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ABSTRACT

This report documents findings of a survey of attitudes of business toward vocational education in South Dakota. Chapter I discusses the purpose of the study. Chapter II describes the procedures followed in collecting data from employers. It documents all steps from questionnaire design to data entering and concludes with a presentation of response rates. (Completed responses were received from 347 small businesses, 319 large businesses, and 54 public sector employers.) Chapter III presents quantitative analyses of the data. It provides statistics concerning the responding and employing establishments, analyzes opinions about and interactions with the vocational education system, and examines worker productivity and training data concerning specific workers. Chapter IV analyzes general comments about vocational education. Summary statistics about the nature of the comments are given and then the comments are analyzed by their content. The comments are classified by selected subjects, including specific existing programs, suggestions for program development, vocational education graduates, curriculum and instruction issues, state regulatory/governance issues, and general comments. A number of the employer comments are excerpted. Chapter V reviews major findings, including solid employer support and systematic differences between vocationally and nonvocationally trained workers. Cover letters and the questionnaire are included in an appendix. (YLB)

EMPLOYER PERCEPTIONS OF VOCATIONAL EDUCATION IN SOUTH DAKOTA

VOLUME II: TECHNICAL REPORT

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FOREWORD

Under section 112 of the Carl Perkins Vocational Education Act, the South Dakota Council on Vocational Education (COVE) is required to "advise the State Board of Vocational Education and report to the Governor, the business community, and general public of the state concerning policies the State should pursue to strengthen vocational education and initiatives and methods the private sector could undertake to assist in the modernization of vocational education programs." It shall, furthermore, "submit recommendations to the State board on the conduct of vocational education programs conducted in the State which emphasize the use of business concerns" and "recommend procedures to the State board to ensure and enhance the participation of the public in the provision of vocational education at the local level within the State, particularly the participation of local employers and local labor organizations." To address these issues and to gauge employer perceptions of vocational education, the South Dakota COVE commissioned a survey of employers in the State. This report and its companion volume document the findings from the survey and recommendations emanating from those findings.

This study would not have been possible without the cooperation and assistance of the 750 employers who so graciously responded to our telephone interview. We greatly appreciate the time and the insights that these busy men and women contributed to the study.

We also thank the South Dakota Council for support of the project and Lloyd Schipper, who served as project officer, for his guidance and support. Don Kattke and Gordon Larson of the Unemployment Insurance Office of the State were very helpful. The development of the questionnaire benefitted from the review and comments of a panel of employers in the state--Steve Harding, Eldon Lindquist, Bob Reiman, Dave Bonde, and Bob Wagner. We thank them for their time and comments.

The telephone surveys were competently conducted by Betty Abbitt, Joyce Coriell, Carolyn Davis, Avanell Frisbey, Joan Gibson, Martha Hughes, Elizabeth Martinez, Dennis Sandage, and Ann Tarpy under the guidance of the Project Director, Dr. Kevin Hollenbeck. Dr. Hollenbeck designed the survey and wrote the final report. Helpful procedural comments were received from Michael Card and Dr. N. L. McCaslin of the National Center. The computer programming and analyses were performed by Frank Bennici.

Dr. Robert Bhaerman of the National Center, and Mr. Oscar Lowery, Chair of the Indiana Council on Vocational Education, reviewed the final report and made many useful suggestions. The report was edited by Judy Balogh and typed by Debbie Fladen. We thank them all for their time and effort.

Ray D. Ryan
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

A statistically valid random sample of small and large businesses in the state of South Dakota were surveyed in order to gauge employers' perceptions of vocational education, to determine the extent of private sector interaction with vocational education, and to document employers' experiences with vocationally trained and nonvocationally trained employees. This document details the procedures and presents the findings and recommendations from that survey. A companion report, "Employer Perceptions of Vocational Education in South Dakota Volume I: Findings and Recommendations."

The universe of employees in South Dakota numbered approximately 17,000 private sector establishments. The survey design opted for a stratification by employment size. Large businesses (over 50 employees) were oversampled in order to attain a valid number of such businesses in the survey. A total of 808 small businesses in the private sector, 570 large businesses, and 74 public sector employers were sampled. Completed responses were received from 347 small businesses, 319 large businesses, and 54 public sector employers.

Five major categories of questions comprised the questionnaire. First, general characteristics about the firm were requested. The type of information collected includes the following:

- Industry
- Number of employees
- Trends in number of employees
- Number of workers covered by collective bargaining
- Occupational structure
- Typical recruitment mechanisms

Next, attitudes toward secondary vocational education were probed. Likert-type scales were used to gather opinions concerning the following:

- Experiences with and opinions about co-op vocational education
- Types of skills that secondary vocational education students have (employability skills, basic skills, specific occupational skills)
- Currency of programs
- Adequacy of equipment
- instructional quality

The next section of the questionnaire addressed attitudes toward postsecondary vocational education programs. In addition to the items mentioned above pertaining to secondary vocational education, the following issues were addressed:

- o Extent to which the employer is aware of and participate in curricular decision making or needs assessment surveys
- o Attitudes toward other education and training providers such as military, 4-year institutions, and JTPA agencies
- o Attitudes toward adult versus younger vocational education participants, toward individuals in programs that are nontraditional for their sex, and toward other specific student populations

The fourth section of the questionnaire asks the respondent for information about specific individuals whom the respondent hired within the past 6 months. Data on matched pairs of workers were collected--a worker who was vocationally trained, and a worker hired about the same time in a similar job who was not vocationally trained. Numerous instances occurred, however, where the matched pair of data were not available because the requisite hires were not done. If there was a least one hire, the following data were collected about that worker:

- o Demographic characteristics (age, race, gender)
- o Educational background
- o School(s) attended
- o Amount and type of on-the-job training received
- o Supervisor reports of productivity
- o Wages
- o Length of time at the firm
- o Promotions

The final section of the questionnaire is comprised of a few questions concerning the respondent's educational background and an open-ended question that ask for any general comments about vocational education.

The National Center in conjunction with the South Dakota Department of Labor mailed a copy of the instrument to the entire sample prior to the telephone interviews along with a cover letter from Governor Mickelson. A fairly complex interviewing protocol was then followed that resulted in each respondent being classified as "complete," "partially complete" "refusals," "unable to contact," "6 or more attempts," or "will mail back." An analysis was conducted comparing nonrespondents to respondents to ensure that no systematic response bias occurred. That analysis indicated that very small employers (one to five employees) and retail trade establishments tended to be underrepresented in the data. The size of the bias was judged not to be serious, however.

The major finding established by this project was that vocational education programs and graduates have solid employer support in South Dakota. When they hire high school graduates for entry-level positions, most employers reported that they would prefer individuals who have completed a vocational education program. They disagreed with the statement that if everything else was the same about a job candidate that they would hire

someone with a 4-year college degree rather than someone from a vocational-technical school. They encourage employees who want more schooling to attend vocational-technical schools or colleges. A large share of employers have participated in cooperative work experience programs, have been contacted by high school or postsecondary representatives to provide input into curricular decisions, have donated equipment, or have interacted with the vocational education system in some other manner.

Individual respondents reported that they had had good experiences with a number of specific programs and that vocational education graduates that are hired--

-- are more enthusiastic.
-- require less training.
-- are preferred over college or military trained persons.
-- are preferred over individuals with several years work experience.

To be sure, the employer support was not unanimous. A significant number of employers were critical of the system or its graduates. Across the sample of employers, small business respondents tended to be more positive toward vocational education than large businesses, and correspondingly, owners of businesses were more favorable than corporate officers. Across the sample, employers were more familiar with and more favorable toward postsecondary vocational education than high school programs.

A second major finding from the study was the systematic differences found between vocationally trained and non- vocationally trained workers. Data supplied about specific workers hired recently indicated that vocationally trained workers tended to--

-- be younger at age of hire.
-- have greater educational attainment.
-- have less prior relevant work experience.
-- be more likely to be promoted.
-- receive more training on the job.
-- experience greater wage growth during the early part of the employment relationship.

These conclusions were buttressed by individual comments that indicated that vocationally trained workers--

-- had better work attitudes.
-- exhibited more common sense.
-- were more enthusiastic.

The employers, in general, were very earnest in their responses and provided a number of suggestions for vocational education policymakers in the state to consider. First of all, cooperative work experience programs were highly praised. Most employers agreed with the proposition that they would prefer to hire an individual who had successfully completed a cooperative

work experience program over an otherwise identical individual without cooperative work experience but with higher grades. Furthermore, well over half of the employers indicated that they had participated in a cooperative work experience or internship program. Co-op programs also are a means of "teaching" work maturity skills, which was a concern of some of the employers critical of vocational education.

A second item of policy relevance was the strong support of basic skill attainment of vocational education students. Most employers felt that the graduates of vocational education programs had adequate basic skills to perform entry-level jobs in their firms. The employers did feel that basic skills should be emphasized in secondary programs, whereas technical skills should be emphasized in postsecondary programs, however.

A third finding with policy relevance was the wage and promotion benefit of vocational training to workers. The state and individual municipalities should be aware that to the extent that vocationally trained individuals receive higher wages, the public is receiving a return on their investment in the vocational education. Individuals with higher wages and incomes pay more taxes and receive fewer public services.

In general comments, the respondents made a number of interesting remarks with policy relevance. For example, comments were made about specific programs currently being offered. Favorable remarks were received about the following programs:

- o Licensed practical nursing
- o Electronics
- o Distributive education programs in high schools

Employers were critical of aspects of the following programs:

- o Auto mechanics
- o Construction trades
- o Machine trades
- o Food preparation

Several employers felt that consideration should be given to developing and offering courses in a number of program areas where no program currently existed. The employers were sensitive to the fact that some of their suggested programs were highly specialized and would have limited student interest. However, some of these suggested programs would likely engender sufficient student demand.

Comments were also received concerning curricular and instructional issues. For instance, a number of employers felt that vocational instructors needed to communicate more with employers. They need to teach or flexibility according to other employers. Students need to learn that they will be facing changing technology as well as using different equipment and they will need to be

flexible enough to adapt to the company's way of getting the job done. Better communication skills seemed to be a particular area that employers felt warranted emphasis in vocational education. Some employers felt that the state needed to be concerned about the impact of increased requirements and standards at the high school level on secondary vocational education programs.

Finally, some general comments made by employers suggested the following:

- Vocational education is a good motivator for a certain share of students.
- More emphasis needs to be put on the majority of students who are not college bound.
- Vocational-technical school programs are well-suited to Indian students and vocational education may be part of the solution to tribes' economic and social problems.
- More and better publicity needs to be put forth concerning vocational education.

In summary, the vocational education enterprise in South Dakota enjoys a strong base of employer support. Small businesses, in particular, are advocates of occupational training. Employers seem to be most familiar with and most favorable toward vocational-technical schools. On the average, employers professed a preference toward hiring vocational graduates, and on the average, vocational graduates experience higher wage growth.

I. PURPOSE OF STUDY AND OVERVIEW OF PROCEDURES

Introduction

The underlying issue being confronted in this study is the alignment of the skills and knowledge that South Dakota's employers need their employees to have with the skills and knowledge that current workers and job seekers bring to the labor market. Discrepancies between the two imply lagging productivity and economic development since employers must divert resources that would be deployed in otherwise more productive activities into general skill training and even basic skill enhancement.

Certain contextual elements in the South Dakota economy and educational system suggest that vocational education should be playing a more vital role in the training of the state's work force. South Dakota is a sparsely populated state with an economy that features a strong agricultural sector coupled with a service-oriented industrial mix. The state has recently placed a strong emphasis on economic development and has been successful in that effort. A 1985 Alexander Grant and Company study rates South Dakota as number 1 of the 48 contiguous states in terms of general economic climate for manufacturing in 1984. Despite this overall supremacy, the state ranks 47th out of the 48 in vocational education enrollment in trade and industrial and office occupations as a percentage of the population aged 16-64 (1.37 percent), one of the factors that the Grant study used in in constructing its composite index. This low ratio of vocational enrollment to population suggests that the current and future

supply of skilled labor in South Dakota may be a constraining factor on what is otherwise a strong economy.

In examining the structure of the South Dakota economy, four features are observed that should facilitate reliance on vocational education as an important component of the education and training system in the state. First of all, the technological advances and mechanization of the agricultural sector need to be supported and maintained by technicians and mechanics. Second, the nonagricultural portions of the economy are heavily skewed toward the trade, professional service, and government sectors. These three sectors accounted for about three-quarters of employees on nonagricultural payrolls in March 1986. Many of the occupations in these industries are skilled--for example, clerical workers, medical technicians, data and information processing specialists, and food service managers. Furthermore, most establishments in these industries are small and school-based training should be attractive from an affordability perspective. Finally, the natural dynamics of economic development--births of new establishments, relocations, labor turnover--suggest that vocational education should be a strong actor in the training system. For these four reasons, vocational education should be a natural conduit for developing skilled workers for the labor market.

The vocational education infrastructure in the state needs to be considered in relation to the economy. At the postsecondary level, the state is characterized by a system of vocational-technical schools, a few occupational programs at 4-year colleges and

universities, business-related proprietary institutions, and single purpose programs such as health-related occupational programs at teaching hospitals. At the secondary level, vocational education is offered for the most part in comprehensive high schools with a handful of area vocational schools as well.

Within this infrastructure, however, evidence suggests that the augmented demands may not be fully met by program offerings. South Dakota has one of the lowest ratios of postsecondary occupational education enrollments to total postsecondary enrollment of any state and the highest ratio of consumer and homemaking enrollment to total secondary vocational education enrollment. It is thus highly appropriate for the South Dakota Council on Vocational Education (COVE) to gather a comprehensive picture of employer perspectives of vocational education and to determine those aspects of extant programs that can be used to stimulate employer interest and involvement in vocational education and employment of that system's graduates.

Purpose of the Study

A scientifically valid survey of the attitudes of business toward vocational education was conducted. Four explicit objectives of the project were established by the COVE:

- Objective 1: To develop a profile of the attitudes of owners, general managers, and supervisors toward persons trained in vocational or occupational education
- Objective 2: To design a campaign to market the positive qualities of vocational education and employment training to business and industry
- Objective 3: To produce a report for the council and the vocational education community that documents the findings

- Objective 4: To determine whether employers perceive a difference between persons trained at the secondary or postsecondary level and persons without training

All four objectives were achieved. In the third and fourth chapter of this report, as well as in the companion nontechnical volume, a comprehensive profile of the state's business and industry community is reported. These chapters include systematic evidence about the attitude of business persons toward vocational education programs and graduates. These attitudes suggest a strong but certainly not complete base of support in the employer community. For virtually all attitudinal indicators, either a majority or plurality of responses turned out to be favorable toward vocational education. However, for all indicators, significant numbers of negative attitudes and opinions were encountered as well.

The final chapters of the reports suggest conclusions and findings that would be useful in a campaign to promote the strengths of the vocational education system. It is noteworthy that several of the respondents suggested that much more publicity about vocational education is needed for employers as well as potential students.

This report meets the third objective of the project. Finally, the quantitative and qualitative evidence demonstrates that employers do perceive differences between vocationally trained employees and those without vocational training. Again, it is the case that most often vocational education graduates are perceived favorably. However, a significant number of employers

provided data and opinions that were highly critical of vocational education graduates.

The next chapter of the report describes the procedures followed in collecting the data. The sample design, procedures, and response rates are documented thoroughly. Chapter 3 presents quantitative analyses of the data. Statistics concerning the respondent and employing establishments are provided in this chapter. Next, opinions about and interactions with the vocational education system are analyzed. Finally, data concerning specific workers recently hired by the firm are analyzed.

In chapter 4, general comments about vocational education are analyzed. Summary statistics about the nature of the comments are given and then the comments are analyzed by their content. The comments were classified by selected subjects, and a number of the employer comments are excerpted in that chapter. The final chapter of the report provides a summary and the appendix contains a copy of the cover letters that were part of the survey protocol and the questionnaire.

II. PROCEDURES

This chapter of the report documents the procedures that were followed in collecting the data from employers. Discussed first are the sample design and process for drawing the sample. Next, the survey procedures are presented. All of the steps from questionnaire design to data entering and cleaning are documented. The chapter concludes with a presentation of response rates achieved within the data collection effort.

Sample Design

The unit of observation and analysis for the survey was employers. The sample was drawn from the roles of business that paid unemployment insurance tax for the third quarter of 1986. The universe of private sector firms numbered approximately 17,000 with a preponderance of that number being small businesses. (Public sector employers numbered approximately 800.) Because of the skewness of the distribution of employment, a simple random sample of employers would have resulted in only a small number of larger firms. Therefore, the strategy of oversampling large businesses was followed.

