

## Chapter 5

### Summary, Conclusions, and Recommendations

This study was designed to describe Virginia's vocational program completers one year after high school graduation by examining their employment status, earnings, and job satisfaction. This chapter presents information derived from this study in three sections. The first section is a summary and discussion of findings. The second presents conclusions and recommendations for practice based on those findings and the relevant literature. The final section presents recommendations for further research.

#### Summary and Discussion of Findings

Outcomes for completers of secondary vocational education have been a concern of vocational researchers and policy makers for many years. Examining current career patterns of vocational course completers provides information that enables the vocational education community to better meet the needs of future students. In the past, success of vocational completers has frequently been measured by whether they are employed in jobs related to their vocational service areas and their performance in the workplace (Hayes, McQuat, & Wilder, 1985). In the future, as a result of the new reauthorization of the Carl D. Perkins Vocational and Technical Education Act of 1998, vocational education will continue to be called upon to show evidence of the effects of its programs with new emphasis on placement and retention of its participants in postsecondary education or employment.

Under the 1990 Perkins Act, states had to identify the percentages of targeted special populations in each service area and location, and funding priority went to programs and schools with higher percentages of targeted populations enrolled. The 1998 Perkins Act has no such provision. However, even though schools will be allowed more flexibility in providing vocational programs, the new law still causes states to place greater emphasis on the education of their students from targeted populations. States will now have to report in quantifiable terms the progress that vocational students with special needs are making toward established state academic and vocational proficiencies. In addition, states will be required to provide evidence of how many students are obtaining diplomas and employment and how many are continuing in postsecondary education. The 1998 Perkins Act has placed new emphasis on accountability to ensure that federal dollars are making a difference (American Vocational Association, 1998).

### Purpose

The purposes for evaluation of vocational education are to ensure the accountability of expenditures and to provide a framework for program improvement (Wentling, 1980). This study reports on the outcomes for vocational completers in Virginia through a description of their employment status, earnings, and job satisfaction.

The research included an analysis of employment status that covered full and part-time employment, whether employment was related or non-related to the vocational service area completed, and employment in both traditional and nontraditional occupations for the completer's gender.

This research also reported employment status of completers from targeted populations including academically and economically disadvantaged individuals, completers with disabilities, and individuals with limited English proficiency.

More specifically, answers were sought to the following questions about Virginia's vocational completers within one year following high school graduation:

1. What is the employment status of vocational completers as a group, by service area, and by targeted population?
2. What is the level of earnings of vocational completers as a group, by service area, and by targeted population?
3. What is the level of job satisfaction for vocational completers as a group, by service area, and by targeted population?

### Data Collection

Data for this research were collected through yearly Vocational Education Student Follow-up surveys. These follow-up surveys were developed and conducted for the Commonwealth of Virginia as part of Virginia's state plan of compliance for receiving federal funds for vocational education under the 1990 Perkins Act. The surveys provided information about students' employment status, earnings, and job satisfaction as well as identifying whether completers were members of a targeted population.

Because they were not collected from a scientific sample but rather as part of a scheduled follow-up, the data must be interpreted with caution. The number of respondents changes depending on the question asked. Every respondent did not answer every question and

individuals could mark more than one response to some questions. As a result the number of responses changes with each question (Virginia Department of Education, 1998a).

Data were gathered as part of a follow-up survey of vocational completers in Virginia in their first year following graduation. This research used results from three different years of follow-up data collection (1996, 1997, and 1998). A list of all schools that surveyed their completers is included in Appendix C.

During each year approximately one-sixth of the school divisions in the state are required to participate in the survey and several more school divisions volunteer to take part in the survey yearly. Since three different years of follow-up data were used, the number of vocational completers reporting employment changed yearly. There were 1,638 employed completers who responded to the survey in 1996. In 1997 there were 3,020, and in 1998 a total of 2,394 completers reported their employment. A copy of each of the Vocational Education Student Follow-up questionnaires used for this research is attached as Appendix A (1996) and Appendix B (1997 and 1998).

### Participants

The total number of vocational program completers participating in the three years of surveys was 19,316. A "program completer" was defined as a graduate of either high school or an approved alternative education program who had completed a vocational program that included a sequence of vocational courses. This research surveyed vocational completers within one year following graduation in all the Virginia program service areas: agricultural education, business education, education for employment, health occupations education, marketing education, technology education, trade and industrial education, and work and family studies.

