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ABSTRACT

A study was conducted to identify the factors that secondary and postsecondary vocational education administrators use as the basis for their decisions to add, terminate, or modify their programs. Data were collected through a telephone survey of 115 secondary and postsecondary administrators and by face-to-face interviews with an additional 25 administrators, representing various states, rural and urban areas as well as types of schools. Analysis of the data gathered showed that the following factors influenced administrators' program decisions: (1) locally conducted surveys of industry; (2) advisory committees, especially in decisions to add or modify programs; (3) student enrollment figures and student interest; (4) job placement rates; (5) input from faculty and administration (a major factor); and (6) published labor market data. One important implication of the study concerns labor market data. Although these published reports often influence policy requirements at the state and federal levels, local administrators' decisions were not usually data based; rather, data reports were used to verify decisions already made or to meet state or federal requirements. A second implication of the study concerns an activity that warrants further attention: faculty visits to local industries should be increased and budgets should allow for this activity. The study also showed the need to harmonize local decision making with legislated decision-making processes to increase the impact of vocational education. (KC)

FACTORS INFLUENCING PROGRAM DECISIONS IN VOCATIONAL EDUCATION

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FOREWORD

Today we see that vocational education's responsiveness to the demands of technological, economic, social and political changes is becoming a central concern to those interested in vocational education in the United States. This has highlighted the use of evaluation and planning to support effective program decisions at the local level. But implementing program decisions has been complicated because data are frequently unavailable, unreliable, or misunderstood.

This report describes how secondary and postsecondary administrators weigh the factors that influence their decisions to add, terminate, or modify vocational education programs. Further, the report provides vocational researchers, administrators, and practitioners with useful insights into factors that influence program decisions at the secondary and postsecondary levels.

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Robert E. Taylor
Executive Director
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EXECUTIVE SUMMARY

This report identifies the factors that secondary and postsecondary administrators in vocational education used as the basis for their decisions to add, terminate, or modify their programs. The conclusions are intended to provide a base for further study and to assist administators in vocational education in their evaluating and planning.

The findings of this report are based on a telephone survey of 115 secondary and postsecondary administrators and on face-to-face, open-ended interviews with an additional twenty-five administrators. Supplementary information was gathered from existing data bases and a review of the literature.

In selecting sites for case study, the project staff considered such factors as rural and urban location, types of vocational schools, the variety of systems for planning and evaluation, and geographical setting. The intent was to represent as many states as possible within the constraints of the budget and scope of the study. The telephone and face-to-face interviews covered thirty states in the postsecondary sample and thirty-one states in the secondary sample.

The factors that affect local administrators' decisions to add, terminate, or modify vocational programs are reflected in the following patterns.

- Locally conducted surveys of industry had a major influence on program decisions. These surveys were conducted in both formal and informal manners.
- Advisory committees were considered very influential in decisions to add or modify programs. However, the effective use of these committees was a concern of most administrators; some used them merely to satisfy federal or state requirements.
- Student enrollment figures and student interest were rated as important factors for adding or terminating programs. Administrators believed these factors could be strengthened by better counseling programs and by improved "advertising" of programs.
- Job placement rates were mentioned as a factor in program decisions, but few secondary administrators indicated that these rates, in themselves, would be a sufficient reason to add or terminate a program. However, a majority of postsecondary administrators indicated that low rates of job placement were instrumental in decisions to terminate programs if economic conditions were likely to continue the downward trend.

- Input from faculty and administration was considered a major factor in program modification by both the secondary and postsecondary administrators. Industrial visits helped faculty and administrators obtain information for making decisions. And although only a few cited industrial visits as a factor in making decisions, a majority of the respondents indicated that industrial visits were needed and should have occurred on a regular basis. Financial and logistical factors often prevented such visits from occuring.

- Published labor market data were often used to support programmatic decisions; however, they were seldom the major influence on changes. Administrators expressed concern over the applicability of the labor market data to their specific geographic areas and their vocational education programs.

One important implication of the study concerns published labor market data. Such information has influenced legislation and shaped policy requirements at the state and federal levels, but the study suggests that program decisions by secondary and postsecondary vocational administrators were not data-based, even though published data were cited and reviewed in the decision-making process. For the most part, labor market data were used to verify decisions already made or to meet state or federal planning requirements.

By contrast, a second implication of the study concerns an activity that warrants further attention: faculty visits to local industries. Several administrators expressed the need to provide more time for teachers and administrative peers to visit local industries on a regular basis in order to ascertain the needs of employers in the community. Effort is needed at the local, state, and federal levels to lessen budgetary and logistical constraints and enable industrial visits to become a standard operating procedure.

In general, the study shows that the surveyed administrators do consider the effects of programmatic decisions on their constituents. They rely on input from advisory committees, surveys of industry and community, and student interest and enrollment. But the study also uncovered the need to harmonize the process of decision-making as it actually occcurs at the local level with the process outlined in the legislation. The result would be an increased impact of vocational education upon communities and labor markets.

CHAPTER ONE

INTRODUCTION

This chapter presents a framework for understanding the decisions to add, terminate or modify vocational education programs. There are at least three elements that influence such decisions: (1) the role of vocational education, (2) the range of activities for planning and evaluation, and (3) the decision-making and its context. Each of these elements is discussed below.

The Role of Vocational Education

Vocational education, broadly defined, is that part of education that makes an individual more employable in one group of occupations than in another (Evans and Herr 1978, p.3). Vocational education encompasses a large and complex set of educational institutions that provide training for millions of young people and adults who intend to use the education, training, and skills acquired in these institutions for entry or progression in the labor market. There are approximately 7,500 institutions in the nation offering six or more vocational courses: 4,875 comprehensive high schools; 225 vocational schools; 1,248 area vocational schools; 162 technical institutions; and 720 community and junior colleges. (National Center for Education Statistics 1982).

It was estimated (National Center for Education Statistics 1982) for school year 1979-80 that the direct instructional costs for vocational education, including nonfederal and federal funds, amounted to approximately $5 billion, with approximately $4.6 billion coming from nonfederal sources. For the school year 1979-80, enrollments in vocational education (both occupationally specific and other) within the ten service area classifications (agriculture, marketing and distribution, health, consumer and homemaking, occupational home economics, office occupations, technical, trade and industrial, industrial arts, and other not elsewhere classified) approximated 16.5 million vocational education students (see table 1). In the occupational specific programs (agriculture, marketing, distribution, health, occupational home economics, office occupations, technical, trade and industry, and other not elsewhere classified), for school year 1979-80, an estimated 6 million students were enrolled. Table 2 gives a detailed presentation of enrollment data by race/ethnicity, non-resident alien designation and sex, and by instructional program area.

Given the cost of the programs and the number of students served, it is important to keep in mind the role of vocational education. According to Evans and Herr (1978, p. 4), there are

TABLE 1

ENROLLMENT IN VOCATIONAL EDUCATION PROGRAMS (VEA)
BY SERVICE AREA: 1979-80

Service Area	Total	Secondary	Postsecondary
Agriculture	878,529	657,247	221,282
Marketing and Distribution	961,018	396,313	564,705
Health Occupations	834,296	128,672	705,624
Consumer and Homemaking	3,385,736	2,622,561	763,175
Occupational Home Economics	551,862	361,773	190,089
Office Occupations	3,400,057	1,972,161	1,427,896
Technical	499,305	32,150	467,155
Trade and Industrial Occupations	3,215,987	1,416,230	1,799,757
Industrial Arts	1,536,667	1,517,424	19,243
Other NEC	1,189,541	977,627	211,922
Total	16,453,006	10,082,158	6,370,848

SOURCE: Preliminary data from the National Center for Educational Statistics' Vocational Education Data System (VEDS) 4 May, 1982.

TABLE 2

ENROLLMENT (VEA) IN OCCUPATIONALLY SPECIFIC INSTRUCTIONAL PROGRAMS, BY RACE/ETHNICITY AND NONRESIDENT ALIEN DESIGNATION AND SEX, AND BY INSTRUCTIONAL PROGRAM AREA 1979-80

PROGRAM AREA		AMERICAN INDIAN/ ASKALAN NATIVE		ASIAN OR PACIFIC ISLANDER		BLACK NOT HISPANIC		HISPANIC		WHITE NOT HISPANIC		NON-RESIDENT ALIEN		STATUS UNKNOWN
	Total	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Agriculture.....	384,940	2,842	841	2,081	750	19,710	4,602	8,548	2,771	241,642	68,038	208	21	32,886
Distribution.....	601,275	2,081	2,001	6,164	6,406	31,985	39,848	15,897	19,008	198,812	248,279	841	1,878	28,075
Health Occup	455,129	1,130	3,351	1,392	5,452	8,220	48,786	4,487	17,208	49,246	295,692	243	656	19,266
Home Ec. Total ..	242,087	652	1,594	955	2,610	12,352	44,557	3,068	12,973	27,973	126,827	12	85	8,665
Office Occup.....	1,970,518	1,685	11,565	16,602	37,883	79,234	224,070	33,746	105,205	354,508	1,055,290	1,349	1,431	43,950
Technical.....	378,117	3,126	684	8,928	2,230	29,659	11,052	15,864	4,208	229,895	54,646	1,771	260	24,794
Trade & Ind Occup.	1,792,052	14,574	3,169	28,392	6,962	188,304	49,620	96,038	22,707	1,068,187	230,480	1,524	376	81,719
Other Nec.....	146,390	535	639	384	465	12,392	19,280	2,281	6,832	44,917	57,498	11	16	1,143
TOTAL	5,979,508	30,625	23,641	64,898	62,758	381,856	441,815	179,929	190,676	2,215,180	2,136,750	5,959	4,723	240,498

SOURCE: Preliminary data from the National Center for Education Statistics' Vocational Education Data System (VEDS), 4 May 1982.

three basic objectives in any public school vocational education curriculum:

1. meeting society's needs for workers
2. increasing the options available to each student
3. serving as a motivating force to enhance all types of learning.

How vocational education is meeting the needs of the labor market as well as the individual needs of students is a major concern for those who plan the programs and make the decisions in vocational education.

To serve the needs of the students, an administrator must recognize the various degrees of student participation in vocational education programs. Campbell et al. (1981, p. x) identified five patterns of participation by youth in secondary vocational education. This identification was based on an analysis of high school transcripts from a national sample--The National Longitudinal Survey of Labor Market Experience of 1979--of youth enrolled in secondary education. The five patterns ranged from extensive involvement in vocational education to incidental use of available courses without establishing a specialty. Concentrators (14 percent) were those students who took a substantial number of courses in a specialty area. Limited Concentrators (23 percent) were similar to the Concentrators except that they tended to take somewhat fewer credits. Concentrator/Explorers (13 percent) were students who tended to concentrate early in a specialty but frequently ended concentration after tenth grade. Explorers (2 percent) were students who sampled widely across program areas but did not develop a specialty. And Incidental/Personal (48 percent) were students who used vocational education to accumulate a small number of credits that were insufficient to be considered saleable skills.