Sample sizes were determined by the formulae for sampling for proportions: for example, the proportion of employers satisfied with vocational education. P is the population or true proportion, and p is the sample proportion. The standard error of p can be represented as follows:

$$(1)\quad se(p) = \left[(1-fpc)\ \frac{p(1-p)}{n-1}\right]^{1/2}$$

where $se(p)$ = standard error of p

fpc = finite population correction = n/N

n = sample size

N = population size

To achieve 95 percent statistical reliability that the true proportion is within a 5 percent range of the sample proportion, that is, $p - .05 \leq P \leq p + .05$, the required completed sample size depends on N and P as shown in table 1:

TABLE 1

SAMPLE SIZE REQUIRED FOR STATISTICAL VALIDITY

N	P =.5	P = .7	P = .9
200	134	126	84
500	222	200	111
1,000	286	251	125
5,000	371	316	141
10,000	386	326	143
∞	401	337	145

Using the criterion of 50 or more employees, there were 570 large private businesses on the wage record file. Thus, the required completed sample size for this stratum was about 230, employing the conservative assumption that P = .5. There were

over 10,000 small private sector employers, so the required completed sample size was approximately 390 for this stratum. For the public sector employers, an arbitrary target of 50 completed responses from a judgemental sample was chosen. To achieve these numbers of completed interviews, a response rate of .50 for the private sector businesses and .67 for the public sector firms was assumed. Thus, the sample drawn from the wage record file is shown in table 2 for large businesses, and the entire universe was sampled. For the other two sectors, the precise sample was selected by using random numbers, so the actual number of respondents does not precisely correspond to the assumed response rates.

TABLE 2

SAMPLE DRAWN FROM THE WAGE RECORD FILE

Sample	Desired Completions	Sample Drawn
Small businesses	390	808
Large businesses	230	570
Public sector	50	74

Specifications for drawing the sample were developed by the National Center for Research in Vocational Education, whereas the actual sampling was done by the South Dakota Department of Labor. Exhibit 1 provides the precise specifications.

EXHIBIT 1

SPECIFICATIONS FOR RANDOM SAMPLE
OF SOUTH DAKOTA EMPLOYERS

1. Three sample are needed--private sector employers with 50+ employees, private sector employers with less than 50 employees, and public sector employers. Denote these as S_L, S_S, S_P.

2. I assume that the two most recent quarters of data available are calendar year 86:1 and 86:2. I further assume that each employer record for each quarter contains an unduplicated (within the firm) count of individuals covered by UI during the quarter (i.e., regardless of part-time or full-time status). In general, I would like to define employment to be the average of quarter 1 and quarter 2 employment. Call E_i the average employment for employer i. Some exceptions:

   i) I would like to delete from consideration all employers with 0 employment in 86:2.

   ii) If a firm has no record in 86:1, then E_i should simply be the level from 86:2.

3. For all sampled employers, I would like name of firm, address, and employment level (as defined in 2).

4. For S_L and S_P, the large businesses and public sector employers, I would like the entire sample, that is all employers from the wage record file with 50 or more employees or in the public sector.

5. For S_S, the small businesses, I would like a total of 800 employers sampled. The way I would like the sampling done would be to count the total number of employers, with less than 50 employees; call this number TOTAL (it should be around 17,000). The fraction 800/TOTAL is the sampling rate. Then in a 2 pass of the file (after counting the firms and screening out zero employment), assign a random variate from the uniform distribution. Include in the sample, all records where that number is less than the sampling rate.

6. If your random number generator only provides positive integers, say 1 to 999,999, for example, then divide each by 1,000,000 to generate a uniform distribution.

7. The sample will likely not end up being exactly 800, but that is okay as long as it is relatively close to 800.

Survey Procedures and Protocol

Questionnaire Development

After drawing the sample, the process for developing the questionnaire was initiated. A draft was constructed and reviewed by a number of National Center staff. Appropriate revisions were made. The second draft was shared with the sponsor and with a panel of South Dakota employers. A number of revisions were made based on input from these two parties. The final version of the questionnaire was then printed. (The questionnaire is provided as the appendix to this report.)

In developing the questionnaire, the structure presented in the proposal was followed closely. There are five major categories of questions in the questionnaire. First, general characteristics about the firm were requested. The type of information collected includes the following:

- Industry
- Number of employees
- Trends in number of employees
- Number of workers covered by collective bargaining
- Occupational structure
- Typical recruitment mechanisms

Next, attitudes toward secondary vocational education were probed. Likert-type scales were used to gather opinions concerning the following:

- Experiences with and opinions about co-op vocational education
- Types of skills that secondary vocational education students have (employability skills, basic skills, specific occupational skills)

- Currency of programs
- Adequacy of equipment
- Instructional quality

The next section of the questionnaire addresses attitudes toward postsecondary vocational education programs. In addition to the items mentioned above pertaining to secondary vocational education, the following issues were addressed:

- Extent to which the employer is aware of and participates in curricular decision making or needs assessment surveys
- Attitudes toward other education and training providers such as the military, 4-year institutions, and JTPA agencies
- Attitudes toward adult versus younger vocational education participants, toward individuals in programs that are nontraditional for their sex, and toward other specific student populations

The fourth section of the questionnaire asks the respondent for information about specific individuals whom the respondent hired within the past 6 months. Data on matched pairs of workers are collected--a worker that was vocationally trained and a worker hired about the same time in a similar job who was not vocationally trained. Numerous instances occurred, however, where the matched pair of data were not available because the requisite hires were not done. If there was at least one hire, the following data were collected about that worker:

- Demographic characteristics (age, race, gender)
- Educational background
- School(s) attended
- Amount and type of on-the-job training received
- Supervisor reports of productivity
- Wages
- Length of time at the firm
- Promotions

The final section of the questionnaire is comprised of a few questions concerning the respondent's educational background

and an open-ended question that asks for any general comments about vocational education.

Questionnaire Mailing

Although it was not envisioned or planned in the original proposal, the National Center in conjunction with the Department of Labor undertook a mailing to the entire sample prior to the telephone interviews. In the judgement of the sponsor and the employer panel, because of the complexity of the questionnaire, an advance mailing would facilitate response. Extra copies of the questionnaire as well as a cover letter from the project director were printed. These materials were sent to the South Dakota Department of Labor where they were mailed along with a cover letter from Governor Mickelson to all members of the sample. (A copy of the governor's letter and the National Center for Research in Vocational Education's cover letter are provided in the appendix).

Telephone Number Listing

An unexpected problem that was encountered by relying on the wage record data was that telephone numbers were not available in the data set. Consequently, the telephone books for all of the exchanges in the state were collected and the phone number looked up for all of the in-state employers in the sample. Out-of-state employers were handled by reliance on directory assistance. As explained below, out-of-state employers typically required at least two additional contacts in order to complete the survey--a directory assistance call to determine the employer's telephone number and a call to the employer to determine the employing

entity within South Dakota. Approximately 40 percent of the large businesses and 15-20 percent of the small businesses were out-of-state employers.

Interviewer Training

For the purpose of conducting the survey, a number of temporary employees who had conducted telephone interviewing on prior National Center projects were relied upon. Formal training sessions were held with the interviewers in which the overall purpose of the project was explained, each item on the questionnaire was reviewed, potential questions and problems were discussed, and practice interviews were completed. Exhibit 2 provides the two "scenarios" used to guide the practice interviews in the training.

The key goals of the training session were (1) to instruct the interviewers as to the purpose of each item on the survey so that appropriate responses would be marked and (2) to achieve interrater reliability. The mock interviews were the mechanism used to achieve the latter goal. Interviewers were paired and each member of the pair was given Scenario A or Scenario B. The individual with B would interview A and vice versa. After these interviews, answers were compared and discussed.

Survey Protocol

Figure 1 provides a flowchart of the procedures followed by the interviewers in conducting the survey. The first activity was to search for the telephone numbers not found in the telephone books as described above. For in-state employers not listed in

EXHIBIT 2

TRAINING SCENARIOS

Scenario A

You are 49 and own ABC Corp. in Aberdeen, SD—makes tractor parts. No other firms in that area manufacture tractor parts. 30 employees on March 1; 28 on December 31. Nonunionized work force composed of assemblers, machinists, maintenance workers, and office staff. You generally announce openings to your current staff and that's enough to get plenty of applicants.

You generally think pretty highly of vocational education in high schools; but you really hadn't considered that some vocational education occurs in colleges. High schools have very up to date equipment and you like to hire their graduates. You graduated from SD State University in 1960, and had taken some shop courses in high school.

It takes about 3 weeks to train an entry-level worker—about the same for high school or college attendees. You once had someone in a co-op program and that worked out pretty well. You've never taught or donated equipment to a school, but you thought about getting a tax write-off once by donating an old machine to the local high school.

You hired Sam as an assembler on Sept. 1, 1986 @ $5.75/hour—full time. Sam was just out of high school [Aberdeen High], where he had been in a machine shop program. Last summer [about July 15], you hired George, who was 45 at the time. He was also an assembler and was paid $5.75/hour, but he was so productive that you promoted him to foremen of the night shift. You don't know what George's educational background is, but he had been a farmer for 20 years, but lost the farm last Spring.

Both Sam and George are still working for you. George's promotion occurred on Feb. 1, 1987 and he then started to make $7.50/hour.

It took 4 weeks to train Sam and only 2 weeks to train George. Training involved the foreman showing the new employees his job and then watching him work. About 50% of the time is training.

Scenario B

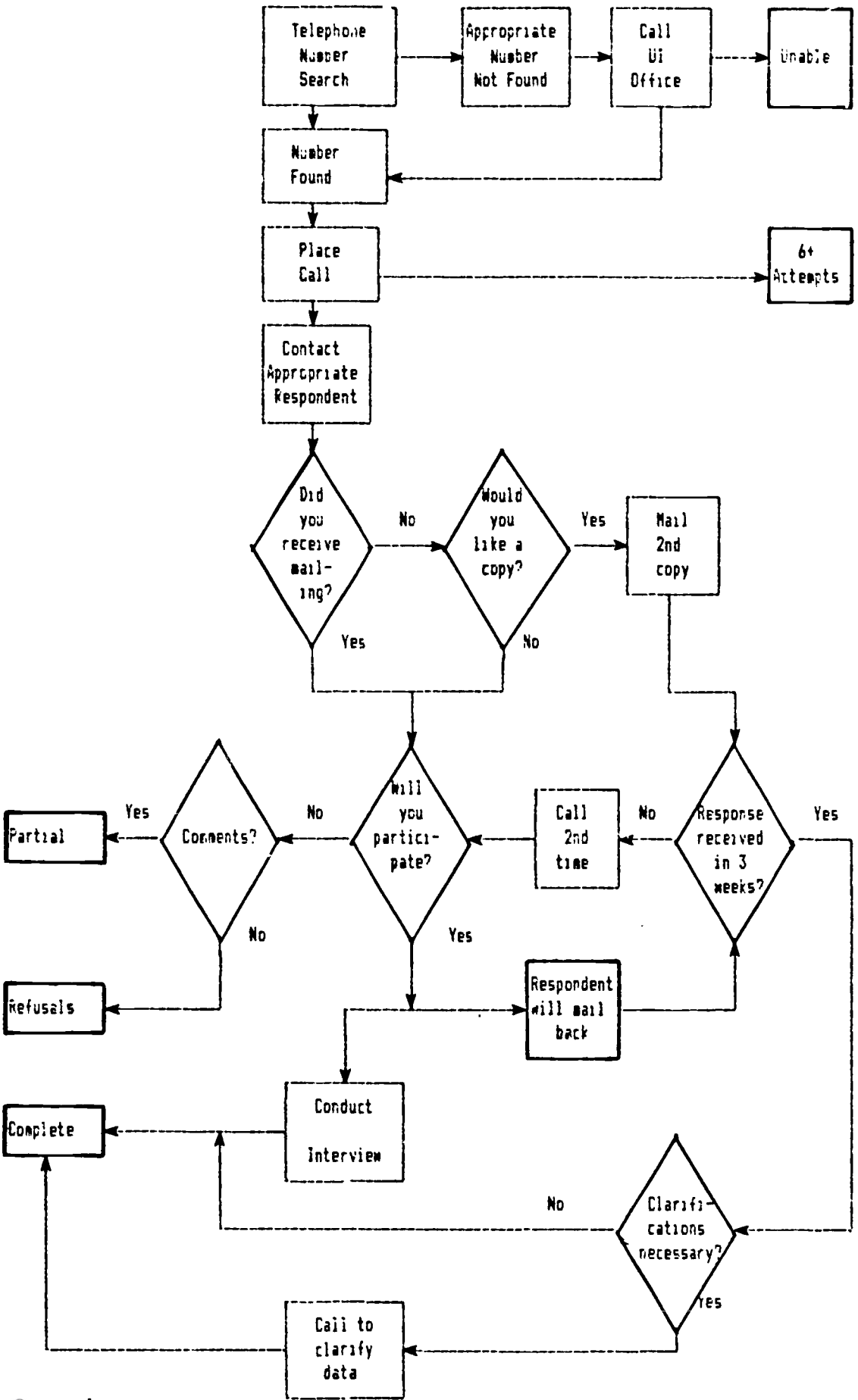
You are the administrative assistant for Dave Owens Insurance Agency in the small town of Pierre, SD [2 other agencies in town]. Insurance agency consists of Dave, yourself, and Dawn, who you hired as a part-time secretary last July 10. You have worked for Dave for 10 years since you left college. You took a college prep curriculum in high school and attended Black Hills State College for 2 years [you were going to be a teacher, but left college to get married.] Dawn is the only person hired in the last 10 years and she was referred through the SD Employment Service. She is currently 19.

You don't know anything about vocational education. When you were in high school, only the "dummies" took typing and shop—the "troublemakers." The voc-tech once called you about hiring someone on a co-op basis, but Dave didn't think that would work well. During the phone conversation, the person asked you for your opinion about what ski type of equipment they should be training people on

It took you about 2 days to train Dawn about agency procedur pe; she was an 8th grade dropout, but you decided to hire her and get a jo s a typing class at the high school at night, which Dave encourages, and ... works on a WANG word proceseor [value = $8000.]

Dawn's starting pay was $3.50/hour and on January 1, Dave gave her a ...

FIGURE 1. SURVEY PROCEDURES



the phone book and for out-of-state employers, the interviewers contacted directory assistance. Missing numbers were obtained approximately 70-80 percent of the time. For out-of-state businesses, the parent business was contacted and, after explaining the purposes and objectives of the survey, the name and number of the employing establishment within the state was sought.

When employers' phone numbers could not be obtained through directory assistance, the project director contacted the Unemployment Insurance (UI) Office in Aberdeen to see if they had a record of a telephone number.[1] The UI office staff were able to provide numbers in 30-40 percent of such cases. For those cases where no telephone number could be found in telephone books, through directory assistance, or from the UI Office, the observation was classified into the Unable to Contact final disposition. This occurred for 56 small businesses (6.9 percent), 52 large businesses (9.1 percent), and 1 public sector employer (1.4 percent).

From these percentages, it is seen that telephone numbers were found for over 90 percent of the sample. When attempting to complete an interview, the interviewers would ask to speak to the person in charge of hiring. If the person was unavailable or too busy to conduct the interview, an appointment was made to call back. Sometimes the respondents did not honor these appointments or were again unavailable. The interviewers imposed a six-call

[1]Gordon Larson of the UI Office was extremely helpful and responsive to these requests.

rule. That is, after six attempts to reach the designated person, they then gave up and classified the respondent in the 6+ Attempts final disposition. Among the small business sample, 64 employers were in this category (7.9 percent). For large businesses, 33 firms were so classified (6.0 percent), and in the public sector sample, 2 respondents ended up in the 6+ Attempts classification (2.7 percent).

When the interviewers reached the person responsible for hiring, early in the telephone protocol, the individual was queried as to whether he or she had received the questionnaire in the mail, and if not, if he or she would like to receive a copy prior to participating. Approximately 300 respondents requested and were sent a second copy.[2] (Most of these cases occurred when the original mailing went to an out-of-state address and the parent company did not forward the questionnaire. In other cases, the employer either reported not receiving the questionnaire or disposing of the questionnaire when it had been received). When a second copy was mailed out, employers were recontacted after 3 weeks if their response had not been received in the interim.

If at the time of this recontact or at the time of the first contact, the respondent indicated either that he or she had received a copy of the questionnaire or a copy was unnecessary, the interviewer asked whether the respondent would take the time now or at a later date to complete the interview. If a negative response was received, the interviewer asked whether the

[2]Through a recordkeeping error, we were not able to keep an exact account of this occurrence.

respondent would be willing to provide general comments about their perception of vocational education in South Dakota (in other words, to respond to the last question on the questionnaire). If the respondent gave an opinion about vocational education, the observation was classified as Partial. The number of such responses for the small business sample, for the large business sample, and for the public sector were 98 (12.1 percent), 39 (6.8 percent), and 16 (21.6 percent), respectively.

If the respondent did not want to participate at all, the interviewer classified the observation as a Refusal. As might be expected, a much larger number and share of small businesses were in this category than large businesses or public sector employers. (See table 3.)

