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A COMPARATIVE ANALYSIS OF SECONDARY GRADUATES OF AREA VOCATIONAL PROGRAMS AND LOCAL VOCATIONAL PROGRAMS IN THE STATE OF MICHIGAN.

MICHIGAN STATE UNIVERSITY, PH.D., 1979

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A COMPARATIVE ANALYSIS OF SECONDARY GRADUATES OF AREA VOCATIONAL PROGRAMS AND LOCAL VOCATIONAL PROGRAMS IN THE STATE OF MICHIGAN

By

Charlie Delmer Roberts, Jr.

A DISSERTATION

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ABSTRACT

A COMPARATIVE ANALYSIS OF SECONDARY GRADUATES OF AREA VOCATIONAL PROGRAMS AND LOCAL VOCATIONAL PROGRAMS IN THE STATE OF MICHIGAN

By

Charlie Delmer Roberts, Jr.

This study was a follow-up investigation of the occupational achievement of area vocational program graduates and local vocational program graduates in Michigan who completed high school in June, 1977.

The researcher's purpose in this study was to compare the occupational achievement of students who graduated from area vocational programs with those students who graduated from local vocational programs. This comparison was done to ascertain if there was a difference between the two delivery systems and which one, if any, held the advantage.

This study utilized data collected by the Michigan Department of Education, Vocational-Technical Education Service Follow-Up System. The questionnaire and data collection procedures represent the methods used by that organization to gather information.

The sample of students used in this study consisted of a random sample of 4074 nineteen hundred and seventy-seven high school graduates who completed their vocational training in a Michigan Department of Education, Vocational-Technical Education Service approved vocational program and responded to the questionnaire. The graduates were divided

into two groups based upon the type of delivery system used to impart their vocational training. The two groups were further stratified by occupational education code. The occupational education codes were then matched for the two groups.

For the purpose of comparing the occupational achievement of area vocational program graduates and local vocational program graduates, nine indicies were developed as the criteria for this study. They were current earnings; employment status, full and part-time related; unemployment; post-secondary status, full and part-time related; and job satisfaction.

The results of various analyses produced several important findings in this study.

A. Employment Status

1. There was no significant difference between the two groups in the proportion of graduates employed.
2. The local vocational graduates held proportionately more full-time related and part-time related jobs than the area vocational graduates. However, neither of the differences was statistically significant.
3. Area vocational program graduates had a higher proportion of unemployed graduates than local vocational graduates and the difference was statistically significant.

B. Post-Secondary Status

1. The proportion of graduates receiving post-secondary training was higher for local program graduates and the difference was significant.
2. Local program graduates were continuing their education full-time and part-time in significantly higher proportions than area program graduates.

C. Earnings and Job Satisfaction

1. The average wage of $3.94 per hour earned by area program graduates was not significantly different from the $3.75 per hour earned by local program graduates.
2. The local program graduates expressed a higher degree of job satisfaction than the area program graduates, however, the differences in the degrees of job satisfaction were not statistically significant.

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Chapter One

INTRODUCTION

The opportunity for a majority of the American people to receive the training necessary to earn a livelihood to be self-supporting and to contribute to the welfare of this country is dependent in part upon the quality of the vocational and technical education programs provided for them. Providing the opportunity for all students to learn the skills needed for employment in our increasingly sophisticated economy is the idea behind Michigan's vocational education delivery systems.

In Michigan, emphasis is placed on providing life-long learning experiences aimed at closing the gap between students' needs and the demands of our changing labor market. This gap that exists between the skills required for gainful employment in a rapidly automating economy and the capacity of the present educational system to provide these skills is a major problem facing education.

Those who have attempted to provide occupational education at the high school level have been frustrated by the lack of resources to provide the breadth, depth, and scope of vocational education needed. This inability results from two major failures. First, school districts generally

have insufficient resources to adequately house, equip, and operate the wide range of occupational preparation programs needed. Secondly, few individual districts have sufficient numbers of students to adequately utilize expanded facilities and programs even if they could be financed. On the other hand, there are a number of school districts that have the resources to house, equip, and operate their own vocational programs. These districts have continued to offer vocational programs in their local high schools rather than adopt the area vocational concept.

