did not know about program	15.5%	18.5%	35.5%
	Not eligible for these funds	23.7	33.5	9.3
	Application rejected	0.9	4.3	6.4
	Did not apply:			
	Award too small	53.6	36.4	23.5
	Unsure of match	9.3	7.9	13.5
	Proposal	19.0	20.8	28.7
	Weighted n:	5,064	262	488
	Unweighted n:	405	82	79

(continued)

Table 1.12 (continued)

National Estimates of Reasons Perkins Act Funds Not Received by School Districts
Separate Secondary Area Vocational School Districts, and Postsecondary Institutions, 1986-87

Category of Perkins Act Funds	Reason Funds Not Received	School Districts	Secondary Area School Districts	Postsecondary Institutions
Single parent/ homemaker set-aside	Did not know about program	17.2	3.1	28.1
	Not eligible for these funds	22.4	28.8	10.9
	Application rejected	0.6	9.1	11.6
	Did not apply:			
	Award too small	56.5	33.3	27.2
	Proposal	19.9	21.2	23.7
	Weighted n:	4,957	280	384
	Unweighted n:	383	102	74
Sex equity set-aside	Did not know about program	15.8	9.1	21.5
	Not eligible for these funds	14.5	17.1	7.1
	Application rejected	1.5	6.8	7.2
	Did not apply:			
	Award to small	62.4	48.5	30.1
	Proposal	20.4	23.9	35.3
	Weighted n:	4,811	270	566
	Unweighted n:	358	91	107
Program improvement	Did not know about program	20.9	30.6	51.4
	Not eligible for these funds	13.6	22.5	8.0
	Application rejected	2.1	6.3	0.7
	Did not apply:			
	Award too small	58.9	31.1	12.3
	Unsure of match	11.3	13.1	19.6
	Proposal	18.5	15.3	6.2
	Weighted n:	3,301	180	245
	Unweighted n:	190	48	40

SOURCE: See table 1.5.

NOTE: Numbers add to more than 100 percent because respondents could select all applicable responses.

considerably larger, with a median expenditure of $27,418. Three-fourths of all expenditures were $62,295 or less. Area vocational school districts with funds averaged somewhat higher enrollment (1,853) than area vocational school districts without funds (1,428). More significant, the per-student size of the area vocational school district grants were, on average, considerably larger than the per-student grants to school districts. The few area school districts without funds indicated that they did not apply primarily because their potential award would have been very small (28 percent), they were not eligible for funds (25 percent), they were unsure of their ability to match (20 percent), or that they had little likelihood of identifying excess costs (18 percent) (see table 1.12).

More postsecondary institutions than school districts spent funds under the set-aside (63.3 percent) and the median postsecondary award was higher (see table 1.5). The median expenditure was $22,734, with three-fourths of all institutions spending less than $57,363. Unlike the secondary level, there were almost no size differences between institutions that did and did not spend funds. Institutions without funds indicated most often that they did not apply because they did not know about the program (53.8 percent) (see table 1.12).

Set-Aside for Handicapped Students

What the Act Prescribes

Federal funds are to be distributed by states through a formula that is based equally on the number of economically disadvantaged students enrolled in the district or institution and the number of handicapped students enrolled in vocational education. Funds are to be used to support up to 50 percent of the excess costs of services to handicapped students enrolled in vocational education, and none of the funds may be reserved for statewide initiatives.

Additional State Rules

Although the percentage of states that divides funds between secondary and postsecondary sectors before implementing the intrastate formula is unknown, we know that those states that divide the disadvantaged set-aside into *a priori* pools spend less of their

handicapped set-aside at the secondary level (68 percent spent at the secondary level as opposed to 86 percent in those states that do not establish such pools). Furthermore, among the states in the case studies, all those that established preset pools for the disadvantaged set-aside did so for the handicapped set-aside as well. The local survey showed that 85 percent of the regular school districts spending funds under the disadvantaged set-aside also spent funds under the handicapped set-aside.

Findings

The local survey showed that about 80 percent of the set-aside for handicapped students was spent by secondary institutions in 1986-87; with about 52 percent spent by school districts and 28 percent by separate area vocational school districts. Again, this 80 percent is a slightly higher amount than the 75 percent indicated in the NAVE survey of state allocation behavior (*Second Interim Report*), and may differ for much the same reasons cited previously. Equally notable, the amount of funds spent at area school districts (35 percent of the secondary-level funds) is considerably higher than the 16 percent of vocational educational credits earned by handicapped students at all area vocational schools.

According to survey responses, 48.5 percent of school districts spent funds, although most districts (84 percent) indicated that they had handicapped students enrolled in vocational education. Districts with funds spent a median amount of $3,000 under the handicapped set-aside (see table 1.5). Three-fourths of all school districts spent under $8,000. The typical district receiving an award was well over three times the size of the average district without an award (1,477 students in grades 9 through 12 as opposed to 432). Once again, districts without awards did not apply primarily because their potential awards were believed to be very small (see table 1.12). Urban school districts were far more likely to spend funds (94 percent) than suburban (54 percent) or rural districts (47 percent).[20] Despite the intrastate formula, however, there was no relationship between spending funds under this set-aside and the

percentage of students below the poverty line (see table 1.7). Districts spending funds were, however, more likely to enroll nonwhite students.

The subset of area vocational school districts in the survey was considerably more likely to spend federal resources under the handicapped set-aside, with 82 percent reporting that they spent set-aside funds. Grants were a great deal larger than those to school districts, with a median expenditure of $16,929. Three quarters of the area vocational districts had expenditures of $31,734 or less. The typical area vocational district receiving funds had an enrollment of 1,886 as opposed to 1,294 in those without awards (see table 1.5). Of the few area vocational school districts without awards, ineligibility was the main reason cited for not applying (39 percent) (see table 1.12), which may mean that, in some states, all funds are awarded to regular school districts. Once again, the typical area vocational school district obtained a considerably larger per-student grant than the typical regular school district.

According to survey responses, 58.6 percent of postsecondary institutions spent funds under the set-aside. Institutions that received handicapped set-aside funds spent a median of $11,137 (see table 1.5). Three quarters of expenditures were $26,400 or less. There were no significant differences in the sizes of institutions with and without grants; in fact, the typical institution spending funds was somewhat smaller than the typical district without an award. Once again, institutions without awards did not apply, primarily because they did not know about the program (50.2 percent) (see table 1.12).

Set-Aside for Adults

The NAVE *Second Interim Report* noted that most states spent all or most of their funds under this set-aside at the postsecondary level--that is, for education beyond grade 12. Sixteen states spent all funds for postsecondary education, and one spent none. On average, states allocated 72 percent of their funds at the postsecondary level. Because a few large states indicated that they allocated a substantial share of adult set-aside funds for education at or below grade 12, however, the share of total adult set-aside funds allocated to the postsecondary

level was only 63 percent. It is quite possible, though, that these state officials were reporting that they allocated funds to nominally secondary institutions such as school districts and area vocational facilities, not to education for adults equivalent to grade 12 or below.

Local survey responses suffer from the same problem. Respondents appear to have provided information for institutions rather than for the level of education or student body. Data from the survey are reported in table 1.5, but the information provided is not considered reliable. We turn, instead, to case study information to describe expenditures under this set-aside.

In the 36 communities for which we have detailed case study information, the projects supported under the adult set-aside were divided among institutions as follows: nine were operated by school districts, 15 by technical institutes or area vocational facilities serving adults, 11 by community colleges, and one by a four-year institution. In view of the fact that the vast majority of adults in nonbaccalaureate vocational education are enrolled in community colleges, these findings are surprising. Although our cases are not intended to be representative, they suggest, once again, that the state office administering the Perkins Act plays an important role in the ultimate location of grants. Because the office likely to administer the Act may have direct responsibility for some of the institutions providing education to adults but not for others, institutions under its authority may receive substantial resources.

Set-Aside for Sex Equity

What the Act Prescribes

The Perkins Act sets aside 3.5 percent of the Basic Grant for efforts to promote sex equity in vocational education by encouraging students to enroll in training programs that are nontraditional for their sex. Unlike the handicapped and disadvantaged set-asides, federal funds may support the full costs of programs or services, and some funds may be retained and

spent at the state level. A state may also elect to spend all its resources on a very limited number of local projects.

Additional State Rules

From the state survey, NAVE reported that almost all states made awards at both secondary and postsecondary levels, and that most states allocated the bulk of their sex equity funds by competition or other discretionary means. All but four states allocated funds most commonly by discretion at the secondary level and all but nine at the postsecondary level.[21] The awards were relatively equally divided between secondary and postsecondary education, with secondary education receiving 57 percent of all federal funds. Less than 20 percent of states placed a cap on the amount of a single award at the secondary level, and the median cap was $11,000 in 1986-87. At the postsecondary level, only six states placed a cap on awards (median $20,500).

Various state-level activities designed to concentrate resources were identified in the case studies, some of which entailed the use of sizable portions of the set-aside. Seven of the states included in the case studies used competitions and other discretionary means to distribute sex equity funds at the secondary level, but two of the three most populous states in the case studies used formulas. One state limited funds to secondary education, and one placed a floor of $1,500 on awards to the secondary level.

Findings

Although there were state-level efforts to concentrate resources under this set-aside, the effects have been limited as can be seen in the local survey. According to the survey, only 7.2 percent of school districts received awards under this set-aside (see table 1.5). Nonetheless, the median grant size was $3,600, and three-quarters of the awards were $9,369 or less. The typical district with a grant was urban and had an enrollment in grades 9 through 12 of more than 4,200 students. We estimate that the typical district spent about $1.30 per student.[22]

Districts without grants averaged 708 students in grades 9 through 12 and indicated most often that they did not apply primarily because they expected they would receive very small awards (62 percent) (table 1.12). In contrast, only 20 percent of those that did not receive grants said that they did not apply because they lacked the staff or other resources to prepare a proposal. Given the small number of districts with awards, one troubling finding was that districts spending funds had significantly fewer students in poverty than those without awards. Although competitions were the major means for funds distribution, the competition for funds does not appear intense. Only 1.5 percent of the school districts without funds indicated that their applications were rejected (1.4 percent of all districts), suggesting that about 16 percent of proposals were rejected.

It is notable that small school districts believed they would receive small awards. Our data on actual awards support this belief. Although most states allocate funds through competitions, the grants *are* small. In addition, in at least one of the states in our case studies, state officials reported difficulty in generating enough local proposals to spend the resources. As indicated by the low rejection rates, few bona fide offers appear to be turned down.

Area vocational schools were more likely to spend funds and to spend larger awards as well; 29.4 percent received grants, with a median expenditure of $8,120 and three-quarters of expenditures at $21,721 or less (see table 1.5). The typical area vocational school district spending funds had an enrollment of 2,784, and we estimate that awards averaged approximately $5.71 per student, larger than the awards for school districts but still not a monumental sum. Area vocational school districts that did not receive grants averaged half the size of those with awards (1,359 students) and were unlikely to apply, either because they believed the potential award was small (49 percent) or they lacked resources to prepare a proposal (24 percent). A subgroup of 6.8 percent (4.8 percent of all districts) indicated that they had submitted proposals that were rejected, a rejection rate of [illegible] percent.

In our survey, postsecondary institutions spent funds at roughly the same rate as area vocational school districts, but at a higher rate than secondary districts overall. Combining

regular and area vocational school districts, 12.7 percent of secondary districts spent funds, but 30.4 percent of postsecondary institutions reported having spent resources under the set-aside. Award sizes remained fairly small, with the median expenditure at $9,000 and three-quarters of expenditures at or below $21,721. The typical institution with an award had an enrollment exceeding 4,004 students, while those without grants averaged 3,378. Although of similar size as recipient institutions, those that did not spend funds indicated most often that they did not apply either because they did not have the resources to write a proposal (35.3 percent) or because they expected they would receive very small awards (30.1 percent). Only 21.5 percent indicated that they did not know about the program. As was the case at the secondary level, there was little real competition for funds. Only 7.2 percent of institutions without funds (5 percent of all institutions) indicated that their proposals were rejected, a rejection rate of 16 percent.

Set-Aside for Single Parents and Homemakers

What the Act Prescribes

New with the Perkins Act was a specific set-aside of 8.5 percent of the Basic Grant for single parents and homemakers, especially displaced homemakers. Federal funds may support the full costs of the services or programs, and a portion of the funds may be retained for statewide projects. States have great latitude in how they choose to allocate funds.

Additional State Rules

According to the NAVE state survey, the typical state spent about 30 percent of its single-parent funds for education at or below grade 12, but because a few large states spent considerably mo... total of 38 percent of set-aside funds were spent in secondary education. Ten states spent none, and one state spent all its set-aside funds at the secondary level. Of the states that spent funds at the secondary level, all but two awarded the majority of funds through competitions or other discretionary means. Less than 20 percent of states placed a cap on the size of awards at the secondary level; the median cap was about $25,000 in 1986-87.

Of the nine states in the case studies, three restricted single parent funds to postsecondary institutions. Of the remaining six, secondary districts could compete equally with postsecondary institutions in three states. The other three states limited secondary districts to 30 percent, 50 percent, and 70 percent of funds. Two of the six states in which secondary districts were eligible for funding awarded projects through formula, the rest through competitions or other discretionary means. Priorities placed on competitions at the secondary level included teenage parents, occupational training (as opposed to support services), and minority students.

Findings

A small number of school districts received awards under this set-aside; 5.4 percent of districts spent funds, with a median expenditure of $8,000. Three quarters of all expenditures were $20,000 or less. Average enrollment in districts with awards was much larger than in those without awards, 4,527 as opposed to 756 (see table 1.5).

Once again, districts that did not receive awards said they did not apply primarily because they expected the awards to be too small to warrant the effort (57 percent), because they were not eligible (22 percent) or because they lacked resources to apply (20 percent). In view of the fact that the most obvious population for services at the secondary level would be teenage parents (who are generally poor), it is troubling to find that the average district with an award had a 12.9 percent poverty rate, whereas the average district without an award had a poverty rate of 16 percent (see table 1.7). Districts with awards had somewhat higher levels of enrollment by nonwhite students than other districts. Almost no proposals were rejected (0.6 percent of districts without grants reported that their proposals had been rejected).

The subset of area vocational school districts had more grants, larger grants, and surprisingly little variation in the size of grants across districts in the survey. Approximately 31 percent of area vocational districts spent funds, although some of these grants may have been for older students or those beyond grade 12.[23] The median expenditure by an area

vocational school district was $32,696, and a quarter of expenditures were at or above $43,993. Area vocational school districts with grants had enrollments larger than those without grants (2,413 in those with grants, 1,443 in those without grants) (see table 1.5). Vocational school districts that did not receive awards cited the small size of their potential award and lack of eligibility at roughly equivalent rates (33 percent and 29 percent). A smaller group (21 percent) said they lacked the resources to apply (see table 1.12). Nine percent submitted proposals that were rejected (6.2 percent of all districts), a rejection rate of 16.7 percent.

Far more postsecondary than secondary institutions received funding under this set-aside--46.9 percent, as opposed to 11.8 percent at the secondary level (regular and area districts combined). The median expenditure was $32,696, and three-quarters of the expenditures were $45,879 or less. These postsecondary award amounts were almost the same as those for secondary area vocational school districts. The average postsecondary institution with an award was slightly larger than the average institution without an award (4,216 as opposed to 3,000 students) but the difference was not significant. Institutions that did not receive awards were equally likely to indicate that they did not know about the program (28.1 percent) or did not apply because they expected small awards (27.2 percent). Despite the lack of difference in size between those with and without awards, a subset of those without awards (23.7 percent) indicated that they did not have the resources to write a proposal. A subgroup of 12 percent of those without funds (6.3 percent of all institutions) had their proposals rejected, a rejection rate of 11.8 percent.

Title II(B): Program Improvement

What the Act Prescribes

Forty-three percent of the Basic Grant is reserved for program improvement, innovation, and expansion. These funds may be distributed in any manner the state chooses, and a portion may be retained for statewide projects. The funds must be matched on a 50-50 basis statewide. The regulations impose a three-year limit on some uses of Title II(B) funds.

Additional State Rules

According to the NAVE survey of states, about 66 percent of Title II(B) funds were allocated at the secondary level in 1986-87, with all but one state allocating some portion of program improvement funds to secondary education. Unlike the set-asides for which states had discretion in allocation, about half the states used more than one method (formula, competition, or other discretion) to allocate program improvement funds. At the secondary level, only 30 percent of the states used formulas as the most common distribution mechanism, but those states accounted for more than 55 percent of all improvement funds allocated to the secondary level. Of all the categories in the Basic Grant, state officials were most likely to allocate the largest share of their program improvement funds in discretionary manners *other than* competition, which was the case in 23 percent of the states.

In eight of the nine case study states, a single competition or formula exercise was the means for distributing the greatest share of the program improvement funds for secondary education.[24] One state appeared to allocate all program improvement funds without holding explicit competitions or possessing a formula.

Findings

Unlike the case with the set-asides, substantial program improvement funds were retained for statewide projects. In the nine states visited, the amount retained varied from less than 10 percent to 40 percent of all program improvement funds.[25] Almost all the statewide projects we observed were directed at secondary-level vocational education. Because we did not set out to study this phenomenon initially, we did not collect systematic information on the amounts retained.

Nonetheless, the local survey expenditure data indicate that substantial program improvement funds are retained for statewide projects. Program improvement funds account for 31.7 percent of funds spent locally in 1986-87, although the set-aside is 43 percent of the Basic Grant (see table 1.14). This suggests that perhaps a third of the funds cannot be

accounted for in local expenditures. The survey findings are, however, only an indirect measure of the amount of funds retained.[26]

According to survey findings on local expenditures, about 26 percent of school districts spent funds under Title II(B). The median program improvement expenditure was $9,887, and 75 percent of expenditures were $21,549 or less. Size was significantly related to receiving an award. Districts with awards had an average enrollment of 1,948 in grades 9 through 12 (average grant was $14.09 per student), whereas districts without awards averaged 591 students (see table 1.5).[27] Although urban districts were more likely to receive awards, suburban and rural areas appear to have spent a greater *relative* share of program improvement funds than set-aside funds. Districts with greater percentages of students in poverty were less likely to spend program improvement funds, but districts with funds had more nonwhite students than districts without funds. Districts that did not receive awards were most likely to cite the small amount of the expected award as the reason for not applying (59 percent), although not knowing about the program was the second most common reason (21 percent, a higher rate than for the set-asides) (see table 1.12).

Area vocational schools obtained larger grants at considerably higher rates than school districts as a whole. More than half (51 percent) spent program improvement funds; the median expenditure was $25,000, and the 75th-percentile expenditure was $58,297 (see table 1.5). Area vocational school districts with awards averaged 2,129 enrollees, and those without awards averaged 1,370--which is the smallest size difference between area vocational districts with and without grants for any category in the Basic Grant. The average area vocational school district received $27.32 per student, or almost twice the amount received by the average school district.

The reasons cited by area vocational school districts that did not receive grants suggest more state policy "control" in the destination of these funds than other portions of the Basic Grant. Districts without grants were equally likely to cite the expectation of a small award and not knowing about the availability of funds as reasons for not applying (31 percent in

each case) (see table 1.12). This second item is notable because it occurs for both school districts and area school districts as an important reason for not receiving funds in the program improvement category but not for the set-asides. It suggests that in retaining proportions of these funds for statewide projects and allocating the rest in a discretionary manner, states are using the funds in a more discriminating manner. This argument is further supported by the finding that 23 percent of area vocational school districts without grants indicated they were ineligible for awards in the category.

Postsecondary institutions were much more likely than school districts to spend funds under the program improvement category. According to local survey findings, 58.7 percent of postsecondary institutions spent funds, as opposed to 26.1 percent of school districts and 51 percent of area districts (32 percent of all secondary districts combined). According to survey data, expenditures by postsecondary institutions accounted for 52 percent of all local program improvement expenditures in 1986-87. This figure is higher than the 34 percent of all program improvement funds that states reported allocating to postsecondary education.[28]

The differences in amounts of program improvement funds for postsecondary education may stem from the fact that, in the state survey, officials attributed large amounts, if not all, of the funds retained for statewide projects to secondary education. The descriptive case study information on uses of funds for statewide projects (discussed in the next chapter) suggests a strong secondary-level emphasis in activities supported with state-retained funds, due in part to the role of state education agencies in administering the funds. Not only did we find this to be the case, but state-level case studies indicated that, in the few cases when secondary-level funds are "handed off" to a separate postsecondary authority, the postsecondary authority carries out few statewide projects with Perkins Act funds. Of course, some of the differences between state and local reports are due, as well, to differences between allocations and expenditures.

Postsecondary awards were considerably larger than awards to school or secondary area vocational districts. The median expenditure was $50,000 and the 75th-percentile expenditure

was $85,000. Institutions spending funds were, on average, almost three times the size of those without awards. Institutions with awards had an average "head count" enrollment of 4,794, while those without awards averaged 1,706 students (see table 1.5). Although the $21.77 per-student in institutions spending funds was slightly smaller than the per student expenditures of area vocational school districts, it should be borne in mind that area vocational schools deliver vocational education almost exclusively, while postsecondary institutions do not.[29] Institutions that did not receive awards indicated that they did not know about the program as the primary reason for not spending funds (51.4 percent), although being unsure about a match was also cited (19.6 percent).

THE PROBLEM OF UNSPENT FUNDS

We also sought to determine whether the "strings" attached to federal funds, particularly matching and excess cost requirements, were a burden to eligible recipients. In particular, we asked whether all the funds received under the intrastate formula were spent or whether some were returned to the state (or carried over to the next fiscal year, if a state allowed such a practice). State officials had reported that about a third of all districts with grants had returned funds to the state, but that the portion of the state allocation unspent was relatively small--13 percent of the handicapped set-aside funds and 17 percent of the disadvantaged set-aside funds in 1986-87.[30]

Local survey responses indicated that the problem of unspent funds was confined to a subset of grantees and, typically, a small amount of money. Of recipients with awards under the handicapped set-aside, 13.3 percent of school districts, 20 percent of area vocational districts, and 18.9 percent of postsecondary institutions returned funds to the state (see table 1.13). These percentages of recipients returning funds are somewhat smaller than the percentages reported by state officials in the NAVE *Second Interim Report*. Of those local respondents that reported returning funds, the school districts tended to return the greatest

percentage of their awards: a median return of 25.7 percent of the award. The mean dollar figure for returned funds was quite low, however, $532.

A further analysis of returned funds under the handicapped set-aside found that returns were not concentrated in either rural or urban locales or in a particular educational sector. Postsecondary institutions that returned funds returned a median amount of 23.1 percent of their awards, but the postsecondary dollar figures were higher than those of school districts (mean: $971) because postsecondary awards were larger. Area vocational school districts returned the smallest percentage of their awards (8.6 percent) but the highest mean amount ($1,006). The findings for the disadvantaged set-aside are similar to those for the handicapped set-aside. Carryovers were small among all types of recipients (probably because many states do not allow this practice). All told, the dollar amounts involved appear small.

The limited extent of the problem is confirmed by an examination of the reasons for unspent funds. For all recipients, the major problem appeared to be one of not incurring sufficient costs to justify all federal funds. School districts reported two somewhat similar reasons--that accounting procedures were too complex to demonstrate excess costs and that actual costs were lower than original budgets. Area vocational districts and postsecondary institutions reported one major reason--actual costs were lower than original budgets (in part, because programs may not have started on time). Returning funds because of failure to identify a local match for federal funds, which might have suggested a serious "strings" problem, was of little concern to area vocational school districts or postsecondary institutions. Only for a subset of school district returnees did match appear to be an issue.

The problem of substantial returned funds in one or two large cities has been widely reported, with the implication that problems in these cities reflect a national phenomenon.[31] These school districts returned substantial percentages of federal funds because they were unable to match the excess costs of the handicapped and disadvantaged set-asides. When we searched for a comparable end of returns in large cities in the survey data, however, we did not find it. It is possible that these districts experienced unique problems because they chose

Table 1.13

National Estimates of Handicapped and Disadvantaged Set-Aside Funds Carried Over or Returned to the State in 1986-87

Category of Perkins Act Funds	Type of District/ Institution	(Weighted n)	Amount of Funds: Mean	Amount of Funds: Standard Deviation	Percent Returning or Carrying Over Funds	Median % of Spending
Handicapped set-aside						
Carried over into 1987-88	School district	(6,117)	$ 586	$ 7,226	8.6%	50.3%
	Area school district	(708)	888	4,846	7.0	75.0
	Postsecondary institution	(1,086)	222	1,786	6.3	15.8
Returned to the state in 1986-87	School district	(6,255)	532	5,013	13.3	25.7
	Area school district	(722)	1,006	3,002	20.0	8.6
	Postsecondary institution	(1,098)	971	4,219	18.9	23.1
Disadvantaged set-aside						
Carried over into 1987-88	School district	(6,220)	1,112	15,802	8.5	79.5
	Area school district	(709)	2,211	14,710	7.5	6.1
	Postsecondary institution	(1,153)	655	3,460	7.5	28.6
Returned to the state in 1986-87	School district	(6,362)	985	10,513	13.2	25.7
	Area school district	(725)	1,144	3,692	18.4	14.8
	Postsecondary institution	(1,154)	1,095	4,977	18.4	12.2

SOURCE: See table 1.5.

to concentrate Perkins Act funds in a very few institutions (and thus required district officials to commit a great deal of additional support to those few institutions) or because their state governments were unwilling to match disadvantaged and handicapped set-aside funds.