### Research Design

This study systematically described the characteristics of vocational completers in Virginia. Descriptive statistics were used for interpretation of the data including frequencies and percentages for both the overall group and by various distributions. There were three major parts to each question and each distinct part was addressed in a separate table. The third question of this research asked about job satisfaction levels using a series of ten different questions. Thirty-nine tables were presented in order to answer all research questions fully and to establish baseline data for future study.

## Discussion of Findings about Employment Status

Research Question 1: *What is the employment status of vocational completers as a group, by service area, and by targeted population?*

### Overall Employment

One frequently heard criticism of the education system is that it fails to provide a smooth transition from school to work for students who proceed directly from high school to the labor market (Klerman & Karoly, 1995). The first research question sought to describe the employment status of all vocational completers by individual years. This study reported an average of 62% of the vocational completers employed over the three years of these surveys. Of the three years, 54% of the completers in 1996 reported employment, 65% in 1997, and 57% in 1998. It should be noted that vocational completers may experience many positive outcomes following high school graduation such as being a homemaker, working in volunteer services, and going on to further education. This study does not look at those outcomes rather it only examines those completers who are employed. Because both full-time and part-time employment are investigated many completers in this study may also be attending school.

For many years vocational education has been encouraging students to take part in vocational classes that lead to nontraditional employment. In this study the highest proportion of completers (6%) were employed in nontraditional occupations in 1996. In 1997 and 1998 only two percent of the completers were employed in nontraditional occupations.

Education for Employment. As vocational education legislation puts greater importance on successful transition to the workforce, the concern of vocational educators related to targeted populations may increase (American Vocational Association, 1998). In Virginia the Education for Employment service area prepares students from targeted populations for independent living and productive careers. It provides for students to receive school-based and community-based instruction.

Many benefits may be derived from placing students in the workplace while enrolled in school and providing supervision throughout the work experience. Students benefit by having jobs in which they can learn responsibility and problem-solving techniques while maintaining the expertise of trained instructors for help and guidance (Stone, Stern, Hopkins, & McMillion, 1990).

The Education for Employment service area did not produce substantial numbers of completers across the state. The total numbers of completers were so small throughout the state of Virginia that it was not feasible for this study to attempt a comparison of its completers with other service areas.

Nontraditional employment. In studies examining career choice and the process of transitioning into an occupation, the term nontraditional employment continues to surface. Nontraditional employment refers to an occupation in which individuals from one gender comprise fewer than 25% of the individuals employed (American Vocational Association, 1998). This research study found that across all service areas only very small percentages were employed in nontraditional occupational areas. The averages across the three years of the study ranged from less than 1% in agricultural education and business education to 10% in technology education.

Health occupations education, some areas of marketing education, and work and family studies were considered nontraditional for male completers. Although some studies find that marketing education is the only service area that contains a balanced enrollment and workforce participation and is not considered to be gender-linked (Boesel, Hudson, Deich & Masten, 1994), in Virginia marketing education has two programs that are related to nontraditional occupations for male enrollment. Male employment in apparel and accessories and in hospitality and recreation are defined as nontraditional.

A little over half of all the employed vocational completers responding in the three years of this study were female. Female workers continue to be one of the fastest growing segments of today's labor force (U.S. Department of Labor, 1996). Jobs in areas nontraditional for females may be more personally satisfying and more likely to command a better wage, have greater benefits, and better job security (Herr, 1995; Norwood, 1982).

Few females reported employment in nontraditional occupations. Service areas that are related to nontraditional employment for women were agricultural education, trade and industrial education, and technology education. As women continue to change roles and the growing numbers who head households continue to grow, there is a need to provide all females with the best possible education for employment. Culver and Burge (1989) reported on the importance of

introducing females to all aspects of vocational education. They contended that this type of education is a direct link in the elimination of sexist thinking and attitudes for both genders.

#### Employment by Service Areas

The average percentage of completers employed in each service area across all three years of the study were: technology education - 49%, trade and industrial education - 54%, business education - 57%, work and family studies - 57%, marketing education - 67%, agricultural education - 74%, and health occupations education - 75%.

These data showed that nearly 70% of all employed completers were from business education, trade and industrial education, and marketing education.