The secondary area vocational education concept emphasizes cooperative arrangements between two or more school districts, usually adjacent, or between high schools within large districts or secondary programs offered by community colleges for the purpose of operating jointly-shared vocational education programs for people in relatively large geographical areas or areas of high population density. This cooperative technique enables two or more school districts to offer more and better vocational programs than they could separately. The area concept is designed to complement and enhance comprehensive high school programs without unnecessary duplication of programs, facilities, or staff.

The area concept is based upon the conviction that all persons should have easy access to quality vocational education programs directed to individual occupational preparation needs, abilities, and interests.

The area program serves as a centralized extension of existing vocational programs in participating high schools. To participate in vocational programs not provided in their home high school, students are transported to an area center for occupational education for half of the time. The area program concept provides that students retain their identity with, receive their general education in, and graduate from, their home high schools.

The area program concept grew from a recognition of the need to pool sufficient numbers of students and financial resources to house, equip, and staff adequate programs. The area program makes it possible to provide instructional programs that many schools cannot afford. Those single high schools having sufficient financial resources and students to justify offering vocational programs were encouraged to continue doing so.

Background of the Study

The tax paying public and educators are questioning the worth and relevance of educational programs including vocational and technical programs. The planning and subsequent management of education programs based on little or no objective data is questionable, to say the least, in an era when justification of actions is required from all levels of society. Simply stated, the era of accountability is here.

Title II, Section 112, of the 1976 Vocational Amendment requires that each state evaluate the effectiveness

of each funded program within a five year period. These evaluations must be in terms of the planning and operational processes, results of student achievement, results of employment success and results of additional services that the State provides under the Act of Special Populations.

Michigan is committed to delivering vocational education to all its citizens. This commitment was characterized by the State Superintendent of Public Instruction's statement (Porter, 1971) that the measure of success in our educational process is whether our human product becomes an active, contributing, participating tax paying member of our society. Fundamental to the entry into our American society is the preparation and the opportunity to work. We can no longer tolerate the loss in human resource that is now taking place.

Pangman (1971) described what Michigan had to do in order to prevent the loss of human resources, when he explained that it was obvious that before new program thrusts in vocational education could be developed, an assessment of existing programs and needs had to be made. To achieve this end, the Michigan Department of Education encouraged educational agencies across the state to study jointly the situation with other educational agencies, business, industry, and agriculture in their respective localities.

As study results became available, it was obvious to leaders in the Michigan Department of Education that a

great deal of diversity in local conditions prevailed across the state. However, two problems were evident in all areas studied. First, most high schools lacked an adequate number of students to justify a comprehensive occupational education program. Second, adequate financial resources were not available on an individual school basis for starting and maintaining a comprehensive occupational education program. These two basic problems led to the development and adoption of the "area program concept" for providing expanded occupational education opportunities for citizens of the state.

In July, 1967, the State Board of Education adopted a "Position Statement Concerning the Development of Area Vocational and Technical Education Programs in Michigan." This position statement identifies the "area program concept" as the means through which single school districts lacking sufficient financial resources and/or students can provide adequate occupational education opportunities to enable all youth and adults to develop and maintain satisfactory occupational competence.

As a result of the adoption of the position statement, nineteen area vocational technical centers were established between 1967 and 1970. Another forty-two centers are proposed. Once all centers are in operation, the system will serve over 110,000 high school students each year (Michigan Department of Education, 1978).

Advocates (Michigan Department of Education, 1967) contend that the area vocational program has the following advantages.

1. It provides for a broader tax base than is usually present in a single school district.
2. It avoids unnecessary duplication of equipment, services, and costs which might occur if two or more neighboring districts elected to offer identical or similar training programs.
3. It makes possible a broader range of curriculum offerings and, therefore, a more extensive program of occupational opportunities.
4. It offers training opportunities to a larger number of persons than is possible in the sum total of smaller schools serving single communities.

Forty-one in-depth studies (Michigan Department of Education, 1970) of existing problems in vocational education were conducted by twenty-eight intermediate school districts, ten community colleges, and three local K-12 districts. The researcher's purpose in these studies was to arrive at both immediate and long-range goals and objectives for the development of vocational-technical education programs. These area studies resulted in a plan which outlined the vocational courses and programs that should be offered in an area. They determined where these programs should be located, who should operate or administer them, and how they could be financed. The area plan for

Michigan was based primarily on results of these studies (Michigan Department of Education, 1970).