Based on the identification of these patterns of participation, Campbell et al. recommended that policymakers consider very carefully the diversity of the vocational education experience as they make decisions about the delivery of vocational education services, particularly since approximately 50 percent of the high school graduates who used vocational education offered in their schools did not do so in a manner that was directed toward securing specific employment.

If program administrators are to fulfill the objectives of vocational education by meeting the needs both of students and employers, they must determine those needs as precisely as possible. The findings of this study (in chapter 3) show how the administrators in the survey ascertained the needs of these two key groups.

Planning and Evaluation

Vocational educators have faced continuing demands for an effective system of planning and evaluation in order to make objective and cost-effective decisions about instructional programs. A review of documents on planning and evaluation since 1963 attests to the attention given to effective program planning. A number of studies--such as Copa et al. (1976), Drewes and Katz (1975), Lawrence and Dane (1974), the National Institute of Education's Vocational Education Study (1981), Starr et al. (1981), and the U.S. General Accounting Office report (1974)--found that federally inspired planning and evaluation at the state level had little influence on local program decisions. Reasons cited in these various reports included limited federal expenditures, poor data and information, and lack of resources to support effective planning and evaluation.

On the one hand, the evaluation requirements of the 1976 Education Amendments (Sections 105, 112, 161, 162, and 523) were directed toward improving the responsiveness of vocational education to the changing needs of industry and society; on the other hand, discrepancies exist between those demands for evaluation data and for the requisite resources in the states and other agencies (Datta 1979). An examination of states' responses to the 1976 vocational education requirements in the spring of 1978 and the 1979-80 school year revealed that those requirements may have stimulated much activity (Smith and Holt 1979; Beuke et al. 1980; Starr et al. 1981). However, several studies (Boruch and Cordray 1980; Hendrickson 1981; Lee 1979; and Starr et al. 1981) indicate that in program improvement, despite high levels of technical sophistication and exhortation, many planners and decision makers do not use evaluation data.

The interrelationship between planning and evaluation was stressed in the vocational education legislation. However, efforts to develop, implement, and operate a system where the relationship supported effective results (i.e., information to support program decision making) remains in large measure at a talking stage. The Vocational Education Study: The Final Report (National Institute of Education 1981) suggests that:

> only one of the four approaches to evaluating the effectiveness of programs specified in the regulations--that dealing with planning and operational process--has the potential to prove useful for the purposes of improving programs and decision making on program offerings, at least in the immediate future. Even this approach needs much improvement in most states before it can realize its full potential. (p. IV-22)

Possibly, efforts have been hindered by a lack of understanding what factors are important in program decision making and specifically the determination of the most effective process of deciding to add, terminate, or modify a vocational education program. Moreover, there is a continuing need on the part of vocational educators to relate a consistent decision making process more effectively to a comprehensive planning and evaluation system.

One result of this continuing need is that unsuccessful programs continue to drain resources. According to Datta (1978, page 33), there is little evidence that a program is dropped because of unfavorable evaluations; if anything, evaluators have lamented that demonstratably an ineffective program continues undeterred. Chelimsky (1982, p. 22) confirms the need for program managers to use evaluation results:

> The problem of evaluation use is hardly a new one. We've been puzzling for years now about how to get program managers, for example, to use evaluation findings as a way of correcting or even cutting their programs, despite the obvious career threat which such use can represent.

From the first vocational education act in 1917 to the current Education Amendments of 1976, legislation has required vocational administrators, planners and evaluators to ensure that vocational education meets the needs of the labor market as well as the needs of the individual student. Preliminary discussions on the reauthorization of the Vocational Education Act reinforce the necessity of meeting the needs both of individuals and of the labor market. Five general goals for reauthorization (Bottoms 1982, p. 10-11) explain how to meet these needs:

1. To enable vocational education to respond to the nation's need for a skilled labor force
2. To give inner cities and rural areas the capacity to offer vocational education programs of high quality
3. To provide the extra services and efforts required to make youth with special needs employable
4. To enable federal funds for vocational education to be used for national purposes
5. To strengthen collaboration between vocational education and Department Of Labor efforts for the disadvantaged needing special help for a second chance.

Thus, not only the role of vocational education but also the practice of planning and evaluation highlight a need for identifying the factors which should influence decisions by vocational administrators. The findings of this study show the range and weighting of factors considered by the 140 administrators in the survey when they faced decisions of adding, terminating, or modifying vocational education programs.

Decision-making and Its Context

The importance of decision making in the vocational education system has been stressed in many ways. The federal legislative enactments since 1917 have highlighted the need for using objective data relating both to occupational demand and supply and to student needs or interest. The advent of comprehensive State and local planning with the passage of the 1963 Vocational Education Act and the subsequent amendments of 1968, 1972, and 1976 further emphasized the need for administrators and planners to use labor market and educational factors in an objective fashion to make decisions about program offerings.

Legislative mandates have, for the most part, put decision making in the realm of a rational process to be undertaken by individuals who have clearly defined goals in regard to a clearly defined role for vocational education, with alternative decisions to be based on objective data. To bring about this objectivity, management information systems and a variety of decision-making procedures, such as PERT (Program Evaluation Review Technique), economic and occupational forecasting, Delphi, linear programming, and so forth, were encouraged at the state and local levels as a result of the passage of Vocational Education Act of 1963 and its subsequent amendments. However, decision makers face a reality unrecognized by the implied call for rational or scientific method in the legislative mandates. Although the local decision-making process may not mirror what is reflected in the legislation, a process often described as informal may be in fact rational--rational, that is, within the unique context of the individual institution.

In other words, the decision making implied in the federal legislation calls for a formal, rational decision-making model. However, if one observes and talks to vocational administrators in their environment, one sees an informal incremental decision-making model. De Young and Conner (1982, pp. 431-432) summarize the characteristics of these two models.

The rational decision-making model assumes that decisions in an organization are based on rational processes. In this model the vocational administrators would begin their decision-making process by identifying the problem. This step would begin

with a formulation of a general statement of the problem in the form of objectives. Next the identification of constraints (of finances, human resources, policies, laws, and so forth) would be balanced against the problem definition. A translation of the problem based on the analysis of the constraints would then result in a determination of measurable goals. The second phase of this decision-making model would be problem solving. In this phase a detailed analysis of the problem would be presented, and alternatives would be identified and weighted according to fixed constraints. From this analysis, candidate solutions would be chosen. Then these solutions would be measured against the goals and objectives established in the problem defining phase of the decision-making process.

The second organizational decision-making model defined by De Young and Conner is the incremental model, which assumes that decisions in organizations are the product of compromise among competing groups. The inability to attain consensus on objectives--as a result of the many diverse groups who have different values--characterizes the environment in which the incremental model operates. De Young and Conner state that information is important in the incremental model. However, it does not play a central role in decision making. They add that the choice among alternatives is not necessarily based on theory or past research but on the policy experiences of the decision maker and the demands of the situation.

Decision making by vocational education administrators has become more complex because of the changes in the environment in which the vocational education system operates. The social, economic, technological, political, and legislative conditions that affect the information base have caused administrators to look at a variety of factors when making program decisions. Mackinnon and Wearing (1980, p. 285) reviewed various planning documents and concluded that a complex decision-making environment surrounds all members of society, from the private individual to corporate and governmental organizations, and that this complexity is increasing. In describing how vocational administrators must operate in a political environment, Pucel and Schneck (1980, p. 45) state that administrators serve both as a source of decision-making information (for those to whom they are responsible) and as decision makers (for those who are responsible to them). Locatis, Smith, and Blake (1980, p. 812) state that research on decision-making indicates that personality characteristics of decision makers and their perceptions of risk and benefits affect their decisions. Decision makers are often publicly committed to programs and may be unreceptive to discrepant evaluation outcomes.

Various researchers, such as U.S. General Accounting report (1974), Drewes and Katz (1975), and Starr et al. (1981), have confirmed that vocational program decision making is a complex process that is not clearly defined at the state and local level. The process is not data-based according to the rational model defined in legislative mandates. Rather, management information systems and the other techniques for decision-making implied in the legislation are only supplemental or fragmentary sources of information and supply only a part of the data needed for making an administrative program decision. Pucel and Schneck (1980, p. 46) state that decisions are made in a political environment involving various groups and individuals who may have not only different but needs also, at times, competing interests; that the best data-oriented planners cannot anticipate all of the information needed; and that, at times, decisions may be political, aimed at defending the organization or at buying time.

As a result, effective decision making for adding, terminating, or modifying vocational education programs requires that vocational administrators be knowledgeable about the context within which their institutions function. The context includes the educational, social, and labor market settings. Administrators also need to understand the present and future trends affecting social and economic conditions, and related group and individual needs. A clearly defined role must be identified for vocational education and its relationships among local, state, and federal constituencies. Finally, there is a need to plan and evaluate vocational education within a framework that supports a defined decision-making process. That process requires a communications linkage among administrators, teachers, evaluators, planners, employers, and special interest groups. The actual factors used in decision making come from many sources and are filtered by the personality characteristics of the decision makers in their perception of the role or roles of vocational education. The understanding of the data, their availability, and their relationship to the decision-making process in a local educational institution is important. As stated in one local program planning document:

> Every school district must correspondingly look at its decision-making structure, re-examine its need for information upon which decisions are made, and sufficiently modify its decision-making process so that vocational program offerings are justified in terms of employment demand data, program costs, placement statistics, and school, community, and student needs. (Portland Public Schools 1977, p. iii)

The survey of administrators in this study shows the variety of factors used to justify and create program offerings. Contrary to the assumptions implicit in federal legislation, many administrators rely on regional rather than national sources of data, and they reach their decisions according to an incremental rather than a rational model of analysis.

CHAPTER TWO

STUDY PROCEDURES

This report is based on data and information collected from 115 nonstructured telephone discussions and twenty-five face-to-face, open-ended discussions. Fifty-five occupational administrators from secondary vocational institutions and sixty occupational administrators from postsecondary occupational institutions institutions comprised the sample for the telephone discussions. The sample for the face-to-face discussions was comprised of eleven occupational administrators from secondary vocational education education schools and fourteen occupational administrators from postsecondary institutions.