LOCAL DECISIONS ON PERKINS ACT EXPENDITURES

Another way to think about targeting opportunity is to consider the extent to which eligible recipients determine the expenditure of funds. What is the mix of set-aside and program improvement funds for which eligible recipients can determine, locally, the flow to particular students and institutions? To answer this question, we weighted the grants of respondents in our survey to reflect the nation as a whole. For program year 1986-87, we were able to identify approximately $637 million in local expenditures through this procedure.

In 1986-87, expenditures under the set-asides for disadvantaged and handicapped students accounted for 47.7 percent of all local Perkins Act expenditures (see table 1.14). In

Table 1.14

Mix of Perkins Act Basic Grant Funds Spent Locally by School Districts, Separate Area Vocational School Districts and Postsecondary Institutions, 1986-87

Category of Perkins Act Funds	Percentage of Spending			
	School District	Separate Area Vocational School District	Postsecondary Institutions	Total
Handicapped set-aside	19.4%	26.6%	9.1%	16.8%
Disadvantaged (inc. LEP) set-aside	39.1	33.3	20.4	30.9
Adult set-aside	8.3	9.9	11.1	9.6
Single-Parent/homemaker set-aside	4.0	6.8	12.6	7.8
Sex Equity set-aside	2.9	3.1	3.5	3.2
Program improvement	26.3	20.3	43.4	31.7

SOURCE: See table 1.5.

other words, although these two items account for only about 32 percent of Basic Grant funds, they constituted a considerably greater proportion of the funds over which eligible recipients exercised some spending discretion. These funds were distributed primarily to school districts and area vocational districts, where they accounted for almost 60 percent of expenditures. Because these funds were distributed to eligible recipients by a formula with a substantial weight for economic disadvantage, the earlier finding that total per-student local expenditures appeared to be greater in school districts with higher poverty rates may be partially understood by the relative size of the formula-driven expenditures, in relation to all expenditures, in school districts.

In contrast, eligible recipients determine the uses of a considerably smaller percentage of program improvement funds. Program improvement funds account for only around 31 percent of the funds spent locally, although nationally program improvement funds are 43 percent of the Basic Grant. For secondary-level eligible recipients, in particular, the relative importance of program improvement funds was small--26.3 percent of funds in school districts, and 20.3 percent of the federal funds in area vocational school districts. This disparity may have occurred, in part, because a substantial percentage of these funds were retained for statewide projects and not distributed as grants to districts. Of the program improvement funds that did flow to the local level, 52 percent were spent by postsecondary institutions, where they accounted for 43.4 percent of all Basic Grant funds spent.

CONCLUSIONS

Allocation of Funds Among States

Some of the states with the smallest populations had the largest per-pupil allocation of funds under the Perkins Act, primarily because of the minimum allotment adjustment. There was no relationship between per-pupil Perkins Act allocation and rates of youth poverty or overall spending for elementary and secondary education. Youth with limited English

proficiency are concentrated in states that have lower per-pupil allocations under the Perkins Act, in part because most of these states also have relatively high per capita income.

Allocation of Funds Within States

States distributed funds in ways that resulted in widely varying allotments among different educational levels and classes of institutions. Across the states, the proportion of the Basic Grant allocated to the postsecondary sector ranged from 8 percent to 100 percent. In relation to enrollment, separate area vocational school districts received a disproportionately large share of the federal funds that flowed to secondary education.

Although we know little about the overall targeting of funds within states, states appear to have allocated more funds to school districts with the highest poverty rates. Furthermore, among school districts, it does not appear that grants under program improvement offset the effects of the intrastate formula, although places with larger per-pupil awards under the set-asides did get somewhat smaller per-pupil awards under program improvement. We know little about the targeting of the 56 percent of Basic Grant funds that flowed to other eligible recipients (secondary area vocational school districts or postsecondary institutions) or were retained for statewide projects. If Pell Grants are used as an indicator of disadvantage, grants to postsecondary institutions do not appear to have been targeted on the basis of students' economic need.

Despite state efforts to target funds, most school districts received awards too small to mount new initiatives of any size. Furthermore, grants were usually divided among at least two set-aside categories (most commonly the handicapped and disadvantaged set-asides). Fewer districts spent program improvement funds, and when they did, the grants were quite small. If we assume that a grant of $25,000 is the minimum needed to purchase the equivalent of one full-time staff position, only a quarter of all school district grants were of that size or greater in 1986-87.

In contrast, separate area vocational districts, which are usually one-school districts, received large enough grants to mount substantial activities. Postsecondary institutions also received sufficient funds to conduct some new or expanded activities. Using the $25,000 rule of thumb again, almost three quarters of all area vocational school districts and postsecondary institutions would qualify.

School districts that received no funds were small, and most did not apply primarily because they believed their awards would probably be too small to warrant the effort. Given what we have learned about the size of median expenditures, they are probably right about the likely size of awards. Depending on the set-aside, between 60 percent and 63 percent of the school districts without funding for set-aside funds at the secondary level indicated that they did not apply because they thought the award would be too small. Funds that are returned to the state are limited to a small subset of districts (around 13 percent under both handicapped and disadvantaged set-asides), and the dollar amounts returned are small.

Most separate area vocational school districts spent funds in at least the handicapped and disadvantaged set-aside categories and more than half spent funds for program improvement. The few area vocational school districts that did not spend funds for these set-asides cited ineligibility (possibly under state rules), small likely awards, lack of excess costs, and lack of match at roughly similar rates. In program improvement, area vocational schools cited lack of knowledge about the program, ineligibility, and likely small awards as major reasons for not applying. A small subset of area vocational districts returned funds to the state, chiefly because their actual costs were lower than anticipated.

Most postsecondary institutions also spent Basic Grant funds. Their median awards were the largest, and, unlike the situation in secondary education, they were equally likely to spend funds under the handicapped set-aside and for program improvement. Using the $25,000 rule of thumb, most postsecondary institutions would be able to hire a full-time staff person with their awards. They would also be able to hire full-time persons in some of the set-aside categories and in program improvement.[32] The small percentage of institutions that

received no awards did not apply primarily because they did not know about the program. The only categories for which lack of knowledge was not the primary reason for not spending funds at the postsecondary level were the nonformula set-asides, in which smaller percentages of institutions received grants. Postsecondary institutions without awards for these set-asides (the majority) also cited likely small awards as well as the lack of resources for proposal preparation. About 18 percent of postsecondary recipients with grants returned some funds to the state under the formula set-asides; the mean amount returned was around $1,000.

In part, because states retained a sizable share of program improvement funds for statewide projects, almost half the funds spent by eligible recipients were spent under the handicapped and disadvantaged set-asides. Only at the postsecondary level was program improvement spending close to the percentage of federal funds authorized for this purpose.

NOTES

1. Much of the discussion in the section on issues is derived from Stephen M. Barro, *Federal Goals and Policy Instruments in Vocational Education: An Assessment of the Resource Allocation and Targeting Provisions of the Carl D. Perkins Vocational Act of 1984*, Discussion Paper of the National Assessment of Vocational Education, (Washington, DC: SMB Economic Research, Inc., 1989).

2. See *Vocational Education Study* (Washington, DC: National Institute of Education, 1981) and PONVER report on which concerns are based.

3. For a complete discussion of these issues, see Barro, *Federal Goals and Policy Instruments in Vocational Education: An Assessment of the Resource Allocation and Targeting Provisions of the Carl D. Perkins Vocational Education Act of 1984*, chapter 7.

4. Two states, Wyoming and Alaska, received less than the minimum allotment because of the limit of 150 percent on prior-year share. The one state with more than the minimum allotment was Louisiana.

5. Spending should not be considered a measure of fiscal effort, however, because some of these states tax their residents at low rates.

6. National Assessment of Vocational Education (NAVE), *Second Interim Report* (Washington, DC: U.S. Department of Education, September 1988) pp. 2.6-2.8.

7. Ibid., pp. 2.14-2.18.

8. Statement of William J. Gainer, Director of Education and Employment Issues, General Accounting Office, before the Committee on Education and Labor, U.S. House of Representatives, March 7, 1989.

9. NAVE, *Second Interim Report*, pp. 2.10-2.13. We believe that the issue of "pooling" is not restricted to the disadvantaged set-aside, but occurs for the Act as a whole. As noted in the discussion of state policy, there is reason to believe that most states decide *a priori* on the overall division of Perkins Act funds between educational levels as well as among different types of institutions before allocating resources. Almost no states simply put *all* the money out in a single formula or competition across all eligible recipients.

10. The portion of the variance accounted for by differences in enrollments alone was 12.9 percent. The portion of the variance accounted for by the percentage of funds allocated to postsecondary education was 71.3 percent. The portion of the variance accounted for by the interaction of these two terms was 15.8 percent. In computing the sources of variation of per-student Perkins Act expenditures in postsecondary education, we used the natural logs of all variables rather than their actual values. Given this transformation of the data, the variables are related in a simple additive fashion. As a result, we were able to decompose the variance of the per-student Perkins Act expenditures in postsecondary education in a straightforward and readily interpretable manner.

11. This discussion and subsequent sections of this chapter are drawn heavily from Janet P. Swartz, *State and Local Response to the Carl D. Perkins Act. Survey Analysis. Final Report* (Cambridge, MA: Abt Associates, Inc. 1989). Some area school data are reported as both secondary and postsecondary in the local survey because institutions serve both clienteles.

12. Case study information presented here and in subsequent portions of the chapter is drawn from Mary Ann Millsap, Christine Wood, Joann Jastrzab, and Camille Marder, *State and Local Response to the Carl D. Perkins Act. Case Study Analysis. Final Report* (Cambridge, MA: Abt Associates, Inc., January 31, 1989).

13. We present medians rather than means because district size (and, hence, size of award) varies greatly. For example, funds spent by school districts ranged from $100 to $13,301,747. Detailed information on means and ranges is available from Swartz, op.cit.

14. See the next chapter for a discussion of allocations within districts, where it is also likely that area vocational schools obtain a disproportionate share. For purposes of this analysis we estimate that our weighted number of separate area districts is 743. According to the study, *National Study of Vocational Education Systems and Facilities* (Rockville, MD: Westat, 1978), there were approximately 1,248 area vocational centers serving secondary students and an additional 225 full-day vocational schools at that time. We assume here that our 743 districts are a subset of the 1,248 or 60 percent.

15. Although there is a six-year difference in the two data sets, we operated on the assumption that areas with greatest poverty had not shifted dramatically in the interim.

16. Statement of William J. Gainer before the House of Representatives Committee on Education and Labor, March 7, 1989.

17. The GEPA data are based on a subset of approximately 38 states for which data were available. We were forced to drop 12 states from the analysis because the quality of the data were poor. Decision Resources Corp., *Analysis of Vocational Education Data Under the General Education Provisions Act* (Washington, DC: Decision Resources Corp., forthcoming).

18. See Swartz, *State and Local Response to the Carl D. Perkins Act*, Exhibit 3.1.

19. We did not request the numbers of disadvantaged students in the districts or the numbers served, because definitions vary a great deal across districts and we had no way of standardizing the responses. For a discussion of elasticity in the definition of disadvantaged student, see Barro, *Federal Goals and Policy Instruments in Vocational Education: An Assessment of the Resource Allocation and Targeting Provisions of the Carl D. Perkins Vocational Education Act of 1984.*

20. See Swartz, *State and Local Response to the Carl D. Perkins Act*, Exhibit 3.7.

21. NAVE, *Second Interim Report*, pp. 2.14-2.17.

22. Mean grant sizes, which are available in Swartz, *State and Local Response to the Carl D. Perkins Act*, are used here to calculate the per-student dollars.

23. Some of these schools apparently failed to follow directions properly in answering the survey. This can best be seen by comparing the median area district grant and postsecondary grant--they are reported by the same institution.

24. One state would not supply information on how funds were allocated.

25. States may retain up to 20 percent of the Basic Grant for statewide projects under federal rules.

26. The total funds accounted for in the survey were $637 million. If we assume that the basic grant funds available were about $730,000,000 (after deducting state administration), the $202,123,000 in program improvement funds we identified would represent only 28 percent of expenditures--an even smaller figure.

27. See Swartz, *State and Local Response to the Carl D. Perkins Act*, for mean grant sizes.

28. NAVE *Second Interim Report*, pp. 2-16.

29. It could also be assumed that "head counts" grossly overstate FTE enrollments in both sets of institutions. See Swartz, *State and Local Response to the Carl D. Perkins Act*, for mean grant sizes from which per-pupil dollars are calculated.

30. NAVE, *Second Interim Report*, pp. 2.19-2.21.

31. See, for example, "Congress Wrestles with Revising, Extending the Problematic Vocational-Education Law," *Chronicle of Higher Education*, April 12, 1989.

32. Almost one person under the disadvantaged set-aside ($22,734), a full-time equivalent under the adult and single parent set-asides, and two full-time persons under program improvement.

CHAPTER 2

THE USES OF FEDERAL FUNDS

Even if state-to-local targeting were designed in a manner that ensured that funds flowed to places with the greatest need, the ways in which funds were distributed locally could either enhance or detract from the effectiveness of the Act. This chapter describes local spending patterns under the Basic Grant--that is, what state agencies and eligible recipients (school districts, area vocational schools, and postsecondary institutions) told us about how they spent the funds they identified as federal. The next chapter considers whether these activities are appropriate and whether they would have taken place if federal funds had not been available (i.e., whether the activities are additive).

The findings in this chapter are based on two sources: (1) a survey of school districts, separate area vocational school districts, and postsecondary institutions undertaken in early 1988; and (2) two sets of case studies of secondary and postsecondary vocational education in states and communities.[1] As a part of the survey, respondents were asked to identify whether they spent Basic Grant funds under the Perkins Act during their 1986-87 program year, and if so, how they used those funds. Categories used in the survey were aimed at describing the type of service provided and the setting for the service where applicable.

The case studies supplement data from the survey with detail on activities and expenditures. The first set of case studies (in 18 communities) was undertaken during the 1986-87 school year, and the second set (in nine states and three communities in each of those states--or 27 communities) was undertaken during the 1987-88 school year. Information on Perkins Act expenditures was obtained in both sets of studies and is combined in this analysis and discussion. We make no claim for the national representativeness of the data obtained from case studies, but we believe that they provide important detail and, in many instances, supply information that can be obtained in no other way.

This chapter identifies issues in the distribution and uses of funds within districts and institutions. The discussion is divided into three parts--the formula-driven set-asides for handicapped and disadvantaged students, the other set-asides, and program improvement. In each section the discussion begins with a statement of what the Act prescribes and potential issues in local implementation. Then, for each set-aside category and program improvement, we examine the flow of Basic Grant funds first to secondary education and then to postsecondary institutions.[2]

TARGETING RESOURCES AND SERVICES UNDER THE HANDICAPPED AND DISADVANTAGED SET-ASIDES FOR STUDENTS

As we observed in the last chapter, the constraints on how funds are distributed to the local level are somewhat weak, and grant sizes are often quite small. Even so, an alternative way of channeling resources to particular uses is to specify, in some detail, the populations that qualify for support and the types and amounts of service that may be provided. The Perkins Act names broad categories of persons that qualify for assistance as well as the kinds of assistance they may receive. In addition, the Act contains a provision that federal funds must not supplant state and local resources. The Act also seeks to direct additional state and local resources to federal goals by requiring that funds under the set-asides for disadvantaged and handicapped students be used solely for the excess costs of services and that they be matched by state or local resources. Before describing actual expenditures, we examine the Act's definitions of populations for whom services are intended and appropriate services.

What the Act Prescribes

The definitions of handicapped and disadvantaged students seek to limit services to students with particular characteristics who require special assistance to succeed in vocational education:

> "Handicapped", when applied to individuals means individuals who are mentally retarded, hard of hearing, deaf, speech or language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multihandicapped, or persons with specific learning disabilities, who by reason thereof require

> special education and related services, and who, because of their handicapping condition cannot succeed in the regular vocational education program without special educational assistance.
>
> "Disadvantaged" means individuals (other than handicapped individuals) who have economic or academic disadvantages and who require special services and assistance in order to enable them to succeed in vocational educational programs. The term includes individuals who are members of economically disadvantaged families, migrants, individuals who have limited English proficiency, and individuals who are dropouts from, or who are identified as potential dropouts from, secondary school. For the purposes of this definition, an individual who scores at or below the 25th percentile on a standardized achievement or aptitude test, whose secondary school grades are below 2.0 on a 4.0 scale (where the grade "A" equals 4.0), or [one who] fails to attain minimal academic competencies may be considered "academically disadvantaged." The definition does not include individuals with learning disabilities.

In addition, students with limited English proficiency (LEP) must be served in proportion to their rate of participation in vocational education.

To make the definitions operational, rules might also limit who is considered to be enrolled in vocational education, but the Perkins Act and regulations do not provide much guidance on this point. The Act contains a definition of vocational education, but it is designed to establish the fields of study that qualify for assistance rather than the amounts or types of enrollment.

> "Vocational education" means organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, in such fields as agriculture, business occupations, home economics, health occupations, marketing and distributive occupations, technical and emerging occupations, modern industrial and agricultural arts, and trades and industrial occupations, or for additional preparation for a career in those fields, and in other occupations requiring other than a baccalaureate or advanced degree....

This definition suggests that Congress envisaged support of students in organized programs of study, but that intent is not spelled out in regulations. Because there is no limiting definition, states and eligible recipients are under no obligation to distinguish between students enrolled in a single course and students with vocational majors or those enrolled in a multicourse sequence. States may, of course, add restrictions. Eligible recipients are under no federal

obligation to spread federal dollars in order to serve everyone who qualifies, so they may favor certain types or groups of students.

The Perkins Act assumes that students who meet the general definitions may require additional help if they are to gain admission to, or succeed in, high-quality vocational education. The kind of help would, presumably, depend on the kind of problem. In the case of academically disadvantaged students, the help might take several forms, including remediation or additional tutoring aimed at improving the students' performance in vocational education. This assistance would enable these students to succeed in vocational programs where, without such assistance, they might fail or be discouraged from participating altogether.

For economically disadvantaged students, assistance might go to individuals (within a school) or to institutions (across schools). Individual help might be in the form of remuneration for work or direct financial assistance to remain enrolled, such as day care for the children of teenage parents. It is unlikely, however, that many high school students would need economic assistance to enroll or succeed in vocational education. At the postsecondary level, there are far more extensive federal and state aid programs for economically disadvantaged students.

More broadly, however, the "economically disadvantaged" criterion appears to be based on the notion that institutionally, that is, across schools, poor students have less access than other students to high-quality vocational education. Poorer access may mean that students are enrolled in vocational programs that provide a narrower or otherwise more limited range of offerings, or that the programs in which they are enrolled prepare students for poorer jobs than the programs to which other students have access. In part, lack of access may come about if the schools in which poor students are concentrated lack the resources to provide a wide range of vocational offerings.

Federal funds might be used to establish new and more challenging offerings by paying the excess costs of smaller classes, equipment purchases, program development, or the like. Economically disadvantaged students might also be placed in higher-quality existing offerings,

with federal funds paying the excess costs of tutoring or other services aimed at increasing students' chances of completing the programs successfully.

In establishing the set-aside for handicapped students policymakers appear to operate under two assumptions. The first is that handicapped students have had less access to high-quality vocational education than other students, perhaps because they have been actively discouraged from enrolling. The second is that additional resources are needed to enable handicapped students to succeed in high-quality vocational programs. Presumably, the framers intended that the set-aside would make enrollment of handicapped students more likely and provide the additional assistance they needed to complete successfully once enrolled.

The Act provides one major indication of desired services for both disadvantaged and handicapped students. It requires local education agencies receiving federal funds to provide to all students who meet the definitions of handicapped and disadvantaged (1) notification of opportunities in vocational education one year before the time to enroll in such programs, and (2) a wide range of individual assistance, including the following:

- Assessment of interests, abilities, and special needs;
- Special services including adaptation of curriculum, instruction, equipment, and facilities;
- Guidance, counseling, and career development activities conducted by professionally trained counselors who are associated with the provision of such special services;
- Counseling services designed to facilitate the transition from school to post-school employment and career opportunities.[3]

Furthermore, Congress apparently intended these provisions to apply even if federal funds were not sufficient to provide the services. This requirement then, is a limited entitlement to certain services--especially assessments and any special services that the assessments, or other information, indicate are needed. There is no comparable requirement for postsecondary education. Some of the main concerns with the definitions and entitlement are summarized in the next section.

Concerns About Targeting Resources Through the Definitions and Allowable Services

Breadth of the Definitions

Although the definitions of eligibility for services under the set-asides for handicapped and disadvantaged students may appear detailed, in fact they are somewhat elastic and may not provide guidance about who is *most* in need of assistance. Given the small amount of dollars per student provided by the Perkins Act, the lack of greater specificity is an important concern. Elasticity is most apparent in the definition of "disadvantaged, because it includes such categories as "potential dropouts" and students who "fail to attain minimal academic competencies." Further, students with grade point averages below 2.0 might include as much as a third of the high school population. There are no rules to determine who, among such a broad population, should be served first, nor does the Act specify any minimum amount of service to be provided to any individual or institution (e.g., concentration rules). For handicapped students, possession of an IEP is an obvious way to determine eligibility, but, presumably, not everyone with an IEP would need additional services to succeed in vocational education (see "Need is Relative" below).

At the postsecondary level there are problems in the applicability of the disadvantaged and handicapped definitions altogether. For example, characteristics such as "potential dropout," secondary school grades, or scores on standardized tests are not applicable. Nor are there IEPs to define who is handicapped. Given the lack of specificity, the numbers and kinds of students served and the amounts expended per student could differ greatly across states and communities.

Individual vs. Group Needs and Assistance

A second set of potential problems arises out of the definitions themselves. In particular. the rationale for including students in the target group on the basis of *individual* economic disadvantage is problematic, especially at the secondary level, because poverty and the ability to complete a vocational program are not clearly connected. A small subset of poor

students might need economic assistance to enroll or remain in vocational education--for example, teenage parents who require day care to continue in school and, hence, in vocational studies. In general, however, educators and policymakers for other federal programs (such as Chapter 1) have been reluctant to single out students for additional individual assistance based sole y on economic disadvantage, fearing stigmatizing effects.

By and large, the connection between poverty and vocational education appears to be an issue of the availability of high-quality programs to poor students as a *group*. As noted previously, poor students are widely believed to have less access than other students to high-quality programs. The NAVE report on access to high-quality programs concludes that students in schools with the highest concentrations of poor students do, in fact, have less access to a wide range of vocational offerings and to area vocational facilities. To give poor students the opportunity to enroll in good programs would, presumably, require additional resources to create or upgrade institutions or programs. Yet the Perkins Act does not stress or encourage this approach to services.

Need is Relative

The definitions assume that a student's need for additional services is absolute, based on an IEP or academic difficulties. But whatever the student's grade point average or handicap, if the student is enrolled in an unchallenging vocational offering, he or she would be unlikely to need additional assistance to succeed in that offering. Ironically, under the existing definition that student would not be eligible for services.

Yet it is the intent of the legislation to increase the access of just such handicapped and disadvantaged students to more demanding offerings that prepare them for good jobs. In other words, the legislation assumes that the funded services will increase students' opportunities and provide support to help them succeed in upgraded programs. Yet nothing in the law or regulations targets or otherwise limits support services to academically or economically disadvantaged or handicapped students whose vocational opportunities have been

upgraded. In fact, the law may create incentives to avoid such upgrading, because it could prove far more costly than maintaining the status quo.

Breadth of Allowable Services and Amounts of Service

The statute allows a wide range of resources or services to be purchased for special populations with federal funds, and the regulations set no further limits. The statute allows grantees to expend funds earmarked for special-needs students on virtually any resource or service related in some way to vocational education except construction (and including "related" basic skills instruction). Nothing in the rules conveys a federal preference for purchasing vocational instruction, for example, as opposed to ancillary or support services, nor are there any rules to direct resources to organized programs of occupational training. As already noted, there are no rules favoring support of students in upgraded programs as opposed to any others.

The lack of priorities on the kinds, or limits on the amounts, of services also presents potential problems. In the absence of rules, districts and institutions might be driven by cost considerations to spend funds on expensive activities they provide anyway, regardless of how or whether those services are linked to improved opportunities in vocational education. This possibility is heightened because federal funds can only pay for up to half of excess costs of services, and in many states, each district or postsecondary institution must match the federal funds individually.