Statement of the Problem

The researcher's purpose in this study was to compare the occupational achievement of students who graduated from area vocational programs with the occupational achievement of students who graduated from local vocational programs and to ascertain if there was a difference between the two delivery systems and which one held the advantage.

Andrew and Roberts (1974) in their study of vocational and non-vocational graduates, contend that one of the best means of evaluating the results of vocational education is found in follow-up studies of the students who have graduated from various vocational programs. Findings from such studies can provide feedback information to be used in the continuing process of improving vocational education programs.

Since the implementation of the area vocational program concept, many students have completed their vocational training and have graduated.

Once the students have graduated, the Michigan Department of Education, Vocational-Technical Education Service has followed up these students in their Annual Secondary Graduate Vocational Follow-up Survey.

In Michigan the annual follow-up survey has provided extensive data to those responsible for guiding educational

programs at the local, state and federal level by providing:

- an accurate picture of what happens to graduates after they leave educational programs.
- graduate input on planning for improvement of education programs.
- a better understanding of student information and placement needs.

Even though the data from the follow-up system is available and the fact that the "area program concept" grew from a recognition of the need to pool sufficient number of students and financial resources to house, equip, and staff adequate programs, there is not any comparative data to show whether the occupational achievement in the business and industrial world is any better for graduates of area vocational programs when compared to graduates of local vocational programs. Such information is needed to evaluate our vocational education delivery system and to determine if the programs are fulfilling the goals for which they were organized.

Hypotheses

This study was designed to determine if high school graduates who had their training in area vocational programs differed from high school graduates who had their training in local vocational programs in regard to certain selected factors and, if so, whether the differences could be attributed to the delivery system itself.

On the supposition that there was no significant difference between the graduates of area vocational programs and the graduates of local vocational programs, the following null hypotheses were tested:

1. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed.
2. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed full-time in an occupation (area) related to their training.
3. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed part-time in an area related to their training.
4. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates unemployed.
5. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the amount of hourly wage they earn.

6. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the degree of their job satisfaction.
7. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education.
8. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education full-time in an area related to their vocational training.
9. There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education part-time in an area related to their vocational training.

In addition, the nine hypotheses were tested for each occupational area to determine if there were any significant differences between the graduates of local vocational programs and graduates of area vocational programs.

The occupational areas used in this study were agriculture, distributive education, health, home economics, business and office, and trade and industry (see Appendix B).

Significance of the Problem

The results of this study should:

1. Reveal empirically based information to vocational educators, vocational administrators, Michigan Department of Education personnel, local and state governmental personnel and the general public regarding the relative merits of the two delivery systems.
2. Provide empirically based information which the state, regional and local educational agencies may use to plan for the expansion, reduction or modification of the delivery systems.
3. Provide empirically based information which the state, regional and local educational agencies may use as support of need for modification of their existing delivery system.

Assumptions

The study was based upon the following assumptions:

1. The various types of programs analyzed in this study were considered to be typical of the different types of programs and of comparable quality with the types of programs occurring in most educational systems throughout the state.
2. The facilities and equipment found in the various area vocational programs and local vocational programs were basically similar.

3. Employment and/or continued education were considered to be valid indicators of occupational achievement for high school graduates.
4. Guidance and job placement services were available to all program graduates.
5. The programs examined in this study met the Michigan Department of Education's Program Standards of Quality for Vocational-Technical Education Programs in Michigan.
6. The rate of response to the follow-up questionnaire allows for generalizations to all students in the various area vocational programs and local vocational programs.
7. The population sampled was normal and the variances were homogeneous.

Limitations of the Study

1. The study is limited to the 1977 graduates who responded to the survey.
2. The findings of this study focused only on the graduates' occupational achievement one year after graduation.
3. The findings, implications and recommendations of this study pertain to the students of the vocational education programs in the State of Michigan and it is not recommended that generalizations be made to similar programs in other states.

4. The survey instrument used in following up the students was not tested for reliability and validity, but was devised and piloted by a committee of vocational educators, counselors, administrators and researchers.

Definition of Terms

To clarify the research design and aid in ther interpretation of the findings of this study, the following definitions will be used:

1. Vocational Education: organized educational programs which are directly related to the preparation of individuals for employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree.
2. Vocational Program: a program of study at the eleventh and twelth grade level specifically designed to prepare individuals for employment in a specific occupation or cluster of closely related occupations.
3. Area Vocational Program: a Michigan State Board of Education designated vocational program which is supported by a joint agreement whereby two or more school districts cooperate in financing the operation of a total vocational program.
4. Local Vocational Program: a vocational program which is supported by a single school district for persons in the eleventh and twelth grades.