TABLE 3

NUMBER AND PERCENTAGE OF REFUSALS BY SAMPLE

Sample	Refusals	
	Number	Percentage of Sample
Small businesses	231	28.5%
Large businesses	83	14.4
Public sector	12	14.9
TOTAL	326	22.2%

In most cases, the interviewers noted reasons for the refusals. Table 4 provides a classification of the reasons for refusals. It should be borne in mind that some interpretation and

TABLE 4

REASONS GIVEN FOR REFUSALS BY SAMPLE

Reason	Sample		
	Small business	Large business	Public sector
Firm was a single individual acting as sales agent or representative.	21	0	0
Firm was very small and felt that survey was inappropriate.	29	0	1
Firm felt survey was inappropriate to their business (for reasons other than size).	46	12	2
Firm was out of business or about to go out of business.	9	5	0
Respondent was not interested in or objected to survey.	28	15	1
Other reason was established (e.g., won't divulge confidential information, illness, duplicates, can't tie up phone line).	35	28	2
No reason for refusal was established.	63	23	6
TOTAL	231	83	12

arbitrary judgement were involved in classifying the interviewers' comments, however. Only a small share of the refusals were hostile and objected to the survey. A large share of the refusals in the small business sample occurred when the respondent was a very small company (one or tw employees) and the owner simply felt that the survey was not appropriate to his or her business or when the South Dakota "employer" turned out to be a sales representative or agent for a company headquartered outside of the state. A large number of the refusals indicated to the interviewers that the survey was not appropriate to the respondent's business (for reasons other than small size of the firm).[3] Other reasons given for refusals were that the firm was out of business or about to go out of business, the respondent did not want to tie up the telephone for an extended period of time, the appropriate respondent was ill or away from the business, and other reasons. Finally, in a number of cases, no reason for the refusal was noted.

In some cases, when asked to participate in the survey, the respondent indicated that he or she preferred to mail in the response. It may have been the case that either the respondent had the original copy which was mailed to everyone, or he or she had received a second copy. In either situation, the interviewer recontacted the respondent if a response was not received. If the

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[3] Respondents said that they had not hired anyone in recent years, that they were totally unfamiliar with vocational education, or that their business did not hire any individuals into occupations appropriate for the vocationally trained. The interviewers had been trained to explain that parts of the survey were still germane and to attempt to complete the interview.

respondent reiterated that the response would be mailed back, but a response was never received, then he or she was classified in the final disposition of Will Mail Back.[4] A total of 107 small businesses (13.2 percent), 85 large businesses (14.9 percent), and 5 public sector businesses (6.8 percent) were placed in this status.

In all other cases, the survey was completed--249 small business, 278 large businesses, and 38 public sector businesses. When the responses were received via mail, it was necessary to scrutinize carefully the responses for accuracy and completeness. If clarifications of any items were needed, the respondents were called. The number of responses received by mail was 114, of which 51 were small businesses, 59 were large businesses, and 4 were in the public sector sample. Approximately one-third of these responses required clarifications. A thorough analysis of response rates is given in the next section of this chapter.

Data Coding, Entering, and Editing

Most of the items in the questionnaire were numeric and thus could be keyed in directly. Codes were needed for the open-ended items, however. These codes were developed and then each survey was coded. By its nature, coding involves some arbitrary decisions in translating the written responses into the appropriate codes. To gain consistency, the coding task was limited to two individuals.

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[4] There is little difference between this category and refusals. It was presumed that if a person indicated at least twice that he or she would mail in the survey, and never did, then this was his or her way of refusing to participate.

After the surveys were coded, they were keyed and 100 percent verified. The equipment used for this process wrote the data directly to magnetic tape. This tape was entered into The Ohio State University computing system and frequencies were run on each variable. If the data items were not legal codes or were missing, then the hard copy questionnaires were scanned to determine the correct responses. The data were then revised accordingly.

Response Analyses

It is impossible to calculate a single unambiguous response rate for the survey because of the different types of responses and final disposition categories. Should a partial response be counted as a completion? Should those employers who were chosen in the sample, but for whom we were unable to obtain a telephone number, be considered as a noncompletions? Three alternative response rate concepts were developed and then the nonrespondents vis-a-vis the completions were analyzed to determine whether nonresponse was random or systematic.

Theoretically, response rates are easily defined as follows:

$$r = \frac{C}{C + NC}, \text{ where}$$

r = response rate
C = completed interviews
NC = noncompleted interviews

Problems arise in what is considered a C and what is considered an NC. Table 5 reviews the final dispositions of the survey. The three alternative definitions of response rates are shown in table 6.

TABLE 5

FINAL DISPOSITIONS OF SURVEYS _. SAMPLE

Final Disposition	Sample						TOTAL	Column Percentage
	Small Business	Column Percentage	Large Business	Column Percentage	Public Sector	Column Percentage		
Completed surveys	249	30.8%	278	48.8%	38	51.4%	565	38.9%
Partial	98	12.1	39	6.8	16	21.6	153	10.5
Refusals	234	29.0	83	14.6	12	16.2	329	22.7
6+ Attempts	64	7.9	33	5.8	2	2.7	99	6.8
Will mail back	107	13.2	85	14.9	5	6.8	197	13.6
Unable	56	6.9	52	9.1	1	1.4	109	7.5
TOTAL	808	100%	570	100%	74	100%	1,452	100.0

TABLE 6

THREE DEFINITIONS OF RESPONSE RATES

Response Rate Definition	Completions Include:	Noncompletions Include:
I	Completed surveys + Partials	Refusals + 6+ attempts + Will mail backs
II	Completed surveys + Partials	Refusals + Will mail backs
III	Completed surveys	Refusals + Partials + Will mail backs

TABLE 7

RESPONSE RATES BY SAMPLE

Response Rate	Sample			TOTAL
	Small Business	Large Business	Public Sector	
I	46.1%	61.2%	74.0%	53.5%
II	50.4	65.4	76.1	57.7
III	36.2	57.3	53.5	45.4

NOTE: See text for definitions of response rates.

Table 7 indicates the alternative response rates for the small business, large business, public sector employers, and total sample. Definition 1 is arguably the "best" definition of the response rate, so we conclude our response rates are about 46 percent, 61 percent, 74 percent, and 54 percent for the small business, large business, public sector, and total sample.

From the wage record file, information on the SIC and employment size of the nonrespondents can be obtained. It is important to analyze these data vis-a -vis the completed surveys to ensure that response bias is not present. Using definition 1 for completions and noncompletions, table 8 shows the industrial and employment size distributions. Although minor discrepancies appear, it is safe to conclude that no systematic biases were added to the data.

TABLE 8

EMPLOYMENT SIZE AND INDUSTRY CLASSIFICATION
OF SURVEY RESPONDENTS AND NONRESPONDENTS

Characteristic	Respondents	Column Percentage	Nonrespondents	Column Percentage
Employment Size				
<6	214	30.6%	274	44.1%
6-10	92	13.1	79	12.7
11-20	58	8.3	36	5.8
21-50	73	10.4	32	5.1
51-100	156	22.3	122	19.6
101+	107	15.3	79	12.7
Industry				
Ag. const., mining	65	9.7%	66	10.8%
Manufacturing	94	14.0	55	9.0
TCPU[a]	40	6.0	42	6.9
Trade	188	28.0	229	37.4
FIRE[b]	47	7.0	52	8.5
Services	238	35.4	168	27.5
Government	N/A[c]	—	N/A[c]	—

[a]Transportation, communication, and public utilities.

[b]Finance, insurance, and real estate.

[c]Not appropriate for this table.

III. QUANTITATIVE ANALYSIS

The previous chapter described how each interview attempt could have ended up in one of six final dispositions. The statistics reported in this chapter come from the completed surveys only. The first section describes the businesses and individuals that responded to the survey. Next opinions about and interactions with vocational education are analyzed. Finally, the worker productivity and training data provided about specific workers are examined.

Description of Businesses and Respondents

In describing the businesses that were interviewed, industry and employment size characteristics will be detailed first. Next, sources of recruitment and types of entry-level jobs are presented. Finally, respondent characteristics are provided.

Industry and Employment Size

The industrial classification of the responding firms reflects the concentration of private sector firms in the state in the trade and service sectors. Table 9 provides summary data about the industrial classification of the responding firms as well as employment size and percentage unionization. No particularly surprising statistics are observed in the table. Small business firms are disproportionately represented in the agriculture, construction, and mining and trade sectors and underrepresented in manufacturing. In looking at employment size, it can be

TABLE 9

STANDARD INDUSTRIAL CLASSIFICATION, EMPLOYMENT SIZE, AND PERCENTAGE UNIONIZATION OF RESPONDING EMPLOYERS BY SAMPLE

Characteristics	SAMPLE						Total	%
	Sm. Bus.	%	Lge. Bus.	%	Pub. Sect.	%		
Industry								
Ag., Constr., Mining	39	15.7%	8	2.9%	0	0.0%	47	8.3%
Manufacturing	19	7.6	71	25.5	0	0.0	90	15.9
TCPU[a]	18	7.2	13	4.7	0	0.0	31	5.5
Trade	78	31.3	58	20.9	0	0.0	136	24.1
FIRE[b]	15	6.0	22	7.9	0	0.0	37	6.6
Services	80	32.1	106	38.1	8	21.1	194	34.3
Government	0	0.0	0	0.0	30	79.0	30	5.3
Employment Size								
0	5	2.0%	0	0.0%	0	0.0%	5	0.9%
1-5	137	55.0	5	1.8	10	27.0	152	27.0
6-10	48	19.3	7	2.5	6	16.2	61	10.8
11-20	34	13.7	7	2.5	5	13.5	46	8.2
21-50	22	8.8	32	11.6	7	18.9	61	10.8
51-100	3	1.2	126	45.5	2	5.4	131	23.3
100+	0	0.0	100	36.1	7	18.9	107	19.0
Percent Unionized								
0	244	98.0%	247	88.9%	34	89.5%	525	92.9%
1-20	2	0.8	2	0.7	2	5.3	6	1.1
21-50	1	0.4	10	3.6	1	2.6	12	2.1
51-100	2	0.8	19	6.8	1	2.6	22	3.9

[a] Transportation, communication, and public utilities

[b] Finance, insurance, and real estate

seen that the largest share of small businesses have five or fewer employees. Although most of the large businesses are in the largest 2 employment size classes, some of the respondents in the large business samples have fewer than 50 employees. This occurred for several reasons. First of all, the data for which employment was measured in the table refers to March 1987, whereas the sampling from the wage record file was done based on employment in the third quarter of 1986. It may be the case that some of the firms shrunk in employment size during the intervening period. Second, as described in the previous chapter, some of the employers were located out of state. The headquarters may have paid unemployment insurance taxes for multiple establishments, and since only one establishment was interviewed, consequently, there is data on local employment only.

Not surprisingly, the percentage of work forces covered by collective bargaining was quite small--about 7 percent of the respondents reported any unionization, and almost all of these were in the large business sample.

Sources of Recruitment and Entry-level Occupations

Question 5 on the survey asked the employers which sources of recruitment were used to fill entry-level positions. The eight sources were as follows:

- Job service
- Schools
- Newspapers or other media
- Signs
- Employee referrals

- Private employment agencies
- Unions
- Other sources

In addition, employers were given the option of responding that they didn't actively recruit (43 respondents representing 7.6 percent of the completions chose this option). Among the rest of the respondents, the Job Service, employee referrals, and newspapers or other media advertisements were the largest sources of referrals. Table 10 shows the frequency of recruitment source usage by sample type. The entries in the table represent the percentage of respondents in the sample who reported using that particular recruitment source. Since employers used more than one source of recruitment, the entries add to more than 100 percent.

Perhaps the most striking aspect about the table is the extremely high usage of the Job Service. Over three-fifths of the respondents reported using the Job Service, with disproportionately large usage reported among the large businesses. This data suggests that over three-quarters of the large businesses rely to some extent on the Job Service. Since those employers count for the largest share of employment, the data suggest that perhaps as many as 70-80 percent of entry-level jobs are listed by the Job Service. It is noted that the frequency of recruitment source usage by large businesses and public sector employers exceeds small businesses in virtually every source. This is explained by the fact that large business used more recruitment sources (an

TABLE 10

FREQUENCY OF RECRUITMENT SOURCE USAGE BY SAMPLE

Recruitment Source	Sample			TOTAL
	Small Business	Large Business	Public Sector	
Job Service	42.6%	76.6%	63.2%	60.7%
Schools	23.3	45.0	23.7	34.0
Newspapers/other media	34.1	60.8	81.6	50.4
Signs	3.2	9.7	10.5	6.9
Employee referrals	44.6	63.7	36.8	53.5
Private employment agencies	11.2	19.1	7.9	14.9
Union referrals	0.8	2.5	0.0	1.6
Other	14.9	11.9	18.4	13.6
Don't actively recruit	12.9	3.6	2.6	7.6

average of 3 sources per opening compared to 1.8 per opening for small businesses).

The occupational mix of the nonmanagerial work forces in South Dakota are given in table 11. Each respondent was asked to name up to three occupations held by nonmanagerial staff. The entries in the table give the percentage of firms in the sample that mentioned at least once an occupation in each broad category of the table. By far, the most often mentioned occupations were office occupations. Over two-thirds of the small businesses and public sector employers named occupations within this category. Fewer than half of the large businesses listed this occupation, however. This may be explained by the preponderance of restaurant and health care providers in this sample. Mentioned about a third of the time in all three samples were the unskilled labor and blue-collar/skilled occupations. The former (unskilled) occurred relatively more often in the large business and public sector samples, whereas the latter (blue-collar) was named disproportionately more often by small businesses.

Respondents' Personal Characteristics

Table 12 displays data concerning personal characteristics of the individuals who responded to the survey. Since the desire was to obtain variation in the respondents' position within the firm, the survey protocol required the interviewers to ask to speak to an (the) individual in charge of recruiting and hiring for the firm. For small businesses, the respondents were the owner over

TABLE 11

OCCUPATIONS OF NONMANAGERIAL WORKERS
BY SAMPLE

Occupation	Sample			TOTAL
	Small Business	Large Business	Public Sector	
Office occupations	67.5%	43.2%	73.7%	55.9%
Professional, scientific technical	14.5	14.4	39.7	16.1
Administrative, management	6.4	3.6	5.3	5.0
Sales	24.9	19.8	0.0	20.7
Warehousing and transportation	18.5	14.0	5.3	15.4
Blue-collar/skilled	34.9	24.1	5.3	27.6
Construction, mining occupations	6.4	5.4	5.3	5.8
Eating and drinking establishment occupations	8.4	24.1	13.2	16.5
Service workers	12.1	27.7	13.2	19.8
Unskilled labor	21.7	36.3	60.5	31.5

TABLE 12

RESPONDENT CHARACTERISTICS BY SAMPLE

Characteristic	Sample						TOTAL	Percentage
	Small Business	Percentage	Large Business	Percentage	Public Sector	Percentage		
Gender								
Male	167	67.6%	171	61.7%	15	39.5%	353	62.8%
Female	80	32.4	106	38.3	23	60.5	209	37.2
Position in Firm								
Owner	120	61.5%	7	3.2%	0	0.0%	127	28.6%
President/chief administrator	17	8.7	45	20.6	10	32.3	72	16.2
Other officer	7	3.6	22	10.1	15	48.4	44	9.9
Office or store manager	32	16.4	61	28.0	1	3.2	94	21.2
Personnel director	5	2.6	42	19.3	2	6.5	49	11.0
Personnel staff	4	2.1	19	8.7	0	0.0	23	5.2
Other staff	10	5.1	22	10.1	3	9.7	35	7.9
Vocational Education?								
Yes	95	38.9%	115	42.0%	15	39.5%	225	40.5%
No	149	61.1	159	58.0	23	60.5	331	59.5
Description of VE Training								
High school only	18	19.8%	25	23.2%	4	28.6%	47	22.1%
Voc-tech only	30	33.0	26	24.1	2	14.3	58	27.2
Other post-secondary only	21	23.1	36	33.3	6	42.9	63	29.6
High school & voc-tech	1	1.1	5	4.6	0	0.0	6	2.8
High school & other postsecondary	1	1.1	3	2.8	0	0.0	4	1.9
Other	20	22.0	13	12.0	2	14.3	35	16.4
Highest Grade Completed								
8	10	4.0%	12	4.3%	1	2.6%	23	4.1%
9-11	8	3.2	4	1.4	0	0.0	12	2.1
12	83	33.3	38	13.7	9	23.7	130	23.0
13-14	62	24.9	62	22.3	8	21.1	132	23.4
15-16	54	21.7	114	41.0	7	18.4	175	31.0
>16	32	12.9	48	17.3	13	34.2	93	16.5
Age								
<25	4	1.7%	9	3.3%	0	0.0%	13	2.4%
25-34	58	23.4	71	26.3	9	23.7	136	24.9
35-44	68	28.5	109	40.4	4	10.5	181	33.1
45-54	65	27.2	58	21.5	14	36.8	137	25.1
55-64	39	16.3	20	7.4	8	21.1	67	12.3
65+	7	2.9	3	1.1	3	7.9	13	2.4

50 percent of the time; he or she was the store or office manager another 16 percent of the time. For large businesses, office or store manager was the modal response (28 percent), with president and personnel director both listed about 20 percent of the time.