Vague Entitlement

The Act and regulations provide little guidance on how much service must be provided under section 204(c). Assessments are to be provided to all students meeting the definitions, but the other special services are to be provided as needed. The other services would, presumably, be identified during the assessment or would be required if the assessment led to upgrading the student's vocational program. Because the other services are potentially open ended, they might be very costly. Given the limited funds available under the Act, it seems doubtful that localities would be willing to incur as much cost as these services might require.

They might even be tempted not to upgrade a student's vocational program, so as to avoid additional costs. The regulations provide no guidance to states and localities on how to interpret section 204(c), and there has been no federal effort to clarify how much additional assistance is required of local education agencies.

Lack of Knowledge on Effective Services

Yet another set of problems with the target group and service requirements arises from the lack of a body of literature on either the needs of or appropriate services for disadvantaged students enrolled in vocational education. Although there is a small body of research on the effectiveness of services for handicapped students, stemming largely from the broad federal research and development effort for handicapped students under the Education of the Handicapped Act as amended (P.L. 94-142), there is no comparable information for disadvantaged students.[4] As a result, it is highly unlikely that most local educators would have information from which to draw to change vocational programs or provide effective supplemental services although the Act expects these activities. Given section 204(c) and what is already known, it is entirely possible that services for disadvantaged students would mirror those normally provided in the absence of federal requirements.

Peripheral Services

Finally, the NAVE *First Interim Report* raised specific questions about the services provided to disadvantaged students under the set-asides. From initial case studies NAVE researchers found that the most common services for disadvantaged students provided under the Act, such as assessments of vocational interests and abilities and academic remediation, were ancillary to vocational instruction. More important, they appeared to do little if anything to promote access to high-quality offerings or, for that matter, to affect in any way the vocational education that the students received. The choice of services appeared to be dictated primarily by local educational needs (in the case of basic skills), or by the service mandates in section 204(c) and the need to demonstrate excess costs.

Additional State Rules Under the Disadvantaged Set-Aside

Beyond channeling funds to particular sectors and providers (discussed in the previous chapter), state agencies visited during the case studies placed few additional constraints on local expenditures under the formula-driven set-asides. The few rules that were added were restricted to secondary education. Of the nine states we visited, one took advantage of the federal option to put a $1,000 floor on formula allocations. One state required that 20 percent of disadvantaged and handicapped set-aside funds be spent on guidance and counseling and required that all disadvantaged funds for LEP students be spent before spending any other funds. One state prohibited disadvantaged and handicapped set-aside funds from being used for academic remediation, equipment purchases, or guidance, arguing either that funds for these purposes were available from other sources, or that it would be hard to demonstrate that these services were not available without federal funds. Ironically, officials in a state visited in the earlier case studies that had been heavily involved in academic reform, suggested strongly that disadvantaged set-aside funds be used for academic remediation. Finally, one state mandated that funds be used to pay for teacher aides at a ratio of one aide per five students until federal resources were expended.

States did not attempt to impose limits on who should be considered enrolled in vocational education, or on the kinds or amounts of disadvantage that qualified for assistance, rules that might have led districts to direct services to particular students. Although some states had elaborate definitions of who is "enrolled" in vocational education that govern state vocational funding, almost no states applied these definitions to how federal funds were distributed or how districts spent federal dollars. States did not attempt to clarify further the federal directive that funds be spent on students who required "additional assistance" to succeed in vocational education.

Expenditures Under the Disadvantaged Set-Aside at the Secondary Level

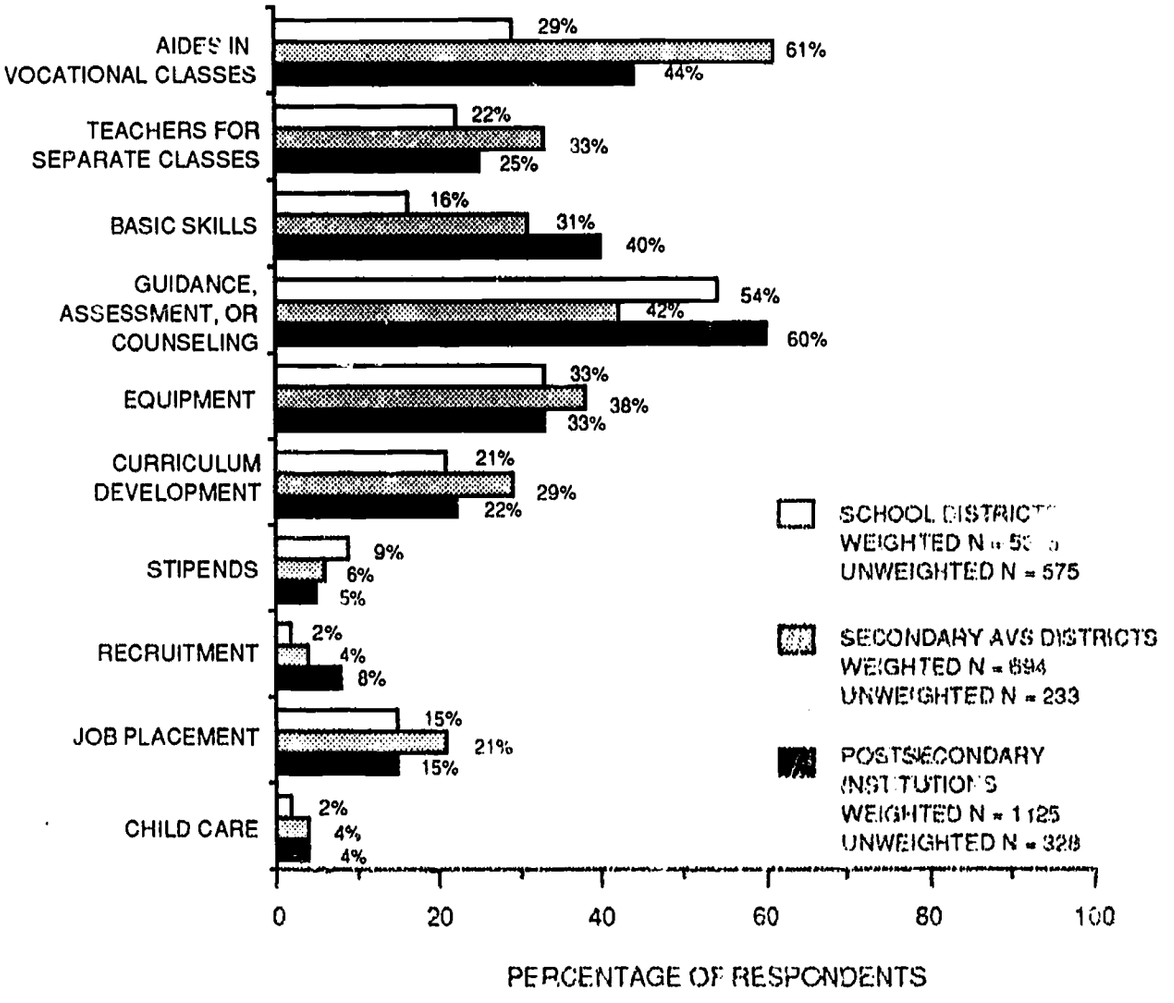
According to the survey of eligible recipients, guidance and counseling were the services most commonly purchased by the half of school districts that spent resources under the set-aside. (Figure 2.1 shows the percentage of districts spending any resources for each category of expenditure, and table 2.1 shows the mean spending for the category.) More than half the districts with funds (54 percent) spent some portion of those funds on guidance, assessment, and counseling, spending an average (across all districts with funds) of 22 percent of the funds on this set of activities. A third of the districts with funds spent some federal resources on equipment, spending an average of 15 percent or, when added to supplies, 19 percent on these items. Twenty-nine percent of districts spent funds, and an average of 17 percent of the funds were spent on aides in vocational classrooms. Twenty-two percent of districts spent funds, and an average of about 13 percent of the funds were spent on teachers or other staff in separate vocational classes.

In all, instructional services appear to account for more than a third of federal funds in school districts. As can be seen from the rather small percentages of districts spending funds on items other than guidance, respondents varied widely in how they reported federal expenditures, so that standard deviations in percentages spent in each category were large.

In the 83 percent of area vocational school districts with grants, expenditures appear to be concentrated in one category--aides in vocational classes. Sixty-one percent of the area vocational school districts spent some funds for aides and an average of 33 percent of the funds across all districts. Although 42 percent indicated that they spent some resources on guidance, assessment, and counseling, expenditures on this activity averaged only 11 percent of funds. Area vocational school districts were about equally likely to spend a portion of funds on equipment purchases (38 percent of districts), teachers in separate classes (33 percent of districts), and basic skills instruction in nonvocational classes (31 percent of districts). Of these three, equipment purchases were, on average, a small percentage of total expenditures (7 percent). Basic skills instruction in nonvocational classes and teachers in separate classes were

FIGURE 2.1

Disadvantaged Set-aside Funds: Percentage Of School Districts, Secondary Area Vocational School Districts, And Postsecondary Institutions Spending Any Perkins Act Funds For Each Category Of Program Activities



SOURCE: See Table 2.1.

Table 2.1

National Estimates of How Disadvantaged Set-Aside Funds Were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent	
		Mean	Standard Deviation
Paraprofessionals/aides in regular vocational classes	School districts[a/]	16.6	32.4
	Area school districts[b/]	32.9	35.2
	Postsecondary institutions[c/]	20.5	31.2
Teachers or staff for separate vocational classes	School districts	12.9	27.6
	Area school districts	18.3	31.3
	Postsecondary institutions	11.2	24.3
Basic skills instruction in nonvocational classes	School districts	6.3	18.7
	Area school districts	13.4	28.0
	Postsecondary institutions	17.2	29.5
Guidance, assessment, or counseling	School districts	21.5	32.6
	Area school districts	10.7	21.3
	Postsecondary institutions	20.2	25.5
Equipment	School districts	15.3	29.6
	Area school districts	7.2	16.7
	Postsecondary institutions	12.9	25.3
Development or modification of vocational curriculum	School districts	7.6	21.6
	Area school districts	4.1	10.7
	Postsecondary institutions	3.0	8.3
Stipends or subsidized employment	School districts	5.3	20.9
	Area school districts	1.5	10.2
	Postsecondary institutions	0.8	4.8
Recruitment of out-of-school youth	School districts	0.2	1.9
	Area school districts	0.3	1.9
	Postsecondary institutions	1.1	5.5

(continued)

Table 3.1 (continued)

National Estimates of How Disadvantaged Set-Aside Funds Were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent	
		Mean	Standard Deviation
Employability and job search activities	School districts	3.7	14.2
	Area school districts	2.6	9.4
	Postsecondary institutions	1.8	7.5
Child care services	School districts	0.2	1.9
	Area school districts	0.3	2.0
	Postsecondary institutions	1.1	8.0
Materials and supplies[d/]	School districts	3.9	14.9
	Area school districts	3.3	10.5
	Postsecondary institutions	1.0	4.7
Administration/overhead[d/]	School districts	0.1	1.1
	Area school districts	0.2	3.4
	Postsecondary institutions	0.7	4.7
Instructural support staff[d/]	School districts	0.4	4.6
	Area school districts	3.4	16.0
	Postsecondary institutions	6.3	21.7

SOURCE: Janet P. Swartz, State and Local Response to The Carl D. Perkins Act, Survey Analysis, Final Report, Abt Associates, Inc. January 1989.

a/ Weighted n = 5,315; unweighted n = 575
b/ Weighted n = 694; unweighted n = 233
c/ Weighted n = 1,125; unweighted n = 328
d/ Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

larger items than in school districts, 13 percent and 18 percent of expenditures, respectively. The combined instructional services cost appears to account for a substantial amount of funds--approximately 64 percent of area vocational school district expenditures. For a more detailed view of the location and nature of the services, let us turn to results of the case studies.

The case studies both confirm survey findings and point up an interesting difference about funded services. First, there is little doubt that counseling and assessment services are common activities associated with Perkins Act funding. In the 44 sites for which detailed information is available, testing, assessment, and other guidance activities are important forms of service provision in 18 settings. Additional counselors or other personnel have been hired to administer tests and other means of assessing vocational interests and abilities and to provide training in employability skills or assertiveness. In a substantial number of locations, funds from disadvantaged and handicapped set-asides have been pooled to hire counselors to provide these services to both groups. Sometimes a centralized testing and assessment center is created; in other instances counselors may travel to multiple sites to administer tests. Policies in several states encouraged combining resources in this manner.

Another finding of the case studies is new, however, and appears to differ from survey findings. In 16 of the 44 sites, disadvantaged set-aside funds were spent entirely or substantially for academic remediation, particularly in English or math.[5] The most common setting for remediation appears to be a basic skills laboratory in an area vocational facility or alternative high school, although separate remediation classes or tutors are sometimes supported at comprehensive high schools. In five instances, aides were hired to tutor disadvantaged students outside of vocational classes, and in four of those instances the tutoring was in academic subject matter. Equipment purchases under the disadvantaged set-aside are often made for the computer hardware and software for learning labs providing academic remediation as well as for testing and assessment.

All other forms of activity accounted for small percentages of federally subsidized projects identified through the case studies. Less common uses of funds were as follows:

- o Teachers or aides (other than for academic remediation per se) in separate vocational classes for disadvantaged students. This use occurred systematically in only two states where disadvantaged and handicapped set-aside funds flow to systems of alternative high schools (5 cases).
- o Tutors or other assistance to LEP students (2 cases).
- o Recruitment activities such as tours of area vocational schools for middle-school students (3 cases).
- o Job placement-related activities (3 cases).
- o Subsidized employment (1 case).

About a third of the school districts combined resources under the handicapped and disadvantaged set-asides. When funds were combined, districts emphasized services that could be delivered to both groups of students, the most common of which was assessment. It was often impossible to determine the extent to which the members of one group or the other were served, but personnel involved with these efforts were generally more familiar with services for handicapped students and felt more comfortable in providing them.

How can we reconcile the low percentages of funds for academic remediation reported in the survey with the case study findings? One possibility is that respondents viewed the questionnaire item "basic skills instruction in nonvocational *classes*" as too narrow to include activities in a learning laboratory or other environment outside the classroom, and hence selected a salary category (aides or teachers) to record the costs of personnel involved in academic remediation. Another possible explanation is that local teaching and administrative personnel identify remediation as the *additional* service that they provide to disadvantaged students and believe is supported, in part, by the Perkins Act. At the same time, school accountants may attribute the funds to some other category for which it is easier to demonstrate excess costs, and this budgeting process is reflected in responses to the survey budget categories. It is also possible that survey respondents attributed the salary of a single

individual across several categories, while field staff described a comparable person as providing academic remediation or assessments--without listing all the activities that took small amounts of time.

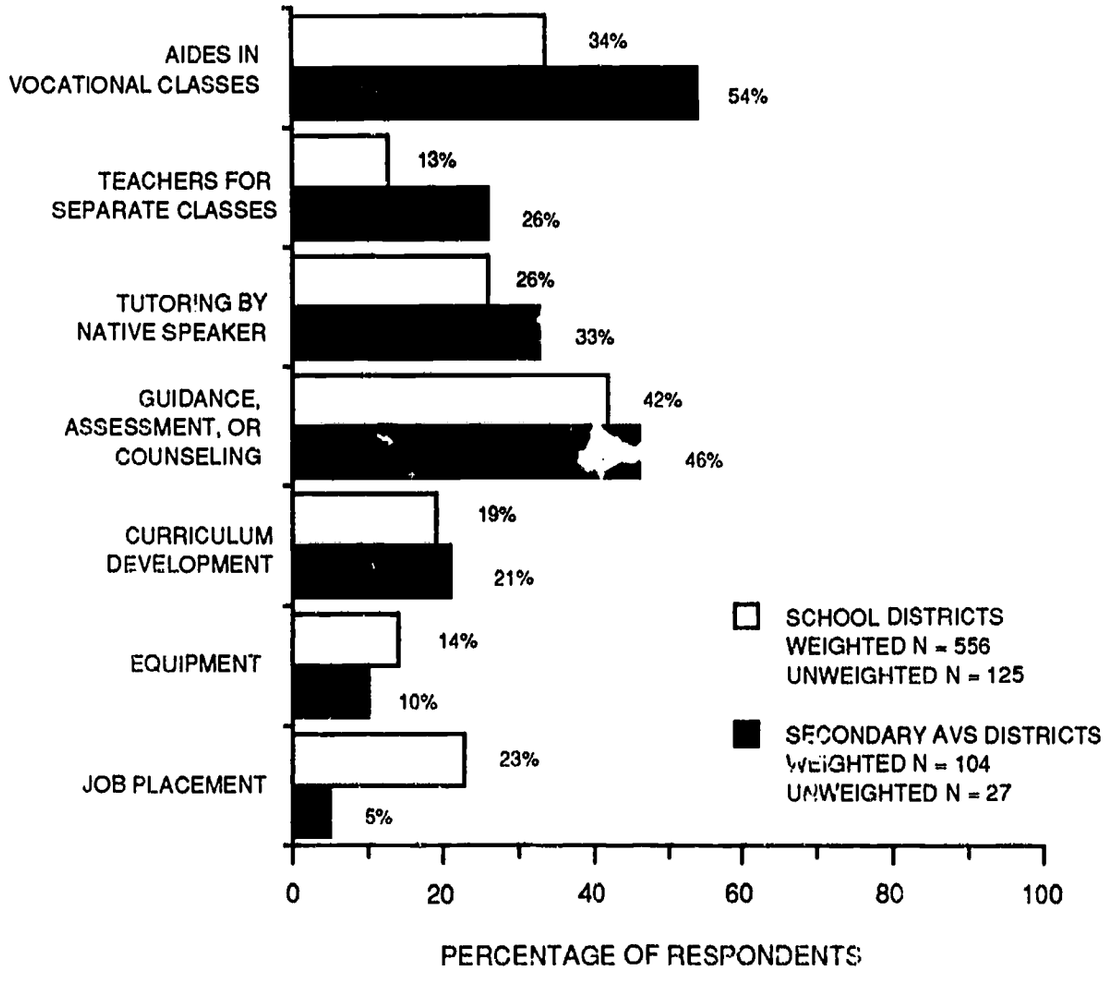
Whatever the explanation, most of the aides we identified through case studies appeared to be linked to academic remediation, not vocational instruction. In addition, the equipment category may mask remediation costs, because most of the purchases we observed under the disadvantaged set-aside were for computers and software. Despite the discrepancy with survey findings, the consistency of observations across 14 states leads us to conclude that academic remediation is an important use of disadvantaged set-aside funds in all types of settings--comprehensive high schools, area vocational schools, and alternative schools. The case studies suggest the concentration of Perkins Act supported activity in two categories overall (assessment/guidance and academic remediation) more than do the survey results.

The use of aides in separate classes for disadvantaged students appears concentrated in particular states. In our case studies, almost all the cases occurred in two states with policies of directing federal resources to alternative high schools for disadvantaged students. In one state the schools are located within bigger comprehensive high schools, and in the other they are located in area vocational facilities.[6] In both cases, the entire educational program is separate (not just vocational education), so Perkins Act funds probably play a small role in policy formulation. In addition, academic remediation by definition is separate, because it is restricted to students with academic difficulties.

Approximately 7 percent of school districts and 16 percent of area vocational schools spent funds earmarked for LEP students. Both school districts and area vocational school districts reported that they spent the bulk of such resources to pay for aides in vocational classes, for guidance and assessment and for tutoring by native speakers outside of class (see figure 2.2 and table 2.2). The six cases we observed in the field were about evenly divided between bilingual aides in vocational classes and bilingual tutors outside of class. Although the Perkins Act mandates that LEP students be supported at a rate equivalent to their enrollment

FIGURE 2.2

Limited-English-Proficient Students: Percentage Of School Districts And Secondary Area Vocational School Districts Spending Any Perkins Act Funds For Each Category Of Program Activities, 1986-87



SOURCE: See Table 2.1.

Table 2.2

National Estimates of How Funds for Limited-English-Proficient Students were Spent by School Districts and Separate Secondary Area Vocational School Districts, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent	
		Mean	Standard Deviation
Paraprofessionals/aides in regular vocational classes	School districts[a/]	21.9	37.6
	Area school districts[b/]	34.1	40.2
Teachers or staff for separate vocational classes	School districts	8.3	24.2
	Area school districts	13.6	26.8
Tutoring by native speaker outside vocational classes	School districts	13.9	31.5
	Area school districts	12.1	26.0
Guidance, assessment, or counseling	School districts	17.3	32.2
	Area school districts	21.2	35.7
Bilingual vocational curriculum development	School districts	9.2	26.2
	Area school districts	7.1	20.2
Equipment vocational curriculum	School districts	7.7	22.7
	Area school districts	2.0	6.2
Employability and job employment	School districts	6.0	19.5
	Area school districts	0.6	3.0
Materials and supplies[c/] out-of-school youth	School districts	11.0	31.0
	Area school districts	5.6	15.8

SOURCE: See table 2.1.

a/ Weighted n = 556; unweighted n = 125
b/ Weighted n = 104; unweighted n = 27
c/ Category coded from "other" responses and is likely to underestimate actual percentage of expenditures.

in vocational education, field staff visited several sites where there were substantial numbers of LEP students in vocational education but no Perkins Act resources specifically targeted to this group--an observation that confirms survey findings discussed in the last chapter.

Expenditures Under th Disadvantaged Set-Aside at the Postsecondary Level

Turning to uses of the disadvantaged set-aside at the postsecondary level, the 63 percent of institutions with funds spent the funds most heavily on guidance and assessment (60 percent of all institutions, approximately 20 percent of the funds on average). Aides in regular vocational classes were an expenditure item in 44 percent of institutions with funds and accounted for 21 percent of expenditures on average. Basic skills instruction in nonvocational classes was an expenditure item in 40 percent of institutions, accounting for 17 percent of expenditures. Equipment accounted for 13 percent of expenditures, and teachers in separate classes for 11 percent. Again, the reported uses of federal funds varied widely across institutions, as noted by the standard deviations that are often much larger than the means.[7]

The case studies reveal a pattern of services similar to the mix of services at the secondary level, but with more separate uses of funds reported for a single institution.[8] As was true at the secondary level, the case studies indicated that federal funds were more commonly used for basic skills remediation than was indicated by the survey data. Of the 27 institutions for which we have detailed information, 16 report academic remediation or tutoring as a major service. In some of these largely less-than-baccalaureate, open-admissions institutions, academic remediation may be a precursor to enrollment in other programs. Counseling activities were funded in 14 institutions, sometimes in the same institutions as those providing academic remediation. Counseling activities in postsecondary institutions appear to include not only testing and other forms of entry-oriented assessment but also career advising. Postsecondary institutions used equipment purchases to establish or expand career counseling centers as well as to outfit learning labs for academic remediation.

Other services that occurred in a few settings included recruitment of high school dropouts (five cases, most of them in a single state where dropout programs were a state policy preference at postsecondary area vocational centers); separate vocational classes for disadvantaged students (three cases); a program for displaced homemakers (one case, combined funding with that set-aside); an ombudsman for disadvantaged and handicapped students (one case); and a program of customized training (one case).

Taken together, the survey and case study findings suggest that academic remediation and counseling/assessment are the main postsecondary services under the disadvantaged set-aside. This finding, while similar to the finding for the secondary level, is surprising, because testing, assessment, and other counseling activities are not mandated by the Perkins Act for postsecondary students. These services are, however, common supplemental services for students in technical institutes and community colleges, particularly for students who enter with academic deficiencies.

Location, Recipients, and Amount of Service Under the Disadvantaged Set-Aside

The kinds of services described in the case studies support the view that, at secondary and postsecondary levels, academic disadvantage is almost always the basis for service provision. Furthermore, services are targeted toward individuals, not institutions or programs as a whole. Although we visited some sites that provided assessment services to economically disadvantaged students, and one site with a program of subsidized employment, most of the services supported by Perkins Act funds, including assessment, were provided to students who were having some academic difficulty. A few districts directed federal resources to alternative school programs for students who were viewed as potential dropouts, but the Perkins Act supported services were still in the guidance/assessment and academic remediation modes.

From interviews in districts (i.e., secondary level) we learned that there are no hard and fast rules for deciding which academically disadvantaged students should receive assistance. Students are sometimes identified by standardized tests or grade point averages; other times

teachers simply identify students who they think can benefit from an available service. In many of the sites we visited, local administrators were unable to identify the number of disadvantaged students enrolled in vocational education, the number or percentage of such students needing additional services to succeed in vocational education, the number actually receiving services with federal funds, or the "intensity" or amount of services they received. As a result, it was often impossible to know not only how many students were served but whether federal funds supplied a week of remediation or a semester, a one-hour assessment or a one-day assessment followed by other services.