Sample Design

A nonprobability sampling design was used for the purpose of this study. Sampling frames for drawing the sample were chosen from selected National Center mailing lists and national directories. These lists of public secondary and postsecondary institutions included the following:

- National Association of Large City Directors of Vocational Education for Cities over 100,000
- National Association of Large City Directors of Vocational Education for Largest Cities in State
- Patterson's American Education Directory (1981)
- National Alliance of Postsecondary Institutions
- American Association for Community and Junior Colleges Director of Postsecondary Institutions (1981)

Judgment sampling was used in selecting sites. Factors such as rural and urban areas and types of vocational school were used for this selection. Geographic representation was also considered. The intent was to have as many states as possible represented within the constraints of the budget and scope of the study. The telephone discussions included twenty-nine states in the secondary sample and thirty states in the postsecondary sample. Fifty-five percent of the sites in the postsecondary sample were classified as urban areas, and 45 percent of the sites were classified as rural. In the secondary sample, 74 percent percent of the sites were classified as urban and 26 percent as rural. The designation of rural or urban was based on the 1980 Census of Population of cities and counties conducted by the U.S. Bureau of Census. No attempt is made to generalize

findings from this exploratory study to vocational education institutions across the United States.

Additionally, four sites were selected for program observation and face-to-face discussions with vocational program administrators. The selection of sites was conducted in conjunction with the National Center evaluation function task focusing on the relative curricular emphasis of vocational education. The same National Center staff members were involved in both tasks and conducted the field site studies. This cost-effective procedure facilitated the achievement of objectives for both projects. The four case study sites included a school located in a rural area, one in a suburban area, one in an urban area, (metropolitan city), and one in an urban area, (metropolitan central city). Open-ended discussions were conducted with eleven secondary occupational administrators. And open-ended discussions were held with fourteen postsecondary administrators at national conferences.

Reliability and Validity

The data-gathering techniques used in this study followed the suggestions of Guba and Lincoln (1981, p. 106) that emphasize careful coding and recoding of information, continual scrutiny of data for internal consistency, cross-checking of inferences with selected interview material, and continual assessment of subject credibility.

To address concerns of validity, project staff cross-checked the different data sources and tested interviewers' perceptions against those of participants (House 1980). Further, the technique of triangulation was used to assess the credibility of data and information collected. The data sources used in the triangulation process were Conditions Affecting Vocational Education Planning (Stan et al. 1981), Factors Relating to the Job Placement of Former Secondary Vocational-Technical Education Students (McKinney et al. 1981), and Factors Relating to the Job Placement of Former Postsecondary Vocational-Technical Education Students (1982).

Data Collection

A common format was used for all telephone conversations and face-to-face discussions with eleven secondary occupational administrators at the four case study sites and with fourteen postsecondary occupational administrators. The interviewers used the open-ended format based on the elite interviewing techniques defined by Dexter (1970). Within this framework, project staff set the context for discussions by stating: "Current trends on vocational education and the economic and demographic conditions

cause one to do some serious thinking about vocational education program decision making. Many believe that decisions affecting the addition, termination or modification of vocational programs are critical to the overall quality of vocational education. What are your thoughts relating to factors influencing decisions to add, terminate, or modify programs at your school?"

The methodology proposed by Patton (1980) and Guba and Lincoln (1981) provided guidelines for the basic steps in designing the case studies and included defining boundaries, specifying the unit of analysis, selecting sites, establishing initial contacts, developing data collection systems, defining fieldwork procedures, collecting data, and analyzing data.

A pilot study was conducted to test the fieldwork procedures for both the telephone discussions and face-to-face interviews. Based on the results of the pilot efforts, refinements were made in the fieldwork procedures.

Four persons conducted the telephone discussions and face-to-face interviews. The interviewers had previous training and experience in conducting interviews on vocational education and in studying administrative decision making. A common format was followed by all interviewers. The interviews ranged from fifteen minutes to fifty-five minutes, with an average length of twenty-five minutes.

For each interview, notes were taken and descriptive reports were prepared. A content analysis was made of the descriptive reports. The results of the content analysis were used to generate a listing of the factors that vocational administrators identified as influencing decisions to add, terminate, or modify vocational education programs. Descriptive statistics, used for the purpose of the analysis, included percentages, frequencies, and rankings. Several cross tabulations were made to highlight differences or commonalities among institutional types and data-gathering techniques.

CHAPTER THREE

FINDINGS AND DISCUSSION

The major findings from this study are organized according to secondary and postsecondary respondent groups and according to the decision factors for adding, terminating, and modifying vocational education programs. The data and information represent the respondents' indication of factors that influenced their decisions to add, terminate, or modify vocational education programs.

Results of Telephone Discussions with Secondary Respondents

Fifty-five respondents representing twenty-nine states participated in the telephone discussions. The respondents held the position of vocational director for their respective school districts.

In all cases, the respondents indicated that more than one factor was used in the decision-making process, and that this process was multidimensional with respect to the number of factors and persons involved. Table 3 presents a summary of those factors considered influential in decisions to add, terminate, or modify vocational education programs at the secondary level.

Existing economic conditions and demographic conditions relating to declining enrollments were often cited as reasons for not considering the addition of programs. Consideration to add programs was associated with the building of a new vocational school or vocational center in a school district.

Adding Programs

The most frequently mentioned factor influencing the addition of a vocational education program was information from advisory committees. Seventy-eight percent (n=43) of the respondents identified this factor as important in making a decision to add a program. The information that administrators generally sought from the advisory committees was the identification of a program to satisfy the job needs of local employers. In some instances, the respondents indicated that advisory committees were used as a validation source for job needs originally identified through published data. The majority of the respondents said that they were more inclined to believe the information provided by the advisory committees than that found in published data sources. However, administrators emphasized that there was a high degree of variability in the effectiveness of advisory councils providing relevant information for decision making. One

TABLE 3

FACTORS INFLUENCING PROGRAM DECISIONS BY NUMBER AND PERCENT OF SECONDARY VOCATIONAL ADMINISTRATORS

(Based on Telephone Discussions)

ADDING	#	%	TERMINATING	#	%	MODIFYING	#	%
Advisory Committee Input	43	78	Student Enrollment Figures	24	44	Advisory Committee Input	44	80
Industry Surveys	38	69	Student Interest	20	36	Faculty & Administration Input	15	27
Student Interest	26	47	Job Placement Rates	19	34	Industry Surveys	13	24
State Labor Market Data	21	38	Needs Assessments	14	25	Community Surveys	7	13
Program Cost	16	29	Lack of Qualified Faculty	11	20	Student Interest	6	11
Community Surveys	14	25	Program Cost	9	16	Occupational Data	5	09
Student Enrollment Figures	11	20	Advisory Committee Input	9	16	Industrial Visits	5	09
Faculty & Administration Input	9	16	Industry Surveys	6	11	Employer Follow-up Data	4	07
Job Placement Rates	8	14	Community Surveys	6	11	Program Evaluation	4	07
Occupational Data	5	09	Student Follow-up Data	5	09	Job Placement Rates	4	07
Employer Follow-up Data	5	09	Faculty & Administration Input	4	07	State Labor Market Data	4	07
Student Follow-up Data	2	04	State Labor Market Data	4	07	Literature Reviews	3	05
Political Implications	1	02	Occupational Data	2	04	Student Enrollment Figures	2	04
			Obsolete Equipment	1	02	State Requirements	2	04
			Literature Reviews	1	02	Competency-based Instruction	1	02
						Articulation with Post-secondary Programs	1	02

NOTE: Multiple responses were given by all respondents in identifying factors for influencing their program decisions. n=55

administrator captured the feelings of the majority of the respondents in regard to advisory committees use and effectiveness by making this statement:

> Advisory committee benefits are proportional to involvement in the program. If we have only two meetings a year to satisfy federal requirements, we have nothing. But if we use them with a clearly defined goal in mind, most are effective. Effectiveness is determined by the administrator involvement and teacher involvement.

The second most frequently mentioned factor was industrial surveys initiated or conducted by the school district. Sixty-nine percent (n=38) of the respondents reported that surveys locally conducted by school personnel or those contracted out to consulting firms or agencies such as the chamber of commerce, were influential in decisions to add vocational programs. Both formal and informal survey techniques were identified by respondents. In comparing the usefulness of the information from local industry surveys with data published by state or national sources, the majority of the respondents preferred the former.

The third most frequently mentioned factor, student interest, was identified by 47 percent (n=26) of the respondents. Some administrators indicated that student interest has long supported programs such as auto mechanics and cosmetology, despite poor placement records of those programs. However, they indicated that smaller budgets will cause the administrator to reassess the weighting of student interest. Rates of job placement and costs of programs were identified as factors that could replace student interest in influencing decisions to add programs.

State labor market data were mentioned by 38 percent (n=21) of the respondents. Of this group, seven individuals cited information from the employment service. The majority of the respondents indicated that the published data provided by state and national sources did not address their needs, and were considered only because of requirements for state or national planning activities. Levitan (1977, p. 2) describes such usage when he comments, "To paraphrase an old advertisement: We're using the statistics more now but believing them less."

Administrators from three schools captured the feelings of the majority of respondents by stating that data published by state and national agencies were used very little. One administrator stated, "If we relied on published data, we would shut our program down, and these are programs which are placing individuals in jobs. The published labor market information does not meet our needs; trends are not accurate for this county." The National Commission on Employment and Unemployment Statistics

(1979, pp. 109-110) concluded that information supplied to state authorities in vocational education was often unused, in part because--

- vocational education officials were accustomed to depending on industry contacts or advisory groups for job prospect information; in part because of rigidities imposed by existence of tenured teachers of various specialties or expensive equipment for teaching specific skills; in part because of vocational educators' unfamiliarity with occupational statistics, or distrust of outside agencies.

The findings from this study support the above conclusion: for information on job prospects, administrators rely on industry contacts or advisory groups more than on reports on the labor market published by the state.

Program cost was identified by 29 percent (n=16) of the respondents. Many described it as one factor that is growing in importance. Citing current and projected economic conditions, administrators indicated that a reordering of factors would probably occur because of increased operating expenditures.

Other factors considered by the administrators when adding vocational programs were--

- o community surveys, 25 percent (n=14);
- o student enrollment figures, 20 percent (n=11);
- o faculty and administration input, 16 percent (n=9);
- o job placement rates, 14 percent (n=8);
- o occupational data, such as changes in technology, salary, and working conditions, 9 percent (n=5);
- o employer follow-up data, 9 percent (n=5);
- o student follow-up data, 4 percent (n=2); and
- o political implications, 2 percent (n=1).

Terminating Programs

Terminating a vocational program at the secondary level was not considered a common practice by those vocational administrators interviewed by telephone. In the words of one administrator, "We don't terminate programs here. Instead, when student interest falls, the program remains in mothballs until needed again." Another administrator stated, "Actual dropping of a program is never done. Instead, it is modified or allowed to go dormant for a year or two until conditions improve." However, administrators who had closed a program or considered closing a program indentified the following factors which influenced or would influence their decisions.