#### Employment by Targeted Populations

A main thrust of the 1990 Perkins Act was centered on students from targeted populations making a positive transition from school to work (West & Meers, 1992). Many students who are members of targeted populations finish high school each year only to be unemployed or in part-time employment (Okolo & Sitlington, 1988). This study, however, found that employment figures for targeted populations resembled those of non-targeted populations. An average of 72% of the completers who were members of targeted populations reported employment during the first year following graduation. All targeted populations reported employment percentages that fairly closely related to the overall figures. However, the 1997 employment data reported low employment (38%) for completers in the economically disadvantaged population.

For the most part the percentages of targeted populations employed in part-time employment were consistent with non-targeted populations through each year studied. Boesel and McFarland (1994) noted some differences in enrollment patterns of targeted populations. They found low incidences of participation appearing in some service areas. This study revealed that completers who were members of targeted populations tended to focus their vocational courses in agricultural education, trade and industrial education, and work and family studies, with a fair level of representation in marketing education and fewer in business education, health occupations education, and technology education.

Students who are disabled or disadvantaged participated in higher concentrations in several service areas. Work and family studies, trade and industrial education, and agricultural education all had higher percentages of completers from these targeted populations. Technology

education and business education had the lowest percentages of completers from these targeted areas. One trend that did hold true over this three-year study was a consistently high percentage of completers from targeted populations working in employment related to their service area.

Limited English proficiency. Much is written about the difficulties of meeting the educational and vocational needs of students with limited English proficiency. The results of some studies indicated that many secondary vocational programs have poor recruiting and intake techniques which limit access to these programs by students with limited English proficiency (Lopez-Valdez, 1984; Freidenberg, 1987). Despite the existence of several pieces of federal legislation that emphasize the right of students with limited English proficiency to access vocational programs, enrollment figures are low, and necessary resources for successful participation in these programs are extremely limited (Friedenburg & Izzo, 1993). Apparently this is true regarding vocational completers who have limited English proficiency in Virginia. There were such small numbers reported of completers with limited English proficiency that they could not realistically provide any distinguishing information.

#### Discussion of Findings about Earnings

Research Question 2: *What is the level of earnings of vocational completers as a group, by service area, and by targeted population?*

Analyzing earnings data from new high school graduates is fundamental to understanding the future needs of vocational programs. Murnane and Levy (1993) analyzed wage data from high school classes over an eight-year span and found that two years after graduation workers still showed little variation in their wages. Six years following graduation, however, earnings had begun to show improvements. Moreover, wage earners at the higher levels proved to be those who had gotten higher test scores in math and reading.

#### Overall Earnings

The earnings data in this study indicated clearly that with each consecutive year of the three years for which data were included, vocational completers were earning higher wages, with the majority of employed completers falling into the "above minimum wage to \$6.50" category. Though very small in number, males and females working in occupations nontraditional for their gender reported fairly high percentages employed at the upper pay levels, and these were higher

for males. Unlike the females, only a few males in nontraditional occupations reported themselves in the lowest level of the pay category for 1996 and none so reported in 1997 or 1998.

#### Earnings by Service Area

Most service areas had more completers who reported earnings in the "above minimum to \$6.50" category, but higher percentages of trade and industrial education completers were working at upper wage levels. Technology education completers were also earning above the average. The overall percentage employed at the lowest level of pay had fallen to just 13% in 1998.

The division of labor by gender has produced many inequities because the domain of labor traditionally assigned to women has been the home. Because the economy rather than the family makes up the central institution within our society, this gender labor division supports and reinforces inequities (Chafetz, 1988). Under this present system, most work within the domestic areas receives lower monetary rewards. Over the three-year study, work and family studies employed completers reported the highest percentages employed at the two lower levels of pay.

#### Earnings by Targeted Populations

Earnings increased with each consecutive year of the study for targeted populations as for the total group. Vocational completers designated as academically disadvantaged and disabled received notably higher wages than completers from economically disadvantaged populations. For example in the 1997 data, 45% of the employed completers from economically disadvantaged backgrounds were employed at "minimum wage or below" with just 4% reaching the highest level of earnings.