Place of enrollment probably influences a student's likelihood of being served more than the intensity of disadvantage. According to case study data, disadvantaged students who are enrolled in vocational education at area vocational facilities or alternative schools have a greater likelihood of receiving some assistance under this Act. This is the only form of within-district targeting of funds that was identified through the case studies.

In the case study sites we observed that, even within regular school districts, funds gravitate to regional area schools or other separate facilities. Of the 44 separate secondary-level projects for which we had information under the disadvantaged set-aside, 20 were located entirely or primarily at area vocational facilities, seven were located at some form of alternative high school for disadvantaged students, five were at vocational high schools (some of which may be area vocational schools), and two were in junior high or middle schools. Only 13 projects were located in all or some of the comprehensive high schools in a district. Given that about 85 percent of all vocational course taking is located in comprehensive high schools, this level of federal support to comprehensive high schools is quite low.[9]

For a subset of the sites we visited, observers were able to obtain information on the actual numbers of disadvantaged students that received services with set-aside fu s. Receipt of services could vary, of course, from a one- or two-hour assessment of vocational interests to a portion of a teacher's time in a smaller-than-normal vocational class for an entire year. The great variety of such "treatments" makes any effort to compute per-student dollars

difficult, and we did not have sufficient observations to compute the costs of different types of services separately. Moreover, we do not know whether Perkins Act funds support half or only a smaller share of the costs of a service, so attaching dollar figures to services provided is impossible. Furthermore, because the only number that some districts normally provide to the state is the number of disadvantaged students enrolled in vocational education, many sites have no idea how many students are actually "served."[10] Nonetheless, we can make some observations about the actual amounts of support.

For the 24 projects for which enrollment and cost data were available, the median amount of federal funds per disadvantaged student "served" was approximately $250. This figure should be interpreted with great caution because the per-student amounts reported varied greatly. Although the amount, in most cases, hovered between $100 and $400, several projects reported per-student amounts exceeding $800. When the amounts reported were extremely low (e.g., $20 or $30 per student) but the services described were ambitious (e.g., basic skills remediation), we did not include the site in the analysis but made the assumption that the number supplied to us was the total number of disadvantaged students enrolled in vocational education, not the number actually served. If these sites had been included, the median per-student amount would be around $100.

In addition, the kind and duration of the service received varied considerably across sites; some sites included costs of equipment, while others reported only the costs of personnel. It is almost impossible to determine per-student costs of equipment in general, because equipment lasts for an indefinite period.

At the postsecondary level there is nothing analogous to within-district targeting in most communities. The institutions we visited in conducting both sets of case studies were likely to be ones with Perkins Act funds, and 16 of the 27 institutions for which we have detailed information were community colleges. The rest were technical institutes or area vocational facilities, except for two four-year colleges.

A few postsecondary institutions (7 of 27 in case studies) appeared to be focusing funds on recruiting or serving students who might not have been enrolled otherwise, such as high school dropouts or unemployed persons. Most institutions did not, however, specify a subgroup of students in vocational programs to serve. There appeared to be no formal system (such as use of standardized tests at the secondary level) to identify disadvantaged students needing services. Most of the decisions about whom to serve appeared to be informal. About a third of the institutions administered basic skills tests to entrants and might refer those who scored poorly for academic remediation funded, in part, through the disadvantaged set-aside. In the case of career guidance services, the students who received services might be those who chose to avail themselves of the opportunity.

Additional State Rules for the Handicapped Set-Aside

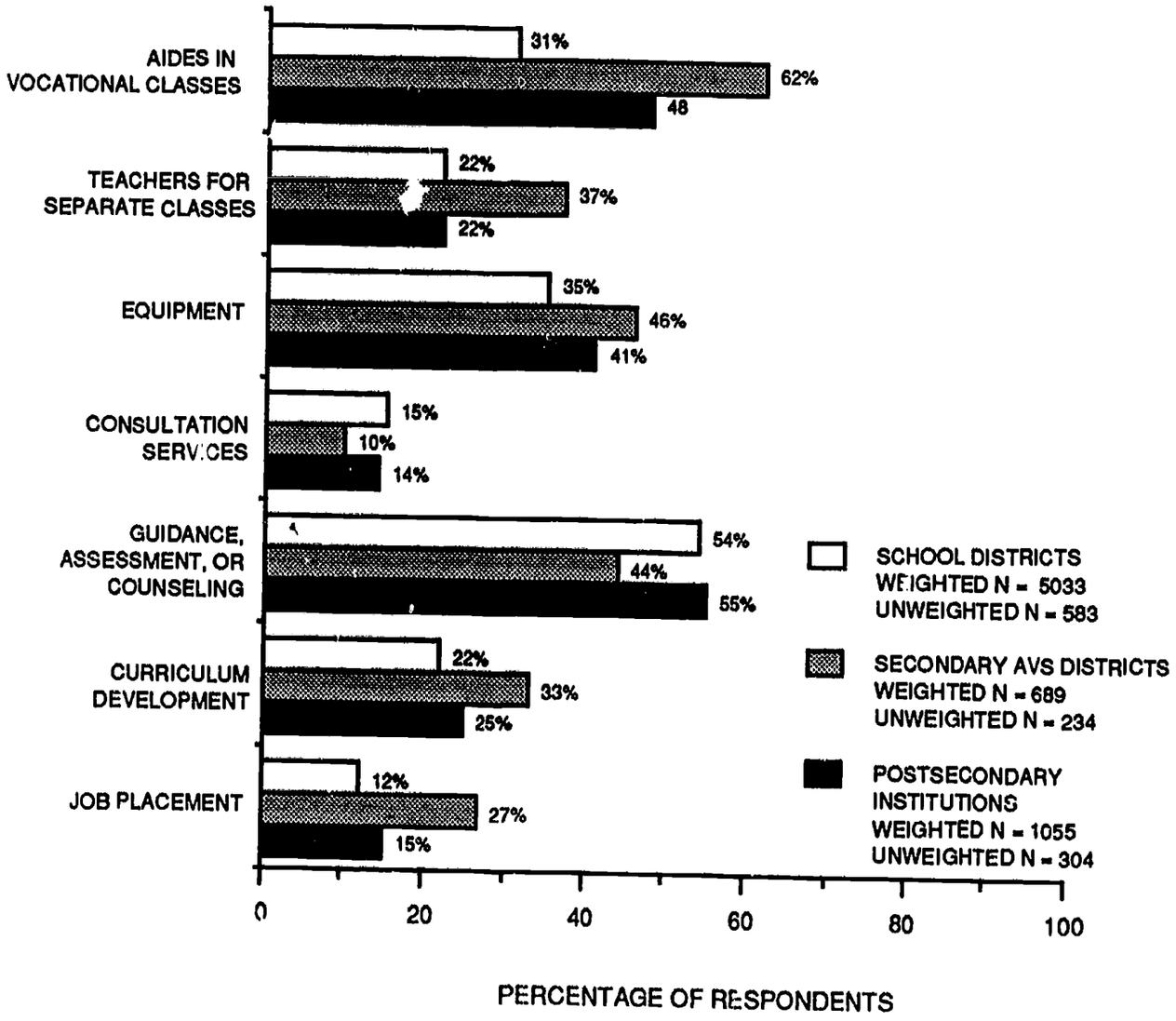
As already discussed, most of the state rules and limitations were the same for both the handicapped and the disadvantaged set-asides. States appear to have provided little additional guidance about who should be considered handicapped in postsecondary education. States we visited provided no advice with respect to further targeting of these funds to persons with particular handicaps at either level.

Expenditures Under the Handicapped Set-Aside at the Secondary Level

Once again, guidance, assessment and counseling were the most common expenditures in school districts (see figure 2.3 and table 2.3). Almost half of the districts received funds, and 54 percent of those with funds reported that they spent funds on this set of activities (an average of 24 percent of expenditures). Equipment purchases were the next most common expenditure item, with 35 percent spending funds. Spending for equipment averaged 19 percent alone or 23 percent when supplies were added. Aides in regular vocational classes were a form of expenditure for 31 percent of school districts and accounted for 20 percent of funds on average.

FIGURE 2.3

Handicapped Set-aside Funds: Percentage Of School Districts, Secondary Area Vocational School Districts, And Postsecondary Institutions Spending Any Perkins Act Funds For Each Category Of Program Activities, 1986-87



SOURCE: See Table 2.1.

Table 2.3

National Estimates of How Handicapped Set-Aside Funds Were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent	
		Mean	Standard Deviation
Paraprofessionals/aides in regular vocational classes	School districts[a/]	19.6	35.3
	Area school districts[b/]	35.9	35.8
	Postsecondary institutions[c/]	23.3	33.3
Teachers or staff for separate vocational classes	School districts	13.1	28.9
	Area school districts	18.7	31.0
	Postsecondary institutions	11.6	26.3
Modified or new equipment in nonvocational classes	School districts	18.8	33.3
	Area school districts	13.5	24.5
	Postsecondary institutions	17.9	30.6
Consultation services counseling	School districts	4.3	14.0
	Area school districts	1.4	4.9
	Postsecondary institutions	3.6	14.1
Guidance, assessment or counseling	School districts	23.5	33.9
	Area school districts	12.6	22.3
	Postsecondary institutions	24.2	32.6
Development or modification vocational curriculum	School districts	7.1	19.5
	Area school districts	4.7	9.8
	Postsecondary institutions	4.3	12.2
Job placement services employment	School districts	2.6	10.6
	Area school districts	3.6	10.0
	Postsecondary institutions	2.8	10.4

(continued)

Table 2.3 (continued)

National Estimates of How Handicapped Set-Aside Funds Were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent	
		Mean	Standard Deviation
Material and supplies[d/]	School districts	4.3	18.1
	Area school districts	4.2	14.4
	Postsecondary institutions	1.1	5.5
Administrative/overhead[d/]	School districts	0.1	0.8
	Area school districts	0.2	3.1
	Postsecondary institutions	1.0	4.3
Instructional support staff[d/]	School districts	1.1	9.5
	Area school districts	3.2	14.3
	Postsecondary institutions	7.2	23.0

SOURCE: See table 2.1.

a/ Weighted n = 5,033; unweighted n = 583
b/ Weighted n = 689; unweighted n = 234
c/ Weighted n = 1,055; unweighted n = 304
d/ Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

The most common expenditure in area vocational school districts was for aides in regular classes. Almost all such districts received funds (82 percent), and almost two-thirds (62 percent) of those with funds purchased aides, spending an average of 36 percent for this item across all districts. As was the case in school districts, equipment was the second most common expenditure item, with 46 percent of area school districts spending in this category and an average of 18 percent spent on equipment and supplies. Unlike school systems, guidance-related expenditures were incurred in only 44 percent of area vocational school districts and accounted for an average of only 13 percent of expenditures. Although 27 percent of area vocational school districts reported using funds for job placement, the percentage of funds so designated was only 4 percent.

This difference between regular and area vocational school districts may reflect the fact that considerable guidance and assessment for handicapped students, including the development of the vocational portion of IEPs, takes place in home schools. Area vocational school districts were more likely than other school districts to spend resources on teachers in separate classes, with 37 percent of area vocational districts reporting expenditures and an average of 19 percent of funds spent on this item. These data suggest that substantial amounts of funds were spent on instructional salaries (teachers and aides) and equipment purchases for handicapped students. Overall, the survey results suggest that, at the secondary level, funds were concentrated in a few categories of service under the handicapped set-aside somewhat more often than under the disadvantaged set-aside.

Results of the case studies lend support to the view that federal funds are used more commonly for instructional salaries in the area schools than in comprehensive high schools. Ten of the 16 area schools for which we have case study information reported that most of their handicapped set-aside funds were used to pay for aides or teachers. The same was true for only 6 of the 13 comprehensive high school programs we observed. In contrast to findings on expenditures for disadvantaged secondary students, set-aside funds have been spent for instructional salaries (teachers and aides) in self-contained vocational classes for handicapped

students in at least 15 of the 42 districts for which detailed case study information is available. Given national data that suggest that about 85 percent of vocational credits earned by handicapped students are earned in mainstreamed classes, this finding is surprising. It might mean that the incentives attached to federal dollars encourage the establishment of separate classes. Federal funds are quite small, however, and respondents did not indicate that this was the case. A more likely explanation is that separate classes are far more costly than other instructional settings, so it is easier to allocate federal funds to this activity and to justify the expenditure as an excess cost.

Other uses of funds are as follows: At least 14 of the 42 case study sites reported using federal funds for counseling and assessment functions, including transition from school to work. Unlike the case with the disadvantaged set-aside, only six sites reported using federal funds for academic remediation. Apparently, academic remediation is not seen as related to vocational education for handicapped students. Equipment purchases were often tied to the separate vocational classes, with the purchases for items such as welding simulators or other simplified equipment. Other, less common uses of federal funds included expenditures for job placement and related activities (six sites), classes in social or employability skills (four sites), subsidized employment (two sites), and salaries of liaison personnel with special education (two sites).

Expenditures Under the Handicapped Set-Aside at the Postsecondary Level

As reported in the survey, uses of handicapped set-aside funds by the 59 percent of postsecondary institutions with funds were similar to those reported by regular school districts. The most common uses were for guidance, assessment, and cou. eling, a category of expenditure for 55 percent of the institutions with funds, accounting for 24 percent of expenditures in a typical institution; aides in regular vocational classes, an expenditure item for 48 percent of institutions, accounting for 23 percent of funds on average; and equipment, an

item in 41 percent of institutions, accounting for an average of 18 percent of funds. Salaries of staff in separate classes accounted for an average of 12 percent of funds.

From the case studies it appears that, in contrast to expenditures at the secondary level, a substantial share of postsecondary services are intended for physically handicapped students. Of the 28 sites for which information was available, at least nine identified equipment (e.g., reading machines) or services (e.g., interpreters) for the physically handicapped as a major use of Perkins Act funds. Another seven sites described the main services as counseling and testing, services that could be designed for students with either physical or cognitive handicaps. Only six sites identified academic remediation as a main service, a service presumably designed to address the learning limitations of cognitively impaired students. Five sites used federal funds for separate classes for emotionally or cognitively impaired adults; two of these sites indicated that federal funds were used to support sheltered workshops. In general, community colleges appeared more likely to use funds for physically handicapped students, whereas postsecondary area vocational facilities appeared about equally likely to use funds for cognitively or physically handicapped students.

Location, Recipients, and Amounts of Service Under the Handicapped Set-Aside

Handicapped set-aside funds at the secondary level are apparently likely to be used to support services for mildly to moderately cognitively impaired students who are taking vocational education in places other than comprehensive high schools. According to the case studies, comprehensive high schools were the locale of federally supported services in only 13 of the 42 cases observed, compared with 15 cases at area vocational centers, eight cases at alternative high schools, four cases at vocational high schools (some of which may be area vocational schools), one at a middle school, and three at other special facilities. In only two cases were services for physically handicapped students funded: a small supported-work program for deaf students at one site and the purchase of some equipment for physically disabled students at another.

Judging by the substantial percentage of funds used to support a portion of the costs of self-contained classrooms, Perkins Act funds are helping to underwrite the costs of students with greater disabilities, possibly because those services are expensive, and hence their excess costs are easier to document. Handicapped students are always defined on the basis of possessing an IEP. From interviews we learned that special education personnel generally made the determination of whether or not the IEP should include vocational education (including services funded under this set-aside).

The overall finding that both disadvantaged and handicapped set-aside dollars tend to flow to locations other than comprehensive high schools could be an indication that dollars are directed to places with substantially higher per-student costs for vocational education. As the NAVE report on access indicates, handicapped students are somewhat more likely than other students to attend vocational classes in area vocational schools and other special settings.

We attempted to compute a secondary-level per-student dollar amount for the handicapped set-aside, as for the disadvantaged, using those instances where we knew both the federal dollars received and the actual numbers of students served. All the caveats and limitations expressed in the comparable section on the disadvantaged set-aside apply here as well. The substantial use of Perkins Act funds for equipment further complicates any effort to establish per-pupil dollars.

For the 30 cases in which we had sufficient data, the median per-student amount of federal money for students who actually received assistance was approximately $350. Once again there was considerable variation in the per-student amounts, from less than $100 to $6,000 spent by one district to run a supported-work program for seven multihandicapped deaf students. The focus on other than comprehensive high schools, combined with the per-student dollars, suggest that at least some districts have targeted resources to a subset of eligible students, but that the students have been defined primarily by where they are enrolled in vocational education and the higher costs of their instructional setting.

At the postsecondary level there are few explicit definitions of who is handicapped and few systematic efforts to target funds. Of the 28 sites with federal support that we visited, 12 were in locations other than community colleges, and these included most of the sites where the services were designed for students with cognitive handicaps. In some of the sites with programs for cognitively impaired persons, the main determinant of eligibility was that the student had an IEP when enrolled in secondary education. In other locations students were classified as handicapped and hence eligible for services on the basis of low scores on a basic skills test.

We identified no institutional rules for whom to serve among the physically handicapped. In fact, most postsecondary institutions know about physical handicaps only when students bring them to the institution's attention. A few places noted that the availability of funds under the Perkins Act caused them to conduct their first poll to determine the extent and kinds of student handicaps. Most services for physically handicapped students involved purchasing some sort of instructional aid (reader, wheelchair, etc.) and appear to have been made on an ad hoc basis.

TARGETING RESOURCES AND SERVICES UNDER THE NONFORMULA SET-ASIDES

The Set-Aside for Adults

What the Act Prescribes

The Perkins Act set-aside for adults provides little direction with respect to whom to serve and what to provide. The Act expresses a particular interest in (but no requirement to serve) adults who require retraining. The legislation requires that funds for adults be matched, at least at the state level, and presumably, Perkins Act funds should not supplant other funds. Beyond these directives, the legislation is mute with regard to the expenditure of these funds. A portion of funds may be reserved for statewide projects. Under this set-aside it is not necessary to generate excess costs in order to obtain support. The main issue from the

standpoint of implementation is whether there is sufficient federal direction to ensure that these funds will be used for unique activities of any type.

Additional State Rules

Our picture of the distribution of adult set-aside funds relies primarily on the case studies. In the nine states where we inquired, three restricted adult set-aside funds entirely to postsecondary institutions, and one restricted the funds entirely to secondary area vocational schools. Although most of the six states with secondary-level spending allocated funds through discretionary means, only one of the six earmarked a portion of its secondary adult set-aside funds for a particular activity--in that case, for placement services. In the case studies we found few instances in which adult training funds were used to provide education to students who had not completed high school (i.e., education below grade 12).

Expenditures Under the Set-Aside

Both sets of case studies indicated that states used these resources to support the general adult vocational education programs of school districts and postsecondary institutions. The widespread state use of discretionary means to distribute adult training funds to the local level could allow states to establish funding priorities or local agencies to compete for funds based on good ideas, but this did not appear to be the case. In all but three of the nine school districts for which we have information, funds were described as being used for instructional salaries, vocational instruction, evening vocational classes, the general adult education budget, or other general purposes. In one case funds were used for the adult school's business program, in another for a licensed practical nurse program, and in a third for apprenticeship training, but these uses were about as specific as we could identify.

Funds in technical institutes and area vocational schools were also designated for rather general purposes, although there were some exceptions. Of the 15 cases, seven sites used funds for general purposes or operating support and two others described the funds as used to support the tuition of adults. The remaining sites used funds for cashier and motel

management (one site), counselors and assessments (two sites), basic skills remediation (one site), a program to upgrade clerical skills (one site), and recruitment and training of displaced workers (one site). In at least one state visited, all adult set-aside funds were allocated on a formula basis to five postsecondary area vocational schools explicitly for general operating support. In the formula allocation, adult training funds were combined with a portion of program improvement funds to pay for all equipment needs in those schools. In this instance state officials told local administrators to use adult set-aside funds for basic operating costs rather than equipment, because the program improvement funds they used for operating support previously now have "strings" attached under the Perkins Act.

The community colleges in the case studies were more likely to target adult set-aside funds to particular purposes. In only one of the 11 cases was the adult set-aside used explicitly as general operating support, but little pattern was evident for the rest of the uses. Three sites used funds for equipment, two used funds for customized training programs, one ran an off-campus training center for disadvantaged students, one used funds for aides in remedial education, one ran seminars to help farm women start home businesses, one provided counseling, and one ran a variety of short-term job skill programs. The fact that community colleges were able to describe their uses of funds should not be taken to mean, however, that the uses were necessarily better or more likely to be additive.

The Set-Aside for Sex Equity

What the Act Prescribes

The Perkins Act sets aside a small portion of the Basic Grant to promote sex equity in vocational education by encouraging students to enroll in and complete training programs that are nontraditional for their sex. In past practice the bulk of services have been aimed at encouraging girls and women to enroll in training for fields in which men hold most jobs. There is no requirement for a local or state contribution to federal funds; federal funds can be used to pay for the full costs of programs. States may allocate the funds in any manner they

desire. In contrast to the handicapped and disadvantaged set-asides, they may retain funds at the state level. Previous policy analyses have observed that the funds allocated to sex equity activities were so limited that it was doubtful that federal policy could have much effect.[11] Although the Perkins Act includes a specific set-aside, its small size means that the concern about the effect of federal policy remains.

Additional State Rules

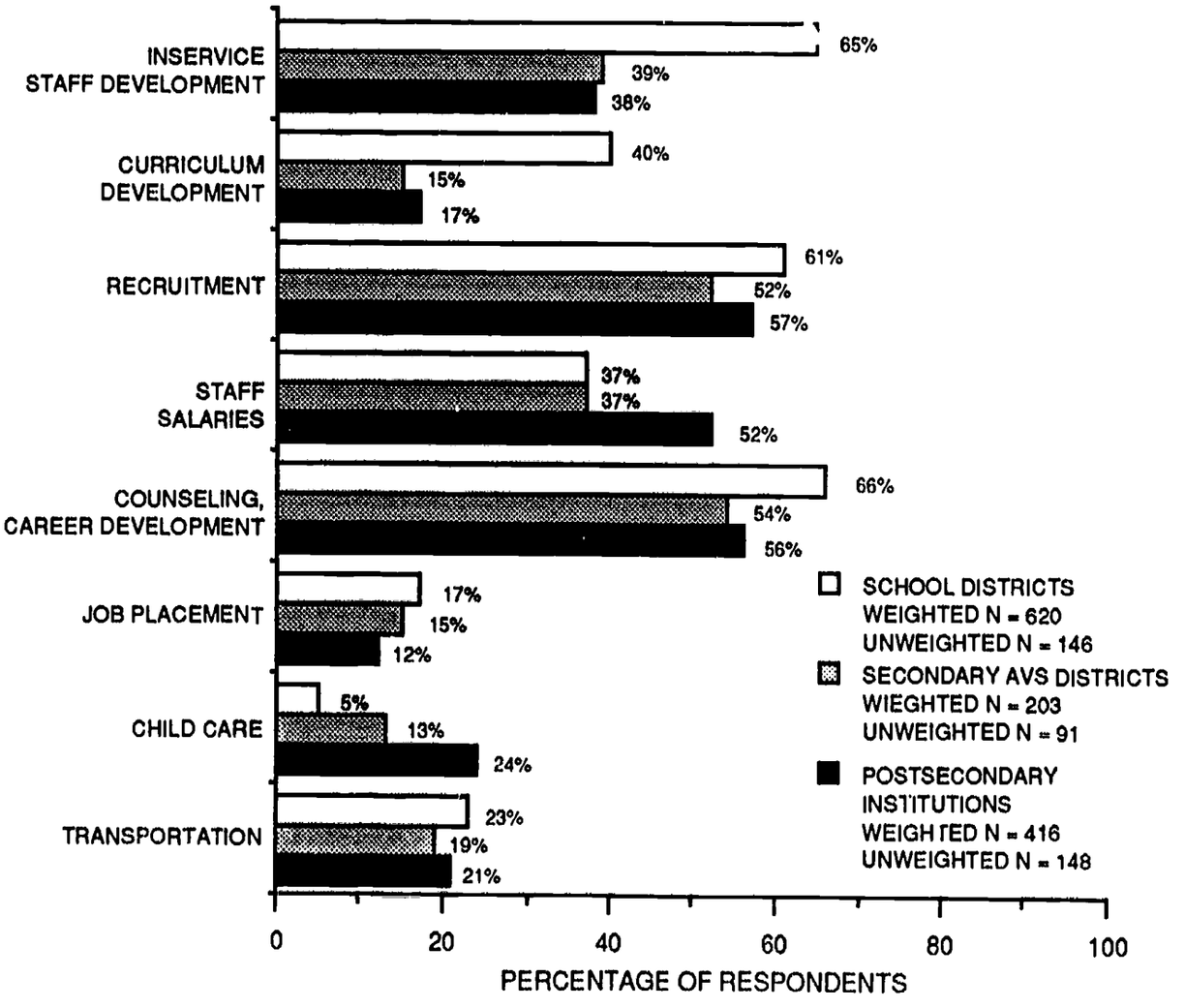
The case studies identified various state-level activities designed to concentrate or otherwise target resources some of which entailed the use of sizable portions of the set-aside. Seven states of the nine state case studies used competitions and other discretionary means to distribute sex equity funds at the secondary level, but two of the three most populous states used formulas. One state limited funds to secondary education, and one placed a floor of $1,500 on awards at the secondary level. One small state used 90 percent of its funds for a single project--a model child care program for the children of teenage parents. One state put all its resources into a competition aimed at expanding opportunities for women in high-tech occupations, and another stressed development of materials and exhibits.