A majority of respondents were males, although there were more female public sector respondents. Only about 40 percent of the respondents reported having enrolled in some type of vocational education at some time in their lives. There was virtually no variation in that statistic across the various samples. For those respondents who had taken some vocational education, between 25-30 percent described the training as occurring in each of the following settings: high schools, voc-tech schools, or other postsecondary settings. About 16 percent indicated a different setting such as the military, night school, or professional schools. The remaining 5 percent described a combination of high school plus postsecondary.

The large business respondents tended to have greater educational attainment than either of the other two samples. Approximately 80 percent of large business respondents had completed some education beyond grade 12. The comparable percentages for the public sector employers and small business were 73 percent and 60 percent, respectively. Finally, age ranges of the respondents are also shown in the table. As might be expected, the respondents tended to be in the 25-54 age ranges, with less than 20 per-

cent younger than 25 or over 54. The youngest respondent was 18 and the oldest was 72.

Opinions about and Interactions with Vocational Education

This section of the chapter first presents opinion data about secondary vocational education. Next, opinions about postsecondary training are presented. Finally, interactions with the vocational education system are described.

Secondary Vocational Education Perceptions

Tables 13 and 14 provide summary data from opinion questions posed to the employers about secondary vocational education. Table 13 presents frequencies for the entire sample, whereas table 14 shows the mean ratings by sample type. A Likert-type scale was used where 1 represents strong agreement, 2 represents agreement, 3 is no opinion, 4 represents disagreement, and 5 represents strong disagreement. In looking at table 14, if the mean rating is less than 3, then on average there is agreement; if the mean is greater than 3, there is disagreement.

The first statement posed to respondents was as follows:

> **When I hire a high school graduate for an entry-level job, I prefer individuals who have completed a vocational education program, other things equal.**

Strong agreement with this statement was found. Over 60 percent of the respondents either agreed or strongly agreed with the statement. In fact, in examining table 13, it can be seen that

TABLE 13

ATTITUDES TOWARD SECONDARY VOCATIONAL EDUCATION

Indicator	Rating				
	Strongly Agree	Agree	No Opinion	Dis-agree	Strongly Disagree
Voc. ed. graduates preferred	76	261	160	59	4
High schools steer away good students	21	129	168	227	20
Programs not up to date	12	100	200	237	12
Better work attitudes	25	201	221	114	4
Better at applying for jobs	21	210	219	110	4
Basic skills inadequate	8	57	131	339	29
Co-op experience better than grades	29	287	143	100	5

TABLE 14

MEAN ATTITUDES TOWARD SECONDARY VOCATIONAL EDUCATION BY SAMPLE

Indicator	Sample			TOTAL
	Small Business	Large Business	Public Sector	
Voc ed. graduates preferred	2.41	2.37	2.32	2.38
High schools steer away good students	3.22	3.13	3.62	3.16
Programs not set up to date	3.24	3.24	3.18	3.24
Better work attitudes	2.74	2.80	2.79	2.77
Better at applying for jobs	2.71	2.78	2.92	2.76
Basic skills inadequate	3.51	3.62	3.65	3.57
Co-op experiences better than grades	2.48	2.66	2.71	2.58

more extreme responses (strongly agree or strongly disagree) were received for this statement than any other of the secondary vocational education items.

The next statement in the questionnaire was as follows:

High schools steer good students away from vocational education classes.

Overall, the employers disagreed, but the mean rating of 3.16 is close to 3, indicating that about as many respondents agreed as disagreed. That means that there are a fair number of employers who perceive that high schools are engaged in a deliberate sorting mechanism with vocational education students.

Next, employers were asked for their agreement with the following statement:

The occupational skills that vocational education student learn are inadequate because the programs in the high schools are not up to date.

The purpose of the item was to gauge employers' perceptions about the currency of high school programs. On average, employers disagreed with the statement, although a large number of the employers had no opinion, suggesting that they were not familiar with high school programs.

The next item posed dealt with the work attitudes of vocational education students relative to other students.

Vocational education students tend to have better work attitudes than other high school graduates.

A large number of employers responded that they had no opinion (presumably because they did not hire secondary vocational education students). Of those that did respond, there was about 2-to-1 agreement with the statement.

Interestingly, the next item, concerning the job search skills of vocational education students, had the same results as the work attitude question. The specific statement was as follows:

> **I've noticed that vocational education students tend to do a better job at applying for jobs than do other high school students.**

A large share of respondents had no opinion. Of those who did have an opinion, there was again about 2-to-1 agreement with the statement.

The employers gave a rather resounding vote of confidence to the basic skills of high school vocational education graduates when asked for agreement with the following statement:

> **The basic skills (speaking, writing, math) of high school vocational education graduates are inadequate to perform entry-level jobs successfully in my firm.**

The employers disagreed with this statement. About two-thirds of the employers either disagreed or strongly disagreed with the statement, about 23 percent had no opinion, and only 11 percent agreed or strongly agreed.

The final item pertaining to secondary vocational education was intended to measure opinions toward cooperative work experience. Specifically, the item stated:

I would hire a high school graduate who had participated successfully in a cooperative work experience program rather than another high school graduate who had a higher grade point average but no co-op experiences.

Cooperative work experiences fared well. The rate of agreement to disagreement on this item was about 3-to-1.

Postsecondary Vocational Education Perceptions

The employers were posed a series of seven items concerning postsecondary vocational education programs in a fashion that was similar to the secondary vocational education opinion questions. As a general rule, far fewer "no opinion" responses were received, probably indicating that employers were more familiar with the postsecondary programs. Again, the vocational education system and its graduates received the general approval of employers. The precise data concerning the postsecondary items are provided in tables 15 and 16.

The first statement for which employer opinion was requested was phrased as follows:

Individuals who have attended a postsecondary technical program are overqualified for entry-level jobs in my firm/company.

Only 16 percent of the employers agreed with this statement. The vast majority of the rest of the sample disagreed or strongly disagreed. This is reflected by the mean rating of 3.63 that indicates general disagreement with the statement. Again, the disagreement was fairly severe; 53 respondents were in strong disagreement.

TABLE 15

ATTITUDES TOWARD POSTSECONDARY
VOCATIONAL EDUCATION

Indicator	Rating				
	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Postsecondary technical students are overqualified.	18	71	63	357	53
Voc-techs are excellent for older individuals.	33	3.5	171	29	6
High schools should emphasize basics; post-secondary should emphasize skills.	57	349	74	73	10
Hire college grad rather than voc-tech.	18	120	91	296	38
Hire voc-tech trained rather than military trained.	31	208	163	143	18
Voc-tech students feel they don't need OJT.	12	88	115	309	39
Encourage employees to attend voc-techs.	101	313	110	37	3

TABLE 16

MEAN ATTITUDES TOWARD POSTSECONDARY
VOCATIONAL EDUCATION BY SAMPLE

Indicator	Sample			TOTAL
	Small Business	Large Business	Public Sector	
Postsecondary technical students are overqualified.	3.59	3.68	3.58	3.63
Voc-techs are excellent for older individuals.	2.39	2.37	2.37	2.38
High schools should emphasize basics; postsecondary skills.	2.23	2.44	2.39	2.34
Hire college grads rather than voc-tech.	3.51	3.32	3.03	3.38
Hire voc-tech trained rather than military trained.	2.80	2.87	2.84	2.84
Voc-tech students feel they don't need OJT.	3.35	3.60	3.58	3.49
Encourage employees to attend voc-techs.	2.21	2.12	2.13	2.16

Next, the employers were asked whether they felt vocational-technical schools were serving the needs of older workers reentering the labor force. Specifically, this statement was posed:

> **Vocational-technical schools and other postsecondary institutions seem to provide excellent occupational training to older individuals reentering the labor force or retraining to be qualified for a new occupation.**

For those who offered agreement or disagreement, the ratio of agreement to disagreement was about 10-to-1. However, 171 respondents (30 percent) indicated they had no opinion, which suggests that they were not familiar with this function of postsecondary institutions. This was the highest level of "nonopinion" of any of the postsecondary items. Given the strong approval, otherwise, this may be a potential area for marketing vocational education benefits.

The next item addresses a contemporary debate in vocational education circles--namely, should skill training be given in high schools. Employers in this survey sided strongly with those that suggest that high schools should emphasize basic skills and postsecondary institutions should emphasize technical skills in their response to the following item:

> **High schools should emphasize basic skills and post-secondary schools should emphasize technical skill training in their vocational programs.**

Over 70 percent of the respondents agreed or strongly agreed with this statement. A total of 57 respondents (70 percent) strongly agreed.

Another issue that is being debated in education is the value of a college degree (typically reflecting some emphasis on liberal arts) as opposed to postsecondary occupational programs of 1 or 2 years. South Dakota employers do not prefer the college educated when hiring for jobs where either college- or non-college-educated applicants could be considered. By a 3-to-1 margin, they disagreed with the following statement:

> **If everything else were the same about a candidate, I would hire someone with a 4-year college degree rather than a degree or certificate from a 1- or 2-year program in jobs where I might consider both.**

The interpretation of this finding is not necessarily that vocational-technical school students are preferred to college graduates, but rather that they are not automatically at a disadvantage when competing for the same jobs.

In a comparison of vocational-technical school training to military training, the former was preferred. The specific statement posed to employers was as follows:

> **If everything else were the same, I would hire someone technically trained in a vocational-technical school rather than someone trained in the military.**

As might be expected, a fairly high level of "no opinion" was received for this item. Probably these employers were not familiar with military skill training. Apart from these responses, the support for vocational-technical training was not overwhelming. The mean for this opinion indicator was 2.84, which is close to 3, and thus indicates almost as much disagreement as agreement.

A concern that was voiced in the formative stages of the project by a member of the employer panel that reviewed the early draft questionnaires was that sometimes vocational-technical students tend to feel that when they graduate, they are totally trained and don't need on-the-job training. We tested the opinions of employers across the state on this issue were sought by asking for agreement with the following:

> **Individuals trained of vocational-technical schools or colleges feel they don't need to be trained on the job because they are already skilled.**

Apparently, the majority of employers have not encountered this attitude. Disagreement with the statement exceeded agreement by over a 3-to-1 margin.

Finally, the following statement was posed:

> **I encourage my employees who want or need more schooling to attend vocational-technical schools or colleges.**

This item received the highest number of "strongly agree" responses of any of the postsecondary or secondary items. Overall, the mean response was 2.16, indicating very strong agreement. Employers definitely do not want educational experiences to stop when individuals become employed.

Interactions with the Vocational Education System

Vocational education cannot operate effectively without interacting with the employer community. Interaction can and does take many forms. Schools may establish formal, work experience-based education programs; they may survey employers in curriculum

planning; or they may receive donations of equipment or time, for example. In the survey, employers were asked about the extent to which they interact with secondary or postsecondary vocational education. The resulting data are provided in table 17. The entries in the table represent the percentages of the sample that indicated that they had interacted with vocational education.

The table shows a clear pattern of greater involvement between vocational education and large businesses and the public sector employers than small businesses. In response to the question of whether the firm had participated in a cooperative work experience program, about three-quarters of the large business respondents and half the public sector respondents answered affirmatively. About 40 percent of the small businesses indicated that they had participated in such programs. These percentages are unexpectedly and suspiciously large. In examining the description of the cooperative work experience programs given by the employers, it seems clear that there was some misinterpretation or misunderstanding about what constitutes a cooperative work experience program.[5] The responses to the question asking the employers to describe their work experience-based program participation were classified, and the following breakdown of descriptions for the total sampler was found:

[5] Some employers described probationary periods for workers, presumably feeling that these constituted internships. Others included JTPA or Job Service program involvement.

TABLE 17

EMPLOYER INTERACTION WITH VOCATIONAL EDUCATION BY SAMPLE

Interaction	Sample			TOTAL
	Small Business	Large Business	Public Sector	
Participated in cooperative work experience	41.5%	77.2%	51.4%	57.7%
Contacted by a school in process of curriculum decision making	17.0	33.5	26.5	25.5
Served as instructor or donated equipment or both:	19.6	33.2	34.4	26.9
--Instructor	(.9)	(8.2)	(12.5)	(5.0)
--Donation	(10.2)	(18.1)	(21.9)	(14.6)
--Both	(8.5)	(6.9)	(0.0)	(7.2)
Other forms of interaction	20.7	41.5	39.5	32.2

- o Government training program 17.6%
  (Job Service, JTPA, etc.)
- o DECA involvement 17.3
- o Secondary school programs 16.1
  (Other than DECA)
- o Postsecondary programs 24.0
- o Other answer 24.0
- o No answer 0.9

Employers who had given a negative response were asked why. Primarily, they responded that they did not have any appropriate positions or they had never been approached.

About one-fourth of the respondents indicated that "a representative from a high school or postsecondary school had involved them or other individuals in their firm in curricular decisions." for those who answered "yes," a brief description was solicited. The "no's" were asked why not. The primary responses were as follows:

- o Yes's (n = 133)
  - -- On advisory boards 15.8%
  - -- Contacted by voc-tech . . . 24.8
  - -- Contacted by other postsecondary 9.8
  - -- Contacted by high school. . 8.3
  - -- Other description 35.3
  - -- No description 6.0

- o No's (n = 388)
  - -- Don't know why not 16.0%
  - -- Never contacted 25.3
  - -- Other answer 8.5
  - -- No answer 50.3

As with the response to the item about being contacted for curriculum decisions, about a quarter of the respondents answered the question about whether they had donated equipment or been an instructor for a vocational school. The lion's share of these

responses indicated that they had given a donation or had done both. Even though relatively small, the percentage of respondents who reported that they had been an instructor is likely to be artificially high because it includes responses by those individuals who gave occasional presentations at schools. (Where this phenomenon could be identified, the data were recoded so that occasional presentations were listed in response to question 13, the answers to which are analyzed next). Approximately one-third of the large businesses and public sector employers indicated that they had been instructors or donated equipment; only about one-fifth of the small business respondents responded that way.

The final question about interactions with vocational education (question 13) was a general one that asked simply for any other type of interaction (other than cooperative work experience, involvement in curriculum decision making, or instructor/donation). About a third of the sample indicated that they had interacted with the vocational education system in some other manner. The responses to the probe of how they had interacted were classified as follows:

- On advisory boards 16.0%
- Occasional lectures or presentations 28.7
- Hiring referrals 3.9
- Other answer (e.g., training instructors) 49.7
- No answer 1.7

In summary, as reported in their responses to this survey, South Dakota employers have favorable opinions about most aspects

of both secondary and postsecondary vocational education. Furthermore, a sizable share of firms have had some type of interaction with the schools.

Profiles of Vocationally Trained and Nonvocationally Trained Workers

The third section of the questionnaire gathered data about specific workers hired by the respondents. It first asked for data about the firm's last new employee hired prior to 1 October 1986. The employee could have been in a management or non-management position. The questionnaire also asked for data about a second worker who holds the same job as the first. If the first worker had had vocational training, then the survey specified that the second worker would not be vocationally trained. If the first worker did not have formal vocational education, then the second worker should have had it. This process enabled profiles to be drawn of the vocationally trained and non-vocationally trained work force in the state. This section of the chapter presents those profiles.

In table 18, the gender, age at the time of hire, and highest grade completed characteristics of the vocationally trained and nonvocationally trained workers are summarized. In both cases, slightly over 50 percent of the workers were males. The vocationally trained workers tended to be younger at the time of hire--35 percent were 21 or under, whereas only 22 percent of the nonvocationally trained workers started at 21 or under. The mean

TABLE 18

GENDER, AGE AT HIRE, AND HIGHEST GRADE COMPLETED OF VOCATIONALLY TRAINED AND NONVOCATIONALLY TRAINED WORKERS

Characteristic	Vocationally Trained	Mean	Median	nvoc. trained	Mean	Median
Gender						
Male	53.6%	N/A	N/A	51.7%	N/A	N/A
Female	46.4			48.3		
Age at Hire						
<18	3.8%	25.8	23	4.5%	29.6	26
18-19	7.3			9.0		
20-21	22.6			8.5		
22-25	27.8			23.3		
26-30	19.1			20.0		
31-40	14.6			19.7		
41-50	3.8			9.6		
51+	1.0			5.4		
Highest Grade Completed						
8	0.0%	13.5	14	1.8%	12.7	12
9-11	1.8			7.2		
12	20.3			60.7		
13-14	69.6			15.4		
15-16	7.3			11.5		
>16	1.1			3.4		

age at time of hire for the two groups were 25.8 and 29.6 years old, respectively. Medians were 23 and 26 years old.

The vocationally trained workers also differed in their educational attainment. About 80 percent of them had completed higher than the 12th grade. Only about 30 percent of the non-vocationally trained had any postsecondary education. In summary, vocationally trained workers tended to be younger at the time of hire and to have more education than their non-vocationally trained counterparts.

Table 19 shows the occupations into which the two groups were hired. The differences, although not striking in magnitude, do seem to accord with prior expectations. Vocationally trained workers tend to be more heavily employed in general office occupations (cleric 1) and blue-collar/skilled (trade and industrial) occupations, whereas they are relatively less represented in sales, warehousing and transportation, and unskilled occupations.