As shown in table 3 (p. 21), the factor cited most frequently for terminating programs was student enrollment. Forty-four percent (n=24) of the respondents reported that if enrollments were adequate, programs would continue to operate; and if they fell below a district-approved level, they generally would either be put on probation for a certain time or be terminated. The second most frequently mentioned factor, student interest, was identified by 36 percent (n=20) of the respondents. This factor was considered to be highly correlated with student enrollment but was expressed as a separate element for program decision making by the majority of administrators. The third most frequently mentioned factor was job placement rate, which 34 percent (n=19) of the respondents cited as influential in decision making. Needs assessments were identified by 25 percent (n=14) of the respondent group as a factor to be considered in deciding whether to terminate an occupational program. These comprehensive assessment were described as involving students, employers, teachers, and parents. Other factors considered important included--

- a lack of qualified faculty, 20 percent (n=11);
- cost of program, 16 percent (n=9);
- advice of advisory committee, 16 percent (n=9);
- results of industry surveys, 12 percent (n=7);
- community surveys, 11 percent (n=6);
- student follow-up data, 9 percent (n=5);
- faculty and administration input, 7 percent (n=4);
- state labor market data, 7 percent (n=4);
- occupational data, such as changes in technology, salary, and working conditions, 4 percent (n=2);
- obsolete equipment, 2 percent (n=1); and
- information from literature reviews, 2 percent (n=1).

Modifying Programs

Modifying occupational programs was considered more common than terminating programs by the respondents in this study. In the words of one administrator: "We are more likely to modify a program than close one." Another administrator stated, "We probably would modify a program rather than terminate it."

The most frequently mentioned factor in decisions to modify a program was information provided by the advisory committees. As shown in table 3, 80 percent (n=42) of the fifty-five respondents identified this factor. Further, craft/program advisory committee were mentioned as providing the information (n=30) more frequently than general advisory committees (n=12). The second most common factor was faculty and administrative input, identified by 27 percent (n=15) of the respondents. Industry surveys, conducted by local schools or by other agencies, were identified by 24 percent (n=13) of the respondents. Community surveys,

similar to industry surveys, but focused more on the social and economic needs of the general public, comprised a fourth factor that was identified by 13 percent (n=7) of the respondents. Other factors considered important included--

- student interests, 11 percent (n=6);
- occupational data, such as changes in technology, salary, and working conditions, 9 percent (n=5);
- employer follow-up data, program evaluation, job placement rates and state labor market data, 7 percent (n=4);
- information from literature reviews, 5 percent (n=3);
- student enrollment figures and state requirements, 4 percent (n=2); and
- competency-based instruction and articulation with postsecondary programs, 2 percent (n=1).

Results of Telephone Discussions with Postsecondary Respondents

At the postsecondary level 60 respondents, representing thirty states participated in the telephone discussions. All respondents held administative positions (such as dean of occupational education, president, dean, or vice president for academic affairs) and were charged with major responsibilities for decisions relating to the vocational programs in community colleges or two-year technical institutes.

Twenty-eight factors were identified from the sixty interviews as being influencing of the administrative decisions to add, terminate, or modify vocational education programs. The majority of the postsecondary respondents, like those at the secondary level, indicated that a variety of factors influenced their decisions to add, terminate, or modify a vocational program. Also, as was found in the interviews with secondary school administrators, decision making was a multidimensional process that included a number of individuals and groups in identifying data and information. Table 4 (p. 29) summarizes the factors influencing decisions to add, terminate, or modify vocational programs.

Adding Programs

The factor cited most often by the postsecondary administrators was industry surveys. The majority of the respondents reported that both formal and informal surveys were generally conducted by their institutional staff. One administrator stated, "The state board of regents has a federal process for adding programs; however, in the informal process new ideas are drawn primarily from an industry survey by the administration." Another administrator added, "The state provides good supply/demand information back to the local institution relating to adding a

TABLE 4.

FACTORS INFLUENCING PROGRAM DECISIONS BY NUMBER AND PERCENT OF POSTSECONDARY VOCATIONAL ADMINISTRATORS

(Based on Telephone Discussions).

ADDING	#	%	TERMINATING	#	%	MODIFYING	#	%
Industry Surveys	45	75	Student Enrollment Figures	34	56	Advisory Committee Input	35	58
Advisory Committee Input	31	52	Job Placement Rates	33	55	Faculty & Administration Input	30	50
Program Cost	25	42	Industry Surveys	18	30	Industry Surveys	15	25
Student Interest	21	35	Program Costs	17	28	Program Costs	5	08
State Labor Market Information (published data)	20	33	Student Interest	13	22	Occupational Data	4	07
Faculty and Administration Input	16	27	Student Follow-up Data	13	22	Community Surveys	3	05
Community Surveys	13	22	Advisory Committee Input	11	18	Student Interests	3	05
Needs Assessments	9	15	Occupational Data	9	15	Student Follow-up Data	3	05
Occupational Data	8	13	Program Evaluation	8	13	Program Evaluation	2	03
Student Enrollment Figures	4	07	Faculty and Administration Input	5	08	State Labor Market Data	2	03
Student Follow-up Data	3	05	State Labor Market Data	4	07	Competency-based Instruction	2	03
Literature Reviews	3	05	Number of Graduates	4	07	Job Placement Rates	1	02
Industrial Visits	2	05	Employer Follow-up Data	3	05	Student Enrollment Figures	1	02
Perception of Institution Mission	5	09	Community Surveys	2	03	Skill Shortages	1	02
Political Implications	2	05	Skill Shortages	2	03	Political Implications	1	02
Skill Shortages Funding	2	05	Lack of Qualified Faculty	2	03	Funding Patterns	1	02
Patterns Space Availability	2	05	Funding Patterns	1	02			
	2	05	Competency-based Education	1	02			

NOTE: Multiple responses were given by all respondents in identifying factors for influencing their program decisions. n=60.

program, but we then conduct a local industry survey to confirm the need." Seventy-five percent (n=45) of the respondents indicated that this factor was used in deciding to add programs. Fifty-two percent (n=31) of the respondents indicated that the second most frequently mentioned factor was input from an advisory committe. Respondents were nearly divided as to the type of advisory committees used to provide information, with fifteen respondents indicating the craft or program advisory committees and sixteen respondents indicating the general advisory committee. The third factor most often mentioned was program cost, with 42 percent (n=25) of respondents indicating that this factor affected their program decisions. It should be noted, however, that the majority of the administrators indicated that economic conditions and resulting budgetary problems were increasing the importance of this factor. Thirty-five percent (n=21) of the respondents mentioned that they considered student interest in deciding to add programs. State data on the labor market were considered by 33 percent (n=20) of the respondents; however, a majority said the data were of questionable value for their local or regional needs and were used to comply with regulations or to reinforce a decision that already had been made. One administrator stated, "If you look at statewide figures, there is an oversupply of nurses, but we need them in our area."

Other factors considered important included--

- o faculty and administrative input, 27 percent (n=16);
- o community surveys, 22 percent (n=13);
- o needs assessments, 15 percent (n=9);
- o occupational data, and job placement rates, 13 percent (n=8);
- o student enrollment figures, 7 percent (n=4);
- o student follow-up data and literature reviews, 5 percent (n=3); and
- o industrial visits, perception of institutional mission, political implications, skill shortages, funding patterns and space availability, 5 percent (n=2).

Terminating Programs

The most frequently cited factor was student enrollment. Fifty-six percent (n=34) of the postsecondary administrators mentioned that this factor had influenced their decision to terminate a program. One administrator stated, "Criteria for terminating a program include a decline in student enrollment or placement." Another administrator said, "For terminating a program, the primary criteria are low enrollment and low job placement."

Job placement rate was the second most frequently mentioned factor influencing an administrator's decision to terminate a

program. Fifty-five percent (n=33) of the administrators indicated that low job placement of completers, over a period of time such as two years, raised questions about the program's continuance. However, the majority of respondents said that the prevailing and projected economic conditions in the local area had to be taken into account before a decision to terminate a program was implemented. As reported earlier, current and projected economic conditions were mentioned as becoming more prominent influences on decisions about vocational programs.

Thirty percent (n=18) of the postsecondary administrators said that their locally conducted industry surveys provided information for program termination. A total of 28 percent (n=17) of the postsecondary administrators stated that program cost entered into the decision to terminate a program. Student interest and student follow-up data were each cited by 22 percent (n=13) of the respondents.

Other factors considered before terminating a program included--

- o advisory committee input, 18 percent (n=11);
- o program evaluation, 13 percent (n=8);
- o faculty and administration input, 8 percent (n=5);
- o state labor market data and number of graduates, 7 percent (n=4);
- o employer follow-up data, 5 percent (n=3);
- o community surveys, skill shortages, lack of qualified faculty, 3 percent (n=2); and
- o funding patterns and the availability of competency-based instruction, 2 percent (n=1).

Modifying Programs

Modifying occupational programs was considered a primary means of program improvement according to one administrator "Program modification often solves the problem of a program which should be terminated." Approximately 75 percent of the administrators indicated that modification preceded the terminating or adding of a program. One administrator scrutinized with an eye toward modifying or improving rather than terminating. Another administrator had this to say about program modification: "Since 1977 we have modified programs; money for expansion has been nil because of poor economic conditions."

Fifty-eight percent (n=35) of the administrators cited advisory committees as influencing their decisions to modify programs. Additionally, 50 percent (n=30) mentioned faculty and administration input as influencing the decision-making process. Twenty-five percent (n=14) of the administrators stated that they used locally conducted industry surveys.