5. Occupational Achievement: the extent to which graduates of vocational programs are employed, full or part-time, in positions related to the training received in school or were enrolled full or part-time in post-secondary educational programs related to the training received in school.
6. Job Satisfaction: the graduate's perception of how content they are with their employment even though their every wish may not have been fully realized.

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Chapter Two

REVIEW OF RELATED LITERATURE

The literature reviewed in this chapter is directed toward examining: (1) the development of area vocational education programs; (2) the merits of using follow-up data to measure the relative effectiveness of the delivery systems used to impart vocational education and; (3) the criteria suggested for measuring the occupational achievement of the graduates.

The Development of Area Vocational Education Programs

The area vocational program as a delivery system for vocational education, while blossoming in popularity since the 1963 Vocational Education Act, is not a recent innovation. Some of the earliest area programs were established in Connecticut, Maine and New York.

In 1903, the Governor of Connecticut appointed a commission to investigate practical means and methods of industrial and technical education. This commission reported to the 1905 session of the General Assembly:

> The need for schools of this sort seems to your commission to be immediate and pressing. Connecticut's record in industrial life is one of which our citizens are justly proud. The inventive capacity of sons of Connecticut is recognized everywhere. The skill of

> our workmen, members of a generation about to pass off the stage, is beyond dispute. This natural adaptability and this acquired skill have been prominent factors in developing and maintaining the prosperity and good repute of our Commonwealth. And further, your commission has been moved to advocate the assumption by the state of a part of the burden of the establishment and maintenance of trade schools in order that the state may justly insist that instruction be free to all her sons. If the schools were maintained by the towns exclusively it is fair to support that the advantages would be enjoyed only by the residents of the larger towns and this would be a calamity. (O'Brien, 1963, p. 49).

As a result of the work of the 1903 commission and its report in 1907, the state system of vocational-technical schools in Connecticut was established in 1910. These Connecticut schools were open to all residents of the state and were (and currently are) thus truly area schools.

Another early type of area vocational program was the use of circuit teachers of vocational subjects by the state of Maine. These teachers spent four to six weeks in a school and carried their specialized equipment with them. They provided intensive "unit courses" of four to six weeks in length for their pupils.

Senator Lester Hall of Alabama (1956) offered a rationale for the establishment of area vocational schools when he said:

> The economic picture in the United States and the world situation has changed markedly since 1917 when congress passed the Smith Hughes Act, recognizing

> the importance of vocational training to the national welfare and the national security. Just as the Smith Hughes Act stimulated the growth of vocational education programs 40 years ago, the area vocational-technical school bill, drawing upon the tested and proven experience under the Smith Hughes Act and related arts, will bring needed training opportunities to people in sparsely settled areas, to people in small towns that cannot afford to maintain the expensive equipment required in a sound vocational program, to people who need training or retraining to compete in the changing labor scene.
>
> Area vocational-technical schools will make possible the establishment of training programs, in keeping with the special needs of the several states and territories, in rural areas where secondary schools are unable to operate comprehensive vocational-technical programs. A great contribution to our national strength and prosperity will result from the prevention of the waste of manpower which follows when large numbers of our people enter the labor market without skills or technical knowledge.
>
> Vocational-technical schools operating on a regional basis to provide training in the most economical manner can provide much of the answer. Vocational educators know how to provide this training. They proved this under fire during World War II when they speedily produced the trained workers needed for war production. They need only the funds to stimulate the expansion of present vocational-technical programs. (p. 5)

During the fall of 1957 Russia launched its first man-made satellites. This triggered an unprecedented criticism of public education - including vocational education - and a nationwide clamor for more and better instruction in mathematics, science and languages.

Immediately, officials of the Federal Administration began work on an educational legislation proposal which

they hoped would be of value to our nation's defense program. Soon after the 85th congress reconvened in January, 1958, President Eisenhower recommended an education measure that contained many of the provisions finally approved as the "National Defense Education Act of 1958."

The area vocational program is a product of Title VIII of this Act. Congress, in passing this legislation, recognized the acute shortage of science and engineering technicians, the shortage of most smaller communities and single school districts to set up such facilities. Accordingly, Title VIII offers aid to "area schools" offering courses to train highly skilled technicians in occupations necessary to the national defense.