Employers were asked how relevant the training received by vocationally trained workers was to the job duties being performed. The response pattern was as follows:

- Very related 53.7%
- Somewhat related 30.4
- Not at all related 15.9

Interestingly, one in six vocationally trained workers were hired into jobs where their training was not at all relevant.

The next set of characteristics examined were work experience characteristics. The data are shown in Table 20. First, it can be seen that the nonvocationally trained workers had, on the

TABLE 19

OCCUPATION OF VOCATIONALLY TRAINED
AND NONVOCATIONALLY TRAINED WORKERS

Occupation	Vocationally Trained	Nonvocationally Trained
Office occupations	19.7%	15.2%
Professional, scientific, technical	9.3	9.0
Administrative, management	7.9	7.9
Sales	9.0	11.7
Warehousing and transportation	4.8	8.6
Blue-collar/skilled occupations	20.0	12.7
Construction and mining occupations	1.4	2.7
Eating and drinking establishment occupations	6.2	7.7
Service workers	9.7	8.6
Unskilled labor	12.1	15.9

TABLE 20

WORK EXPERIENCE CHARACTERISTICS OF VOCATIONALLY TRAINED AND NONVOCATIONALLY TRAINED WORKERS

Characteristic	Vocationally Trained	Mean	Median	Non-vocationally trained	Mean	Median
Months of Related Prior Work Experience						
0 months	43.4%	23.0	6	39.7%	33.0	9
1-4	5.8			3.9		
5-8	4.7			6.0		
9-12	11.6			8.1		
13-24	12.0			13.8		
25+	22.5			28.5		
Still Employed?						
Yes	83.3%	N/A	N/A	87.6%	N/A	N/A
No	16.7			12.4		
Type of Separation If Separated						
Layoff	11.6%	N/A	N/A	18.5%	N/A	N/A
Discharged	7.0			5.6		
Induced quit	14.0			3.7		
Voluntary quit	55.8			59.3		
Other	11 6			13.0		
Duration at Firm						
<4 weeks	3.0%	68.9	39	1.0%	59.6	35
4-8	.9			1.3		
9-12	2.1			2.6		
13-26	23.8			35.0		
27-40	21.7			18.0		
41-52	9.4			7.5		
53-78	9.8			13.1		
79-104	11.9			8.2		
104+	17.5			13.4		
Promoted						
Yes	55.1%	N/A	N/A	44.9%	N/A	N/A
No	44.9			55.1		
Months to Promotion						
<2	16.1%	7.5	6	23.7%	6.0	4
3-4	24.8			27.8		
5-6	25.5			24.8		
7+	33.6			23.7		

average, much more related work experience prior to being hired than did vocationally trained workers. They averaged approximately 33 months of related work experience compared to only 23 months for the vocationally trained employees. Part of this difference is likely to be explained by the fact that the nonvocationally trained workers were older at the time of hire.

Since the questionnaire asked for information concerning workers hired several months prior to the interview, it was possible that the workers had been separated from the firm in the interim. Indeed, about a sixth of the vocationally trained workers had been separated, and about an eighth of the nonvocationally trained workers were no longer wiith the firm. For those workers that had been separated, the employers were asked to provide the reasons for separation. The data are presented in the table, but because only a relatively small number of workers had been separated, the cell sizes are too small to yield statistically reliable differences.

The duration at the firm data are also hard to interpret because they represent a completed spell for people who had left their jobs but only an interrupted spell for the majority of workers still employed. The tentative finding appears to be that vocationally trained workers tend to be employed at the firm for a longer period, however.

In looking at promotions, it is unambiguously clear that vocationally trained workers had a higher promotion rate than nonvocationally trained workers. Over 55 percent of the former had been promoted as compared to only 45 percent of the latter.

Interestingly, however, the average length of time at the firm before receiving the promotion, for those workers who had been promoted, is shorter for nonvocationally trained workers. This may be explained by the fact that the latter tended to have more work experience.

The final characteristics to round out our profiles of vocationally trained and nonvocationally trained workers are training time, productivity measures, and wages. Information about the number and hours spent in training during the first 3 months of work was gathered for each specific worker as well as for a "typical" worker. Training time was disaggregated into formal training (such as self-paced training programs or training given by specially trained instructors), informal training given by management or line supervisors, and informal training given by coworkers, who are not supervisors. Table 21 provides summary data about the training time of vocationally trained and nonvocationally trained workers. Both groups were reported to spend almost exactly the same amount of time in formal training. However, the nonvocationally trained workers received significantly less informal training. On average, they received about 53 hours of informal training given by management as compared to 66 hours for vocationally trained workers. The means are 37 and 61 for informal training by coworkers for the nonvocationally trained and vocationally trained, respectively. The differences may be explained by many factors. First, because the nonvocationally trained workers have more related job experience, they may require less training. Second, jobs and firms are not

TABLE 21

TRAINING TIME FOR VOCATIONALLY TRAINED
AND NONVOCATIONALLY TRAINED WORKERS

Characteristic	Vocationally Trained			Nonvocationally Trained		
	Distribution	Mean	Median	Distribution	Mean	Median
Formal Training Hours						
0	47.6%	27.7	0	47.3%	29.5	0
1-20	19.0			19.1		
21-40	10.3			8.2		
41+	15.8			17.7		
Some, DK #	7.3			7.7		
Informal Training by Management						
0	9.4%	66.0	24	11.0%	52.6	20
1-20	30.1			31.7		
21-40	14.9			16.0		
41-80	12.7			9.9		
81-120	5.1			5.9		
121+	11.6			8.5		
Some, DK #	16.3			17.1		
Informal Training by Coworkers						
0	19.6%	61.1	20	22.1%	37.1	10
1-20	19.6			24.0		
21-40	13.1			13.3		
41-80	8.9			5.3		
81-120	3.8			2.9		
121+	9.6			5.8		
Some, DK #	25.4			26.5		

controlled in this analysis, so it may be the case that the occupations that vocationally trained workers go into require more training than other occupations. Third, there may be "selection on the job" meaning that employers choose to invest more in training for those workers they perceive to be most promising. Thus receiving more training is a positive sign.

We asked employers to rate employees on a productivity scale of zero to 100 for three points in time; during their first 2 weeks on the job, during their first 3 months, but after that initial 2 weeks, and finally, today (at the time of the interview or during their final week of employment, if they had separated from the firm). Table 22 summarizes this productivity data. Interestingly, there are virtually no differences in the productivity profiles. Both groups have an identical average productivity rating during the first 2 weeks of employment of 58.2. That rises to around 75 for the second productivity score and about 87 for the third. None of the differences in the table are significant.

Finally, table 23 looks at wage rates. Two wages were reported. The first was the starting wage for an individual who would start work today in the job held by the specific workers being described. The second was the workers' specific wage rates at the time of the interview. Unlike the productivity data, there this a clear difference in the wage patterns. The vocationally trained workers started at a slightly lower average wage rate

TABLE 22

PRODUCTIVITY MEASURES OF VOCATIONALLY TRAINED
AND NONVOCATIONALLY TRAINED WORKERS

Productivity Measure	Vocationally Trained			Nonvocationally Trained		
	Distribution	Mean	Median	Distribution	Mean	Median
Productivity during First 2 Weeks						
	0.8%	58.2	60	1.1%	58.2	60
1-20	9.2			7.8		
21-40	13.8			13.3		
41-60	32.7			33.2		
61-80	31.5			30.9		
81-100	15.8			13.7		
Productivity during First 3 Months						
0	0.0%	75.3	80	0.2%	75.6	80
1-20	1.[illegible]			1.8		
21-40	3.6			3.9		
41-60	17.1			14.7		
61-80	38.2			38.8		
81-100	39.6			40.6		
Productivity Today						
0	0.4%	87.2	90	0.2%	86.1	90
1-20	0.4			1.2		
21-40	0.0			1.4		
41-60	5.3			4.9		
61-80	22.6			19.5		
81-100	71.3			72.7		

TABLE 23

WAGES OF VOCATIONALLY TRAINED
AND NONVOCATIONALLY TRAINED WORKERS

Wage Rate	Vocationally Trained			Nonvocationally Trained		
	Distribution	Mean	Median	Distribution	Mean	Median
Today's Starting Wage						
<3.35	2.5%	5.07	4.65	3.5%	5.13	4.50
3.35	8.9			13.0		
3.36-3.50	7.5			8.7		
3.51-4.00	18.9			18.9		
4.01-5.00	28.6			24.6		
5.01-7.00	21.4			20.3		
7.01-900	8.6			7.3		
9.01+	3.6			5.9		
Today's Wage						
<3.35	0.4%	6.05	5.50	1.7%	5.91	5.10
3.35	1.5			2.5		
3.36-3.50	2.6			3.7		
3.51-4.00	10.6			15.4		
4.01-5.00	23.0			26.6		
5.01-7.00	39.6			29.4		
7.01-9.00	14.7			12.9		
9.01+	7.5			10.2		

($5.07 compared to $5.12), but by the second report, their wage had overtaken the nonvocationally trained worker (6.05 compared to $5.91).

In summary, we find the following distinctions between vocationally trained and nonvocationally trained workers:

Vocationally Trained	Nonvocationally Trained
- Younger at time of hire	- More related work experience
- More education	- For those promoted, fewer months at firm until promotion
- More likely in clerical and blue collar occupations	- Less training time required (particularly informal training)
- No productivity difference	
-Greater wage growth	

IV. ANALYSIS OF GENERAL COMMENTS

The previous chapter presented rather exhaustive analyses of the quantitative data on the questionnaire. In this chapter, the responses received to the final question in the survey are discussed.

Do you have any special comments or concerns dealing with vocational education that you would like to share with the South Dakota Council on Vocational Education?

In addition to the respondents who completed the entire survey, individuals who declined to participate were invited to respond to this question. As described in chapter 2, a significant number did so.

The first type of analysis presented here provides a frequency count on whether the comments received were positive toward vocational education, were negative, were both positive and negative, or were irrelevant or unrelated to vocational education Second, the comments are classified into the following categories:

- Comments about specific existing programs
- Suggestions for programs that should be developed
- Comments about vocational education graduates
- Curriculum and instruction issues
- State regulatory/governance issues
- General comments

Frequency of Positive or Negative Responses

Table 24 presents the distribution of comments by the nature of the comments; by whether the respondent was a small business, large business, a public sector employer; and by whether the entire survey was completed or was just a partial completion.

TABLE 24

QUALITATIVE DATA BY NATURE OF RESPONSE,
SIZE OF FIRM, AND SURVEY COMPLETION STATUS

Nature of Response	Survey Completed			Comments Only		
	Small Business	Large Business	Public Sector	Small Business	Large Business	Public Sector
Positive toward vocational education	94	67	18	61	26	12
Negative toward vocational education	27	50	5	13	7	1
Both positive and negative comments	26	22	2	9	5	3
Comments irrelevant or unrelated to voc. ed.	11	17	1	15	1	0
TOTAL	158[a]	156[a]	26[a]	98	39	16

[a]The remainder of the completed surveys did not have comments.

Although the classification of the nature of response was in some cases, somewhat arbitrary, a picture of rather solid support for vocational education is painted. This support is strongest from the small business sector and public employers. Combining the completed surveys with the surveys for which comments only were received, the percentage of comments from small business respondent that were positive toward vocational education is about 60 percent. Another 14 percent have both positive and negative comments. For the public employers, these percentages are 71 percent and 12 percent, respectively.

Large employers, however, are relatively less happy with vocational education, as measured by these qualitative comments. A plurality of comments are classified as positive (47 percent), but almost a third of the comments (57/195) are negative in nature. It should be noted that large businesses are responsible for the largest share of employment in the state and so their comments are important to consider.

An examination of the comments by whether the survey was completed or not shows some difference in the distributions across the categories of responses. Generally, the opinions offered by respondents who gave comments only were more positive toward vocational education than respondents who completed the entire survey. This phenomenon is best explained by the fact that among the total group of employers not inclined to complete the survey, those favorably disposed toward vocational education were most likely to take the minute or two to make a comment. In chapter 2, it was argued that no systematic differences (in terms

of industry or employment) existed between respondents and nonrespondents.

The next section of this chapter examines the content of the various comments.

An Analysis of the Qualitative Data

After the comments were classified as positive or negative, they were more closely scrutinized for content. The comments generally fell into one of the six categories listed previously. Each of these is presented in turn.

Comments about Specific Existing Programs

A number of the employers gave comments addressed at specific programs at specific institutions. Some of the comments were positive in nature and some were negative. In general, the following types of programs were viewed favorably:

- Electronics
- LPN programs
- High school distributive education

Employers were most negative toward some of the trade and industrial programs, such as construction trades, welding, and auto mechanics, but negative comments were also received about food preparation, advertising, and cosmetology. In considering these comments, it should be remembered that the survey was designed to be valid at the state level only and is not necessarily representative at any substate or regional level. Furthermore, these are spur-of-the-moment opinions of employers and are not rigorous evaluations.

Some of the comments received about vocational-technical school programs follow:

- o Licensed practical nursing

  -- (Health care provider, Gregory). I feel that vocational education is very valuable, especially in the 2 year programs for LPN's (with a diploma). Staff orientation time . . . . is cut from 6 months to 6 weeks.

  -- (Health care provider, Webster). Some of my best LPN's were trained in voc-tech schools . . . . RN's feel they know it all whereas LPN's don't seem to have this attitude.

  -- (Health care provider, White). Basically our LPN's are better workers than RN's who have college education. The LPN's have more practical experience. The RN's have been educated and have been taught in the classroom setting but have less hands-on experience.

- o Auto mechanics

  -- (Auto dealer, Sioux Falls). Vocationally trained people are not trained well enough to start anywhere but on the bottom . . . . Takes 2 years to train them at the dealership.

  -- (Auto dealer, Rapid City). Voc-tech schools are not up to date to comply with the fast changing technology from Detroit auto manufacturers. I have to train mechanics myself or send them to special school operated by the auto makers. I also feel that voc-tech schools should teach a customer relations course.

  -- (Boat dealer, Yankton, former vocational-technical school instructor). As I see it, having been in the system, students are not getting enough in-depth in either technical or academic courses . . . . Some subjects taught without the necessary equipment (e.g., wheel alignment instruction without a machine).

- o Cosmetology

  -- (Beautician, Selby). I think that vocational education has a tendency to simplify our line of work to the students. They tell them that in a year, or less, they will know all about it, that it is easy!

- Electronics

  -- (Utility, Baltic) [Re: Mitchell Vocational-Technical School Electronics program]. I feel the quality of the program is better than when I attended. They have added a third year to the electronics program, which improves that program.

  -- (Public sector employer, Marion). Vocational education is working well in our state. In fact, some of the larger electronics companies have been hiring our voc-tech trainees because they have excellent training.

  -- (Real estate firm, Rapid City). I'm all for it--I think everybody should know how to make a living when they get out of high school . . . . One woman friend of mine--a voc-tech computer grad--is now the 5th highest paid woman in Rapid City. She repairs computers.

  -- (Instrumentation manufacturer, Sioux Falls). There is much more to tell. What we in industry really, really need is a combined degree, where two year voc-tech graduates can continue in their education to get four year degrees, etc. . . . . The BSET 4-year program at SDSU is a good answer for us as the largest employer of electronics trained people in the state. Problem is that most students in that program come from voc-techs in other states.

- Advertising design

  -- (Commercial photographer, Sioux Falls). I have had many applicants from the voc-tech school in town here and they don't know the equipment or even the terms. I am not impressed. It's really too bad---they have modern equipment but they are not teaching what they say they offer . . . . In the typesetting course, there are large gaps in the training. They [Southeast Area Vocational-Technical School] are skipping portions of the curriculum.

- Construction trades

  -- (Carpenter, Sioux Falls). Voc-techs have got carpenters working for $4/hour. Kids leave school with the idea they're going to make a living at it but the wages aren't high enough because there are just too many of them. They just keep pumping them out and pumping them out. The employers are just laughing about it--I hear them say I hope they send another batch to us next year!

-- (Construction company, Rapid City). We hire people based on their on-job experience. Voc-tech grads think they've paid their dues and want wages they aren't worth. We are a commercial building contractor--primarily concrete, steel, glass. Voc-tech's emphasize wood construction.

-- (Carpenter, Armour). I'm primarily a remodeler and they don't teach this in voc-techs.

-- (Farm machinery manufacturer, Sioux Falls). South Dakota vocational education is at a disadvantage because vocational-technical schools in two neighboring states (Minnesota and North Dakota) are far more up to date. For example in wire vs. stick welding, most plants are now using wire welding, but the voc-tech program is still using stick.

o Food preparation

-- (Civic association, Ft. Pierre). I haven't heard any favorable remarks about the Food Preparation and Baking training at Mitchell Voc-Tech. In general, persons trained in that program are not as good as they could be and have difficulty finding employment.

-- (Motel operator, Sioux Falls). Bitterly disappointed in voc-tech people. I hired a person out of a voc-tech, but he thought he knew everything when he really had very limited knowledge. He did not have a willingness to work. People come out only knowing how to fry hamburgers. I have visited the Mitchell program. They have good facilities, but because Mitchell is so isolated, students are not able to get OJT.