Expenditures Under the Set-Aside at the Secondary Level

As for the use of federal resources, the survey results suggest that, despite very small median grants, districts are spreading the resources across a substantial variety of activities (see figure 2.4 and table 2.4). Many of the 7 percent of districts with grants spent funds for in-service training of staff (65 percent of the districts, and an average of 26 percent of funds), recruitment of students to nontraditional fields (61 percent of districts, an average of 18 percent of funds), and counseling and career development (66 percent of districts, an average of 21 percent of funds). In addition, 40 percent of districts spent some funds for curriculum development (10 percent on average) and 37 percent spent some funds on staff for training in nontraditional fields (16 percent on average). This array of spending percentages suggests a rather fragmented use of small amounts of funds at the local level, although it may be that

FIGURE 2.4

Sex Equity Funds: Percentage Of School Districts, Secondary Area Vocational School Districts, And Postsecondary Institutions Spending Any Perkins Act Funds For Each Category Of Program Activities, 1986-87



SOURCE: See Table 2.1.

Table 2.4

National Estimates of How Sex Equity Set-Aside Funds were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent Mean	Standard Deviation
In-service staff development	School districts[a/]	25.8	30.9
	Area school districts[b/]	13.1	25.2
	Postsecondary institutions[c/]	8.7	19.0
Development or modification of vocational curriculum	School districts	9.7	19.3
	Area school districts	2.8	9.2
	Postsecondary institutions	5.2	18.0
Recruitment of students to nontraditional fields	School districts	7.8	25.6
	Area school districts	2.3	32.0
	Postsecondary institutions	21.1	30.0
Salaries for staff to provide programs increasing participation in nontraditional fields	School districts	15.7	27.9
	Area school districts	24.9	35.6
	Postsecondary institutions	22.3	30.7
Counseling and career	School districts	20.8	24.1
	Area school districts	17.9	29.7
	Postsecondary institutions	16.7	22.9
Job placement services	School districts	2.2	5.7
	Area school districts	1.9	7.6
	Postsecondary institutions	2.2	9.0
Child care services	School districts	0.6	3.0
	Area school districts	1.5	5.7
	Postsecondary institutions	8.2	24.3
Transportation	School districts	2.2	6.8
	Area school districts	1.3	3.5
	Postsecondary institutions	1.8	5.0

(continued)

Table 2.4 (continued)

National Estimates of How Sex Equity Set-Aside Funds were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent Mean	Standard Deviation
Materials and supplies[d/]	School districts	2.8	14.0
	Area school districts	3.2	8.5
	Postsecondary institutions	2.0	9.0
Administration/overhead[d/]	School districts	0.2	2.0
	Area school districts	0.0	0.0
	Postsecondary institutions	0.6	3.9
Tuition reimbursement[d/]	School districts	N/A	N/A
	Area school districts	N/A	N/A
	Postsecondary institutions	4.1	16.9

SOURCE: See table 2.1.

a/ Weighted n = 620; unweighted n = 146
b/ Weighted n = 203; unweighted n = 91
c/ Weighted n = 416; unweighted n = 148
d/ Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

recruitment, counseling and staff development are all conducted by a single individual (or team) whose time is allocated across all the response categories.

Area vocational school districts have similar patterns, but in-service staff development is a somewhat less important activity and instructional salaries and student recruitment are of greater importance. More than half (54 percent) of the 29 percent of districts that received support spent funds on counseling/career development, with an average of 18 percent across all districts. Recruitment of students to nontraditional fields was an item in 52 percent of districts and accounted for an average of 22 percent of funds. A subset of districts, 37 percent, spent resources on instructional salaries for nontraditional training, but districts spent a larger share, an average of 25 percent, on this category. In-service staff development was an item for 39 percent of districts, but the amount spent averaged only 13 percent. Items for which a small percentage of resources were spent included job placement, child care, transportation, and curriculum development.

In the case study sites, the fragmentation of services appeared somewhat less than in the survey, but most of the projects were fairly traditional. Of the 13 local projects for which we have information, the bulk of awards were for workshops or seminars for teachers, parents and students, and for the development of written materials aimed at attracting students to nontraditional high school courses (nine sites). Some sites appeared to mount these projects to comply with the provisions of section 204(b) (i.e., notifying students of vocational options available to them). At least three of the recruitment projects were targeted toward eighth-grade students, and one was targeted toward at-risk eighth graders. The other projects were split among counseling for students already in nontraditional programs (two sites), a crisis intervention center at a school for teenage parents (one site), and a person to review curriculum materials for sex bias (one site). Three of the projects were located at area vocational schools, and the rest were operated through school district offices.

Expenditures Under the Set-Aside at the Postsecondary Level

According to survey results, the 30.4 percent of postsecondary institutions with grants spent the funds for two items that were also common at the secondary level: recruitment (57 percent of institutions, an average of 21.1 percent of funds) and counseling and career development (56 percent of institutions, an average of 16.7 percent of funds). Postsecondary institutions were considerably less likely than secondary districts to spend resources on in-service education (38 percent of institutions, 8.7 percent of funds) and more likely to spend funds on salaries of staff offering nontraditional programs (52 percent of institutions, 22.3 percent of funds). The picture that emerges from the survey is one of funding for recruitment, counseling, and instructional salaries.

The case studies reinforce the survey findings that funds were spent for a substantial number of activities per site. Although our sample was not selected to be representative, the majority of postsecondary projects in the case study communities were located in technical institutes and area vocational centers serving adults. Of the 27 sites, 17 were technical institutes or area centers, eight were community colleges, one was an adult high school, and one was a state college. The range of activities was wide, even within a single site. The bulk of the activities involved recruitment (eight sites, including three that sought men for health fields); career counseling (seven sites); limited economic assistance such as tuition waivers, scholarships, transportation, or child care (eight sites--many of them in conjunction with funds under the single parent set-aside or Title III, consumer and homemaking funds); workshops, films, brochures (six sites); and staff for nontraditional programs (five sites). None of the sites we visited spent funds for in-service education for postsecondary staff, although one site conducted workshops for high school teachers. We found no sites that emphasized job placement with sex equity funds.

The Set-Aside for Single Parents and Homemakers

What the Act Prescribes

New with the Perkins Act is a set-aside of 8.5 percent of the Basic Grant for single parents and homemakers, especially displaced homemakers. Although this program is not exclusively for women, the goal of this set-aside is widely understood to be to enable women who must support families alone, older women who are entering the labor force for the first time, or women who are returning to the labor force after an extended absence to gain the skills and confidence to find and maintain jobs. Federal funds may support the full costs of these programs, and a portion of the funds may be retained for statewide projects.

Additional State Rules

Of the nine states we visited, three restricted single-parent funds to postsecondary institutions. Of the remaining six, secondary disricts could compete equally with postsecondary institutions in three states. The other three states limited secondary institutions to 30 percent, 50 percent, or 70 percent of funds. Two of the six states in which secondary institutions were eligible for funding awarded projects through formula, the rest through competitions or other discretionary means. Priorities placed on competitions at the secondary level included teenage parents, occupational training (as opposed to support services), and minority students.

At the postsecondary level, the amount of state direction varied a great deal across the nine states. States that provided guidance on sex equity were likely to do so here as well, but those that did not provide guidance in one area rarely did so in the other. Three states awarded all funds to a group of displaced homemaker centers. The centers were located in area vocational schools in two of the states and in community colleges in the third. These funds appeared to be used to support the overall operation and services of the centers, including instruction, counseling, and some support services such as child care. As for the other states, two set priorities for local projects, but the rest appeared to place few limits or direction on projects. Two of the most populous states distributed funds by formula without

priorities. A number of states we visited were considering changing their allocation mechanisms (secondary, postsecondary or both) because they found it difficult to generate local interest in mounting programs or because funds were not believed to be targeted currently to students with the greatest need.

Expenditures Under the Set-Aside at the Secondary Level

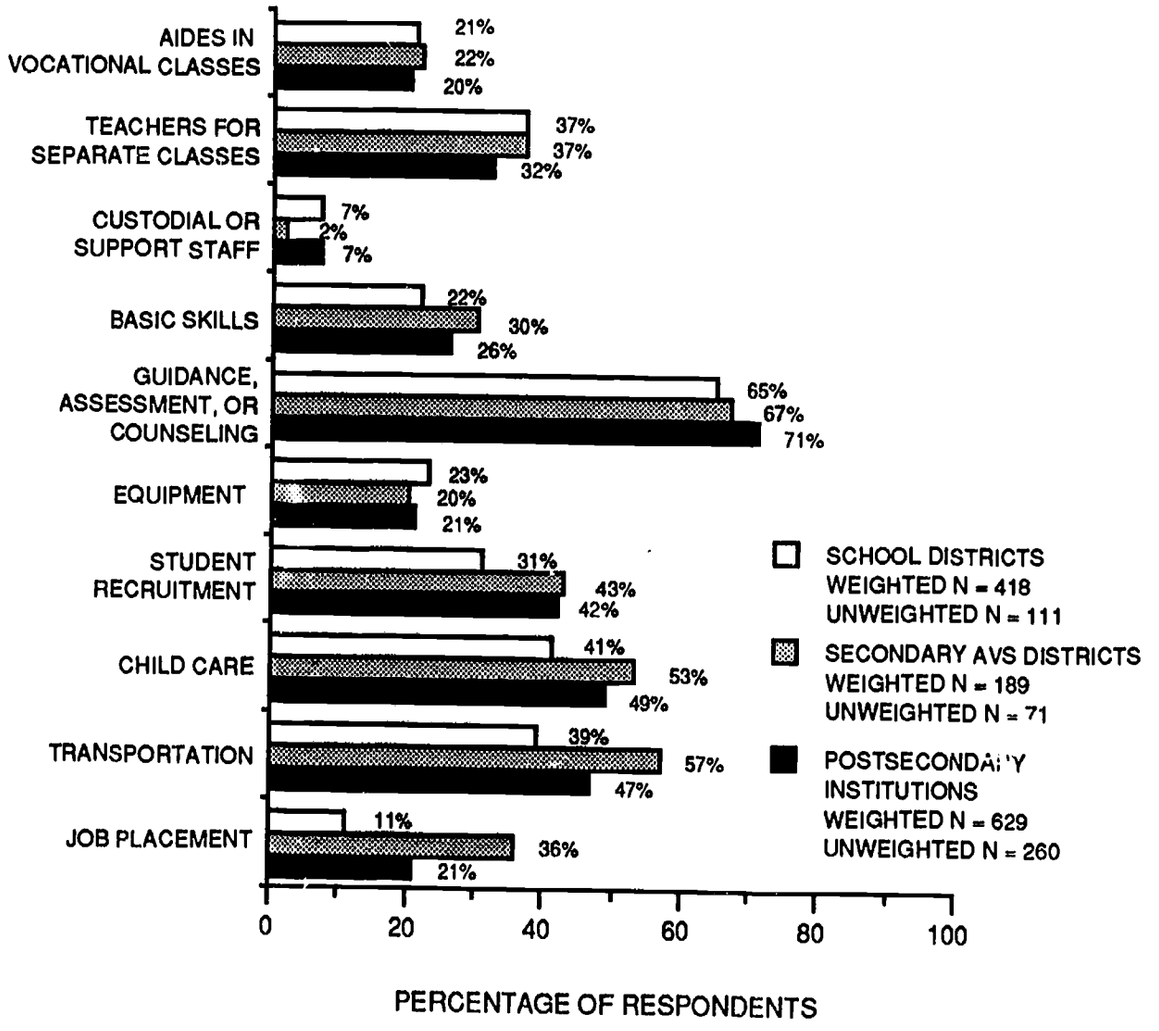
According to survey results, the small number of school districts (5.5 percent) with grants spent the largest share of their resources on guidance, assessment, and counseling (65 percent of districts, an average of 28 percent of the funds), followed by staff for separate vocational classes (37 percent of districts, an average of 19 percent of the funds) (see figure 2.5 and table 2.5). A subset of districts (41 percent) spent some resources on child care, but the average spent was only 9 percent of the funds. Academic remediation in nonvocational classes accounted for 12 percent of the funds.

Spending by the area vocational school districts in the survey parallels that of school districts. Once again, of the 31 percent of area vocational school districts with grants, most (67 percent) spent funds on guidance and counseling, including assessment, with an average of 26 percent of the funds going to this activity. Child care spending was even more common, with 53 percent of the districts indicating spending on this activity, but only 6 percent of the resources were spent for this item. Teachers for separate classes accounted for 17 percent of resources, transportation for 10.5 percent, and tuition reimbursement for 10 percent.[12]

The single-parent programs among the case studies help explain the findings of the secondary survey. Of the 11 school district or area school programs for which we have information, eight were alternative schools or other programs for teenage parents. In most cases the Perkins Act resources were used to provide guidance and counseling; in a few the funds were used for some instructional salaries, for employability skill sessions, or for assertiveness training. Almost all the sites indicated that they provided some transportation

FIGURE 2.5

Single Parent/Homemaker Funds: Percentage Of School Districts, Secondary Area Vocational School Districts, And Postsecondary Institutions Spending Any Perkins Act Funds For Each Category Of Program Activities, 1986-87



SOURCE: See Table 2.1.

Table 2.5

National Estimates of How Single-Parent/Homemaker Set-Aside Funds Were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent Mean	Standard Deviation
Paraprofessionals/aides in regular vocational classes	School districts[a/]	3.2	9.7
	Area school districts[b/]	8.6	22.8
	Postsecondary institutions[c/]	7.8	21.5
Teachers or staff for separate vocational classes	School districts	18.6	31.1
	Area school districts	17.2	27.9
	Postsecondary institutions	13.8	24.9
Custodial or support staff to keep facilities open longer hours	School districts	0.7	3.0
	Area school districts	0.2	1.4
	Postsecondary institutions	1.0	5.2
Basic skills instruction in nonvocational classes	School districts	11.8	30.1
	Area school districts	2.8	6.3
	Postsecondary institutions	5.2	15.8
Guidance, assessment, or counseling	School districts	28.1	34.2
	Area school districts	25.9	32.8
	Postsecondary institutions	31.4	33.0
Equipment	School districts	10.5	26.0
	Area school districts	1.6	4.3
	Postsecondary institutions	2.2	8.7
Student recruitment	School districts	5.3	13.0
	Area school districts	6.1	14.0
	Postsecondary institutions	5.3	11.3
Child care services	School districts	9.2	20.5
	Area school districts	6.4	11.4
	Postsecondary institutions	8.4	17.3

(continued)

Table 2.5 (continued)

National Estimates of How Single-Parent/Homemaker Set-Aside Funds Were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent	
		Mean	Standard Deviation
Transportation	School districts	4.0	8.3
	Area school districts	10.5	23.6
	Postsecondary institutions	5.4	14.8
Job placement services	School districts	1.2	4.9
	Area school districts	3.3	4.9
	Postsecondary institutions	2.6	6.9
Materials and supplies[d/]	School districts	0.6	3.3
	Area school districts	1.1	3.9
	Postsecondary institutions	1.1	5.4
Administration/overhead[d/]	School districts	2.1	11.9
	Area school districts	0.0	0.0
	Postsecondary institutions	2.1	9.2
Tuition reimbursement[d/]	School districts	1.3	10.0
	Area school districts	10.1	27.9
	Postsecondary institutions	3.3	13.8

SOURCE: See table 2.1.

a/ Weighted n = 418; unweighted n = 111
b/ Weighted n = 189; unweighted n = 71
c/ Weighted n = 629; unweighted n = 260
d/ Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

and referrals for child care. A subset of programs provided some direct child care; in one instance the full Perkins Act grant was applied to a day care center in a high school.

Expenditures Under the Set-Aside at the Postsecondary Level

Even more than at the secondary level, postsecondary institutions spent single-parent set-aside funds for guidance, counseling, and assessment. Of the 47 percent of institutions with funds, 71 percent spent some funds in this category, the average being 31.4 percent of all funds. Institutions were also likely to spend some funds on child care (49 percent), transportation (47 percent), or recruitment (42 percent), but the amounts were very small--8.4 percent of funds for child care, 5.4 percent for transportation and 5.3 percent for recruitment. A subset of institutions (32 percent) spent a substantial share on staff for separate classes, because that category accounts for 13.8 percent of the resources. What emerges from the survey is spending in one major category--guidance--and some fragmentation of resources beyond that item.

The pattern of postsecondary assistance that emerges from the case studies is one of recruitment, counseling, and referral for support services. A subset of programs also provided small amounts of direct economic assistance (transportation, tuition waivers, day care), separate vocational offerings (often short-term training), and job search or placement assistance. Single-parent set-aside funds were often combined with the sex equity set-aside and other funds to support larger programs, some of which were operated through women's centers of various sorts. The uniformity of findings across sites suggests a standardized notion of appropriate assistance for women returning to the labor force.

Of the 26 postsecondary projects for which we have detailed information, 15 used single-parent funds to support counseling, including one-to-one or small-group counseling, and courses on assertiveness and self esteem. Seven sites used the support for separate instructional programs, most of them short-term and geared to fields in which women have traditionally found jobs, such as bookkeeping or secretarial work. Four programs in sites we visited used

single-parent funds for financial support in the form of day care, tuition assistance, and transportation, and two used the funds primarily for job placement assistance. Projects in our case studies tended to be located in community colleges (16 of 26), with the rest evenly divided between technical institutes and area vocational centers.

RESOURCE ALLOCATION AND USE UNDER TITLE II(B): GRANTS FOR PROGRAM IMPROVEMENT

What the Act Prescribes

Forty-three percent of the Basic Grant is reserved for program improvement, innovation, and expansion. The states may distribute these funds in any manner they choose, and they may keep a portion for statewide projects. The funds must be matched by states or localities on a 50-50 basis. The Act identifies 25 permitted uses of funds, but the list is not intended to be exhaustive. The uses include traditional state and local activities such as curriculum development, in-service and preservice training, equipment purchases, and student organizations. Funds can also be used in conjunction with the set-asides, to improve or expand programs for disadvantaged, handicapped, or other special groups of students. In the regulations to the Perkins Act, the Education Department added a restriction that certain types of innovations could only be funded for a maximum of three years. Under this interpretation, the costs of maintaining an enlarged program (even if there is no change in the curriculum, clientele, etc.) could be supported with federal funds for three years.

The Act, then, provides states and localities with funds that can be used for virtually any purpose except maintenance of existing programs at their current levels. Hence the resources can be used to add a section of a course, to provide in-service education for teachers, to write a new curriculum, to purchase new equipment, and so on. Congress clearly intended to give vocational educators some of the support they needed to revise their offerings, try new approaches, attract new clienteles, or do whatever else they believed necessary to become more effective. States were, of course, free to establish priorities or other restrictions for the funds.

Potential Problems in Title II(B) Implementation

One major problem with Title II(B) is that among the permitted uses are ones that are ongoing services or may have little to do with improving vocational education. Permitted uses include a variety of ancillary services that are not "one shot" expenditures, such as day care, student stipends, and placement services. In addition, the law allows funds to be used on equipment "necessary to improve or expand programs," but that qualifying statement is omitted from the regulations, meaning that *all* equipment purchases are considered to be program improvement. Hence, one might expect a substantial share of expenditures for this item.

An additional problem with Title II(B) is that its broad scope, combined with the lack of strong measures in the Act or regulations to ensure against nonsupplanting, means that funds could be used for activities that would have taken place without federal funds. The nonsupplanting provision of the Perkins Act has been interpreted as applying to the total state and local outlays for vocational education, not to particular programs, schools, or purchases. In addition, the regulations limit the maintenance of effort provision so that it applies solely to state funds. Although states or localities are required to match the federal program improvement funds, the match can be statewide and does not have to be spent on the same expenditure as the federal funds. Given the long list of approved expenditures (including, for example, such common expenditures as in-service education) the federal rules do not appear to be a powerful means to leverage state and local resources for federal improvement goals.

Finally, some vocational administrators and practitioners believe that Title II(B) is intended to be general aid for vocational education, that this portion of the Perkins Act is the VEA with a new name, and that Title II(A) was the quid pro quo for retaining this portion of federal funds as general aid.

Additional State Rules

In eight of the nine case study states, a single competition or formula exercise was the means for distributing the greater share of the program improvement funds for secondary-level

eligible recipients.[13] One state appeared to allocate all program improvement funds without holding either explicit competitions or possessing a formula. In most of the states, the application packages to districts for formula funds or for competitions reiterated the federally specified purposes, although priorities were noted and a few states placed additional restrictions on the uses of funds. Two states prohibited the purchase of equipment, urging instead that funds be used for curriculum development, staff training, and other purposes; both had state categorical programs designed to pay for vocational equipment at the secondary level. One state limited equipment purchases to 10 percent of funds or $50,000. Other states either encouraged equipment purchases with all funds or specified particular portions of the funds solely for equipment purchases. State officials appeared more likely to provide direction on local use of portions of Title II(B) than on the use of the set-asides at the secondary level.

None of the states we visited limited the use of program improvement funds at the postsecondary level. A few of these states established priorities for improvement funds. To some extent, these priorities were concerned with issues of disadvantaged youth and adults. One state combined a portion of program improvement funds with resources from the state department of social services and mounted a competition to encourage programs for welfare recipients and persons in need of vocational rehabilitation. Another allocated program improvement funds to a statewide program for at-risk youth. A few states targeted a portion of the funds to establishing articulation agreements between secondary districts and postsecondary institutions or establishing industry-education partnerships.

Expenditures Under Program Improvement at the State Level

Unlike the case with the set-asides, substantial amounts of program improvement funds were retained at the state level for statewide projects. In the nine states we visited, the amounts retained varied from less than 10 percent to 40 percent of all program improvement funds. Almost all the statewide projects we observed were concerned with secondary vocational education. Because we did not realize the scope of statewide projects when we

planned the survey and case studies, we did not set out to study this phenomenon initially. As a result, we did not collect systematic information on the amounts retained or the activities funded.

Local survey expenditure data indicate that a substantial amount of program improvement funds are retained for statewide projects. As noted in the previous chapter, program improvement funds account for 31 percent of funds spent locally in 1986-87, although the set-aside is 43 percent of the Basic Grant. This finding suggests that perhaps a third of the funds cannot be accounted for in local expenditures. The survey findings are, however, only an indirect measure of the amount of funds retained.[14]

Six items for which program improvement funds were spent at the state level are as follows:

1. **Curriculum Development.** Most states have used program improvement funds to develop competency-based curriculum outlines for occupational fields, task lists, and desired student outcomes. A few states have shifted away from competency-based occupational curriculum development recently toward the development and testing of curricula aimed at incorporating basic skills into vocational instruction or at the development of curricula for general vocational skills applicable across a wide range of jobs. Several states we visited have used federal funds for curriculum development since at least the mid 1970s. Mechanisms to support the activity include grants and contracts with interstate consortia, universities, individual consultants, and school districts, as well as in-house efforts involving state staff, technical committees, and local teachers. Well-known consortia and curriculum developers with which states have contracts include the Southern Regional Education Board, Vocational Technical Consortium of States, Agency for Instructional Technology, and Center for Occupational Research and Development. States appear to invest in curriculum development to upgrade vocational offerings, to try to integrate academic and vocational education and to highlight the value of vocational education.

2. **Regionalization.** Half of the states visited have targeted federal funds to create and support regional administrative and resource centers for vocational education. Not only have state-retained program improvement funds supported regional activities, but localities often "buy into" the regional entities with set-aside or other funds. The regional entities may provide services under other portions of the Act, such as assessments for disadvantaged and handicapped students.

3. **Staff Development.** Some states have funded universities to provide various in-service activities, while others have carried out a portion of the activities in house. In a few states federal funds have underwritten a substantial portion of vocational teacher training.

4. **Student Organizations.** Statewide competitions and other activities have been supported with federal funds.

5. **Evaluation.** Some states have entered into contracts with universities or consortia for evaluations mandated under the Perkins Act, while others have conducted them in house.

6. **Integrated Social Services.** One state has used a portion of its program improvement funds to support a competition with other state agencies supplying state and federal resources. The aim was to encourage schools to coordinate educational services with social services and other assistance for welfare recipients.