CHART 1
SELECTED FACTORS INFLUENCING DECISIONS TO ADD PROGRAMS BY SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION ADMINISTRATORS

(Based on Telephone Discussions)

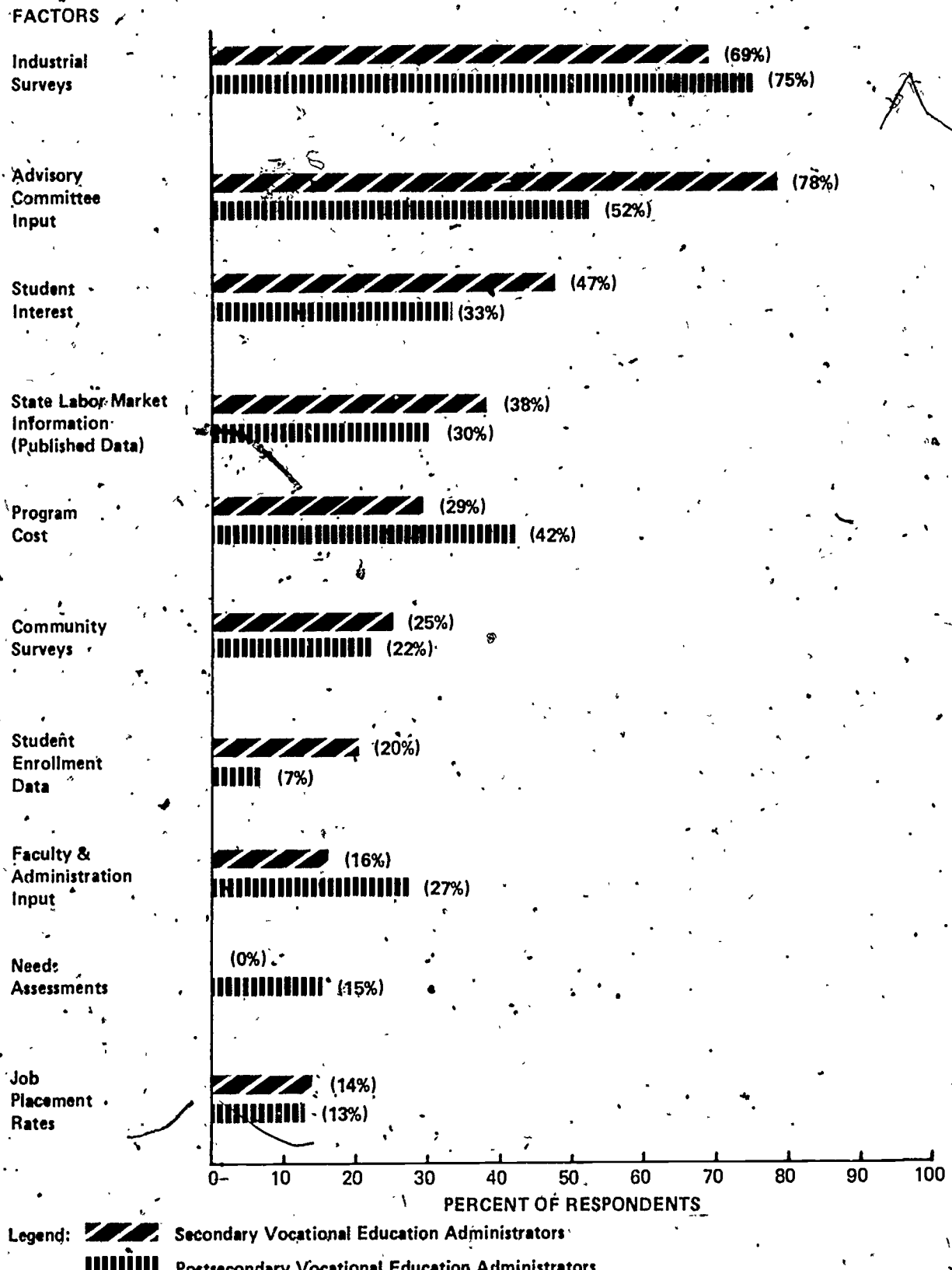


CHART 2

SELECTED FACTORS INFLUENCING DECISIONS TO TERMINATE PROGRAMS BY SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION ADMINISTRATORS

(Based on Telephone Discussions)

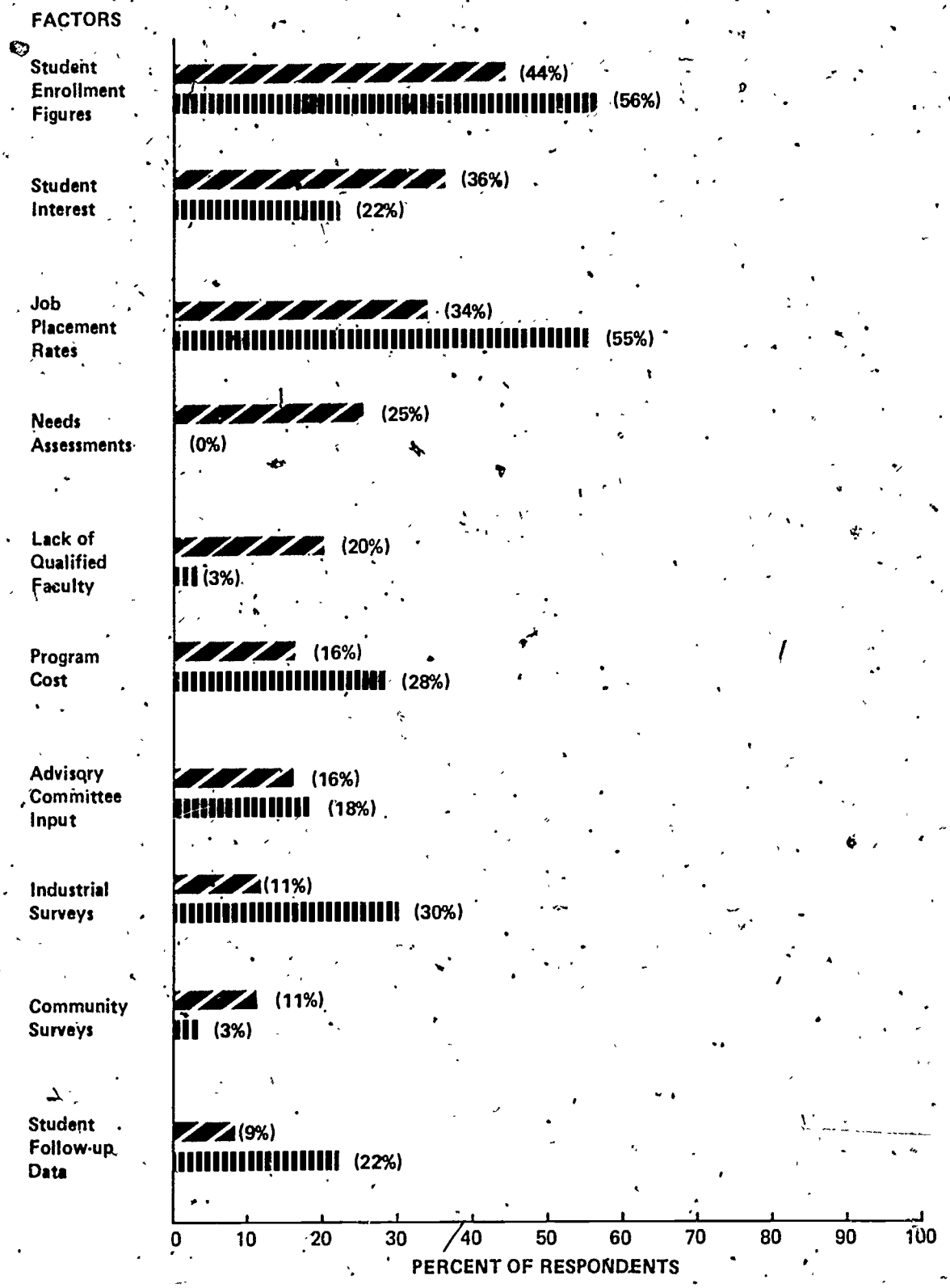


CHART 3
SELECTED FACTORS INFLUENCING DECISIONS TO MODIFY PROGRAMS BY SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION ADMINISTRATORS

(Based on Telephone Discussions)

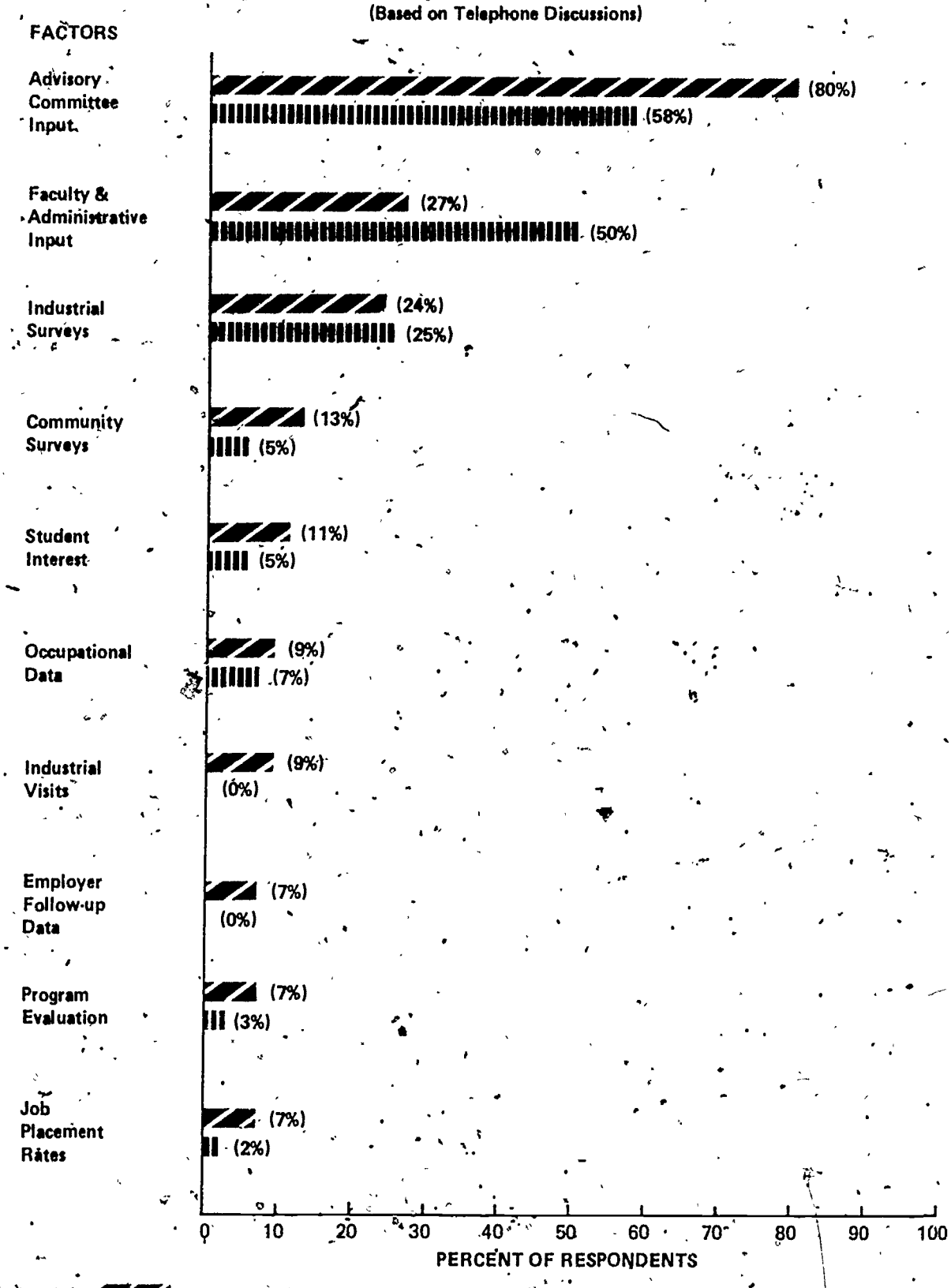


TABLE 5

RANK ORDER OF FACTORS INFLUENCING PROGRAM DECISIONS
BY VOCATIONAL EDUCATION ADMINISTRATORS
(Based on Telephone Discussions)

Factors	Decision Type: Adding		Terminating		Modifying	
	Sec.	Postsec.	Sec.	Postsec.	Sec.	Postsec.
Industry Surveys	2	1	8	3	3	3
Advisory Committees	1	2	6.5	7	1	1
Program Cost	5	3	6.5	4	-	4
Student Interest	3	4	2	5.5	5	7.5
Student Enrollment Figures	7	11	1	1	12.5	12.5
Job Placement Rates	9	9.5	3	2	9.5	12.5
State Published Labor Market Data	4	5	11	11	9.5	10.5
Faculty & Administrator Input	8	6	11	10	2	2
Community Surveys	6	7	9	14	4	7.5
Needs Assessments	-	8	4	-	-	-
Occupational Data	10.5	9.5	13	7	6	5
Student Follow-Up Data	-	12.5	-	5	-	7.5
Literature Reviews	-	12.5	14	-	11	-
Industrial Visits	-	14.5	-	-	6.5	-
Perceptions of Institution Mission	-	14.5	-	-	-	-

TABLE 5 (Cont.)