Fewer comments were received about specific programs in high schools. A sampling of the comments that were received follow:

o (Insurance agency, Milbank). At the high school level, our Distributive Education program is very good. I think very highly of it.

o (Auto parts dealer, Gregory). We use DECA students from the local high school and it works out very well.

o (Shoe store, Rapid City). Our corporation is a real strong supporter of DECA and is one of the supporters for the national DECA conference.

- (Health care provider, Lennox). The office education program in Lead High School is just excellent. The work experience program gives them a chance to test it out before spending the money to go on to a voc-tech school.

Comments Suggesting That Programs Be Developed

A significant number of comments made by employers suggested that certain programs should or could be developed and offered that currently are not available (at least, to their knowledge). Some of these program suggestions were extremely specialized and probably would have limited demand. Others, however, if offered, may generate sufficient demand. The specific programs requested are as follows:

- Limited demand

  -- dog grooming
  -- musical instrument repair
  -- golf course maintenance
  -- fitness/spa occupations
  -- injection plastics
  -- travel agent

- Sufficient demand

  -- optometry
  -- meat cutting
  -- heavy equipment
  -- truck driving
  -- child care
  -- teller/banking occupations

These suggestions are detailed in the following excerpts:

- Limited demand programs

  -- (Pet groomer, Sioux Falls). Nobody in the state has a dog-grooming program. Nearest is in Twin Cities area. This is an extremely high demand industry: I believe there could be 15 more in the Sioux Falls area. Wages are $6 - $6.25/hour.

  -- (Music store, Pierre). We do instrument repairs - a vocational education field. Only 3 people in the entire state are qualified for this.

-- (Golf course, Southeastern South Dakota) . . . . would like to see programs offered for golf course supervisor, groundskeeping, and maintenance, especially at high school level. There's a need for qualified people in this field and voc-tech schools need to add it to their curricula.

-- (Fitness Center, Pierre) . . . . would like to see 1-2 year programs in the field of fitness (health club management, instruction, etc) since it's such a growing field. I have a B.S. in Sports Management, but I wish I'd had voc-ed "hands-on" experience instead because it would have been more beneficial.

-- (Public sector employer, Isabel). In my job, I always deal with people needing technical skills and I find that I cannot help employers fill jobs with technically trained people because the skills are not being taught within South Dakota. For example, injection plastics. The closest program is in Minneapolis and we can't get people from there to come here.

-- (Travel agency, Sioux Falls). The state of South Dakota does not have a travel school that teaches the relevant airline system for travel training. I'm very critical of travel schools because they hire persons to teach who have little or no experience in the field of travel.

o Programs with sufficient demand

-- (Optician, Brookings). No known programs in South Dakota; only Minnesota. Students from South Dakota would like to attend school in state or have reciprocity with Minnesota to avoid higher fees. Equipment suppliers will donate equipment; the problem is finding qualified instructors.

-- (Meat packer, Eastern South Dakota). I am concerned that there is no meat cutting training available in our immediate area. The closest one is in Pipestone, MN. . . . . Since there is a voc-tech campus here, I'm wondering why the meat cutting trade is not offered there.

-- (Construction company, Howard). No voc-tech program in South Dakota for heavy equipment operator, so I have to school them myself.

-- (Construction company, Rapid City). In our area, no heavy equipment voc-tech courses are available. Most vocational education mechanical courses are for smaller equipment, so we don't get voc-tech graduates.

-- Day care center, Southwestern South Dakota). Nobody offers vocational education courses in child care in our area, but I think it would be a great thing.

-- (Financial institution, Rapid City). In the banking industry, I feel we are in need of some type of teller training. I know that in Minneapolis and Denver, this type of training is available.

-- (Trucking company, Whitewood). For my type of business, South Dakota is in need of a good truck driver training program. Most insurance companies will not insure anyone under the age of 25, but perhaps they could be persuaded to insure younger drivers who had undergone proper training.

Comments about Vocational Education Graduates

Many of the employers who offered remarks gave comments about former vocational education students that they had hired. As with the other categories of comments, both positive and negative comments were made. However, the majority of comments were positive toward vocational education graduates. Depending on the respondent, vocational education graduates--

-- are more enthusiastic.
-- require less training.
-- are preferred over individuals trained in college or military.
-- are preferred over individuals with several years work experience.
-- have common sense.
-- require less time to be productive employees.

On the other hand, some employers reported that vocational-technical graduates--

-- expect too much money.
-- are "know-it-alls."
-- have poor work attitudes.
-- produce poor quality work.

To put these descriptions into context, following are selected excerpts from the comments:

- o More enthusiastic

  -- (Construction company, Scotland). Vocational-technical schools are doing a "great service" to all who are involved, i.e. the student, the employer, and the consumer. Students who attend voc-tech schools are more specialized in their field and perform their jobs in a more enthusiastic manner.

- o Expect too much money

  -- (Auto repair shop, Rapid City). Voc-tech grads seem to come out feeling they should be paid the same as experienced workers, but they don't have on-job-training.

  -- (Construction company, Rapid City). Voc-tech grads think they've paid their dues, and want wages they aren't worth.

  -- (Business association, Pierre). They [voc-tech students] think they know more than the boss at times; demand higher wages than they should be getting.

- o Require less training

  -- (Health care provider, Dell Rapids). I'm strongly in favor of vocational education. We can see the difference in the training . . . . saves employers time and money.

  -- (Health care provider, Sioux Falls). I know from experience that an employee with vocational education takes less time to become productive.

  -- (Auto dealer, Sioux Falls). About 30% of employees here have voc-tech training--mainly in the service department. Those with some voc-tech background "catch on quicker."

  -- (Repair service, Aberdeen). We've had a lot of vocational-technical school people. They come with very good basic training background. They learn more easily.

- o Are "know-it-alls"

  -- (Commercial printer, Vermillion). After 6-12 months of vocational education training, many students feel they "know-it-all" and are 'smart-alecs who try to run the business"--They don't necessarily know more than people with no vocational education training at all. It's a real problem in my opinion because they're hard to train.

- Are preferred over college students

  -- (Real estate, Rapid City). I think that vocational-technical school training is better than either college or military, because college gives no hands-on experience and military do it only their own way.

  -- (Business services, Aberdeen). Vocational education grads want to work harder than 4-year students and they take their job more seriously.

  -- (Auto repair shop, Belle Fourche). Vocational education is extremely valuable. I would hire a voc-tech trained person over a college grad in my business.

  -- (Mining, Minnesota employer). I have more faith in graduates of a vocational education program than a graduate of a college program.

- Poor attitude

  -- (Repair service, Aberdeen). Attitude is the only problem we've had (with vocational education people). They feel they're overtrained sometimes and their attitude is poor sometimes.

- Preferred over experienced workers

  -- (Retail nursery, Rapid City). I have 2 employees who went through SE Area Vocational-Technical (horticulture/landscaping). They do good work as a result. °You can tell the difference' between their work and that of untrained employees, even if the latter have prior experience.

  -- (Wood products manufacturer, Sioux Falls) . . . . been much more satisfied with people out of voc-tech than with people with 5-6 years of experience.

- Poor quality work

  -- (Electrician, Aberdeen). Vocational education programs should strive for better quality workers. When we take on a vocational education graduate, it drives down the quality of our work.

- Have more common sense

  -- (Retail nursery, Sioux Falls). Give me a voc-tech student any day! I am greatly impressed by the average voc-tech student who indicates, °Here I am. This is what I know. What else do I need to know? Where do I

get the information?' Most important, °What can I do to make myself valuable to your firm?'

-- (Auto repair shop, Sioux Falls). I have 4 children--2 are voc-tech students and 2 have graduated, with honors, from college. The two in voc-tech school are much better prepared for 'life in general' than the college graduates. You could put the 2 college graduates in the center of the state, and they couldn't find their way home.

Curriculum and Instructional Issues

Several comments addressed curriculum content or instructional issues. Heard quite often were comments that (1) vocational educators need to communicate more often with employers to find out about the "real world" and (2) there needs to be more emphasis on employability or work maturity skill develcpment. Following are excerpts from some of the comments.

o Communicate more with employers

-- (Home furnishings manufacturer, Webster). What occurred with DECA students was that the school district doesn't really provide a link with the employer. There has to be a great deal of coordination and communication.

-- (Construction machinery manufacturer, Canton). Vocational educators need to get out and talk to real business and to get work experience for their students.

-- (Restaurant, Spearfish). Vocational-technical schools need more existing businesses contibuting to their classrooms--might give students better idea of what it's like working in a "real situation."

-- (Wholesaler-grain, Aberdeen). I feel that the South Dakota Vocational Education Department should make more personal contact (i.e., on the job site visits) with businesses instead of writing letters.

o Too much academics; not enough "hands-on"

-- (Restaurant, Spearfish). Voc-tech teachers need a realistic approach to work; not just an academic one. That experience that comes only with doing the job.

- Need to teach flexibility

  -- (Automotive repair, Rapid City). The training is okay but the students still need to learn that they have to remain flexible when they get in e work force. They need to know that they will have to do it the way the company wants and not necessarily the way they were taught.

  -- (Business association, Pierre). One thing vocational education has to do is be flexible enough to change with the times, for example training persons to use computer terminals.

- Better teacher training needed

  -- (Repair services, Sioux Falls). I attended S.E. Area Vocational-Technical school in auto mechanics (1976-77). I presently work on motorcycles and snowmobiles. The regret I have is that although my teacher was a great mechanic, he was not really a teacher. I feel that teachers should have more teacher preparation.

  -- (Restaurant, Sioux Falls). I feel that the education system is artificial, they have good educators, but the educators do not have the business experience to convey the expectations of employers.

- Better labor market analyses needed in planning

  -- (Wholesaler-lumber, Sioux Falls). We are in a rapidly changing world and Vocational Education must be prepared to shift their education emphasis as conditions demand. We can't pump out 35 to 70 grads in a given field if there are only 20 businesses who will employ them.

  -- (Machine repair shop, Rapid City). We need to do something--I probably get 10 guys a week looking for jobs . . . . We have a whole heap of trained individuals with nothing to do.

  -- (Restaurant, Mobridge). I know a lot of people that have gone to vocational-technical schools. Many of them can't find jobs in their field unless they relocate to larger cities. Many of them don't want to leave this area (pop.--4,000) so they end up working for less, out of their training area.

- o Teach work maturity skills

  -- (Health care provider, Watertown). I think there's 2 areas all vocational programs need to improve on: 1) communications and 2) human relation skills. Currently, vocational education programs do address the technical skills area but do not address the abovementioned two areas.

  -- (Communications equipment manufacturer, Brookings). It is important for our company that vocational graduates be given more training on communication skills (written and verbal).

  -- (Drug store, Sioux Falls). Vocational education students often don't have communication skills. More emphasis needs to be placed on this at high school level.

  -- (Mining equipment manufacturer, Yankton). There needs to be an increased emphasis on skills of being a productive, cooperative, dependable, loyal, contributing, problem-solving employee. There also needs to be an increased understanding of management requirements that govern operations which result in profit which is the only way jobs are created and maintained.

  -- (Restaurant, Sioux Falls). Students in vocational education are not taught many of the basics of the business world (i.e. urgency of taking care of guests/customers) and being responsible in jobs (as far as showing up for work should be a higher priority than their social life, etc.)

- o More emphasis on basic skills

  -- (General merchandise store, Pierre). Basic education in high school is lacking.

  -- (Civic association, Sioux Falls). I think they learn a lot of skills but they need to work on the basic skills like reading, writing, and math. The vocational education students and graduates that I have dealt with are lacking in these areas.

- o Need to encourage creativity

  -- (Utility, Madison). Vocational education is an excellent means of placing skilled workers in work force, but frankly the vocational-technical school system here does very little to develop future leaders--little promotion of creativity. Not all

people are leaders, but crash courses result in dollar-oriented grads.

-- (Industrial machinery manufacturer, Rapid City). Vocational-technical school programs insufficiently creative and theoretical.

State Regulatory and Governance Issues

The fifth general area of comments received dealt with state regulatory and governance issues. A few employers felt that the state should bear a larger share of the funding of vocational education--particularly the vocational-technical schools.[6] Others felt that increased standards and requirements promulgated for high school students will hurt secondary vocational education. Finally, specific regulatory actions such as turning the University of South Dakota-Springfield into a prison were criticized. Excerpts from these comments follow:

o Funding issues

-- (Business association, Sturgis). I feel state should run secondary vocational education . . . . local area raised money to build an area vocational-technical school and now due to lack of support, it will be closing. This left a bad feeling in the area because of local donations.

-- (Meat packer, Rapid City). I feel that the state should be more involved in funding vocational education much like the funding in our colleges. I feel that regional funding for vocational education is wro It's a statewide function.

-- (Plastics manufacturer, Brookings). Vocational schools such as the Lake Area Vocational-Technical School do not provide excellent occupational training in the machinist trades--not because they don't want to but because of the way in which vocational education is funded in South Dakota. The present procedure, in my opinion, leaves much to be desired because the funding process is based on numbers of students graduated

[6]Note this funding concern was an employer perception that does not necessarily reflect the actual funding policies of the state.

rather than the quality of the graduates. The machinist trades cannot be treated the same as some other skilled trades because the ratio of students-to-instructors has to be much lower in order to achieve quality education. Also, the machinist trades are upgrading constantly to state-of-the-art equipment. If this equipment isn't available, they can't teach it. Simply stated, vocational education in the machinist trades has to be overhauled in South Dakota or we will remain in the lower echelon of quality in student learning.

- o Effects of high school academic requirements on vocational education

  -- (School, Miller). I'm a little disappointed that the Board of Regents has required foreign language for entry into college--2 years! High school students are taking languages as alternative to vocational education.

  -- (Bank, Huron) . . . . the high school curriculum demands so many college prep courses, so early, that there's no room for vocational courses in schedules should a student be undecided or change his mind by 10th grade.

  -- (Miscellaneous retail store, Sioux Falls). We should get to school boards prior to them increasing their requirements for graduation. It seems they are assuming that all persons are college bound.

  -- (Public sector employer, Oldham). With new requirements from the state, vocational education has been downgraded.

- o Criticism of recent policies

  -- (Construction company, Lennox). USD-Springfield was the best school the state had for construction.

  -- (Health care provider, Rapid City). They shut down the LPN program leaving us without a source of LPNs; left the health care providers up in the air. We have to go out of the area, just at the time when we were going into a shortage of LPNs. It just didn't make sense! All of our LPNs are vocational-technical school grads (28 of them) almost all from Western Dakota Vocational-Technical School (program now closed).

- o Geographic coverage

  -- (Utility, Jefferson). Our closest school is in Iowa and we need one in South Dakota to serve our area.

-- (Restaurant, Aberdeen). I'd really like to see more vocational training offered in this area (Aberdeen). Most young people from this area have to go to Rapid City, Sioux Falls, or Mitchell to get their training. From my understanding, the vocational training offered here at Presentation College is more in medical fields (like X-ray tech, etc.)

-- (Health care provider, Lemmon). We live in the northwest corner of the state. There is no postsecondary vocational education avilable within 200 miles.

General Comments

The final category of comments are grouped here as general comments relevant to vocational education. The five types of comments reviewed are as follows:

o Vocational education is a good motivator for some students.

-- (Securities dealer, Sioux Falls). It's a good motivator for a number of individuals who lack the desire to attend college.

-- (Tourist court, Spearfish). I like to tell the story of a young man who dropped out of high school as illiterate. After several years, he attended an auto mechanics program in Denver which stimulated the youth's desire to learn to read after years of nonreading in traditional public schools . . . . different institutions respond to different people's needs.

-- (Wholesaler-groceries, Deadwood). We should slant more of high school education toward the 85% of students not going to college. I get an incredible number of high school graduates in here who cannot read or write. More of the 85% should be encouraged toward vocational training.

o Vocational-technical schools are affordable, excellent alternatives to college.

-- (Sawmill, Custer). Vocational education is absolutely positive. College is not for everyone.

-- (Building materials store, Gregory). I'm a believer in vocational education. In a highly technical age, we still need tradesmen. Postsecondary vocational education should be a part of public education.

-- (Contractor, Aurora). I think vocational schools are very good. A lot of families can't afford college expenses.

-- (Funeral home, Watertown). Vocational training bridges the gap for a lot of students. A lot of students cannot afford 4 years of college, plus people go to 4 years of college and have only a general education with nothing for the job they might be interested in.

-- (Food store, Rapid City). I think vocational schools are a good thing to help students in ordinary jobs. I don't think much of the big colleges--too expensive. A lot of things you have to take will not do any good when you go out to work, where voc-tech training would.

-- (Wholesaler-construction materials, Rapid City). Vocational-technical schools are very, very good in South Dakota. The one closest to me (Western Dakota) has done an outstanding job. A lot of people don't need 4 year college training . . . . Vocational-technical schools are more beneficial in a lot of types of work.

-- (Public sector employer, Gayville). I'm in favor of vocational education. I feel it's probably more important than obtaining a college degree. People who are vocationally trained are more prepared for the actual work situation than those who are college-educated.