#### Discussion of Findings about Job Satisfaction

Research Question 3: *What is the level of job satisfaction for vocational completers as a group, by service area, and by targeted population?*

#### Overall Job Satisfaction

Job satisfaction was addressed by inquiring about ten different topics related to the employed completers' jobs. For each topic question they could answer "very satisfied," "satisfied," "dissatisfied," or "very dissatisfied." Topics covered were: (a) salary, (b) potential for advancement, (c) supervisor, (d) co-workers, (e) company policies and practices, (f) working conditions, (g) work tasks assigned to you, (h) level of responsibility expected of you, (i) amount

of work expected of you, and (j) job security. For all three years job satisfaction remained high across all ten areas of inquiry.

#### Satisfaction by Service Area

When examining how completers from different vocational service areas felt about varying aspects of their employment, some levels of dissatisfaction were noted. Employed health occupations completers consistently had somewhat higher levels of dissatisfaction with salary over the three years studied. They were followed closely by technology education completers. Both health occupations education and technology education completers also reported higher levels of dissatisfaction with their potential for advancement and company policies. High levels of satisfaction with their job supervisors as well as co-workers were reported by all service areas except health occupations education, which reported slightly more dissatisfaction.

General satisfaction was reported with company policies and practices by most of the service areas with health occupations education and work and family studies reporting higher levels of dissatisfaction. Business education, health occupations education, marketing education, and technology education all reported high satisfaction with responsibility levels. Only agricultural education, health occupations education, and work and family studies completers for certain years had levels of dissatisfaction as high as 9% to 10% when asked about the amount of work expected of them. Over the three years covered by this data, agricultural education, business education, and technology education respondents showed increased levels of dissatisfaction with job security. The other service areas generally responded positively to all aspects of job satisfaction.

#### Satisfaction by Targeted Populations

Completers with disabilities had slightly higher levels of dissatisfaction with their salary. All areas of targeted populations reported being satisfied with their co-workers. As a whole, the vast majority of employed completers from targeted populations responding to the ten questions about job satisfaction were "satisfied" to "very satisfied" with all aspects of their current employment during their first year following graduation from high school.

The completers from economically disadvantaged families reported higher levels of dissatisfaction to questions asked about advancement, supervisors, company policies and practices, working conditions, tasks assigned to them, responsibilities expected of them, work

expected of them, and job security. However these completers do not report dissatisfaction with co-workers or earnings. In 1997, when employed completers from economically disadvantaged backgrounds had a larger percentage employed at the lowest level of the earnings range, they still reported high levels (81%) of satisfaction with earnings. Low socioeconomic circumstances may limit students' aspirations by stereotyping employment possibilities (Rojewski, 1997). The economically disadvantaged students in this study reported lower levels of employment, more part-time employment, slightly lower wages, and lower levels of satisfaction across most areas. Understanding the effects that poverty can have on students' capabilities not only includes their capabilities to learn (Kozol, 1991), but also the influences economic factors have on their career development (Haveman & Wolf, 1994). The most immediate economic influence upon economically disadvantaged completers is the family. Data clearly point to the influences exerted by key persons, especially parents (Brunkan, 1965; Picou & Carter, 1976; Super et al., 1957; Way & Rossmann, 1996). Even after graduation, future success for many students is tied to family influences (Rosenberg, 1957; Grunegerg, 1979; Rothman, 1987).

#### Conclusions and Recommendations for Practice

This study examined the employment status, earnings levels, and job satisfaction of employed vocational completers in the state of Virginia in the first year following graduation. This type of assessment of vocational programs serves many different purposes including strengthening accountability for expenditures, reassuring critics that legislative supporters of vocational education are serious about demanding quality education for vocational students, and providing a framework for program improvement and future research. It is important to keep in mind that all educational outcomes are products of multiple causation and that outcome data must be interpreted in light of other information about completers. This researcher recognizes that outcomes of primary interest in vocational education also are affected by local labor markets (Hill, Harvey, & Praskac, 1992). Taking this into consideration, the following conclusions and recommendations can be drawn from this study's findings and the relevant literature.