Factors	Decision Type: Adding Sec.	Adding Postsec.	Terminating Sec.	Terminating Postsec.	Modifying Sec.	Modifying Postsec.
Skill Shortages	-	14.5	-	15.5	-	12
Funding Patterns	-	14.5	-	17.5	-	12
Space Availability	-	14.5	-	-	-	-
Political Implications	13	14.5	-	-	-	12
Competency Based Education	-	-	-	17.5	14.5	9
Employer Follow-up	10.5	-	-	13	9.5	-
Lack of Qualified Faculty	-	-	5	15.5	-	-
Program Evaluation	-	-	-	9	9.5	9
Obsolete Equipment	-	-	14	-	-	-
Articulation with Secondary/ Postsecondary Programs	-	-	-	-	14.5	-
State Requirements	-	-	-	-	12.5	-

NOTE: The rank order of factors was based on the frequency of response by the vocational administrators. The highest rank of one indicates that the factor was mentioned by more vocational administrators than any other factor. A "-" indicates that no mention was made of this factor as influencing the vocational administrators decision to add, terminate, or modify a program.

Other factors mentioned, but with less frequency, included--

- o occupational data, such as changing technology, salary, and working conditions, 7 percent (n=4);
- o community surveys, student follow-up, and student interest, 5 percent (n=3);
- o program evaluation, state labor market data, and competency-based instruction, 3 percent (n=2);
- o job placement rates, student enrollment figures, skill shortages, political implications, and funding patterns, 2 percent (n=1).

Comparison of Secondary and Postsecondary Responses

There were a number of factors used by vocational administrators in deciding to add, terminate, or modify vocational education programs. In examining the telephone responses of secondary and postsecondary vocational administrators, project staff identified twenty-five factors cited by secondary administrators and twenty-eight factors cited by the postsecondary administrators.

Charts 1, 2, and 3 (pp. 35-37) contrast the responses by secondary and postsecondary administrators. Table 5 (pp. 47-48) ranks factors cited by secondary and postsecondary administrators on the basis of the number of respondents citing a particular factor for each type of decision.

Results of Face-to-Face Interviews with Secondary and Postsecondary Respondents

At the four case study sites, eleven vocational administrators took part in face-to-face, open-ended interviews. Face-to-face interviews were also held with fourteen postsecondary vocational administrators at national conferences. In all cases, the respondents said that they considered more than one factor in making program decisions, and that more than one person was involved in the decision making process.

Results of Face-to-Face Discussions with Secondary Respondents

As in the telephone discussions, the interviews revealed that secondary vocational administrators cited economic conditions and demographic conditions relating to changing enrollment patterns as reasons for not considering the addition of new programs. In the words of one administrator, "We have to be cost-conscious, given the conditions which exist now and which are projected." Table 6 (p. 30) summarizes those factors mentioned

TABLE 6

FACTORS INFLUENCING PROGRAM DECISIONS BY NUMBER AND PERCENT OF SECONDARY VOCATIONAL ADMINISTRATORS

(Based on Face-to-Face Discussions)

ADDING	#	%	TERMINATING	#	%	MODIFYING	#	%
Industry Surveys	6	54	Student Enrollment Figures	8	73	Faculty & Administration Input	9	82
Advisory Committee Input	5	45	Job Placement Rates	4	36	Advisory Committee Input	3	27
Student Interest	4	36	Advisory Committee Input	3	27	Community Surveys	2	18
Student Enrollment Figures	3	27	Student Interest	1	09	Industrial Visits	2	18
Faculty and Administration Input	2	18	Student Follow-up Data	1	09	Industry Surveys	2	18
Program Costs	1	09	Occupational Data	1	09	Student Follow-up Data	2	18
Community Surveys	1	09	Program Evaluation	1	09	Job Placement Rates	1	09
			Faculty and Administrative Input	1	09			

NOTE: Multiple responses were given by all respondents in identifying factors for influencing their program decisions. n=11.

by the secondary vocational administrators as influencing their program decisions.

Industry surveys were mentioned most frequently; 54 percent (n=6) of those interviewed reported that such surveys influenced decisions to add a program. Input from advisory committees was mentioned by 45 percent (n=5) of the respondents. According to one, "I maintain contact with industry, the advisory committee, and the chamber of commerce in order to get new ideas for programs." Other factors mentioned include--

- o student interest, 36 percent (n=4);
- o student enrollment figures, 27 percent (n=3);
- o faculty and administration input, 18 percent (n=2);
- o program cost, 9 percent (n=1); and
- o community surveys, 9 percent (n=1).

The factor cited most frequently as influencing decisions to terminate programs was student enrollment; 73 percent (n=8) of respondents mentioned these figures. Like the respondents contacted by telephone, the interviewees indicated that if enrollments were adequate, programs would continue to operate; if they fell below a district-approved level, they would be put on probationary status. One administrator commented: "We look at enrollment projections from the central office on the first of March. And given that the central office indicates you have ninety teachers for the coming school year and that you must have at least a 17:1 student teacher ratio, plus student subject choice, a decision to terminate programs can be made." Another administrator said succinctly, "Student enrollment figures are important; that will close a program."

The second most frequently mentioned factor was job placement rates; 36 percent (n=4) indicated that this factor was considered in terminating a program. However, most respondents took economic conditions into account. As one administrator commented, "Low placement rates by themselves would not be a reason to terminate a program, because placement rates are not a fair way to evaluate vocational education given economic conditions and student interest." Advisory committee input was mentioned by 27 percent (n=3) of the individuals as a factor to be considered in terminating a program. Others factors mentioned were--

- o student interest, 9 percent (n=1);
- o student follow-up data, 9 percent (n=1);
- o occupational data, 9 percent (n=1);
- o program evaluation, 9 percent (n=1); and
- o faculty and administration input, 9 percent (n=1).

As was found in the telephone discussions, a greater emphasis was placed on program modification than on termination. In the words of one administrator, "I would rather modify a program than close or open a program."

The most frequently mentioned factor for deciding to modify a program was input from faculty and administration; 82 percent (n=9) cite this factor. One administrator stated, "The teacher is the key in modifying programs." The second most mentioned factor, was input from an advisory committee, according to 27 percent (n=3) of the respondents. One administrator commented, "Program modifications would be chiefly motivated by change in the work place, mainly through advisory committees and teachers' perceptions." Other factors mentioned as influencing decisions on program modification are--

- o community surveys, 18 percent (n=2);
- o industry visits, 18 percent (n=2);
- o industry surveys, 18 percent (n=2);
- o student follow-up data, 18 percent (n=3); and
- o job placement rates, 9 percent (n=1).

Results of Interviews with Postsecondary respondent

A summary of the results of the face-to-face, open-ended discussions with fourteen postsecondary administrators is presented in Table 7 (p. 33).

The single most frequently mentioned factor for adding a program was the industrial surveys; 64 percent (n=9) cited this factor as influential in program decision making. The second most prominant factor--29 percent (n=4)--was advisory committee input and student interest. These results of the face-to-face discussions are similar to the results of telephone discussions regarding the frequency with which industry surveys and input from advisory committees are mentioned as key factors in the addition of programs. Among the other factors, 21 percent (n=3) of the postsecondary vocational administrators, mentioned job placement rates, input from faculty and administration, and program cost as important in deciding to add a program. Other factors mentioned as influential in decisions to add a program were--

- o student enrollment figures, 14 percent (n=2);
- o occupational data, 7 percent (n=1); and
- o needs assessments, 7 percent (n=1).

In discussions on termination of vocational programs, a majority of the administrators reported very careful examinations before making this type of decision. As one administrator

TABLE 7

FACTORS INFLUENCING PROGRAM DECISIONS BY NUMBER AND PERCENT OF POSTSECONDARY VOCATIONAL ADMINISTRATORS

(Based on Face-to-Face Discussions)

ADDING	#	%	TERMINATING	#	%	MODIFYING	#	%
Industry Surveys	9	64	Student Enrollment Figures	4	29	Faculty and Administration Input	6	43
Advisory Committee Input	4	29	Job Placement Rates	2	14	Advisory Committee Input	3	21
Student Interest	4	29	Program Cost	2	14	Industry Surveys	2	14
Job Placement Rates	3	21	Industry Surveys	2	14	Student Follow-up Data	1	07
Faculty and Administration Input	3	21	Student Follow-up Data	1	07	Student Interests	1	07
Program Cost	3	21	Employer Follow-up Data	1	07	Professional Association Input	1	07
Student Enrollment Figures	2	14	Program Evaluation	1	07			
Occupational Data	1	07						
Needs Assessment	1	07						

NOTE: Multiple responses were given by all respondents in identifying factors for influencing their program decisions. n=14.

stated, "Before we terminate a program, we place the program in temporary suspension--keep equipment and reassign teachers--and look at all conditions." Twenty-nine percent (n=4) of the vocational administrators mentioned student enrollment figures as important in deciding to terminate a program. One administrator stated, "We have a state board policy that any enrollment that drops below ten for two semesters will be reviewed for continuation." Fourteen percent (n=2) of the vocational administrators mentioned job placement rates, program cost, and industry surveys as important factors in decisions to terminate programs. Other factors mentioned were--

- o student follow-up data, 7 percent (n=1);
- o employer follow-up data, 7 percent (n=1); and
- o program evaluation, 7 percent (n=1).

The results of the face-to-face discussions are similar to those of the telephone discussions regarding the most frequently mentioned factors. Specifically, the student enrollment figures and job placement rates were most frequently cited as influencing decisions to terminate vocational programs.