-- (Apparel store, Rapid City). The benefits of vocational education are good for those people who don't want to go through 4 years of college and want training for better job opportunities.

-- (Public sector employer, Jefferson). I think vocational education is a good thing for students who cannot go to college. It gives them some options that they wouldn't get otherwise.

o Vocational education has a perception problem.

-- (Drug store, Sioux Falls). "Stigma" of vocational-technical school students exists in some areas as being "2nd class students," unable to succeed in 4 year programs.

-- (Restaurant, Spearfish) . . . . need to change perception of vocational education. Encourage better students to take vocational education training instead of feeling that vocational education is only for those students who wouldn't make it in a regular 4-year program.

-- (Health care provider, Webster). I am glad that the stigma attached to vocational-technical students is losing ground. Some of my best LPN's were trained in vocational-technical schools.

-- (Health care provider, Mitchell). Need to change the name because of the stigma attached to vocational students.

-- (School, Platte). I probably wouldn't send my own children to vocational education schools because they're both good students. There is a stigma attached to vocational education schools--if a child has learning problems or isn't very bright, they go to vocational-technical schools in our area.

o Vocational education can be beneficial to the members of Indian tribes.

-- (Social service agency, Pierre). Vocational-technical schools are particularly good for Indians. Four-year institutions seem to be a mental block, but they seem to be able to handle the social adjustment of 9-15 months at a vocational-technical school.

-- (Public sector employer, Lower Brule). There is a great need for a vocational-technical school for Indian students; preferably in the central part of South Dakota.

o Better public relations is needed.

-- (Temporary services, Sioux Falls) There is not enough advertising done by vocational-technical schools in our area. Many persons who come to us to apply for temporary jobs are not aware that there are refresher courses available in typing.

-- (Health care provider, Hill City). I think high school students really need vocational education and more awareness of its possibilities. Vocational education "is the best thing that ever happened." For the education I received, I've had a better return for my investment than I could have had from anything else; especially being a woman in this day and age. Every woman needs to prepare for a career whether she plans to get married or not. I have marketable skills. I

can work only because of the vocational education training received.

-- (Service station, Chamberlain). Vocational education should be advertised and promoted more in high school as a choice. Students are better off taking courses that will help them earn a living.

-- (Miscellaneous retail store, Sioux Falls). From my experience in South Dakota, it appears that the vocational training here is not publicized enough. I'm from California and the vocational training or education on the West Coast is more advanced, more varied, and more publicized.

-- (Wholesaler-farm supplies, Sioux Falls). Business people need to be exposed to vocational education. I was just recently made aware of vocational-technical schools and their possible application to my business.

-- (Miscellaneous retail store, Sioux Falls). As far as South Dakota is concerned, I think voc-techs has been its best-held secret--very little publicity about them. We've sent people to Brainerd Minnesota to the vocational-technical school there--I did not realize . . . . how available and intensive the training is here--We need a better PR job.

V. FINDINGS, MARKETING RECOMMENDATIONS, AND POLICY RECOMMENDATIONS

Considerable quantitative and qualitative data were collected during the course of this project. In this chapter, we review the major findings from analyses of the data are reviewed. In addition, recommendations are prvided to the COVE for a potential marketing campaign, as well as general policy recommendations.

Findings

The major finding established by this project was that vocational education programs and graduates have solid employer support in South Dakota. When they hire high school graduates for entry-level positions, most employers reported that they would prefer individuals who have completed a vocational education program. They disagreed with the statement that if everything else were the same about a job candidate that they would hire someone with a 4-year college degree rather than someone from a vocational-technical school. Employers reported that they encourage employees who want more schooling to attend vocational-technical schools or colleges. A large share of employers have participated in cooperative work experience programs, have been involved with high school or postsecondary representatives in curricular decisions, have donated equipment, or have interacted with the vocational education system in some other way.

The qualitative data corroborate the quantitative evidence supporting this point. Employers reported that they had had good

experiences with a number of specific programs and that vocational education graduates that are hired--

-- are more enthusiastic.
-- require less training.
-- are preferred over college or military trained persons.
-- are preferred over individuals with several years work experience.

To be sure, the employer support was not unanimous. A significant number of employers were critical of the system or its graduates. Where mentioned, these comments have been incorporated into the policy recommendation section of this chapter. Across the sample of employers, small business respondents tended to be more positive toward vocational education than large businesses. The difference in the level of support is small, by about any standard of measurement, but nevertheless showed up consistently in the data.

A second point to be made is that employers were more familiar with and more favorable to postsecondary vocational education as opposed toward high school programs. Comments tended to be addressed toward postsecondary aspects of the system and the quantitative data were skewed in that direction as well.

A second major finding from the study was the systematic differences found between vocationally trained and non-vocationally trained workers. The analysis of data supplied about specific workers recently hired, enabled the construction of a profile indicating that vocationally trained workers tended to--

-- be younger at age of hire.
-- have greater educational attainment.
-- have less prior relevant work experience.
-- be more likely to be promoted.
-- receive more training on the job.
-- experience greater wage growth during the early part of the employment relationship.

These conclusions were buttressed by qualitative evidence that indicated that vocationally trained workers

-- had better work attitudes.
-- exhibited more common sense.
-- were more enthusiastic.

Marketing Recommendations

In attempting to publicize the merits of the vocational education system in South Dakota, the COVE has to, of course, bear in mind the audience. The various findings and data from the study may be more or less apropos to employers, to students and families, or to policymakers. Each of these audiences are addressed in turn.

Employers

In the competitive business world, employers are likely to be more sensitive to the payoffs and expenses associated with hiring vocational education students. As such, they would be interested in the fact that vocationally trained workers are better educated, have a greater likelihood of being promoted, are hired at younger ages, and (tentatively) have longer expected employment durations. They would be impressed favorably by comments that suggest that vocation education students "catch on quicker" and require less time to be trained. Some direct employer quotes follow:

We can see the difference in the training . . . saves employers time and money.

I know from experience that an employee with vocational education takes less time to become productive.

We've had a lot of VE people. They come with very good basic training. They learn more easily.

Apart from dollars and cents, many studies have indicated that work attitudes of youth are the most important consideration taken into account in employer hiring decisions. The South Dakota employers, on average, agreed with the direct statement that vocational education students have better work attitudes by about a 3-to-1 margin. As one employer stated,

I am impressed by the average voc-tech student who indicates, "Here I am. This is what I know. What also do I need to know? Where do I get the information?" Most important, "What can I do to make myself valuable to your company?

Many employers expressed the opinion that more publicity needs to be accorded vocational education. Simply becoming aware of the strong base of support among employers should convince other employers that vocational education is of value. For this purpose, many of the positive comments provided by employers could be used.

Students

Students need to be made aware of the benefits that they could receive from vocational training. In particular, the data show that wage growth and promotion likelihood are positively correlated with vocational education. The average starting wage for a job held by vocationally trained wrokers was $5.07, whereas it was $5.12 for individuals who were not vocationally trained.

However, 2 years after the hire, the average wage $6.05 and $5.91, for vocationally trained and nonvocationally trained workers, respectively.

Furthermore, as students are making their educational investment and career choices, they and their parents need to know about employer opinions about vocational training vis-a-vis other educational or training options. They need to see or hear that a majority of employers prefer graduates of vocational education programs. It would be effective for them to be aware of comments such as:

> **I think that voc-tech training is better than either college or military . . .**
>
> **Vocational education is extremely valuable. I would hire a voc-tech trained person over a college grad in my business.**
>
> **I have more faith in graduates of a vocational education program than a graduate of a college program.**

Policymakers

The most potent evidence that can be brought to legislators and state or local administrators is the solid base of support in the employer community. A majority of employer respondents held favorable opinions about the seven attitudinal indicators in the questionnaire concerning secondary vocational education and also the seven attitudinal items concerning voc-techs or other postsecondary programs. Analyses of the actual data about specific workers show that employers in their hiring behavior distinguish between vocationally trained and nonvocationally trained workers. The support is not just lip service. The third type of evidence indicating the extent of support from the

business community comes in general comments and suggestions made by employers. The majority of comments were positive in nature.

Policymakers need to hear that the employer support emanated not only from the narrow perspective of profits and productivity of their own companies, but also from the perspective of a belief that vocational education should be part of a strategy of economic development.

Policy Recommendations

The employers, in general, were very earnest in their responses and provided a number of suggestions for vocational education policymakers in the state to consider. First of all, cooperative work experience programs were highly praised. Most employers agreed with the proposition that they would prefer to hire an individual who had successfully completed a cooperative work experience program over an otherwise identical individual without the cooperative work experience but with higher grades. Furthermore, well over half of the employers indicated that they had participated in a cooperative work experience or internship program. Co-op programs also are a means of "teaching" work maturity skills, which was a concern of some of the employers critical of vocational education.

A second item of policy relevance was the rather strong support of basic skill attainment of vocational education students. Most employers felt that the graduates of vocational education programs had adequate basic skills to perform entry-level jobs. The employers did feel that basic skills should be emphasized in

secondary programs, whereas technical skills should be emphasized in postsecondary programs, however.

A third finding with policy relevance was the wage benefit ofvational training to workers. The state and individual municipalities should be aware that to the extent that vocationally trained individuals receive higher wages (and higher employment rates, although we didn't collect evidence on that in this study), the public is receiving a return on their investment in the vocational education. This is because individuals with higher wages and incomes tend to pay more taxes.

From the qualitative data, a number of interesting remarks with policy relevance were received. Comments were made about specific programs currently being offered. Favorable remarks were received about the following programs:

- Licensed practical nursing
- Electronics
- Distributive Education programs in high schools

Employers were critical of aspects of the following programs:

- Auto mechanics
- Construction trades
- Machine trades
- Food preparation

Several employers felt that consideration should be given to developing and offering courses in the following areas:

- Child care
- Dog grooming
- Fitness/spa occupations
- Golf Course maintenance
- Heavy equipment
- Injection plastics
- Meat cutting
- Musical instrument repair
- Optometry
- Teller/banking occupations
- Travel agent
- Truck driving

The employers were sensitive to the fact that some of these programs were highly specialized and would have limited student interest. However, the employers made the case that some of the suggested would engender sufficient student demand.

Several comments were received concerning curricular and instructional issues. For instance, a number of employers felt that vocational instructors needed to communicate more with employers. They need to teach or impart flexibility, according to other employers. Students need to learn that they will be facing changing technology as well as using different equipment and they will need to be flexible enough to adapt to the company 's way of getting the job done. Vocational educators have been exposed to the message that work maturity or employability skills need to be emphasized but some of the employers in this survey reconfirmed that message. Better communication skills seemed to be a particular area that employers felt warranted emphasis in vocational education.

Another general policy area where comments were received was in state regulatory and financing issues. A few employers felt that the state should bear a larger share of the funding of vocational education--particularly the voc-tech schools. Others felt that the state needed to be concerned about the impact of increased requirements and standards at the high school level on secondary vocational education programs.

Finally, some general comments made by employers suggested the following:

- Vocational education is a good motivator for a certain share of students
- More emphasis needs to be put on the majority of students who are not college bound
- Voc-tech programs are particularly good for Indians and vocational education may be part of the solution to tribes' economic and social problems.
- More and better publicity needs to be put forth concerning vocational education

In summary, the vocational education enterprise in South Dakota enjoys a strong base of employer support. Small businesses, in particular, are advocating of occupational training, and employers seem to be most familiar with and most favorable toward postsecondary (voc-tech) schools. On the average, employers professed a preference toward hiring vocational graduates. On the average, vocational graduates expereince higher wage growth.

APPENDIX

COVER LETTERS AND QUESTIONNAIRE

STATE OF SOUTH DAKOTA

GEORGE S MICKELSON
GOVERNOR

EXECUTIVE OFFICE
STATE CAPITOL BUILDING
PIERRE, SOUTH DAKOTA 57501

(605) 773-3212

February 23, 1987

Dear South Dakota Employer:

As we move forward with our state's economic development and growth, it is critical that we develop and maintain a well trained work force. We must ensure that individuals entering our labor market possess the skills, attitudes and basic knowledge to be productive in today's jobs and adaptable to the new skills needed for tomorrow's jobs.

The South Dakota Council on Vocational Education is conducting a study of employer perceptions of the vocational training currently taking place in our high schools, vocational technical schools and colleges. The council has contracted with the National Center for Research in Vocational Education to conduct the study. Once we have collected and studied the data from this survey, we will have a valid basis from which we can provide the best possible vocational training programs.

I urge you to read the enclosed materials and make time available to participate in this important study.

Very truly yours,

GEORGE S. MICKELSON

GSM:LP:ls

Enclosures

OSU

The Ohio State University

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION

1960 Kenny Road
Columbus, Ohio 43210-1090

Phone: 614—486-3655
Cable: CTVOCEDOSU/Columbus, Ohio

February, 1987

Dear South Dakota Employer:

The National Center for Research in Vocational Education is conducting a survey for the South Dakota Council of Vocational Education to determine employers' opinions about vocational education. The purpose of the survey is to determine the strong points and the weak points of the vocational education system in South Dakota as you see them. With this information, programs can be improved and the overall quality of the South Dakota work force can be improved.

We will be telephoning you sometime during the month of March to collect the information. Enclosed is a copy of the questionnaire we will be using. The survey will require about 20-25 minutes to complete, although that time can be shortened considerably if you look through the questionnaire ahead of time. We recognize that your time is valuable, so our goal is to collect this important information with as little inconvenience as possible.

If you have any questions or concerns about this survey, you may call me on our toll-free telephone number 1 (800) 848-4815.

I thank you in advance for your cooperation.

Sincerely,

Kevin M. Hollenbeck

Kevin M. Hollenbeck
Project Director

KMH:mco

Enclosure

ID:

_____
Interviewer's Name

_____
Date Completed

EMPLOYER PERCEPTION SURVEY

Sponsored by:

South Dakota Council
on Vocational Education

Conducted by:

The National Center for Research
In Vocational Education
The Ohio State University

Employer Name:_____ SIC _____

Address:_____

_____

_____

Phone: (_ _ _) _ _ _ - _ _ _ _
(_ _ _) _ _ _ - _ _ _ _

Contact Record:

Date	Time	Comments	Interviewer

Interviewer: Text is to be read unless it is in ALL CAPS

Introduction

Hello, I would like to speak to the individual who is in charge of recruiting and hiring for your business.

a) INDIVIDUAL IS NOT IN OR IS BUSY. . . . . .

May I have that individual's name and direct number? And when might be a good time to contact that person?

NAME:_____

POSITION:_____

TELEPHONE NO: ____ - _____ X_____

CONTACT TIME:_____

b) "MAY I TELL HIM/HER WHO IS CALLING". . . . .

My name is ( ) and I'm calling representing the South Dakota Council on Vocational Education.

i) INDIVIDUAL DOES NOT TAKE CALL . . . . . .

May I have that individual's name and direct number? And when might be a good time to contact him/her?

NAME:_____

POSITION:_____

TELEPHONE NO:_____ - _____ X_____

CONTACT TIME:_____

ii) INDIVIDUAL TAKES CALL . . . . . .

(Go to C)

c) "I AM RESPONSIBLE FOR HIRING AND RECRUITING"

My name is ( ) and I'm calling for the South Dakota Council on Vocational Education to survey employers concerning their opinions about vocational education. We recently mailed you a letter with a cover letter from Governor Mickelson about this survey. That mailing included a copy of the questionnaire. The survey will require about 20-25 minutes and is intended to improve vocational education and the overall work force in South Dakota. Is now a good time to conduct the survey? I would remind you that your responses are voluntary and will remain totally confidential.

i) "NO, TRY ANOTHER TIME". . . . . .

May I have your name and direct number? When would be a good time to contact you?

NAME:_____

POSITION:_____

TELEPHONE NO:____ - _____ X_____

CONTACT TIME:_____

'i) "NO, NOT INTERESTED, DON'T CALL BACK". . . .

(Ask if individual would complete the survey and mail it back.

iii) "NO, I DIDN'T RECEIVE THE MAILING AND I WOULD LIKE TO SEE A COPY OF THE QUESTIONNAIRE BEFORE I DECIDE WHETHER TO PARTICIPATE". . . .

Certainly. Could I have your name and address? When would be a good time to follow-up.

NAME:_____

POSITION:_____

ADDRESS:_____

_____

_____

CONTACT TIME:_____

iv) "YES, GO AHEAD". . . .

Could I please have your name and position within the firm (IF NOT ALREADY RECORDED)

NAME:_____

POSITION:_____

_____

EMPLOYER PERCEPTIONS SURVEY

SECTION 1

In the first section of this questionnaire, I am going to ask a few general questions about your business.