Follow-up

In a report prepared for the Urban Observatory of Metropolitan Nashville and University Centers, Paul (1970) stated:

> There may not be an obvious or direct relationship between economic development and follow-up vocational graduates; but to the extent that vocational training produces skilled manpower, follow-up data will measure the success or failure of each endeavor. Follow-up data, therefore, are essential to plan and evaluate the development of human resources which are essential for industrial and economic development.
>
> In addition to their usage as an evaluative measure of vocational education trainings' success, follow-up data provide an essential dimension to

> the information systems for human resources planning. The concepts of manpower supply and demand are highly related to placement on jobs. Success or failure of program participants can be best verified by the kind of jobs on which they are placed. Verifying the placement is an important function of follow-up. Planning and implementation of vocational education will be incomplete without appropriate follow-up data. (p. 1)

In recent years many follow-up studies of vocational education have been conducted. Some of these studies have compared area vocational school graduates with comprehensive high school graduates in employment status and post-secondary educational status.

Herman T. Hemler (1972) conducted a follow-up survey of graduates of regional vocational programs, regular vocational programs and regular high school programs. He indicated in his findings that both categories of vocational graduates had a higher rate of employment and a higher rate of participation in post-secondary education than did the graduates of regular high school programs. The slight differences between the regional vocational program and the regular vocational program graduates tended to favor the regional program.

Emanuel Carreras (1972) examined the employment experiences and opinions of area center graduates and compared them to vocational and non-vocational graduates of comprehensive high schools. He found no statistically significant differences in employment experiences between groups, although the differences that did exist tended to

favor the vocational over the academic graduates. His findings supported the continued development of the area center concept.

In a study conducted in Illinois, Alan Johnson (1976) compared the placement effectiveness of vocational programs in area vocational centers and comprehensive high schools. He compared the placement effectiveness in terms of the degree graduates were employed in fields related to their high school programs.

Johnson indicated that the area vocational centers had a moderate advantage over the comprehensive high schools' vocational programs in terms of the proportion of graduates employed in related occupations. The relationship between delivery system and employment status was sufficient to support the continued encouragement of area vocational center development.

In a study to determine if vocational graduates receive higher salaries than those who terminate the programs before completion, Harris (1975) analyzed the variables of school, program, age, race, sex and completion status. He indicated that there was no significant difference between beginning salary of program completers and non-completers.

Paul (1970) compared private vocational school graduates with public school vocational graduates in Oklahoma. He found that private school graduates found jobs related to their training more often than the graduates from public

schools. Also, the private school graduates earned, on an average, 31 percent higher income on their first full-time job than the graduates from public schools. On the other hand, about 12 percent of the private graduates rated their training as "low" compared to only 5.5 percent by public school graduates.

Eninger (1968) conducted one of the most comprehensive follow-up studies with a sample of 5,327 former students of vocational programs drawn from one hundred randomly selected schools. He designed the study to evaluate vocational programs by providing the information on 1) time required to get a full-time job, 2) relatedness of job to training, 3) earnings, 4) job satisfaction, and 5) mobility. Data on job stability and employer satisfaction were also compiled. To provide a longitudinal dimension to the study, Eninger surveyed the classes of 1943, 1958, and 1962. Some of the other variables used in this study to compare graduates' post-school performance were the amount of schooling after termination of vocational training, types of leisure activities, organizational affiliations, and attitude towards former schools and vocational programs.

Some of the significant findings of this study were the following:

1. A majority of the trade and industry (T & I) program graduates went directly to work after completion, though the jobs found by more than a third were not related to their training.

2. Starting wages depended on local labor markets, but the graduates with vocational training gained faster raises in wages than graduates from academic programs.
3. Graduates placed on training related jobs reported higher job satisfaction and job security than those placed on jobs unrelated to their training.
4. About 87 percent of the graduates had not moved out of the community in which they went to school.

Another comprehensive survey of vocational education graduates was conducted by the U. S. Office of Education in 1966 with 606,872 vocational graduates as subjects. It was reported that 80 percent of all graduates available for placement found jobs for which they were trained, or jobs highly related to their training. Only four percent of the graduates were unemployed. The report also listed the occupations entered most frequently by the graduates.