On modifying vocational programs too, the responses of vocational administrators were similar. The single most important factor for modifying a program was input from faculty and administration; forty-three percent (n=6) of the respondents cited this factor. One administrator stated, "We expect, at least, modifications every two years, and most of the input comes from teachers." Twenty-one percent (n=3) of the respondents cited input from advisory committees as important. According to one administrator, "For modifying a program primary feedback comes from the advisory committee and employers." The third most frequently mentioned factor was industry surveys, with 14 percent (n=2) of the administrators indicating that this factor was influential in the decision to modify a program. Other factors mentioned included--

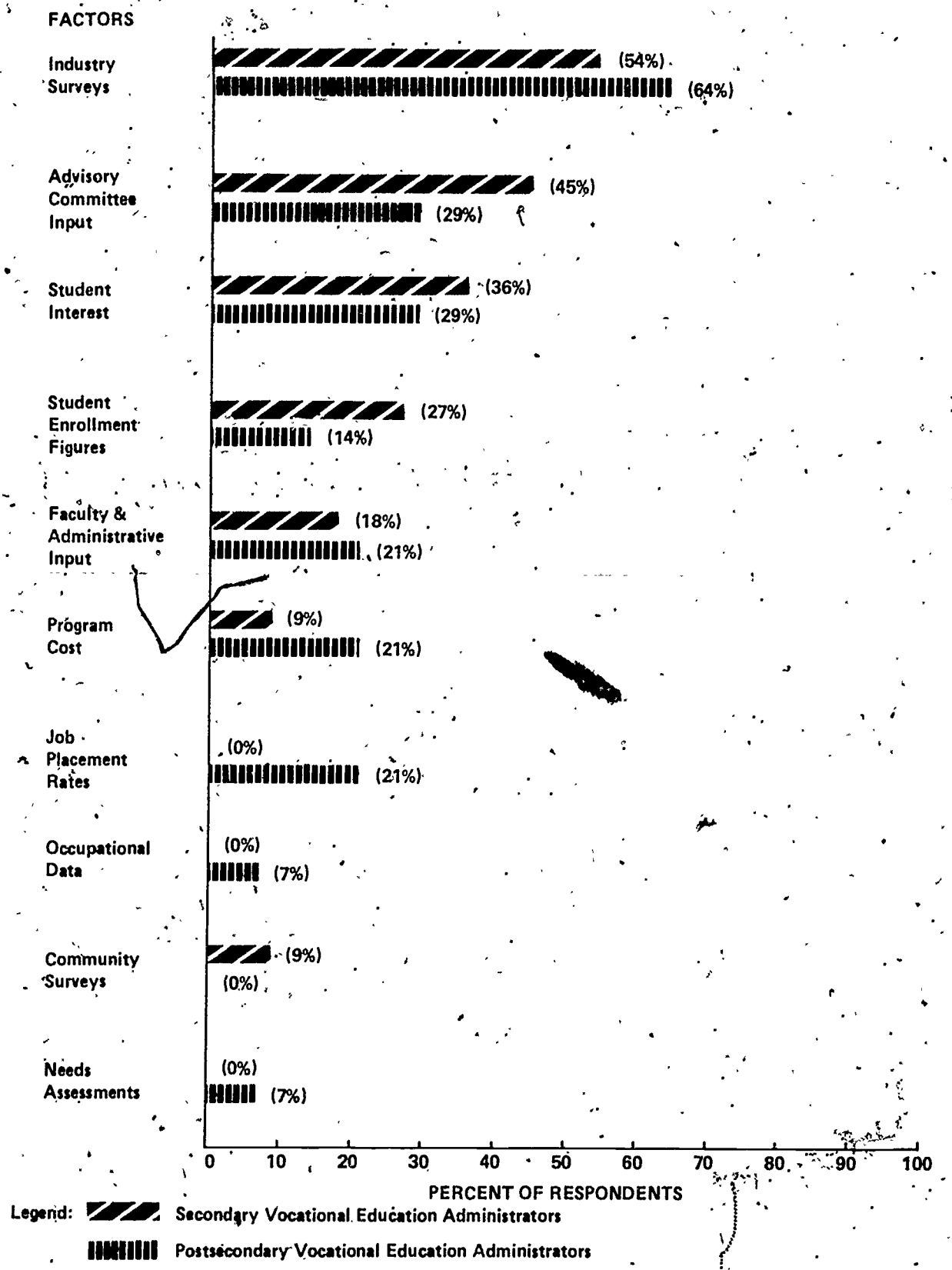
- o student follow-up data, 7 percent (n=1);
- o student interest, 7 percent (n=1); and
- o professional association input; 7 percent (n=1).

Charts 4, 5, and 6 (pp. 35-37) contrast the responses of those secondary and postsecondary administrators who were interviewed. Table 8 (p. 38) ranks the factors based on frequency of response that were cited by secondary and postsecondary administrators as influencing their program decisions.

Summary of Findings

In summary, secondary and postsecondary vocational administrators use information from a variety of sources in making decisions to add, terminate, or modify a program. Published

CHART 4
FACTORS INFLUENCING DECISIONS TO ADD PROGRAMS BY SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION ADMINISTRATORS
(Based on Face-to-Face Discussions)



18

CHART 5
FACTORS INFLUENCING DECISIONS TO TERMINATE PROGRAMS BY SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION ADMINISTRATORS
(Based on Face-to-Face Discussions)

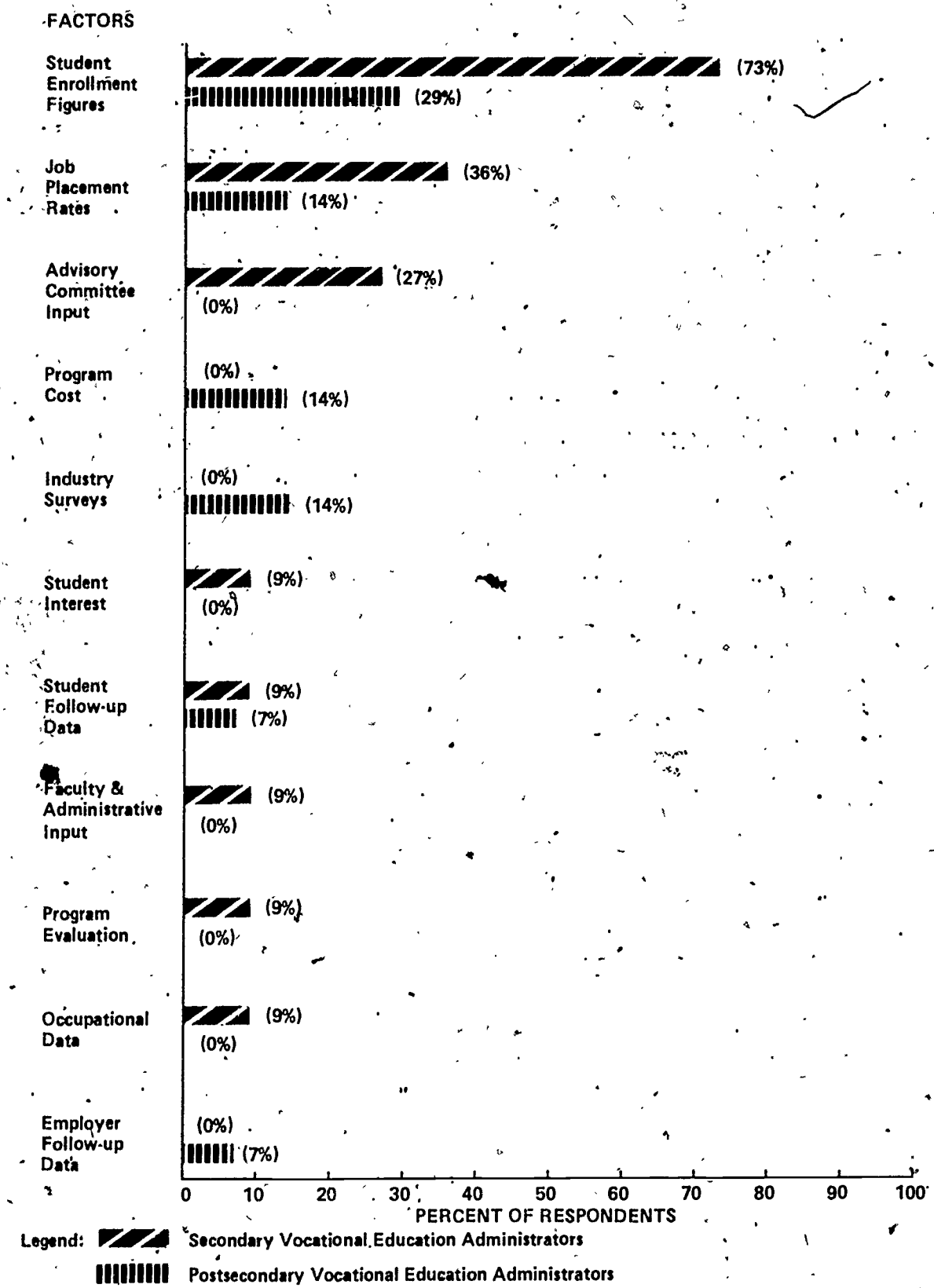


CHART 6
FACTORS INFLUENCING DECISIONS TO MODIFY PROGRAMS BY SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION ADMINISTRATORS
(Based on Face-to-Face Discussions)