1. What major product(s) or service(s) do you provide? (MAJOR PRODUCT, IF MULTIPLE PRODUCTS)

   _____

   _____

2. How many total employees were on your payroll on March 1 of this year (1987)?

   _____ employees

3. How many employees did you have on December 31, 1986?

   _____ employees

4. What <u>percentage</u> of <u>non</u>-managerial employees are covered under a collective bargaining agreement?

   _____%

5. Which of the following sources of recruitment do you typically use to fill entry level positions?

		YES	NO
a)	Job Service	1	2
b)	School(s)	1	2
c)	Newspaper or other media	1	2
d)	Signs	1	2
e)	Encourage employees to refer individuals	1	2
f)	Private employment agencies	1	2
g)	Union	1	2
h)	Other: _____	1	2
i)	Don't actively recruit; get enough walk-ins	1	2

6. What are the main occupations or job duties held by your <u>non</u>-managerial staff? (PROBE FOR UP TO THREE)

1st MENTION	2ND MENTION	3RD MENTION
_____	_____	_____
_____	_____	_____

SECTION 2

The second section of the questionnaire asks for your opinion about vocational education. First I would like to ask you about vocational education in high schools such as (READ HIGH SCHOOL LIST FOR THIS LOCALITY).

7. For the following statements, would you please indicate whether you strongly agree, agree, have no opinion, disagree, or strongly disagree?

	STRONGLY AGREE	AGREE	NO OPINION	DISAGREE	STRONGLY DISAGREE
a) When I hire a high school graduate for an entry-level job, I prefer individuals who have completed a vocational education program, other things equal.	1	2	3	4	5
b) High schools steer good students away from vocational education classes.	1	2	3	4	5
c) The occupational skills that vocational education students learn are inadequate because the programs in the high schools are not up to date.	1	2	3	4	5
d) Vocational education students tend to have better work attitudes than other high school graduates.	1	2	3	4	5
e) I've noticed that vocational education students tend to do a better job at applying for jobs than do other high school students.	1	2	3	4	5
f) The basic skills (speaking, writing, math) of high school vocational education graduates are inadequate to perform entry-level jobs successfully in my firm.	1	2	3	4	5
g) I would hire a high school graduate who had participated successfully in a cooperative work experience program rather than another high school graduate who had a higher grade point average, but no coop experiences.	1	2	3	4	5

Now, I would like to ask you about vocational education programs in postsecondary and adult programs at colleges or vocational-technical schools such as (READ POSTSECONDARY LIST FOR THIS LOCALITY).

8. Again, do you strongly agree, agree, have no opinion, disagree, or strongly disagree?

a) Individuals who have attended a postsecondary technical programs are overqualified for entry-level jobs in my firm/company.	1	2	3	4	5
b) Vocational-technical schools and other postsecondary institutions seem to provide excellent occupational training to older individuals reentering the labor force or retraining to be qualified for a new occupation.	1	2	3	4	5
c) High schools should emphasize basic skills and postsecondary schools should emphasize technical skill training in their vocational programs.	1	2	3	4	5
d) If everything else were the same about a candidate, I would hire someone with a 4-year college degree rather than a degree or certificate from a 1- or 2-year program in jobs where I might consider both.	1	2	3	4	5
e) If everything else were the same, I would hire someone technically trained in a voc-tech school rather than someone trained in the military.	1	2	3	4	5
f) Individuals trained at voc-tech schools or colleges feel they don't need to be trained on the job because they are already skilled.	1	2	3	4	5
g) I encourage my employees who want or need more schooling, to attend voc-tech schools or colleges.	1	2	3	4	5

9. .a) Thinking back over all the employees that you have hired in entry-level jobs, about how many days/weeks would you estimate it takes for an average employee to become productive?

_____ days/ weeks

b) About how many days/weeks would you estimate it would take to train a high school vocational education graduate in that same job?

_____ days/ weeks
DK/NA 99

c) About how many days/weeks would you say it would take to train an individual who has completed vocational-technical training in a postsecondary school?

_____ days/ weeks
DK/NA 99

10. Has your firm ever participated in a cooperative work experience, internship, or other experience based education program?

1 YES. Briefly describe._____
_____
_____

2 NO. Why not?_____
_____
_____

9 DON'T KNOW

11. Has a representative from a high school or postsecondary school ever involved you or another individual in your firm in curriculum decisions to your knowledge? (e.g., what equipment to use in teaching, what subjects to cover)

1 YES. Briefly describe._____
_____
_____

2 NO. Why not?_____
_____
_____

9 DON'T KNOW

12. Has anyone in your firm been an instructor for a vocational education program or has your firm dorated equipment to a program to your knowledge?

1 BOTH . . . . . What school? _____
2 INSTRUCTOR . . . . . What program(s)? _____
3 DONATION . . . . . _____
4 NEITHER
9 DON'T KNOW

13. Have you or anyone else in your firm to your knowledge interacted in any other way with a high school vocational education program or a postsecondary or adult program?

1. YES. Briefly describe._____

_____

_____

2. NO.

Section 3

I'd like to ask you to think of the last new employee your company hired prior to October 1, 1986. For this section, this employee could be in a non-managerial or management position. I'm going to ask you some questions about that person in this section of the questionnaire.

14. To make it easier to refer to him or her during the interview, please give me his or her first name and sex.

_____ NAME 1

MALE. 1
FEMALE. 2

15. What was the title of the job (NAME 1) was hired for? What were most important duties of the job?

_____

_____

_____

16. How many of the skills learned on-the-job by new employees in this job are useful outside of this company? (READ LIST)

Almost all. 1
Most. 2
Some. 3
Or almost none. 4
DK/NA 9

17. For the skills that are useful outside your company, how many other companies in your area of the state have jobs that require these skills? (READ LIST)

Less than 5 1
5 to 15 2
More than 15. 3
DK/NA 9

18. If it were purchased today, what would be the cost of the most expensive machine that people in (NAME 1's) job work on or with? (READ LIST).

Under $2,000. 1
$2-$10,000. 2
$10,000-$50,000 3
$50,000 + ... 4
DK/NA 5

19. In what month and year did (NAME 1) begin working for your company?

__ __ --19 __ __
MONTH YEAR
DK/NA 9999

20. What was (NAME 1's) age at the time (he/she) was hired?

__ __
AGE
DK/NA 99

21. What was the highest grade that (NAME 1) completed? PROBE FOR ACTUAL NUMBER. IF FOLLOWING ANSWERS ARE GIVEN, RECORD THE CORRESPONDING NUMBER:

__ __
GRADE
DK/NA 99

(GRADUATED) GRAMMAR SCHOOL. 08
HIGH SCHOOL DROPOUT 10
HIGH SCHOOL GRADUATE. 12
ATTENDED VOC-TECH SCHOOL (BUT DIDN'T COMPLETE). . . . 13
INCOMPLETE COLLEGE OR ASSOCIATE DEGREE. 14
COMPLETED COLLEGE 16
SOME GRADUATE WORK/MASTERS. 18
PH.D./M.D./D.D.S. 20

22. Prior to being hired, did (NAME 1) receive any vocational training in a school setting?

YES . . . (ASK 23A) 1
NO. . . . (GO TO 24). 2
DK/NA . . (GO TO 24). 9

23. a) What was the name of the most recent institution where (NAME 1) received (his/her) vocational training prior to being hired? Please tell me the name of the school and whether it's a high school, 2-year college, vocational-technical school, or 4-year college.

(RECORD NAME OF SCHOOL) _____

HIGH SCHOOL 1
2-YEAR COLLEGE. 2
VOCATIONAL-TECH SCHOOL. . . . 3
4 YEAR COLLEGE. 4
DK/NA 9

b) Did the vocational training at (NAME OF SCHOOL) last less than 1 year, 1 year, up to 2 years, or more than 2 years?

LESS THAN 1 YEAR. 1
1 YEAR. 2
1-2 YEARS 3
2+ YEARS. 4
DK/NA 9

c) What year was the training at (NAME OF SCHOOL) completed?

19 __ __
YEAR
STILL A STUDENT 98
DK/NA 99

d) How related was the vocational training at (NAME OF SCHOOL) to the job that (NAME 1) was hired for? (READ LIST)

Very. 1
Somewhat. 2
Not at all. 3
DK/NA 9

* * * GO TO 29 * * *

* * * GO TO 29 * * *

SKIP THIS PAGE IF NO. 23 WAS ANSWERED

24. The purpose of the following question is to compare (NAME 1) with another employee in the same or a similar position, but who had had vocational training in a school setting.
Please tell me the first name and sex of the last person you hired within the past 2 years for (NAME 1's) position who had received vocational training.

_____
NAME 2

MALE. 1
FEMALE. 2
NONE HIRED IN PAST 2 YEARS (GO TO 33). 3
DK/NA . . . (GO TO 33). . . . 9

25. In what month and year did (NAME 2) begin working for your company?

__ __ -- 19 __ __
MONTH YEAR
DK/NA 99

26. What was (NAME 2's) age at the time (he/she) was hired?

__ __
AGE
DK/NA 99

27. What was the highest grade that (NAME 2) completed? PROBE FOR ACTUAL NUMBER. IF FOLLOWING ANSWERS ARE GIVEN, RECORD THE CORRESPONDING NUMBER:

__ __
GRADE
DK/NA 99

(GRADUATED) GRAMMAR SCHOOL. 08
HIGH SCHOOL DROPOUT 10
HIGH SCHOOL GRADUATE. 12
ATTENDED VOC-TECH SCHOOL (BUT DIDN'T COMPLETE). . . . 13
INCOMPLETE COLLEGE OR ASSOCIATE DEGREE. 14
COMPLETED COLLEGE 16
SOME GRADUATE WORK/MASTERS. 18
PH.D./M.D./D.D.S. 20

28. a) What was the name of the most recent institution where (NAME 2) received (his/her) vocational training prior to being hired? Please tell me the name of the school and whether it's a high school, 2-year college, vocational-technical school, or 4-year college.

(RECORD NAME OF SCHOOL) _____

HIGH SCHOOL 1
2-YEAR COLLEGE. 2
VOCATIONAL-TECH SCHOOL 3
4 YEAR COLLEGE. 4
DK/NA 9

b) Did the vocational training at (NAME OF SCHOOL) last less than 1 year, 1 year, up to 2 years, or more than 2 years?

LESS THAN 1 YEAR. 1
1 YEAR. 2
1-2 YEARS 3
2+ YEARS. 4
DK/NA 9

c) What year was the training at (NAME OF SCHOOL) completed?

19 __ __
YEAR
STILL A STUDENT 98
DK/NA 99

d) How related was the vocational training at (NAME OF SCHOOL) to the job that (NAME 2) was hired for? (READ LIST)

Very. 1
Somewhat. 2
Not at all. 3
DK/NA 9

* GO TO 33 * * *

* * * GO TO 33 * * *

29. The purpose of the following questions is to compare (NAME 1) with another employee you hired for the same or similar position, but with no prior vocational training.

Please tell me the first name and sex of the last person you hired within the past 2 years for (NAME 1's) position who received no vocational training in a school.

NAME 2

MALE. 1
FEMALE. 2
NONE HIRED IN PAST 2 YEARS WITH NO VOCATIONAL TRAINING **(GO TO 33)**. 3
NO ONE ELSE HIRED **(GO TO 33)**. 4
DK/NA . . . (GO TO 33). . . . 9

30. In what month and year did (NAME 2) begin working for your company?

___ ___ --19 ___ ___
MONTH YEAR
DK/NA 9999

31. What was (NAME 2's) age at the time of hire?

___ ___
AGE
DK/NA 99

32. What was the highest grade that (NAME 2) completed? PROBE FOR ACTUAL NUMBER. IF FOLLOWING ANSWERS ARE GIVEN, RECORD THE CORRESPONDING NUMBER:

___ ___
GRADE
DK/NA 99

(GRADUATED) GRAMMAR SCHOOL. 08
HIGH SCHOOL DROPOUT 10
HIGH SCHOOL GRADUATE. 12
ATTENDED VOC-TECH SCHOOL (BUT DIDN'T COMPLETE). . . . 13
INCOMPLETE COLLEGE OR ASSOCIATE DEGREE. 14
COMPLETED COLLEGE 16
SOME GRADUATE WORK/MASTERS. 18
PH.D./M.D./D.D.S. 20

33. **FOR THE FOLLOWING QUESTIONS, ASK EACH QUESTION FOR NAME 1 AND THEN NAME 2. IF NO NAME 2 IDENTIFIED, ASK QUESTIONS FOR NAME 1 ONLY.**

How many months of experience in jobs that had some application for the position did (NAME) have before (he/she) started working for you?

NAME 1	NAME 2
___ ___ ___ MONTHS	___ ___ ___ MONTHS
SOME, DK # . . 996	SOME, DK # . . 996
DK/NA. 999	DK/NA. 999

34. Is (NAME) still with your company?

NAME 1	NAME 2
YES (GO TO 37). . 1	YES (GO TO 37). . 1
NO. 2	NO. 2
DK/NA 9	DK/NA 9

43. Did you receive any vocational training in a school or college setting?

YES . . . 1 DESCRIBE (PROBE FOR TYPE OF SCHOOL; PROGRAM) _____

_____

_____

NO. . . . 2

44. What is the highest year of education that you completed?

__ __

DK/NA 99

45. What is your age?

__ __

AGE

DK/NA 99

46. That completes my questions. Do you have any special comments or concerns dealing with vocational education that you would like to share with the South Dakota Council on Vocational Education?

COMMENTS. 1
NO COMMENTS 2

(WRITE COMMENTS HERE).

40. Please rate your employees on a productivity scale of zero to 100, where 100 equals the maximum productivity any employee in this position can attain and zero indicates <u>absolutely</u> no productivity.

		TYPICAL	NAME 1	NAME 2
a)	What productivity score would you give (TYPICAL WORKER, NAME 1, AND NAME 2) <u>during their 1st two weeks</u> on the job?	___ ___ ___ SCORE DK/NA 999	___ ___ ___ SCORE DK/NA 999	___ ___ ___ SOCRE DK/NA 999
b)	During their first 3 months, but after that initial 2 weeks (i.e. weeks 3-12)	___ ___ ___ DK/NA 999	___ ___ ___ DK/NA 999	___ ___ ___ DK/NA 999
c)	Today? (OR AFTER 2 YEARS FOR TYPICAL WORKER, OR LAST WEEK OF EMPLOYMENT IF NAME 1 OR NAME 2 NO LONGER AT FIRM)	___ ___ ___ DK/NA 999	___ ___ ___ DK/NA 999	___ ___ ___ DK/NA 999
41.a)	What was the starting hourly rate paid to workers starting today in NAME 1 or 2's position? (Include commissions, bonuses, etc.)	$__ __.__ __ DK/NA 999	$__ __.__ __ DK/NA 999	$__ __.__ __ DK/NA 999
b)	What is the wage rate at 2 years for typical workers and NAME 1 and 2's current or most recent wage?	$__ __.__ __ DK/NA 999	$__ __.__ __ DK/NA 999	$__ __.__ __ DK/NA 999

<u>Section 4</u>

Thank you for being so patient with the previous section. To complete the interview, I'd like to ask just a couple of questions about your own educational background.

42. (INTERVIEWER NOTE RESPONDENT GENDER)

MALE. 1
FEMALE. 2

35. How many weeks did (NAME) work for you?	___ ___ WEEKS		___ ___ WEEKS
36. Was (NAME's) separation a layoff, a discharge, an induced quit, or a voluntary quit?	LAYOFF. . . . . 1 DISCHARGE . . . . 2 INDUCED QUIT. . . 3 VOLUNTARY QUIT. . 4 OTHER . . . . . 5 DK/NA 9		LAYOFF. . . . . 1 DISCHARGE . . . . 2 INDUCED QUIT. . . 3 VOLUNTARY QUIT. . 4 OTHER . . . . . 5 DK/NA 9
37. Has/had (NAME) received a promotion, or upgrading of (his/her) job responsibilities since being hired?	YES . . . . . 1 NO (GO TO 39) . . 2 DK/NA 9		YES . . . . . 1 NO (GO TO 39) . . 2 DK/NA 9
38. Approximately how many months after being hired did (he/she) receive the promotion?	___ ___ MONTHS DK/NA 99		___ ___ MONTHS DK/NA 99

39. For the following question we ask comparisons among NAMES 1 and 2 and your average or typical employee in the same position.

Once we get started, if you find it is necessary for me to talk to a supervisor for that position, please transfer me to her/him at the end of this interview.

	TYPICAL WORKER	NAME 1	NAME 2
a) During the first 3 months of work, what was the <u>total</u> number of hours spent on <u>formal</u> training such as <u>self-paced learning</u> programs or training done by specially trained personnel of . . .	___ ___ ___ HOURS SOME, DK #. .996 DK/NA 999	___ ___ ___ HOURS SOME, DK #. .996 DK/NA 999	___ ___ ___ HOURS SOME, DK #. .996 DK/NA 999
b) How about <u>informal</u> training <u>given by management</u> or line supervisors . . .	___ ___ ___ HOURS SOME. . . . .996 DK/NA 999	___ ___ ___ HOURS SOME. . . . .996 DK/NA 999	___ ___ ___ HOURS SOME. . . . .999 DK/NA 999
c) Informal training <u>given by co-workers</u> who are not supervisors (e.g., job shadowing)...	___ ___ ___ HOURS SOME. . . . .996 DK/NA 999	___ ___ ___ HOURS SOME. . . . .996 DK/NA 999	___ ___ ___ HOURS SOME. . . . .996 DK/NA 999