#### Employment Status

High school graduates are often thought of as moving in and out of the labor force, holding numerous part time jobs, and experiencing interspersed periods of non-employment. Frequently a period of "settling down" is needed to find stable employment. Young males often

hold several part time jobs in their first few years in the labor force, and the typical male high school graduate entering the work force does not settle into a long-term job until his mid-twenties (Klerman & Karoly, 1995). At the time of this study the percentages of completers employed (during the first year after graduation) over all three years in each of the service areas ranged from 59% to 86% with major fluctuation between full-time and part-time employment. There were also earnings differences and job satisfaction differences noted among vocational service areas. Some differences would be caused by the sampling method and because of the uniqueness in the employment market throughout Virginia. Also, the geographic areas in which the vocational completers lived and worked would be contributing factors in these data. In order to get a more accurate picture statewide of the employment status of vocational completers, it is recommended that the State expand its follow-up system to include all vocational completers throughout Virginia each year.

#### Earnings

Research and statistics about workers' earnings are based primarily on cross-sectional data from surveys that relate to a point or period in time. Such statistical "snapshots," however, do not capture movement in the labor market. Young workers are continually moving into and out of jobs and the labor force. During the years researched in this study it has been an employers' market with high levels of employment, and it may not have been necessary to pay high starting wages to young workers. In fact, the federal wage law allows for paying a young worker (under 20) below the minimum wage level for up to 90 days. Since we do not know the exact amount of time vocational completers have been employed at the time of the follow-up surveys, it is difficult to get a complete picture of the wages of vocational completers. Consequently, it is concluded that a need exists for a longitudinal follow-up system in order to provide a "panoramic" view of the earnings of vocational completers over time.

#### Job Satisfaction

Since employed completers were relatively well satisfied when questioned about their levels of job satisfaction, even with lower levels of earnings, one can conclude that employed completers' job expectations were fairly realistic and reflected overall job approval during their first year of post-completion employment. Because employment and job satisfaction often reflect family characteristics (Brunkan, 1965; Picou & Carter, 1976; Super et al., 1957; Way &

Rossmann, 1996) it may be important to examine more closely vocational completers' relationships with their families. If at the time of the survey vocational completers were still living at home and really not out on their own, their levels of satisfaction and their needs may be expected to change in the near future as they become more independent of their parents. Since we do not know the financial needs or present living situations of the vocational completers studied, it is recommended that a longitudinal follow-up system be developed to include satisfaction and family information.

### Summary of Recommendations for Practice

In summary, these recommendations for practice highlight the need for:

1. a follow-up system that includes all vocational completers each year, and
2. a longitudinal follow-up system of vocational completers to include employment, earnings, satisfaction, and other characteristics that affect these variables such as family situation.

### Recommendations for Further Research

Several recommendations for further research emerge from this study. This study did not include all variables needed to explain employment, earnings, and satisfaction. Personal variables that may need to be included in future studies are: educational attainment in math and reading, employment experience during high school, level of wages while in high school, motivational and expectancy indicators, risk-taking propensity, need for achievement, leadership skills or membership in vocational student organizations, job opportunities, family economic variables (such as housing and marital status), and geographic and economic variables of the community.

### Education for Employment

Large numbers of students are being counted as members of targeted populations and taking part in vocational education. In looking at the total numbers of students from targeted populations who are being served by vocational education in Virginia, one can conclude that the low numbers of students being served in education for employment could be caused by pressure to include students from targeted areas within all vocational service areas. As local school districts respond to the mandates of equal access legislation, efforts to include students in regular programs have increased. Providing targeted population students with vocational education in Virginia is often accomplished through inclusion or integration into existing vocational

programs. In order to differentiate whether the best educational interests of students are being served through this system, further studies will be needed.

### Targeted Populations

The 1998 Perkins initiatives could open new opportunities for persons with disabilities. Practitioners and researchers are paying increasing attention to vocational completers from targeted areas as they exit high school. In the past the 1990 Perkins Act demanded assurance that funds were spent on supplemental services for targeted populations. Based on the new legislation, the federal government will ask whether vocational expenditures serve the best educational interests of the students who are among the targeted populations. It is unclear from studying employment and earnings data whether present course-taking patterns best serve the students' interests, but it is clear from the literature that a growing number of jobs require computer literacy in the workplace (D' Amico, R., & Marder, C., 1991). In examining the low rate of enrollment of targeted populations in technology education and business education courses it is obvious that vocational education is faced with a challenge. Since there is an increased amount of technological information being taught in all of the vocational service areas today, further research is needed to determine whether members of targeted populations are being given the opportunities to develop their technological potential within all service areas.