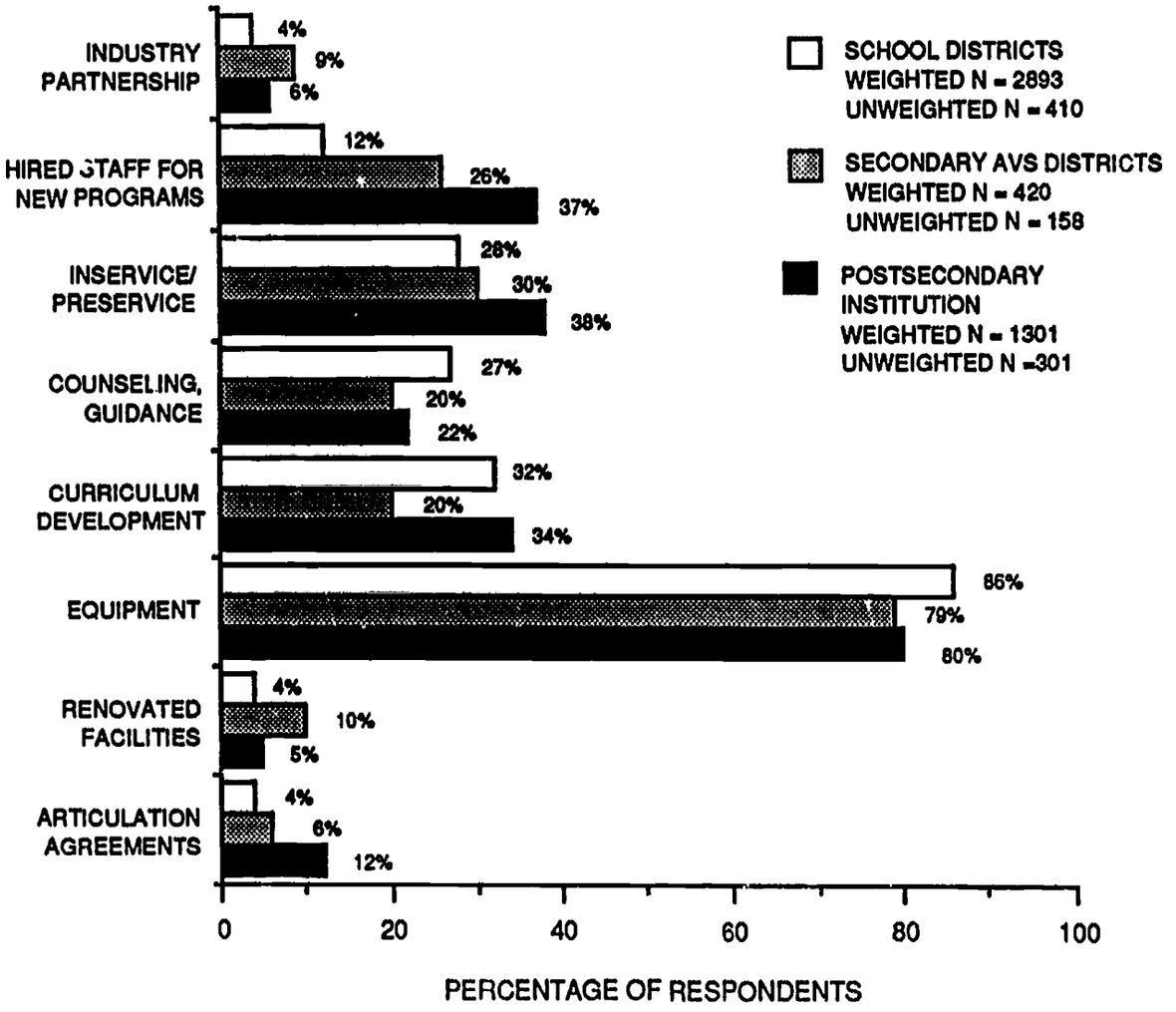
Expenditures Under Program Improvement at the Secondary Level

School districts spent most of their Title II(B) funds on equipment purchases (see figure 2.6 and table 2.6). Eighty-six percent of the districts with grants spent funds for equipment. The average amount spent was 63 percent of program improvement funds, with an additional 5 percent for supplies. The median amount spent by districts in our sample was 75 percent of Title II(B) funds. No other category--including staff, in-service education, counseling, curriculum development, articulation agreements, or industry-education partnerships--was an expenditure item in more than a quarter of all districts, and no other single item accounted for more than an average of 7 percent of expenditures.

Like school districts, area school districts spent the bulk of their funds for equipment purchases. Seventy-nine percent of the area school districts with grants spent at least some portion for equipment. The average amount spent by all recipients was 62 percent, with 3 percent more for supplies. The median amount was 80 percent, slightly more than for school districts. Area school districts spent, on average, about 13 percent of their program improvement funds for staff for new or expanded programs, so their average expenditures in all the other categories were even lower than those of school districts.

FIGURE 2.6

Program Improvements Funds: Percentage Of School Districts, Secondary Area Vocational School Districts, And Postsecondary Institutions Spending Any Perkins Act Funds For Each Category Of Program Activities, 1986-87



SOURCE: See Table 2.1.

Table 2.6

National Estimates of How Program Improvement Funds were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent		
		Mean	Standard Deviation	Median
Hired staff for new or expanded program	School districts[a/]	6.2	20.4	0
	Area school districts[b/]	12.9	25.5	0
	Postsecondary institutions[c/]	14.7	26.4	0
In-service and pre-service training	School districts	7.2	19.4	0
	Area school districts	6.8	18.1	0
	Postsecondary institutions	10.9	25.1	0
Expanded counseling and guidance services	School districts	4.1	12.4	0
	Area school districts	5.2	14.9	0
	Postsecondary institutions	5.0	16.0	0
Development of new or modified curricula	School districts	9.9	20.6	0
	Area school districts	5.3	13.5	0
	Postsecondary institutions	9.4	20.3	0
Equipment	School districts	63.0	37.7	75.0
	Area school districts	61.6	41.3	80.0
	Postsecondary institutions	53.9	41.3	60.0
Renovated or expanded facilities	School districts	0.8	6.5	0
	Area school districts	1.8	6.3	0
	Postsecondary institutions	0.6	5.3	0
Articulation agreements with secondary school	School districts	N/A	N/A	N/A
	Area school districts	N/A	N/A	N/A
	Postsecondary institutions	1.3	4.9	0
Articulation agreements with postsecondary	School districts	0.3	2.1	0
	Area school districts	0.4	1.6	0
	Postsecondary institutions	0.6	2.9	0

(continued)

Table 2.6 (continued)

National Estimates of How Program Improvement Funds were Spent by School Districts, Separate Secondary Area Vocational School Districts and Postsecondary Institutions, 1986-87

How Funds Were Spent	Type of Eligible Recipient	Percentage of Funds Spent		
		Mean	Standard Deviation	Median
Industry-education partnership agreement	School districts	1.0	7.7	0
	Area school districts	1.3	4.4	0
	Postsecondary institutions[c/]	0.8	3.8	0
Materials and supplies[d/]	School districts	4.9	16.3	0
	Area school districts	3.3	11.6	0
	Postsecondary institutions	N/A	N/A	N/A

SOURCE: See table 2.1.

a/ Weighted n = 2,893; unweighted n = 410
b/ Weighted n = 420; unweighted n = 158
c/ Weighted n = 1,031; unweighted n = 301
d/ Category coded from "other" responses and is likely to underestimate actual percentage of expenditures.

Case studies confirmed the widespread use of program improvement funds for equipment purchases, but indicated that there were other uses as well--particularly when states prohibited equipment purchases with federal funds. We sought to determine what kinds of equipment were purchased and to what ends. In comprehensive high schools, 15 of 22 sites used all or most of their funds for equipment purchases, with well over half of the equipment-oriented sites purchasing computers, software, printers, or related items. The rest purchased specifically vocational equipment such as computer-assisted drafting equipment or computerized milling equipment. Equipment purchases were even more common in area vocational schools than in regular schools districts, accounting for a portion of funds in almost every site visited. In area schools, however, funds were about twice as likely to be spent for specifically vocational as for computer equipment.

Districts in states that expressly forbade the use of federal funds for equipment had widely variable uses of funds under Title (II)B. Two comprehensive high schools used funds to implement the Principles of Technology curriculum (which may entail equipment purchases as well as curriculum materials and in-service training). Other uses in comprehensive high schools included support for student organizations (two sites); in-service training (two sites); and, in one site each; industry-education partnership agreements, articulation agreements, customized training, and compensation of vocational teachers for time served on committees. Area schools also used funds to expand guidance and counseling (three sites), curriculum development (three sites), hire a job placement coordinator (one site), write articulation agreements (one site), support a teenage parent center (one site), and conduct a public relations campaign promoting vocational education (one site).

In only three of the 44 sites for which we have information did special populations figure in the use of program improvement funds. In one site funds were used to purchase modified equipment for handicapped students, and in another a counselor for handicapped students was supported jointly with the Office of Vocational Rehabilitation. The third effort was the teenage-parent program already noted. Some local administrators expressed the view

that the amount of federal funds provided for special populations is excessive, and they see the program improvement funds as a way to support vocational education for other students.

Local personnel said they decided to use funds for equipment purchases for several reasons. Historical precedent was important. Many administrators indicated that they had used federal funds for equipment for a long time; in fact, some called it "federal equipment money." Many stressed that they have come to rely on this source of funding from year to year. Some administrators also noted that local school boards were reluctant to approve equipment purchases, and the availability of federal funds for this purpose permitted them to bypass the local appropriation process. Finally, equipment purchases were viewed as "safe" expenditures that ensured the district would not face an audit exception. In the states where program improvement funds were not matched with state funds, few communities had any difficulty in finding the funds necessary to match federal resources, but the match was rarely used for equipment.

Expenditures Under Program Improvement at the Postsecondary Level

Eighty percent of postsecondary institutions with grants (58.7 percent of institutions in the sample) spent at least some funds for equipment purchases. The average amount spent, across all institutions, was 53.9 percent, and the median amount was 60 percent. Ironically, despite less state guidance on spending priorities at the postsecondary than the secondary level, documented in the case studies, postsecondary-level recipients had slightly lower rates of equipment expenditures than secondary-level recipients. Postsecondary institutions also spent some funds on staff for new or expanded programs (37 percent of districts, 14.7 percent of funds), in-service education (38 percent of districts, 10.9 percent of funds), and curriculum development (34 percent of districts, 9.4 percent of funds).

Among the case study sites, equipment purchase was the dominant postsecondary expenditure. Of the 24 sites for which we obtained some information, all but five spent all or most of their Title II(B) funds on equipment, usually on computer-assisted technical hardware.

Among the items that were purchased by more than one of the sites visited were computer numeric control hardware, computer assisted drafting equipment, digital typesetting equipment, auto diagnostic equipment, and general-purpose microcomputers. Accompanying software and printers also were purchased. Of the subset of sites for which detailed equipment purchase information is available, postsecondary institutions tended to buy technical equipment (12 sites) rather than microcomputers (three sites).

CONCLUSIONS

At both secondary and postsecondary levels, Perkins Act expenditures under the disadvantaged set-aside appear to have been weighted most heavily toward guidance and counseling. Case study information indicates that assessments were the major form of guidance supported directly with federal funds. Various vocational instructional services, including a portion of the salaries of teachers and aides, also have been supported. The case studies also suggest that academic remediation has been a major use of federal funds aimed at instruction, although this was not the finding of the survey.

Secondary-level students who are most likely to have been served are those who were academically disadvantaged and received their vocational education in a location other than a comprehensive high school. This finding stems from the broader finding that, at the local level, federal funds tended to be spent in special facilities--area vocational schools, vocational high schools, and alternative schools for disadvantaged students. At the postsecondary level, academic disadvantage has remained the basis for service.

Handicapped students also received guidance and counseling as the main federally funded service in school districts. In area vocational school districts, however, federal funds were most commonly used for instructional services (aides especially). We speculate that this difference is due to the likely development of IEPs (including vocational assessments) in home high schools. The difference may also be due to the possibly higher costs of separate programs for handicapped students in area schools, costs that are easier to justify as "excess." Our case

study finding was that a substantial share of federal funds have been used to support separate programs for handicapped students--students with IEPs--in both settings. Federal funds tend to flow to institutions other than comprehensive high schools for students with moderate cognitive impairments.

At the postsecondary level, handicapped set-aside funds have supported guidance and counseling. In the case studies, where vocational instruction or equipment was supported, about half the projects were designed for students with physical disabilities and half for students with cognitive disabilities. Vocational students with cognitive disabilities were usually in separate classes. Many institutions knew little about the extent of handicaps among students. There were no formal rules for within-institution targeting to particular students.

The set-aside for adults appears to have supported the general adult vocational programs of school districts (including area vocational schools) and postsecondary institutions. Few states have established priorities for the funds. In the case studies, community colleges were more likely to identify a specific use of the funds, but overall, few specific purposes were identified.

Despite their extremely small size, sex equity grants have been spread among a substantial number of activities. At the secondary level, common uses included in-service training, recruitment, and counseling. Area vocational schools had similar patterns but showed somewhat less support for in-service education and more for instructional salaries. Postsecondary institutions had spending patterns similar to area schools. Case studies revealed a substantial share of resources for student recruitment, workshops, seminars, counseling and, at the postsecondary level, a small amount for direct economic assistance.

Single-parent/homemaker funds have been used for guidance and counseling at secondary and postsecondary levels. From the case studies it appears that the bulk of the counseling has been connected with teenage parenting programs at the secondary level. At the postsecondary level, case studies found one-to-one as well as group counseling, and support

through the Perkins Act for short-term vocational training or direct financial support in some sites.

A sizable share of Title II(B) funds (program improvement) appears to have been retained for statewide projects. The most common use was curriculum development. Other uses included establishing and maintaining regional resource centers for vocational education, and staff development (in-service and preservice education).

At both secondary and postsecondary levels, most program improvement funds have been used to purchase equipment. Equipment purchases described in the case studies appear to have been about equally divided between computers (and related software and printers) and technical equipment for specific vocational programs. School districts were more likely to purchase computers, whereas area schools and postsecondary institutions somewhat more likely to purchase technical equipment. In the few states that forbade the use of the funds for equipment, funds were used for a wide range of activities including adoption of the Principles of Technology curriculum, support of student organizations, and in-service training. Few program improvement funds supported programs or services for special populations.

NOTES

1. The first set of case studies was conducted by E.H. White and Co. in 18 communities. The individual case studies will be available soon. The survey of eligible recipients and the second set of case studies (nine states and three communities in each state) were conducted by Abt Associates, Inc. The project director was Mary Ann Millsap. Findings are summarized in Mary Ann Millsap, Christine Wood, Joann Jastrzab, and Camille Marder, *State and Local Response to the Carl D. Perkins Act. Case Study Analysis. Final Report* (Cambridge, MA: Abt Associates, Inc., January 31, 1989); and Janet P. Swartz, *State and Local Response to the Carl D. Perkins Act. Survey Analysis. Final Report* (Cambridge, MA: Abt Associates, Inc., January 27, 1989). Additional analyses using the survey data were conducted by Decision Resources Corporation in Washington, DC. Analysis of the E.H. White case studies was conducted by Lana Muraskin at NAVE.

   The distribution of the set-aside of 1 percent for incarcerated persons is described in the state policy chapter of the NAVE *Second Interim Report*. None of the sites visited yielded projects, and no sample of correctional institutions was included in the survey of eligible recipients.

3. A careful reading reveals certain inconsistencies that lead the reader to conclude that the Congress did not truly mean "enrolled in vocational education" as the basis for notification of opportunities in vocational education, because students are to be told of the opportunities in vocational education in order to make an enrollment decision. Nor did the Congress mean students "who require special services... to succeed in vocational education" for section 204(b) or (c), because such need would presumably be identified through the assessment process. In short, it would appear that Congress intended section 204(b) to apply to all students who are disadvantaged or handicapped, and section 204(c) to apply to all students who are disadvantaged and handicapped and enrolled in vocational education regardless of their special needs. Ironically, even this view excludes handicapped and disadvantaged students who might benefit from vocational education but have not chosen to "enroll" prior to the assessment.

4. See, for example, L. Allen Phelps, Thomas R. Wermuth, Robert L. Crain, and Patricia Kane, *Vocational Education for Special Populations: Options for Improving Federal Policy*, draft paper, National Center for Research in Vocational Education. University of California, Berkeley, February 1989.

5. The use of the terms *district* and *institution* is necessitated by the ways in which data were collected. The unit of analysis was a community. Within that community we visited districts and area vocational centers with vocational programs. In some cases, information is obtained on a district wide basis, while in others the information applies to a particular institution. Another way to think of the data is that we have information for 44 separate "projects."

6. Both these states were included in the first set of 18 case studies, so discussion of this phenomenon is not included in the Abt Associates, Inc., case study report cited in note 1. It is, however, an important example of the role of state policy in affecting the uses of federal funds.

7. Postsecondary institutions spending funds under the disadvantaged set-aside include community colleges, technical institutes, and area vocational schools. To obtain enough observations we have combined all three types of "less-than-baccalaureate institutions" in most of the analysis. Because we are now observing institutions rather than districts or systems, the issue of targeting of resources among institutions within a system does not apply. It should also be noted that section 204(c), the service mandates, do not apply to the postsecondary level.

8. For example, assessments, remediation, and career counseling might all be reported as provided by a single institution. At the secondary level, districts were more likely to report funds for one purpose.

9. See NAEP data results, reported in the NAVE report on access to high-quality vocational education.

10. A substantial number of sites were unable even to supply this number, and if they were shown numbers of disadvantaged enrollees in vocational education that we had obtained from the state education agency or another state agency, they did not know how those numbers were generated.

11. See U.S. Department of Education, *The Vocational Education Study: The Final Report*, chapter 8, September 1981.

12. The tuition reimbursement item may indicate that some of what is reported here is actualiy postsecondary education. The transportation item may also reflect postsecondary education or it may reflect costs associated with transporting teenage parents to alternative settings in area vocational schools.

13. One of the nine states would not supply information on how funds were allocated.

14. The total funds accounted for in the survey were approximately $637 million. If we assume that the Basic Grant funds available were about $730 million (after deducting state administration), then the $202,123,000 in program improvement funds we identified would be only 28 percent of total local expenditures--an even smaller figure.

CHAPTER 3

SUMMARY AND IMPLICATIONS OF THE FINDINGS

This chapter discusses the portrait of funds distribution and expenditures presented in this report. We consider here whether funds reached their intended beneficiaries and were used well. For each major portion of the Basic Grant we consider the following questions:

- Do the services that are purchased help to meet the goals of the legislation?
- Are services appropriate and adequate to address the social and educational problems that underlie the Act?
- Do districts and institutions use Perkins Act resources to carry out activities that are additional (additive), or would they undertake them in any event because of local needs or because they are compelled to do so by other policies and requirements?

After summarizing and discussing the findings, we conclude with recommendations for reauthorization of the Perkins Act. The recommendations included in this chapter are designed to *strengthen the current provisions* of the Act. In reports on secondary and postsecondary vocational education, NAVE makes recommendations for altering the structure and provisions of the Perkins Act.

To answer questions about the appropriateness of services provided, we examine what we have learned from assessment of the Act itself, as well as from studying the targeting and expenditure of funds, considering what is known from other sources about the needs of special populations or reform in vocational practice. We draw on information about rates of participation in vocational education and other issues discussed more fully in the NAVE report on access to high-quality vocational education, as well as in earlier NAVE publications.

It is impossible to answer the "additivity" question conclusively. Because federal funding has been a portion of the support for vocational education for almost 75 years, it is impossible to know what vocational education would look like without it. States and many localities rely on receiving federal subsidies for certain activities from year to year. These expectations affect their priorities and behavior in ways that cannot be measured. With respect

to which activities might not have taken place without the Perkins Act, all answers are, ultimately, suggestive rather than definitive. Nonetheless, we can make some observations about additivity that may help inform future legislation.

STATE ADMINISTRATION OF THE PERKINS ACT

Across the country there were great differences in the rates at which states allocated Perkins Act funds among secondary and postsecondary sectors in 1986-87, with postsecondary shares ranging from 8 to 100 percent. We estimate that, nationally, close to 40 percent of funds were spent for postsecondary education. In addition, separate area vocational school districts appear to have received a disproportionate share of the federal funds that flowed to secondary education. Area vocational school districts and postsecondary institutions received much larger grants than school districts on a per-pupil basis. If only the school districts are considered, there is some evidence of targeting of funds to districts with higher rates of poverty, but not to districts with higher proportions of minority populations. If Pell Grants are used as a measure of need, there is no evidence of comparabl targeting at the postsecondary level.

In states we visited during case studies, the state office administering the Perkins Act was always responsible for secondary vocational education, but in only one of the nine states was that office responsible for all secondary and postsecondary vocational education. In at least half the states visited, the office administering the Act was able to limit the eligibility of institutions not under its purview to grants under the Act. Most of the states had a preset portion of funds available for secondary and postsecondary education or for particular institutions. The unequal distribution of resources across sectors and institutions meant that intended beneficiaries in a given sector or set of institutions were considerably more likely to receive support in some states than in others.

Most school districts received awards that were too small to mount new initiatives of any size. Half of all school districts received $7,910 or less, and three quarters of the districts

received $25,000 or less, insufficient resources to pay for even one full-time teaching position. By contrast, area vocational school districts and postsecondary institutions received median grants exceeding $90,000.

IMPROVING VOCATIONAL ACCESS AND UPGRADING SERVICES FOR DISADVANTAGED STUDENTS

Do the Resources Reach Those Most in Need?

If we assume that the students most in need are concentrated in places with the highest poverty rates, the picture that emerges from this study is mixed. First, the interstate distribution of Perkins Act funds and the poverty rates for youth are not significantly related. Within states, both the survey of eligible recipients and the analysis of GEPA data indicated that total Basic Grant resources are somewhat greater in school districts with the highest rates of poverty. At the same time, however, the GEPA data suggest that the additional funding increment for students in districts with high poverty does not carry over to students in districts with high concentrations of minorities, single-parent households or persons with limited English proficiency. The introduction of the intrastate formula and the requirement that 50 percent plus one dollar of the basic grant be distributed to economically depressed areas does not appear to have affected the share of resources going to high poverty school districts.

At the postsecondary level, we observed an inverse relationship between the percentage of students receiving Pell Grants and the likelihood of obtaining an award under the Perkins Act (although most postsecondary institutions in our survey received awards). It is important to remember that we have no evidence on the targeting of resources by need to secondary-level area vocational school districts, and our measure of need for postsecondary institutions is a weak one.

For the disadvantaged set-aside alone, we found that school districts with the highest poverty rates had a greater likelihood of receiving an award, and their per-student disadvantaged (and handicapped) set-aside awards were larger than those of other districts. Within districts, however, our case studies were unable to uncover any systematic means for

funds distribution or for service provision based on student or programmatic characteristics. Many districts did not know how many students were eligible for services, and some did not know how many were actually served. The only systematic distribution mechanism we uncovered through the case studies was a tendency to locate services in facilities other than comprehensive high schools--such as area vocational facilities, vocational high schools, and alternative schools.

Perhaps most important, typical set-aside grants appeared to be too small to provide much service under any circumstances. This condition was most apparent in regular school districts. Under the disadvantaged set-aside, the median school district grant under the disadvantaged set-aside was $4,000. At area vocational school districts the average grants under the set-aside were larger and more likely to be spent on instructional services.

The concentration of resources in special facilities--area vocational schools, alternative schools, and the like--means that funds are less likely to be spent to upgrade vocational programs in comprehensive high schools, where about 85 percent of all vocational courses are taken. Data presented in the NAVE report on access suggest that students in high schools with the greatest concentrations of poor students are less likely than other students to have access to area vocational schools or to a wide range of vocational offerings in comprehensive high schools. The policy question raised by the combination of findings is clear: Should federal legislation be concerned primarily with upgrading the quality of the programs taken by most disadvantaged (and advantaged) students in comprehensive high schools, or should it actively encourage more disadvantaged students to attend special facilities? Most broadly, should funds follow the students or should they flow to institutions most in need?

Are the Services that are Provided at the Secondary Level Appropriate?

In the case studies we found that most services were provided to academically disadvantaged students. Services included counseling--especially assessment--and academic remediation, with related equipment purchases. Services were provided to students who

qualified under the definitions in the Act, but few were linked to increasing the access of those students to high-quality vocational education or otherwise upgrading their offerings. Most services were provided without reference to changing the vocational program in which the student was enrolled. Assessments were provided to students who were eligible (according to federal definitions); remediation or other instructional assistance was provided when students had general academic difficulties or specific difficulties affecting their vocational performance. Local administrators told field staff that few additional resources were available from other sources to support academic remediation at the secondary level.