Paul and others (1972) in a statewide follow-up survey in Kentucky studied ten thousand former students of vocational education, the class of 1971. A mail questionnaire was used for this survey with telephone and personal interviews to verify the responses and to offset or eliminate a possible bias due to non-response. Some of the important findings from this statewide survey were as follows:

1. Of the 68 percent of former students available for placement, only 41 percent found jobs related to their training, and as many as fifteen percent

were still unemployed at the time of the survey.

2. Of the 32 percent not available for employment, 65 percent continued their schooling after the completion of their vocational training.
3. A list of jobs on which the former students were frequently placed was compiled. Two most frequently reported jobs were "secretary" and "nurse aide."
4. A great majority of those working on training-related jobs reported a higher degree of job satisfaction than those placed on unrelated jobs.

The New Mexico State Department of Education (1968) studied the experiences of graduates from four area vocational schools. Among the findings, important ones were the following:

1. Of the 31 percent of graduates who were gainfully employed, 82 percent were working on training-related jobs.
2. The average graduate had been working on the job only a year or less; hence no readings were available on advancements in salary levels.
3. Over 72 percent of those employed found jobs within or near their home communities.

In an article supporting the inclusion of vocational education in the comprehensive high school, McGee (1972) refers to a study conducted for the Alabama Advisory Council on Vocational Education by the Education Systems

Resources Corporation. In that study it was found that comprehensive high schools operate at a lower cost per pupil and provide better job placement than do area schools. In comparing the two types of schools it was determined that the vocational needs of students were best being served by the comprehensive high school in terms of relevance of training, courses, and placement related to training.

Mobley (1955) reported that it was the belief of some vocational leaders that the comprehensive high school can provide economic advantages because the facilities and equipment can be used a portion of the day for general education programs. He pointed out that separating vocational students from the other students deprives them of desirable social relationships and increases their consciousness of economic class differences. By developing the comprehensive high school to its maximum, all students are placed into contact with other students of differing interests, abilities, and socioeconomic levels.

Mobley also pointed out that travel time and expense could be saved when the vocational program was included in the comprehensive high school. By combining academic and vocational courses more academic electives are available and the reputation and prestige of the vocational program may be increased.

Criteria for Occupational Achievement

Many of the decisions made in education are made on the basis of indicators, or some kind of behavior, idea, or phenomena thought acceptably representative of reality. Judgments of a program are usually made in response to an observation or description of something that seems to indicate what is happening in or as a result of a program.

Borus and Tash (1970) suggested that indicators be used in the decision making process when they reported:

> The purpose of the evaluation process is to provide policy makers with the basic data necessary for them to make decisions wisely. Evaluations of programs should provide five essential sets of information. First, they should provide all of the data necessary to determine if a particular program should be continued. Second, they should determine which of the alternative programs achieve the greatest gains for a given cost. Third, evaluations should present information on the components which are most effective for a given expenditure so that maximum operating efficiency can be achieved. Fourth, evaluations should provide the first three types of information for persons with different characteristics, so that a decision maker, may determine which individuals are best served by each program. Finally, in the course of evaluating existing programs, data should be gathered which will suggest new methods to attack the problems.

Occupational achievement is a term which has been used loosely without being precisely defined. Those things which are used as relevant criteria for evaluating the job related attainment and satisfaction can be considered as an index of occupational achievement. In this study,

employment status, post-secondary education status, present wage and job satisfaction are used as the criteria for the occupational achievement of high school graduates. However, by no means are they considered to be the only relevant criteria of occupational achievement.

The process of leaving school and joining the labor force in full-time employment is seldom a smooth one for the nation's younger workers. There are few exceptions - those whose part-time or summer employment experiences lead to a job offer in the same establishment or a related industry; those who have chosen, and had the resources to complete successfully, training in an uncrowded profession; and those who move directly from vocational training into entry-level positions or apprenticeships in their chosen occupation. But most teenagers seeking full-time jobs face formidable barriers to employment.

In his message accompanying the first Manpower Report of the President, John F. Kennedy expressed this concern about youth unemployment, "The trend in youth unemployment demands special concern and action. . . . Both lack of work opportunity and lack of suitable preparation are involved in this situation - and are combining to spread frustration and disillusion among large numbers of young people."