### Limited English Proficiency

Despite the existence of several pieces of federal legislation that emphasize the rights of students with limited English proficiency to access vocational education programs, the percentages of completers reported to be in this group were very low (less than 1%), and this number does not reflect Virginia's growing immigrant population. Language difficulties are probably the most obvious problem, but often these students and their families are unaware or unconvinced of the potential benefits of vocational education. In the past many efforts have been made, funds have been provided, and programs have been started to increase enrollment, yet vocational completion of students with limited English proficiency remains minimal. It is recommended that further studies are needed to help clarify vocational enrollment and completion patterns for this group.

### Nontraditional Occupations Earnings

Investigations of teen wage differences have confirmed a significant gap between adolescent males and females which mirrored the adult gap. Females on average earn less than their male counterparts (Endriss & Froomkin, 1980; D'Amico, 1984; Meyer, 1987). When comparing wages in this study for males and females in nontraditional occupations, it was found that more females were reporting earnings at the lower end of the pay scales.

Virginia has long sought to establish gender equity in the classroom, reduce learned biases, expand thinking, and encourage students' exploration and the modeling of non-stereotypical roles. Yet it is obvious by examining Table 3 which service areas are male or female dominated. It is also easy to see the difference by gender in the income levels of the different service areas by comparing Table 3 with Table 8. Further studies are needed that address gender equity and why it is still a major issue confronting vocational education.

#### Research Methods

Researchers should investigate other ways to collect data in addition to using self-report surveys. The use of qualitative interviews about employment and earnings could be very useful in future research. The use of previously taken interest inventories, assessment tests, and Standards of Learning scores could contribute to explaining employment status and earnings outcomes.

Vocational education seeks to provide work-related experience and encourages entrepreneurship. Often self-employed completers are simultaneously involved with other types of activities as well as further education. Further research of vocational completers who are self-employed or employed part-time would help clarify vocational outcomes.

A detailed longitudinal follow-up of all high school graduates would be very beneficial to the improvement of educational programs in Virginia. This could include examining post-secondary education, earnings and employment outcomes of all graduates in relationship to their educational background upon leaving high school. This study could be modeled after the Vocational Education Student Follow-up (VESF) study in Virginia but continued over at least five years and expanded to report graduates' results on the Standards of Learning assessments in the academic areas.

#### Summary of Recommendations for Research

In summary the recommendations for research highlight the need for:

1. studies with a broader range of predictor variables,

2. follow-up research on vocational education inclusion and integration of targeted populations,
3. research to determine whether members of targeted populations are being given the opportunities to develop their technological potential within all service areas,
4. further studies to clarify enrollment and completion patterns of vocational students with limited English proficiency,
5. further research addressing employment issues related to gender,
6. research that uses more qualitative techniques,
7. studies that include further research into self-employment (entrepreneurship), part-time employment, and levels of commitment to employment, and
8. research that follows-up all high school graduates.

#### Summary

This study provides insight into the employment status, earnings and job satisfaction of vocational completers through an analysis of three years of follow-up surveys. It was found that very small numbers of students who had limited English proficiency were becoming vocational completers. Also reported were few students in education for employment, a service area that prepares students from targeted populations for productive careers through school-based and community-based instruction. This study was not able to effectively describe the participants in nontraditional employment because they were also few in number. In looking at outcomes experienced by completers from targeted populations, this study found that employment figures resembled those of non-targeted populations, with high percentages reporting employment related to their service area.

Earnings data indicated clearly that with each consecutive year of the three years for which data were included, vocational completers were earning higher wages, with the majority being employed at the "above minimum wage to \$6.50" level. Earnings also increased with each consecutive year for completers from targeted populations, with vocational completers who are academically disadvantaged or disabled receiving higher wages than completers from economically disadvantaged backgrounds. One finding of interest is that while sizable numbers of completers reported lower wage levels, most reported satisfaction with their levels of earnings. Additionally, vocational completers in all service areas generally reported for the most part that

their job satisfaction levels were high. The targeted populations category of students from economically disadvantaged backgrounds reported lower levels of satisfaction across most areas as well as lower levels of employment, more part-time employment, and slightly lower wages.

Further longitudinal research should be conducted to more fully understand the transitioning process of vocational completers. Such research could be useful when planning and implementing policy, requesting grant funding, and instituting educational innovations.