In the case studies, the most common approach to provision of academic remediation was to identify students who were enrolled in vocational education and who appeared to be having academic difficulties as measured by standardized tests or informal means such as teacher opinion, and refer them to learning laboratories or special classes. According to the case studies, academic remediation might address math or English skills related to a current vocational course, but that link was not always evident. Sometimes the main criterion for remediation at the secondary level was the need to pass a minimum competency examination for graduation. Although the Perkins Act says that academic remediation must be "related" to the student's vocational program, the regulations do not specify how "relatedness" is to be established. In the absence of such rules, some localities apparently have used Perkins Act funds to offer or augment general academic remediation. Survey results suggest a greater use of federal funds for aides in vocational classes than do case study findings.

Testing and other assessment devices may be good diagnostic and motivational tools, but it has proven difficult to fit the assessments conducted with Perkins Act funds into an overall "access improvement" plan for a student. Although an assessment could be an important first step in finding the most challenging vocational program, in many schools it is an isolated event of little consequence to vocational placement. In many sites, academically (or economically) disadvantaged students already enrolled in vocational education are provided with a battery of interest and ability tests and other measures designed to identify the training and jobs for

which they are suited. Yet in interviews with counselors and administrators, field staff found that, in many cases, the assessment does not play much role in placing a student in a particular vocational program.

Counselors and teachers were sometimes unclear about what to do with the results of vocational interest or ability tests. Often the assessment was viewed as motivational--alerting students to the large number of different job choices for which they might be suited and perhaps broadening their career horizons. In small towns and rural areas particularly, the district's offerings or the local job possibilities were quite limited, so there was no way students could enroll in programs of their choice. In many sites, the persons conducting the assessments spoke of the need to provide training to counselors and teachers on ways to use the information, but the problem appears to be much more basic. The program reform goals of the Perkins Act have not been translated into practice through the assessment process.

At the secondary level, services were rarely provided to economically disadvantaged students who did not have academic deficiencies. This decision seems reasonable given the types of services that were provided. In the few case studies where economic disadvantage was a criterion at the secondary level, the service was likely to be an assessment. (The one exception in the case studies was day care for teenage parents, supported under the single-parent set-aside.) In survey results, few disadvantaged set-aside funds were spent for economic assistance, such as paid work experience, designed to enable poor students to enroll in or complete vocational programs. Nor was job placement more than a rare use of Perkins Act funds, even though poor students might need jobs at or before completion of their educational program.

In general, school personnel were understandably uneasy about singling out students for help on the basis of economic characteristics that did not appear to be linked to achievement and might have stigmatizing effects. Serving poor individuals on the basis of poverty alone makes sense in some cases--for example, providing financial aid to stay in school. In general, however, targeting to economic disadvantage appears to make sense only with respect to

institutions (i.e., across schools), for upgrading the quality of offerings to which poor students have access. In other words, the hope that the Perkins Act would serve as an incentive to upgrade vocational programs in schools where poor students are concentrated, and that the federal funds would be used to provide the additional help needed to succeed in more challenging offerings, has not been realized.

Requirements in the Perkins Act contribute to the difficulty, because several provisions emphasize service to individual students with particular deficiencies. These provisions include the definitions of disadvantaged (and handicapped) students who qualify for service, as well as Section 204(c), the service mandates. These provisions call for a model of service that assumes that the educational offerings are adequate but that certain persons need additional assistance to be successful in those offerings (e.g., students who are handicapped or who read poorly). But the Perkins Act also assumes that a *class* of students (those who are economically disadvantaged) is enrolled in inadequate programs or has not enjoyed the same access to high-quality offerings. The "solutions" continue to be framed in the individual assistance mode, however.

We did not have enough survey or case study observations to reach definitive conclusions about support for limited-English-proficient students. Survey data show that far more districts have LEP students enrolled in vocational education than report explicit Perkins Act expenditures for this group. It appeared, however, that at least some LEP students were receiving additional vocational tutoring in their native language either in vocational classes or outside of class. Case studies confirmed that many districts with federal funds and LEP students enrolled in vocational education were providing no particular services for this group.

Are the Services Provided at the Postsecondary Level Appropriate?

The link between services to disadvantaged students and program access and upgrading was no more highly developed at the postsecondary level. The services delivered were similar to those at the secondary level. A small subset of postsecondary institutions used federal funds

to recruit high school dropouts to training programs; however, an activity that directly promotes greater access because many of these students would probably not receive training without it. Academic remediation at the postsecondary level may be even less tied to vocational instruction than at the secondary level, because postsecondary institutions may demand particular levels of academic performance before allowing students to enroll in vocational programs.

Few postsecondary recipients were spending Perkins Act resources on job placement, but many appear to weight services to the front end--recruitment, assessment, and remediation. Both types of service are important. As described in the NAVE report on postsecondary vocational education, disadvantaged students face barriers to both access *and* completion of degrees and certificates at less-than-baccalaureate institutions. What may be needed, then, are greater incentives to increase institutional and program access and to encourage all students, but especially disadvantaged students, to complete their vocational programs.

Are the Services for Disadvantaged Students Additive?

The substantial use of Perkins Act funds for assessments and other types of vocational counseling suggests that the Act has served to increase these activities. Local administrators interviewed in case studies indicated that they were conducting more assessments than in the years before the Act went into effect; they were aware of the Act's requirement to provide the assessments and credited it with a portion of the increase.

A further indication of the extent to which the Act may have increased the rates of assessment is the survey finding that districts with support under the disadvantaged set-aside were more likely to indicate that they provided assessments to all or most academically disadvantaged students (see table 3.1). There was a positive relationship between receiving funds and providing assessments. Districts with greater funds per capita were more likely than those with less funds per capita to provide assessments. But districts with greater funds were no more likely than those with less or no set-aside funds to provide other potentially

additional services stemming from assessments including academic remediation, summer jobs, alternative schools, curriculum modification, and guidance and counseling.

Table 3.1

Percentage of School Districts Where "All" or "Most" Academically Disadvantaged Students Received Selected Services, by Level of Per-Pupil Perkins Act Funds, Disadvantaged Set-Aside, 1986-87

Selected Services	Level of Perkins Act Disadvantaged Set-Aside Funds in District			
	None	Low	High	Total
Assessments	68.7	73.5	86.9	78.0
Remediation in vocational classes	55.2	62.6	60.0	60.2
Remediation in other classes	77.5	63.7	50.6	60.9
Summer jobs related to vocational education	26.4	1.74	4.8	7.3
Alternative or school within school	29.6	7.1	6.2	10.7
Modified curriculum	34.7	20.1	25.5	24.8
Guidance and counseling	71.4	79.4	85.1	80.2
Transition guidance	62.6	78.8	78.0	75.6

SOURCE: Additional Analyses of Survey of Local Vocational Education Practices, Decision Resources Corporation, 1989.

NOTE: Per-pupil refers to total enrollment in district, grades 9 through 12.

The extent to which the Act provides students with more remediation than they would otherwise have obtained is less clear. At both secondary and postsecondary levels, students may be selected for remediation in accordance with their overall academic performance, not their particular difficulties in a vocational program. The remediation is then presumably

geared to their academic difficulties. In some school districts, it is explicitly designed to help the student pass examinations or courses required for graduation. In many states, students are entitled to academic remediation under federal or state compensatory education programs or remediation programs tied to state-level academic reforms. In these cases students would seem to be entitled to remediation even without the Perkins Act, although we cannot say that they would get it.

Area vocational school administrators noted that the Perkins Act allows remediation to take place in area vocational schools. Without federal funds that remediation would not be available, so secondary students who needed remediation would not be able to attend the area vocational school. In other words, although students might obtain remediation, the location would be different.

Analysis of local survey responses for school districts indicated no clear connection between receipt of Perkins Act disadvantaged set-aside funds and greater amounts of remediation in academic skills (see table 3.1). Districts with lower set-aside funds per pupil were slightly more likely than those with higher per-pupil funds to provide remediation in vocational classes. Those with no funds were less likely to provide remediation in vocational classes but more likely to provide remediation in nonvocational classes. These findings suggest that the availability of funds influences the setting for academic remediation.

Given the Act's weak nonsupplanting and maintenance of effort requirements and the lack of any regulatory limits on basic skills instruction "related" to vocational education, allowing funds to be used for basic skill instruction without limitation appears to invite funds substitution.[1] This concern, which applies at both secondary and postsecondary levels, will continue to be important as Congress considers ways to link academic and vocational education in future legislation.

Only full-scale audits could generate evidence to determine the extent to which aides and other instructional staff are additional, and even then findings would not necessarily be conclusive. The use of aides does, on its face, suggest more intensive vocational instruction or

other vocationally oriented service. Much of the federal support of instructional services identified in the case studies took place in special settings--area vocational schools, alternative schools, schools within schools. It is quite possible that such institutions have higher per-student costs than comprehensive high schools, meaning that they already incur "excess" costs for students, and the Perkins Act provides an opportunity to support a portion of those costs. If that is the case, it would mean that Perkins Act funds are being "attributed" through bookkeeping to what are already high cost activities, and would demonstrate again the need for an effective nonsupplanting rule at the appropriate level of aggregation (i.e., the school or the vocational program).[2]

UPGRADING ACCESS TO VOCATIONAL EDUCATION AND PROVIDING SERVICES TO HANDICAPPED STUDENTS

Do the Services Go to the Students Most in Need?

From the case studies we have learned that services go to students with Individualized Education Plans (IEPs) at the secondary level and to students with both physical and cognitive impairments at the postsecondary level. If there is targeting of resources, it appears to be much the same as for the disadvantaged set-aside--funds tend to flow to special facilities at the secondary level. This is true with respect to the division of funds among school districts and area vocational districts as well as within school districts, the latter information derived from the case studies.

The overall grant size and per-student dollars under the handicapped set-aside varied tremendously. Once again, most school districts did not receive sufficient resources to pay for much additional service, because the median set-aside award was $3,000. Area vocational school districts and large school districts were somewhat better off. Even when resources were concentrated on a subset of students in special facilities or programs, however, the per-student dollars were small. The typical postsecondary institution received a set-aside somewhat smaller than that of an area vocational school district but considerably larger than that of a school district.

Are the Services at the Secondary Level Appropriate?

As discussed fully in the NAVE report on access, handicapped secondary students take more vocational education than other students, and vocational education occupies a greater proportion of their total secondary education hours because they take fewer units than other students. In addition, handicapped students obtain most of their vocational education in mainstreamed settings and are more likely to be in mainstreamed settings for vocational education than for other studies. Overall, they are not concentrated in preparation for low level service occupations, although their participation in training for service jobs is slightly greater than that of other students. But sex stereotyped course taking patterns are more common in the vocational education of handicapped than other students. Despite opportunities in vocational education, handicapped students continue to have high levels of adult unemployment.

Until the NAVE report on access, no systematic information was available on the participation of handicapped students in vocational education. The Perkins Act is based on the notion that handicapped students have had relatively limited and poorer access to vocational education. We now know that these students do not have less access overall, but the picture with respect to access to high-quality programs is mixed. NAVE findings about course participation, combined with high unemployment rates, point to a need for services that link instruction to jobs.

Findings of the local survey and case studies suggest that Perkins Act resources are used primarily to help pay for the instructional costs of vocational education for handicapped students in both mainstreamed and separate settings, and to provide assessments and other forms of guidance. There is reason to believe that educational costs for handicapped students are substantially higher than those of other students. One recent study found that the cost of special education is 2.3 times the cost of regular education.[3] The cost of handicapped students in self-contained classrooms is 2.5 times the cost of regular education.

In survey findings, instructional spending was divided between mainstreamed and separate classes at rates of about 1.5 to 1 in school districts and 2 to 1 in area vocational districts. This finding is surprising in light of the Perkins Act goal to increase the participation of handicapped students in mainstreamed vocational education. In the case studies we found that about a third of the Perkins Act-funded activities were located in separate classes. Although we found little reason to conclude that availability of Perkins Act funds was the reason for creating separate classes, excess costs may be more easily justified in those settings.

Nor did we see funds used for one specific activity--subsidized work experience--that vocational educators concerned with handicapped students have argued is currently neglected. Experts on the vocational education of handicapped students have argued that paid work experience is an important component of successful secondary programs because it bridges school and work. Creating this bridge is particularly important for handicapped students, given their high adult unemployment rates. Perkins Act funds were seldom used to subsidize work experience. In addition, few Perkins Act resources were spent on job placement, but handicapped students, unlike disadvantaged students, have some access to job placement services under other state and federal legislation.

Are the Services at the Postsecondary Level Appropriate?

From case studies, the Perkins Act appears to pay for services to two types of handicapped students at the postsecondary level: (1) physically disabled persons enrolled in vocational education and (2) cognitively impaired students (generally, students who had IEPs when in high school). The services for physically disabled students described in case studies do not always appear to be linked to particular vocational programs. Administrators use Perkins Act funds to provide various aids such as readers, wheelchairs, and the like.

Although survey findings suggest the use of Perkins Act funds in mainstreamed settings, when we looked only at services for cognitively impaired students, the postsecondary

experience appeared to be a continuation of programs offered in high school. Almost all the offerings for cognitively impaired students identified in the case studies were separate, suggesting that the resources were doing little to increase access to mainstreamed vocational training. Although it is encouraging to find cognitively impaired students in postsecondary education, questions may be raised about whether these funds might be used to try to mainstream these students, who are motivated enough to stay in school. Otherwise, "postsecondary education" simply means shared facilities. Given a median postsecondary grant of around $11,000, however, it is doubtful that the Perkins Act could be held accountable for decisions to provide education in particular settings.

Are the Services for Handicapped Students Additive?

Secondary Level

Unlike disadvantaged students, handicapped students at elementary and secondary levels enjoy an entitlement under federal and state laws to an individualized education plan and to the services appropriate to carry out the plan. In a broad sense, then, there is little in the way of support or services to which they are not already entitled. The Perkins Act acknowledges that dual entitlement when it notes that its funds may be used to provide and pay for vocational services, even though states or local education agencies would have been required to provide and pay for those services in the absence of the Perkins Act (see Section [a][3][A]).

The question remains, however, whether acknowledging the dual entitlement means that the Perkins Act envisages fiscal substitution. Although policymakers intended that handicapped students would get *more* services with the Perkins Act than without it (as evidenced by the excess cost provision), the Act lacks a strong nonsupplanting provision, so there is no way that additional assistance can be assured.

Specific concern about supplanting is raised by the uses of the set-aside in separate classes for handicapped students. Because these settings are usually more costly than mainstreaming, they incur substantial excess costs by definition. If we assume that these

classes would exist even without the Perkins Act, which seems reasonable given the small size of Perkins Act grants, the use of Perkins Act funds to support their excess costs is a direct supplanting of state and local (and possibly other federal) resources. Only a nonsupplanting provision aimed at an appropriate level, such as all services for handicapped students enrolled in vocational education in a school district, would solve this problem.

The small size of Perkins Act grants under the handicapped (and disadvantaged) set-asides, in itself, invites supplanting. Such small amounts of money provide little incentive for districts or institutions to undertake new activities, especially when those activities also entail real additional costs to meet match provisions. As a result, districts may seek ways to use the funds without incurring much additional cost. One way is to identify activities that already incur excess costs to which the Perkins Act funds can be "attributed" in what is essentially a ledger entry. Yet attributing Perkins Act funds to an activity that incurs excess costs without demonstrating increased costs is supplanting. At present, there are no safeguards against this practice in the Perkins Act or regulations.

There is reason to believe, however, that handicapped set-aside funds result in some activities that would not take place in their absence. As can be seen from survey findings, school districts with higher per-pupil grants under the handicapped set-aside were more likely to modify facilities for handicapped students (see table 3.2).[4] They were slightly (but not significantly) more likely than districts without funding to provide vocational assessments, and somewhat less likely to provide assessments than districts with smaller per-pupil awards. No significant relationship exists between higher per-pupil spending and other additional services. Case study findings suggest, however, that the services mandated in the Perkins Act have resulted in more and better contacts between special educators and vocational educators to plan the vocational programs of special education students.

Table 3.2

Percentage of School Districts Where "All" or "Most" Handicapped Students Received Selected Services, by Level of Per-Pupil Perkins Act Funds, Handicapped Set-Aside, 1986-87

Selected Services	Level of Perkins Act Handicapped Set-Aside Funds in District			
	None	Low	High	Total
Assessments	72.9	85.9	81.9	82.6
Modified curriculum	66.0	67.0	74.0	69.9
Adapted equipment	32.8	18.0	28.3	24.2
Modified facilities	9.7	16.8	41.3	26.6
Guidance and counseling	78.4	89.1	89.2	87.9
Transition guidance	81.5	75.0	84.7	80.0

SOURCE: See table 3.1.

NOTE: Per-pupil refers to total enrollment in district, grades 9 through 12.

Postsecondary Level

At the postsecondary level, the use of Perkins Act funds for separate classes for handicapped students carries with it the same concerns that were expressed about such efforts at the secondary level. As for physically handicapped students, most of the expenditures we recorded appear so basic (wheelchairs, readers, etc.) that it is hard to believe that needy students would not receive these services under other federal or state programs. It is possible, however, that the services would not be provided by the institution, so the students would not attend.

PROVIDING SERVICES FOR ADULTS UNDER THE PERKINS ACT

Because most of the adult set-aside funds appear to be used for the general support of adult vocational education in school districts, area vocational schools, and community colleges, we cannot really judge the appropriateness of federally supported services. To the extent that the Act expressed a preference for the retraining of adult workers, however, we saw few instances of such programs (or any other specific programs) under the set-aside. In the few cases for which funds were attributed to specific activities, they were sometimes used for short-term training of persons with limited skills. Overall, however, the adult set-aside appeared to be general aid to states and localities. Because the funds provided operating support, the opportunities to use federal funds in lieu of state and local funds were broad.

SERVICES FOR PARTICIPANTS IN PROGRAMS THAT PROMOTE SEX EQUITY

Do the Funds Go to Places that have a Need for Services?

Not much is known about the extent to which sex equity in vocational enrollments or placements differs across sectors or types of institutions. What we have learned through the local survey is that a small number of school districts received grants and median grants were extremely small. Districts with grants tended to be urban and have somewhat lower poverty rates than districts without funds. Area vocational districts received larger grants at somewhat higher rates. In some states included in the case studies, state officials reported difficulty in attracting sufficient proposals. At the postsecondary level, expenditures were at about the same rate and level as in area vocational school districts. Grant sizes were small for all types of eligible recipients, far too small to purchase any sizable amount of staff time.

Are the Services to Achieve Sex Equity Appropriate?

Secondary Level

The tiny resources under this set-aside have been spread across a wide number of activities. Most of the activities in school districts and area vocational districts are aimed at

training teachers about sex equity issues and at counseling and recruiting girls to nontraditional high school programs, although sometimes the activities are aimed at boys as well. There is little doubt that sex segregation in vocational education remains, despite efforts to promote nontraditional enrollments. In fact, NAVE findings suggest that, over the past two decades, sex segregation in vocational enrollments has hardly changed.[5]

One important finding about sex segregation, reported in depth in the NAVE report on secondary education, is that girls who enroll in and complete nontraditional high school programs are unlikely to find work in the fields for which they receive training. This finding has implications for services, because it suggests that recruitment is only the beginning. Programs need to incorporate guidance and job placement services that can overcome what appears to be a bias against hiring women in nontraditional fields. At present, almost none of the Perkins Act funds in any of the set-asides are supporting job placement activities.

Postsecondary Level

One difference at the postsecondary level is that sex equity set-aside funds were sometimes combined with funds from the set-aside for single parents and homemakers, so that the total awards were somewhat larger and the target group narrower. The services were similar to those at the secondary level, although in-service education was less important and support of staff salaries more prominent. According to case studies, a substantial number of Perkins Act-supported projects involved counseling, probably because when the target group is homemakers who are returning to the labor force, counseling, assertiveness training, and various other efforts aimed at building self esteem are important.

Are the Services to Achieve Sex Equity Additive?

Most of the activities supported under the set-aside appear to be additive to those that districts and institutions would undertake on their own, particularly at the secondary level. We found that 77 percent of the school districts and area vocational school districts that spent funds under the sex equity set-aside in 1986-87 indicated that they added or expanded

activities aimed at promoting sex equity over the past five years (see table 3.3). In contrast, only 29.6 percent of those districts not spending federal funds had added or expanded such activities.

Table 3.3

Percentage of School Districts and Separate Area Vocational School Districts that Did or Did Not Add or Expand Activities to Promote Sex Equity 1982-87, By Receipt of Sex Equity Set-Aside Funds, 1986-87

	Sex Equity Set-Aside Funds	
Type of District	Yes	No
School districts (n=468)		
Added or expanded activities	77.0	29.6
Did not add or expand activities	23.0	70.4
Area vocational districts (n=175)		
Increased activities	77.1	48.7
Did not add or expand activities	22.9	51.3

SOURCE: See table 3.1.

The additive nature of the funding is also supported by case study findings. First, the "one shot" nature of the activities supported under the set-asides (workshops, brochures, etc.) suggests that they are provided because support is available. In addition, however, local administrators indicated that most of the projects are supported entirely with federal funds, and that without federal support they would not undertake such activities. Some administrators deprecated their districts' effort, suggesting that even though they had received federal support they did not see the point of promoting greater sex equity in vocational education.

The findings for the sex equity set-aside point up the problems that occur when several conditions are all present: federal resources are required to be additional, there is little local support for federal intent, and the grants are extremely small. The end product, when truly additive, is likely to be a one-time, often peripheral activity. Furthermore, after observing these limited activities over time, practitioners may discount the importance of all sex equity efforts as well as the goal. After years of witnessing such small-scale efforts (with likely small-scale effects) some of the local administrators interviewed in this study are, not surprisingly, cynical about efforts to achieve sex equity. The findings do, however, point up the need to rethink the mix of services and the level of service.

SERVICES FOR SINGLE PARENTS AND HOMEMAKERS

Do the Funds Go to Places With a Need for Services?

At the secondary level, most funds appear to flow to a small number of school districts and a larger number of area vocational districts. From case studies it appears that most of the funds are used in programs for teenage parents. School districts with funds have lower poverty rates than districts without funds. Median expenditures in school districts are small in comparison with those in area vocational districts. At the postsecondary level, grants are about the same size as in area districts. From case studies we learned that, in a number of postsecondary sites, the funds support a portion of the costs of centers for displaced homemakers.

Are the Services for Single Parents and Homemakers Appropriate?

Secondary Level

Most of the Perkins Act resources are used to support services in programs for teenage parents. Historically, programs for pregnant and parenting teens had few vocational offerings, often limited to typing and shorthand. In part, the limited offerings were a function of operating the programs in settings apart from regular schools.[6] We do not know the extent to which teenage parent programs supported under the single-parent set-aside were located in

separate settings or facilities. Research conducted at the beginning of the decade found that some of the programs in separate settings were inferior to the education students would have received in regular high schools. Physical facilities tended to be old and run down. Instructional hours were shorter and the mix of course offerings more limited than regular schools. Equipment and texts were in short supply.

It is encouraging to find that programs supported with Perkins Act funds appear to be offering some vocational education to teenage parents, but most of the federal funds are used for counseling and other ancillary services. Only a subset of districts uses federal funds to support vocational instruction. Although the median grant to a school district is probably too small to pay for the costs of instructional staff, median grants to area vocational facilities tend to be considerably larger.

Postsecondary Level

One of the most notable case study findings was the similar use of set-aside funds across different types of institutions. As discussed in the last chapter, there appears to be consensus about the appropriate set of services in a program for women returning to the labor market: recruitment, counseling, courses or group sessions aimed at building assertiveness and self esteem, referral to child care and other social services, referral for student aid, and referral to training. Many of the programs are operated from centers for displaced homemakers located on or near the campuses of postsecondary institutions. In most cases the intervention is either prior to enrollment in regular offerings of the institution or concomitant with the start of training. Field staff noted, however, that the vocational training itself is likely to be short term and in traditionally female fields. Although this training may reflect the economic reality--these women need jobs quickly, and jobs are most plentiful in traditionally female fields--it would be reasonable for federally funded projects to demonstrate that other choices are possible.

Are the Services for Single Parents and Homemakers Additive?

Because the lack of vocational instruction has been a serious problem in programs for teenage parents, it is encouraging to see secondary expenditures associated with these programs. Counseling is usually a major function of these programs, because teenage parents face a wide range of psychological and economic difficulties. It is simply impossible to know how much of the counseling supported through the Perkins Act is additional. A substantial portion of federal funds is probably used for assessments to which the teenage parents (as disadvantaged students) are entitled under Section 204(c). The second most common use is to pay for staff for separate vocational classes which, given the history of programs for teenage parents, may be a new service.

Despite limited offerings, programs studied in the early 1980s were generally more expensive than regular offerings because of smaller class size.[7] Many were also dependent on sources of support outside the district for their continued operation. Sources included state or federal special education funds, state or federal categorical grants for teen pregnancy and parenting programs, and foundation support. In some cases, sufficient outside support was generated that the school districts in which programs were located actually spent less of their own funds per pupil for students in these programs than for other students.