Fifteen years later, it was apparent that the situation had not improved much. In 1977, when the unemployment rate for the labor force as a whole was 7.0 percent, it was 17.7 percent for teenagers and 10.9 percent for 20 to

24-year olds (U. S. Department of Labor, 1978).

To explain why teenagers accounted for almost 18 percent of the unemployed in 1977, while comprising only about one-tenth of the nation's labor force, the possibility employers systematically avoid hiring younger workers must be considered. Indeed, studies conducted in recent years showed that two-thirds to four-fifths of employers were reluctant to hire youth under age 29 for regular, full-time jobs (Barton, 1976).

The possibility that many employers expressed a preference for workers who had already acquired experience and marketable skills was not surprising. Particularly where substantial on-the-job training costs were involved, employers could have calculated that their investment would have been better spent on prime-age workers, rather than on teenagers.

Another facet of employer preferences - the impact of legislated minimum wages on the unemployment of low-skilled workers, especially young workers, has been debated by economists and policymakers for many years. Although economists have attempted to measure the impact of minimum wages on youth unemployment (Gramlich, 1976), there is no consensus due to the difficulty of isolating its impact from such general factors as the state of the economy, the number of youth looking for jobs, changes in the characteristics of entry-level jobs, and changes in worker productivity.

Under the Fair Labor Standards Act minimum wages are set for most industries. The federal minimum which covers 54 million wage and salary workers, was $2.30 per hour for all but agricultural workers in 1977. Over the decade, it has increased from $1.40 an hour in 1967, to $1.60 in 1971 and to $2.30 in 1975. Legislation enacted in 1977 raised the level of the minimum wage to $2.65 per hour on January 1, 1978, $2.90 on January 1, 1979, $3.10 on January 1, 1980, and $3.35 per hour on January 1, 1981.

Gurin (1968) states that there are two basic indicators of success that the federal government has used for manpower and training programs. One indicator of success has been the students' salary following their training program. While a person's earning may not be the only criterion of his success in using his program experience, it should clearly be accepted as at least one very significant criterion.

Since vocational education has been charged with the responsibility of providing job training, it must be concerned with the development of adjustment competencies related to the world of work. This process must be present throughout the training program, if the students are to approach their first jobs with some feeling of confidence that they will be able to adjust. If this process is accomplished, the students are freed from a trial and error process of developing career objectives.

Hoppock (1935) concluded from his study that job satisfaction is an attitudinal relationship between the individual as an entity and the environment. It follows, that if an individual is unable to adjust emotionally, he or she is likely to experience difficulty in adjusting to a job and thereby experience job dissatisfaction.

In Eninger's (1967, 1968) studies of trade and industry graduates, higher degrees of satisfaction with jobs are reported by vocational graduates than graduates of other curricula. Job dissatisfaction is reported as the reason for leaving the first job by only 15 percent of the graduates. This fact indicates a considerable degree of satisfaction by both graduates and employers.

In American society, the type of work usually determines the standard of living enjoyed by its members. One of the outcomes of this socio-educational process might be the merging of these complex forces to enhance the individual's ability to work consistently, and to receive satisfaction from his work. People tend to work for a variety of reasons: because there is work to be done, because work is enjoyable, or because of the need to earn a living. Whatever the reason to work, or whenever a person learns to accept responsibility and has the opportunity to become creative, work becomes a means to an end rather than an end.

It follows then that job satisfaction is an integral part of this complex interplay. Educators must be concerned

with the relationship between an individual and his or her satisfaction in the world of work.

Today, there is a heightened interest in identifying and assessing the outcomes of schooling. The functions of the schools have included transmitting useful skills to the young, imparting cultural knowledge and norms, and instilling moral precepts - responsibilities the schools share with other environmental and social institutions. Yet, since the schools remain the most obvious, and certainly the best organized means of reaching young people, it is natural that increased pressures for accountability have focused attention on the need to measure more precisely the results of education.

Participation in post-secondary education within the last 10 years has seen increasing diversity among students, especially in the ages at which they enroll and in the courses of study they choose. This increase has been accompanied by a diversification of avocational offerings that both adds complexity to any statistical examination of post-secondary trends and signals caution to anyone attempting to predict the future, as individuals select from the expanding range of educational opportunities available.

High school graduates, in general, constitute the largest pool of entrants into post-secondary education. During the first year following completion of high school a major decision - to continue or not, and if so, what type of school to enter - must be made. For this reason plans

of high school seniors - declared in many cases prior to their acceptance by particular institutions - may be a revealing source of information about entry into post-secondary education. These intentions examined over time may suggest changes in student expectations and perceptions of the benefits of schooling.