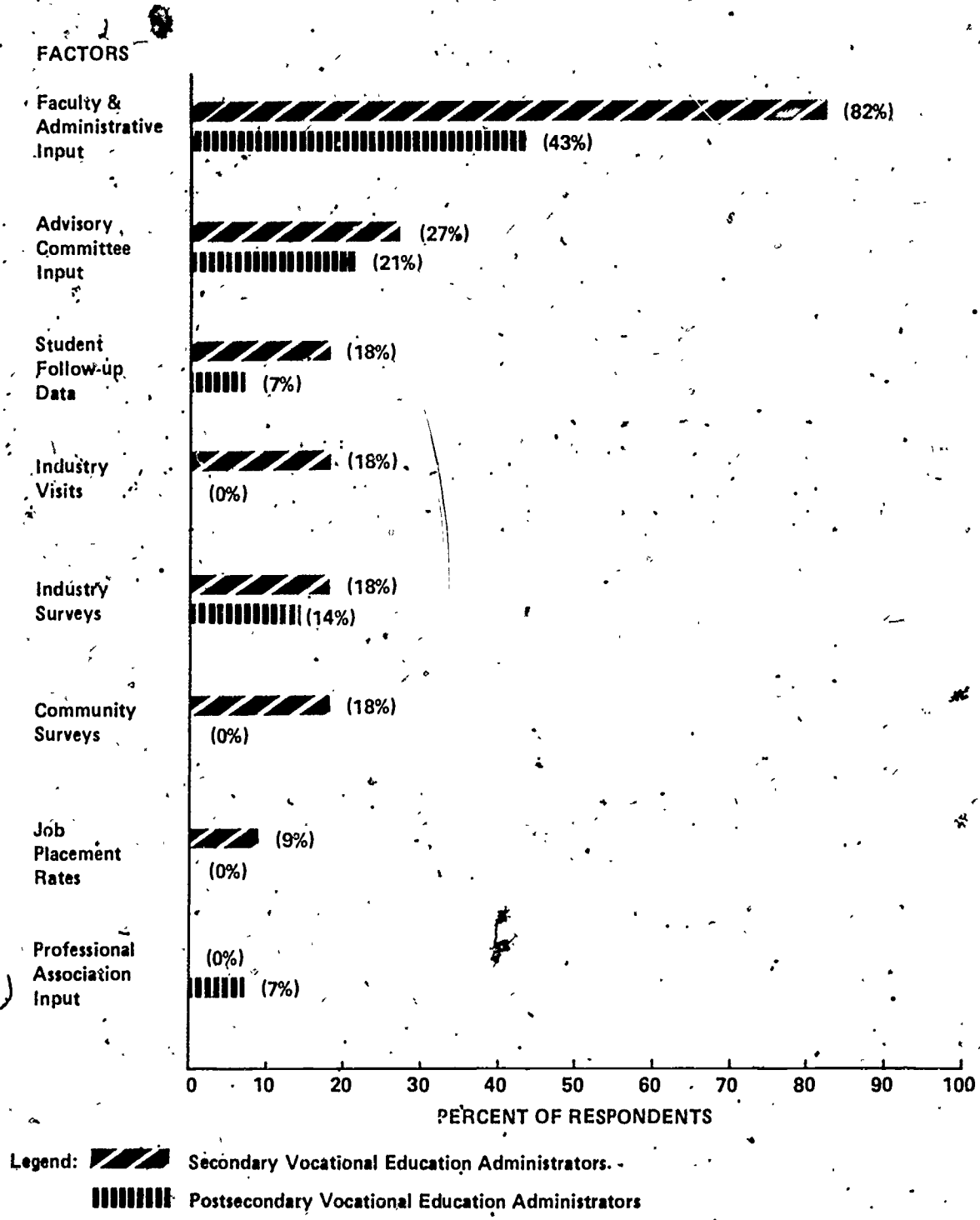


TABLE 8

RANK ORDER OF FACTORS INFLUENCING PROGRAM DECISIONS BY VOCATIONAL EDUCATION ADMINISTRATORS (Based on Face-to-Face Discussions)

Factors	Decision Type: Adding Sec.	Adding Postsec.	Terminating Sec.	Terminating Postsec.	Modifying Sec.	Modifying Postsec.
Industry Surveys	1	1	-	3.5	4.5	4.5
Advisory Committee Input	2	2.5	3	-	2	2
Student Interest	3	2.5	5.5	-	-	4.5
Student Enrollment Figures	4	7	1	1	-	-
Job Placement Rates	-	5.5	2	3.5	7	-
Faculty and Administration Input	5	5.5	5.5	-	1	1
Program Cost	6.5	5.5	-	3.5	-	-
Student Follow-up Data	-	-	5.5	6.5	4.5	4.5
Community Surveys	6.5	-	-	-	4.5	-
Occupational Data	-	8.5	5.	-	-	-
Needs Assessments	-	8.5	-	-	-	-
Employer Follow-up Data	-	-	-	6.5	-	-
Program Evaluation	-	-	5.5	-	-	-
Industry Visits	-	-	-	-	4.5	-
Professional Association Input	-	-	-	-	-	4.5

NOTE: The rank order of factors was based on the frequency of response by the vocational administrators. The highest rank of one indicates that the factor was mentioned by more vocational administrators than any other factor. A "-" indicates that no administrator mentioned this factor as influencing their decision to add, terminate, or modify a program.

data, for the most part, were generally used only to satisfy the requirements of state or federal planning or to substantiate a decision.

The study shows that these administrators consider the effect of impending decisions on their constituents by relying on input from advisory committees, and on surveys of community and industry, and on measures of student interest and enrollment. The administrators consider programs feasible when the factors indicate a positive climate, and rely on published labor market data for verification of their decision.

The following overall patterns of factors affect local administrators' decisions to add, terminate, or modify vocational programs:

- Locally conducted industrial surveys had a major influence on program decisions. These surveys were conducted in both a formal and informal manner.
- Advisory committees were considered very influential in decisions to add or modify programs. However, more effective use of the committees in these decisions was a concern of most administrators. For some administrators, committees are used only because they are a program funding requirement.
- Student enrollment figures and student interest were rated as important factors for adding or terminating programs. Administrators believed these factors could be strengthened by better counseling and through improved "advertising" of programs.
- Published labor market data are often used to support program decisions; however, they are seldom the major influence on program changes. Administrators expressed concern over applicability of the labor market data to their specific geographic areas, and their vocational education programs.
- Rates of job placement were mentioned as a factor in program decisions, but few secondary administrators indicated they would be reason for a program addition or termination. However, a majority of postsecondary administrators indicated that low rates of job placement were instrumental in decisions to terminate programs if economic conditions were likely to continue the trend.

- Input from faculty and administration was considered a major factor in program modification by both the secondary and postsecondary administrators. Industrial visits helped faculty and administrators obtain decision-making information. Although only a few cited industrial visits as a factor in decisions, a majority of the respondents indicated that industrial visits were needed and that they should have occurred on a regular basis. However, financial, logistical and other factors often prohibited visits from taking place.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

The data and information from this study lead to a number of conclusions for local, state, and federal audiences. These study findings suppplement findings from studies noted in chapter 1, including (1) Copa et al. (1976), Drewes and Katz (1975), Lawrence and Dane (1974), the National Institute of Education's Vocational Education Study (1981), Starr et al. (1981, 1982), the U.S. General Accounting Office Report (1974), and Eninger (1968). The conclusions are intended to provide a base for further study and to assist vocational administrators in their planning and evaluation. Within this framework, the following conclusions and recommendations are offered.

Several factors and/or processes are used by administrators in making decisions to add, terminate, or modify vocational education programs. In the telephone discussions and face-to-face discussions of the secondary and postsecondary vocational administrators mentioned, approximately thirty factors.

A primary concern of both secondary and postsecondary administrators is balancing the needs of their institutions' students with the needs of their communities' employers. Students must be given training suited to their backgrounds and abilities, and at the same time, the instructional programs must be targeted to satisfy the current and future needs of the labor market. The primary attention given to such factors as advisory committees, student interest and enrollment, and industrial surveys at both the secondary and postsecondary levels supports this finding.

Furthermore, in order to provide high quality programs in vocational education, the administrator must consider such interrelated factors as the potential employee, the community, the employer, work environments, and the job characteristics. Information on each of these factors is of critical importance. Therefore, within the institutional setting of vocational education, a system must measure, interpret, or respond to those factors critical to making programmatic decisions.

One indicator of need is the set of priorities established by the community and the educational system. In what direction does the community view its industrial development? What needs for human services exist in the community and how do they relate to the industrial needs? How does the community view the role of vocational education--secondary and postsecondary? For example, when numerous job openings exist in two or more occupations (e.g., for sales clerks, secretaries, waiters/waitresses, nurses), the priorities of human needs must be established and

weighed against the needs of industries. In another example, when there is a strong demand for both carpenters and electronic technicians but limited resources prevent meeting both needs, the direction in which the community wishes industry to develop may dictate which program should be implemented. Vocational administrators' reliance on the input of advisory committees and on locally developed industry surveys underlines the importance which administrators attach to the needs of the community and the labor market needs to the implementation of vocational programs.

Another indicator of need is the rate of job placement for former students. Job placement was considered a more important factor in program decisions at the postsecondary level. Job placement was considered somewhat important at the secondary level, but in most cases, administrators said they would not terminate programs simply on the basis of low placement rates, because economic conditions might distort the record of job placements. Information on job placement was often discussed in occupational specific terms; that is, the data show the number of trainees from each program who are successfully employed in the occupations for which they were trained. Postsecondary administrators often cite high placement as a valid indicator of an adequate number of job openings for program training and quality programs, while low placement rates reflect a shortage of job openings or a program which lacks quality. Placement rates were considered by both secondary and postsecondary administrators to be more valid than any published data produced by state or federal government agencies.

Another influence on program decision-making was occupational data on working conditions, job salary, and competency requirements relating to changes in technology. Occupational data were generally obtained through advisory committees or locally developed surveys of industry.

Several administrators indicated a need to provide more time for teachers to visit various industries on a regular basis. However, constraints of budgets and logistics must be loosened to ensure implementation. Attention is needed from local, state, and federal levels to make industrial visits by faculty as a standard operating procedure. This strategy for getting valuable information for program decision-making could enhance the likelihood of the goals which certain individuals and groups have set for the reauthorization of the Vocational Education Act.

Published data on the labor market was used less for making initial decisions about adding, terminating, or modifying programs than merely for complying with state or federal reporting or for reinforcing a decision. However, there are indications that the National Occupational Coordinating Committee and State Occupational Coordinating Committee efforts were providing improvement in what some administrators considered an extremely

difficult job. These efforts to develop and present data on the labor market should be publicized, and technical assistance should be expanded to help local administrators to interpret the data and use it in their decision-making.

Nearly all of the administrators relied on locally conducted surveys of industry and the assessments of community needs. Increased efforts are needed to improve the effectiveness of the use of advisory committees and surveys of local industry to gather information, and disseminate it to local schools.

Efforts to provide training in the use of such surveys have been launched by such agencies as the American Vocational Association (AVA), the National Center for Research in Vocational Education, the National Association for Industry Education Cooperation, and the National Institute for Work and Learning. However, these efforts need to be geared to the key participants and to the actual programmatic decisions taking place in local schools, with a focus on the key participants in the decision-making process.

In summary, the practice of administrators in deciding to add, terminate, or modify programs is similar to the practice of legislators as described in the following quotation:

> Legislative priorities exist in the following order with regard to a particular issue: first, legislators consider the effect on constituents (how do they feel about it?); second, they consider legislative feasibility (is there a consensus to do something about it?); and only in last place, do they consider substantive information (what do we know about it?). The legislator thus reverses the priorities of the ideal "statesman-policy-maker" who put substance first and constituents last. Also, somewhere within the legislator's last priority lies the researcher's top priority. And this explains quite a few things. For example: why emotional issues (i.e., constituent issues) dominate legislatures; why, if you come in with substance but without showing how constituents will be affected or what legislative strategy is possible, you won't get much response, not technical ones; and why timeframes for legislative action are geared to time in office, not to the amount of time needed to solve the problem.*

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* Hon. Gordon Voss, Minnesota State Legislature. Remarks at a Panel Discussion Conference on "The Integration and Use of Research within the Federal System," Hawaii, 19 June, 1979.

The results of this study show that the administrators who were surveyed do consider the effect on their constituents by relying on the input from advisory committees, on surveys of industry and community, and on student interest and enrollment. They determine feasibility on the basis of these factors and then use published information on the labor market only to verify what has already been decided.

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