The Perkins Act is designed to provide additional services to special populations and to increase the access of special populations to high-quality vocational eduction. If it is the case that single-parent funds are used to support a portion of the ongoing costs of programs with the characteristics described above, it may be the case that the Act is doing little to help improve vocational opportunities for this population. Given the weak nonsupplanting provisions in the Perkins Act, and the fact that the districts are using the single-parent rather than the disadvantaged set-aside, the funds may not even be purchasing more services than would be available without them. Clearly, this issue warrants further attention.

At the postsecondary level, it appears that Perkins Act funds support a share of an overall set of services in special programs for women returning to the work force. Most

commonly, the service is counseling, including referral to various sources of economic assistance. To the extent that direct economic assistance is provided (e.g., tuition waivers), it appears to be in the form of a stopgap--before other sources are available and, hence, additive. In general, these programs appear to add to regular institutional offerings and to rely on a variety of state and federal programs to support their costs. In several sites, school officials and program personnel indicated that without the support package, of which Perkins Act funds are a part, these programs probably would not exist. Again, the institution views them as "add ons;" so although they are additional, they are also marginal and their survival depends on outside funding. Perkins Act funds may or may not be the impetus for their creation, depending on the site, but the funds support a piece of these additional programs.

SERVICES FOR PERSONS IN CORRECTIONAL INSTITUTIONS

Because questions about the uses of the corrections set-aside were asked only at the state level, we have less complete information on the uses of these funds. Like adult set-aside funds, however, the corrections set-aside appears to pay for the general operating support of educational offerings. In one case study state, funds were earmarked for replacement of extremely old vocational equipment. To the extent that funds are not allocated for specific activities, however, the opportunities for supplanting are substantial. Of course, given the tiny amount of money, substitutions would have little consequence for state budgets.

SERVICES SUPPORTED UNDER TITLE II(B)--PROGRAM IMPROVEMENT AND EXPANSION

Do Funds Flow to Places With Program Improvement Needs?

A substantial (but unknown) share of program improvement funds is retained for statewide activities. Most statewide projects involve assistance to secondary vocational education. In states where case studies were conducted, the amounts retained ranged from less than 10 percent to 40 percent. Of the program improvement funds that flow to local eligible recipients, slightly over half were spent by postsecondary institutions. A little over a quarter

of school districts spent funds as did about half of area vocational school districts. Median expenditures in area vocational districts were 2.5 times the size of those in school districts. Well over half of postsecondary institutions spent funds, and median expenditures in postsecondary institutions were twice the size of those in area vocational school districts.

The large median awards to area vocational school districts and postsecondary institutions raise questions about the role of federal support in programmatic upgrading. The institutions with substantial Perkins Act support are generally considered to have the better vocational programs overall. According to findings from the case studies, postsecondary institutions in particular tend to change programs, update curricula, and recruit new populations regularly. If, as is widely held, the poorest vocational programs are located in comprehensive high schools, those are not the locations most likely to obtain program improvement funds. Clearly, policymakers need to determine where improvement and innovation are most necessary and how to ensure that federal funds are directed to those places.

Are the Services Appropriate?

State Level

Virtually all state-level activities supported through the Perkins Act are concerned with *secondary* vocational education. State officials are involved in specifying and validating the occupational learning of secondary students, both to increase local program accountability and to demonstrate that students have the skills to get jobs. A subset of states appears to be using federal resources to develop curricula aimed at general vocational skills or at curriculum and model program development for vocational-academic integration. All the states visited in the case studies belong to interstate consortia supported with federal funds.

State-level curriculum development has been taking place at least since the mid-1970s and is common in almost all the states visited. Because it appears to consume substantial amounts of the Title II(B) funds retained at the state level, it is important to learn more about

the extent, content, and uses of the funds. In the case study states there was little systematic information available on the extent to which state-developed curricula have been implemented in localities. Only a limited number of the local communities we visited were using state-developed materials, and several were embarking on their own curriculum development as well. Given the likely uniformity of secondary vocational offerings across states (i.e., assuming that training for automobile mechanics or for secretarial work need not vary a great deal from place to place), the opportunities for greater across-state curriculum development should be explored.

A subset of the states we visited is engaged in a variety of innovations using federal funds. In one state, vocational education has taken the lead in shaping courses aimed at teaching what state officials called general vocational skills, skills that can be applied to a range of occupations. In several states, vocational educators have embarked on efforts to better integrate the secondary curriculum through coordination of academic and vocational studies. In another instance, Perkins Act funds have been combined with other state and federal resources to promote unified education, training, and social services for welfare recipients and other disadvantaged adults. In all these cases, state vocational officials have taken the lead in promoting unique activities that provide leadership not only within their states but for vocational education nationally.

Secondary and Postsecondary Levels

The main use of Title II(B) funds was to purchase equipment. The question is, to what extent are equipment purchases a means to improve programs? As respondents in the case studies noted, there are two axioms about the relationship between equipment and vocational education: (1) acquisition of equipment is vital to the existence of vocational education, and (2) vocational institutions always need new equipment. In other words, acquiring equipment is important to maintaining existing programs as well as to expansion and change.

Districts and postsecondary institutions are always engaged in some level of change and program innovation, the extent dependent on local leadership and economic conditions. Districts and institutions recruit new populations, develop curricula or adopt curricula developed elsewhere, establish "articulation agreements" across schools or educational sectors, establish or adopt model programs (Principles of Technology is currently popular), start new offerings in response to changes in the labor market, and (less often) cancel or modify old ones. In short, there is always enough "innovation" going on to absorb the rather small sums available from the Perkins Act. Yet Perkins Act funds are used, at very high rates, for equipment purchases that do not appear to provide a catalyst for change and in many instances appear unrelated to changes taking place in the same locale.[8]

At best, an equipment purchase might be tied to the planned introduction of a particular program or upgrading of the curriculum in a subject area. In such cases, officials have come to rely on the federal funds to support a portion of the costs associated with the change--the particular portion being for the needed equipment. They designate the federal funds for equipment because they always have, because there are restrictions on the use of state or local funds for equipment, or because they do not want audit exceptions. Local practice is probably encouraged by federal rules that hold that all equipment purchases are acceptable expenditures under Title (II)B.

At worst, however, federal funds are simply spread among schools or programs every year or doled out to a different program or school or district each year--the idea being equity of equipment support. In these cases, there is no claim to particular innovation. District officials simply view the resources as "federal equipment money" and calculate it into their budgets. When funds are spread among many schools or programs in a single eligible recipient, the awards are often too small to make any difference.

Title II(B) funds have proven useful to localities. We were told repeatedly that administrators rely on the funds from year to year, that they like the fact that the funds can be spent for just about any purpose or priority, that the availability of federal resources for

equipment purchases allows them to bypass school boards that are loath to appropriate funds for equipment, and that administrators use funds as incentives--awarding them to teachers they consider successful. In short, the funds amount to reliable "soft" money, calculated into local planning.

Are the Improvement Funds Additive?

State Level

Federal funds retained for statewide projects appear to be additive in the sense that, without them, it is unlikely that state vocational education officials would have discretionary funds for statewide activities. Although most states have specific state funds for vocational education, those resources are likely to be increments to formula-based state aid or are earmarked for certain categorical activities such as equipment purchases or in-service education. State officials have little control over their use. In state after state we were told that, without federal funds, curriculum development activities and interstate consortia would not exist, in part because state categorical funding or other state aid must go directly to localities. In some states, relations between vocational officials and chief state school officers are poor or competitive, and federal funds are the only source of support for program development activities of state vocational administrators.

Given the lack of other sources of support, it is interesting to note that the Perkins Act rule limiting state administrative expenditures to 7 percent of the Basic Grant caused little hardship. According to preliminary studies of state administration, conducted before the NAVE was established, when the 7 percent limitation was adopted, state vocational education officials reexamined some of their administrative duties and found that they could be considered projects not subject to the 7 percent limitation.

Secondary and Postsecondary Levels

It is possible to make some general observations but impossible to reach definitive conclusions about the additivity of equipment or other purchases. As noted earlier, districts

and institutions have spent funds in this manner for many years and have come to rely on this source of aid. The aid is calculated into the budgets of districts and institutions that receive support. If administrators know federal funds will be available for equipment, they can use state and local resources for other purposes and, in that sense, federal funds are hardly additive. If federal aid were eliminated tomorrow, many states and localities would probably have to spend resources on equipment that are currently devoted to other outlays, or would have to generate new resources. States included in the case studies that prohibited the use of program improvement funds for equipment had earmarked state funds for this purpose.

According to the case studies, the main use of program improvement funds appears to be as much associated with the regular operating costs of vocational programs as with programmatic change. As the historical pattern is now well established, federal funds may well substitute for nonfederal funds that would otherwise be spent for ongoing needs. Case studies revealed that the "match" for equipment purchases was rarely spent for equipment. Usually, there was enough ongoing "change" or "expansion" to match federal funds, so federal resources have achieved little leveraging. Over time, "federal equipment money" has been a reliable and convenient source of ongoing programmatic support.

According to survey findings, there was a positive but not statistically significant relationship between receipt of program improvement funds and some types of innovation at the secondary level (see table 3.4). We compared school districts on amount of innovation, observing separately those that spent program improvement funds, those that spent funds only under other parts of the Perkins Act, and those that spent no Perkins Act funds. We found that those that spent program improvement funds in 1986-87 were more likely than others to report that they had expanded work experience programs and developed curricula that integrated mathematics or science with vocational education over the past five years. But they were no more likely than those with other Perkins Act funds or no Perkins Act funds to have added general vocational courses, responded to advances in technology, established articulation agreements with postsecondary institutions, or developed integrated secondary-postsecondary

Table 3.4

Percentage of School Districts that Did or Did Not Add or Expand Various Vocational Improvements 1982-87, by Receipt of Perkins Act Funds, 1986-87

Improvements	Perkins Act Funds		
	Program Improvement	Other Only	None
General or transferrable skills courses			
Added	37.3	40.8	24.1
Not added	62.7	59.2	75.9
Responses to advances in technology			
Added	72.1	69.2	50.2
Not added	27.9	30.8	49.8
Articulation agreements with postsecondary institutions			
Added	33.8	33.9	9.3
Not added	66.2	66.1	90.7
Integrated curriculum with postsecondary institutions			
Added	22.6	18.0	9.6
Not added	77.4	82.0	90.4
Work experience programs			
Added	34.4	14.0	12.8
Not added	65.6	86.0	87.2
Integrated math/science curriculum with vocational education			
Added	33.3	25.3	11.5
Not added	66.7	74.7	88.5

SOURCE: See table 3.1.

curricula. Of course, this analysis compares grants received in one year with change over a five-year period.

Repeating the same analysis at the postsecondary level, we found a somewhat greater likelihood for those institutions with program improvement funds to have responded to advances in technology, established articulation agreements, or integrated math or science into vocational education (see table 3.5). It should be remembered, however, that both the sizes and the numbers of awards were much larger at the postsecondary level.

RECOMMENDATIONS FOR CHANGES IN FEDERAL POLICY

This section outlines recommendations for changes in the Perkins Act based on study of its provisions and implementation. The recommendations in this section are provided under an assumption that Congress seeks only to enhance the effectiveness of the *current* objectives, division of resources, and policy mechanisms. In other words, in this section we provide recommendations based on the assumption that Congress maintains the general structure of the Perkins Act including set-asides and program improvement portions of the Basic Grant.[9]

Interstate Formula

1. **Eliminate the minimum allotment.** Our research suggests that the minimum allotment has resulted in per-pupil awards more than twice as high in some of the smallest as in some of the most populous states. There is no *a priori* reason to assume that vocational education costs are more than twice as high in small states.

2. **Take into account the distribution of disadvantaged students and other students with special needs across the states.** At present, the distribution of funds is not correlated with the extent of youth poverty, one indicator of disadvantage. Given the emphasis on helping special populations in the Perkins Act, a formula that acknowledges the uneven distribution of disadvantage across states would help ensure that disadvantaged students in all states would have relatively equivalent opportunities for federal support.

Table 3.5

Percentage of Postsecondary Institutions that Did or Did Not Add or Expand Various Vocational Improvements 1982-87, by Receipt of Perkins Act Funds, 1986-87

Improvements	Perkins Act Funds		
	Program Improvement	Other Only	None
Integrated curriculum with secondary schools			
Added	33.6	22.5	7.3
Not added	66.4	77.5	92.7
General or transferrable skills courses			
Added	28.1	26.1	3.4
Not added	71.9	73.9	96.6
Articulation agreements with Secondary schools			
Added	61.4	42.3	50.1
Not added	38.6	57.7	49.9
Responses to advances in technology			
Added	90.7	73.6	74.8
Not added	9.3	26.4	25.2

SOURCE: See table 3.1.

Within-State Funds Distribution

3. **Establish rules for allocation of funds among secondary and postsecondary education.** The current destination of Perkins Act funds varies greatly according to state politics among other factors. State agencies charged with administering the Act often restrict the access of sectors or institutions not under their control to Perkins Act funds. Although no reliable state-by-state measures of vocational enrollment are currently available, overall enrollment data are available and could be used for distributing federal funds. Congress could also establish a predetermined division of all funds among sectors, or a division for portions of the Basic Grant.

4. **Direct greater resources to places of greater disadvantage.** Although the funds that flow to school districts may tend toward places of greatest poverty, the increment is not very large. At the postsecondary level no comparable increment appears to exist, and little is known about the relationship between poverty and support of area vocational school districts. The intrastate formula appears to have done nothing to increase funds to poor school districts. Ways in which greater targeting could take place include the following:

   a. Clarifying the rules for allocating funds under the intrastate formula. In 1986-87 over half the states established "cuts" of these funds among sectors or sets of institutions before implementing the formula, although it does not appear that such cuts were intended by Congress.

   b. Ensuring that funds allocated under other portions of the Act also flow to places of greatest need, or at least do not offset the effects of the formula). Although we did not conclude that other portions of the Act offset the formula grants to school districts, there is no evidence that nonformula grants are directed to places of greatest economic need.

   c. Establishing predetermined rates of support for general and specialized institutions. Specialized institutions at the secondary level appear to obtain a disproportionate share of Perkins Act funds. Although disadvantaged and handicapped students

are represented in specialized institutions at relatively high rates, most students enroll in vocational education in comprehensive high schools. Many have argued that comprehensive high schools are also the places most in need of programmatic upgrading.

5. **Match all Basic Grant funds at the state level, or match services directly, and distribute returned handicapped and disadvantaged set-aside funds by the same rules as the original distributions.** The idea behind the match provision is to bring state and local resources to bear on federal goals. Although this is a worthy idea, the current matching requirement applies statewide and in the aggregate. Some states match all federal funds, some match portions, and some require localities to supply the full match. In states that lack a state match, some school districts have had to return handicapped or disadvantaged set-aside funds because no additional local funds were available. Because the federal funds are small in relation to state and local support of vocational education, it should be possible for federal funds to be matched at the state level.

   As an alternative, the match should apply to the same activity or service as the federal funds. We recommend eliminating the ability of states or localities to match federal funds simply by identifying districts, institutions, or programs that are already overspending on special populations. This approach complies with the letter of the law, but it certainly does not comply with its spirit, because it adds nothing to the resources available for special populations and improving vocational education.

6. **Define a statewide project.** States appear to retain substantial amounts of Perkins Act funds. Some funds are spent on activities that are clearly innovative and additive, whereas other funds are spent on activities for which the state assumes responsibility in areas other than vocational education. Activities such as technical assistance are ones that state education agencies normally provide. Congress should determine appropriate uses

for state-retained funds or establish priorities for the use of funds retained at the state level.

Targeting at the Local Level

7. **Establish minimum grants of sufficient size to purchase services.** Most grants to school districts are simply too small to carry out any but the most marginal activities. When broken down further among several set-asides, the amounts are no more than tokens. We recommend a minimum overall grant of at least $25,000 to an eligible recipient, that amount being the least that could be expected to purchase a full-time-equivalent staff person. In order to deal with the set-asides, we recommend a minimum amount per student served (i.e., a concentration rule).

8. **Target resources on schools with the greatest need for services.** This recommendation depar. from the current individual-service-based approach, but it is an important alternative way to implement existing federal goals. Confusion exists now not only because the eligibility definitions are too loose, but also because the definitions do not explain how economic disadvantage and the "need for special assistance in vocational education" should be taken into account in providing services. In upgraded offerings, economically disadvantaged students *might* or might not need individual assistance. The logical way out of this dilemma is to focus federal resources on improving the vocational offerings in schools with concentrations of economically disadvantaged students. This recommendation also has implications for within-state targeting among types of institutions discussed earlier.

9. **Even if current individual-based targeting is maintained, tie services provided with federal funds to vocational offerings that are upgraded or otherwise altered.** As currently designed, services are provided to persons who meet the eligibility definitions without regard to the program in which they are enrolled. Under the alternative proposed here, services such as vocational tutoring, academic remediation, or counseling could be

federally subsidized only when they enabled a student to succeed in a *better* vocational education program than the one in which the student would have been otherwise enrolled. Currently, the objective of increased access or programmatic upgrading is all but forgotten in practice.

10. **If targeting to individuals is maintained, eliminate the "requires special services... to succeed in" portion of the definitions.** This portion of the definition makes little sense logically, because it fails to acknowledge that a student's need for assistance depends on the program in which the student is placed. In practice, it could well result in no federal support for students in the least challenging vocational programs, because these programs would be the easiest in which to succeed. In the absence of programmatic upgrading, the requirement invites perverse behavior.

11. **If targeting to individuals is maintained, refine the definitions in such a way that priorities are established for assistance to those students with the greatest needs.** We have identified no systematic state or local rules for whom to serve. Many jurisdictions were unable to tell us anything systematic about the extent or nature of students' service needs. The lack of systematic student-level targeting within eligible recipients was one of the most important findings of the case studies.

12. **If targeting to individuals is maintained, restrict eligibility to students enrolled in organized programs of occupational training.** Such students would be those who are enrolled in an organized program or sequence of courses or might otherwise be considered vocational "concentrators." Also, these students would be the ones counted for apportioning funds among eligible recipients (see previous discussion). Implementing this recommendation would require the development of a uniform definition of a concentrator, however.

The Services Provided

We recommend that the Act limit ancillary services in favor of vocational instruction and job placement. As we have described, sizable amounts of federal funds are used for services that are peripheral to instruction. Some have argued that the excess cost provision encourages ancillary services.[10] The assessment requirement under Section 204(c) and the opportunity to spend federal funds for academic remediation without limits probably also contribute to this outcome. To deal with these problems, we recommend the following:

13. **Eliminate Section 204(c).** Although assessments are a reasonable service, this mandate encourages the provision of this service at a high level. At the same time, local personnel frequently do not know what to do with the results of the assessments. Furthermore, we have seen little evidence that the assessment process results in better placements or that other portions of Section 204(c) have been implemented, that is, other services (including instructional services) that would stem from the assessments. Assessments often take place after students have enrolled in vocational courses (because it is students in vocational education who are eligible). Moreover, handicapped students are already entitled to all services necessary to carry out their IEPs, including any vocational education included in those plans.

14. **If Section 204(c) is retained, reduce the incentive to spend disadvantaged and handicapped set-aside funds on noninstructional or ancillary services.** Because the Department of Education has asserted that local education agencies are obliged to provide these assessments and other ancillary services only to the extent that federal funds are available to pay for them, many recipients use their Perkins Act funds to provide assessments but do not follow up with additional instructional services. Particularly if Section 204(c) is retained, it is important to include a provision creating an incentive to use federal funds for instructional services.

15. **Limit the proportion of funds for basic skills remediation or link the service to the vocational offerings in which the student is enrolled.** Changes of these kind not only would reduce the opportunities for substitution but also would ensure, once again, that federal funds were directed to vocational education.

16. **Limit federal program improvement funds to true program improvement activities, as distinguished from the costs of program operation.** Under current rules, grantees may use federal resources to cover ordinary expenses of running programs. Under this proposed option, a sharper distinction would be drawn between the costs of program operation and program improvement activities. In particular, such a provision would distinguish between funds used to develop new programs and funds used to buy, for example, maintenance and routine replacement of equipment. To carry out this recommendation would require the development of a definition of program improvement that is considerably narrower than the current list of allowable services.

17. **Limit expenditure of federal aid for equipment and materials.** Many of the current outlays have little to do with improving programs except in the sense that a program with new equipment is "better" than one with old equipment. Federal funds could be restricted to cases in which evidence was presented that equipment purchases were linked to broader program improvement efforts (such as creation of a new occupational program). Alternatively, funds could also be restricted to a given percentage of equipment acquisition. Congress might also consider mandating that states establish priorities and distribute all or part of program improvement funds on a competitive basis so that the distribution process generates program improvement proposals.

18. **Establish specific purposes for the adult set-aside.** At present, this set-aside is general aid for adult programs. Unless Congress

specifies some purposes for this aid, it will continue to be used in this manner, and much of it will probably substitute for state and local funds.

19. **Increase the size of sex equity grants.** NAVE time-series data on enrollments indicate that sex segregation in vocational course taking has not decreased over the past two decades, and more assistance is needed to tie instruction to jobs. Despite the use of competitions and other discretionary means to distribute funds, awards are small and services marginal. Unless Congress provides a major additional subsidy and specifies uses of funds, this situation is likely to continue.

Additivity

The Perkins Act contains a number of provisions designed to ensure that federal funds are additive to, or do not supplant, state and local resources. These include the provision for states or localities to match federal funds, the requirement for maintenance of effort, the excess cost provision, and the assurance that federal funds do not supplant state and local resources. As discussed previously, most of these provisions are not terribly effective. The excess-cost provision, moreover, may have perverse effects, by encouraging marginal or peripheral services.

As an alternative to the various current provisions, we propose three tests or criteria for establishing that Perkins Act funds do not supplant other resources:

1. In districts or institutions with more than one school, schools aided under this grant should receive at least the same level of funding per student from other sources as schools that do not receive assistance under this grant.

2. In all districts, schools receiving aid under this grant should receive at least the same level of "real support" per student (dollars adjusted for inflation) from other sources as they received in the prior year.

3. Schools receiving grants and students participating in programs should receive their equitable shares of services funded under other federal, state, and local programs for the disadvantaged or other special populations.

This alternative does not depend on determining the costs of vocational education within a school or district, a task that has proven almost impossible and thus made the excess-cost provision perverse or meaningless. Instead, overall schools budgets are the unit of analysis (except for the addition of clearly specified programs for special populations in number 3). If these provisions are adopted, match, excess-cost, and maintenance-of-effort requirements could be eliminated. The only other way to deal with the nonsupplanting issue would be to provide mandatory guidelines on how to compute the costs of vocational education in each school or district, so that excess costs could be established. Given the size of most awards, the process of determining costs would probably use most of the funds.

Equal Access to Programs and Services

The regulations effectively nullified the Perkins Act by stating that the equal access provision applied only to programs that received federal support. Language should be included in legislation that makes it clear that this provision applies to all vocational programs of local recipients whether the programs are federally funded or not.

NOTES

1. For an extensive discussion of this issue see Stephen M. Barro, *Federal Goals and Policy Instruments in Vocational Education: An Assessment of the Resource Allocation and Targeting Provisions of the Carl D. Perkins Vocational Education Act of 1984* (Washington, DC: SMB Economic Research, Inc., 1989).

2. The disparity between the findings of the survey (that aides were a major outlay) and the case studies (where aides appeared to be a small item) could, in fact, be explained as follows: for accounting purposes, Perkins Act funds are attributed to higher instructional costs for disadvantaged students, but when asked what additional services are provided to disadvantaged students, local administrators point to remediation or assessments.

3. See Mary T. Moore, E. William Strang, Myron Schwartz, and Mark Braddock, *Patterns in Special Education Service Delivery and Cost* (Washington, DC: Decision Resources Corporation, 1988). This study did not examine the specific costs of vocational education for handicapped students. The findings reported are averages for elementary/secondary education combined.

4. Per-pupil refers to total enrollment in grades 9 through 12, not the number of handicapped students.

5. John Tuma, et al., *Enrollment Trends in Vocational and Academic Education in American Public High Schools, 1969 to 1987*, Chapter V, (Berkeley, CA: MPR Associates, April 1988).

6. This discussion draws heavily from Gail Zellman, *The Response of the Schools to Teenage Pregnancy and Parenthood* (Los Angeles, CA: Rand Corporation, 1981).

7. Ibid.

8. The percentages of funds spent on equipment are particularly high when one considers that two of the largest states in the survey specifically prohibited secondary-level institutions from spending Title II(B) funds for equipment.

9. Options for implementing each of the recommendations in this section are described in Barro, *Federal Goals and Policy Instruments in Vocational Education: An Assessment of the Resource Allocation and Targeting Provisions of the Carl D. Perkins Vocational Education Act of 1984.*

10. See, for example, E. Gareth Hoachlander, "National Data Needs for Vocational Education," p. 24, (Berkeley, CA: National Center for Research in Vocational Education, January 1989).