Several factors are related to the entrance into, and completion of, post-secondary education. Sex, age, race, income, and distance from school, all influence access and participation.

In a study conducted by researchers at Portland Community College (1972), to determine where community college graduates were, what they were doing, and how well their employers rated their performance, the researchers found that 309 of the 527 respondents were employed, 134 were continuing their education, and 54 were unemployed. The major factors in the choice of school were the available technical programs, finances, location, and desire to increase job skills.

Other findings were: (1) over 31 percent of the graduates were earning between $600 and $750 per month, with 59 percent earning less than $600 per month; (2) over one-half of the graduates regarded their initiative as having been the most influential factor in obtaining their first position; (3) 73 percent said that their specialized training helped them to obtain employment; (4) 73 percent of the employers felt that their employees were better

prepared as a result of their college work; and (5) 57 percent of the employers stated that the training of the Portland Community College graduate influenced their decision to hire them.

Since vocational education programs include both educational and manpower aspects, the criteria by which their success is evaluated should take into account both the educational and economic dimensions. The relevant indexes of economic success include the earnings and unemployment rates of students as compared with similar students in academic and general programs. The indicators of successful outcomes may also allow for differentials in dropout rates among students in different curricula and for differences in the likelihood of their continuing with further education after leaving high school.

Summary

In summary, the area vocational program as a delivery system is not a recent innovation. Some of the earliest area programs were established in the early 1900's in Connecticut, Maine and New York.

The legal basis for the development of area vocational programs nationally is found in Title VIII of the National Defense Act of 1958. This act offers aid to "area schools" offering courses to train technicians in occupations necessary to the national defense.

A review of follow-up studies and related research

done in recent years indicates that a number of factors have been used as criteria of occupational achievement, including earnings, employment status, post-secondary status and job satisfaction. Other variables, including sex and race, have been found to be related to occupational achievement.

Based on this review of the literature, it appears that there is no one criterion that should be used to measure occupational achievement. Recognizing this fact, the criteria used in the described studies are representative of the criteria used in this research study.

The criteria for occupational achievement used in this study are:

1. Employment
2. Full-time Related Employment
3. Part-time Related Employment
4. Unemployment
5. Hourly Wage
6. Job Satisfaction
7. Continuing Education
8. Continuing Education Full-time in a Related Course of Study
9. Continuing Education Part-time in a Related Course of Study

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Chapter Three

METHODOLOGY

The author's purpose in this chapter is to describe the population, sample, instruments, data collection procedures, the statistical tools and the procedures for analysis used to evaluate the hypotheses presented in Chapter One. Since the researcher used data collected by the Michigan Department of Education, Vocational-Technical Education Service Follow-up System, the instrument and data collection procedures described herein represent the methods used by that organization to gather information.

Population

The population of this study consisted of all the 1977 graduates of programs approved by the Michigan Department of Education, Vocational-Technical Education Service. This population totaled 55,032 graduates of whom 10,833 had their training in area vocational programs and 44,199 had their training in local vocational programs.

Sample

The sample of students used in this study consisted of a random sample of those 1977 high school graduates who completed their vocational training in a Michigan

Department of Education, Vocational-Technical Education Service approved vocational program and responded to the state follow-up questionnaire.

The graduates were divided into two groups based upon the type of delivery system (area vocational program or local vocational program) used to impart their vocational training.

The two groups were further stratified by 104 occupational education codes. The occupational education codes were then matched so that each occupational education code was found in both delivery systems and had at least 13 subjects. From each of the matched occupational education codes an a priori 10 percent random sample was chosen from each group of area vocational programs and local vocational programs.

Instrument

The instrument used in the study was the Michigan Department of Education's Follow-up Survey of 1977 Graduates (Form VE-4045-A).

This form (revised) has been used in the Michigan Department of Education's annual follow-up of secondary vocational graduates since 1973 (see Appendix A). During this period the response rate has risen from 45 percent in 1973 to 76 percent in 1977.

The researcher's purpose in this survey form was to gather data which would give local districts, Career Education Planning Districts and the Michigan Department

of Education a clearer picture of what was happening to graduates. In addition, the results of the survey provided local school districts with a firmer base for designing school programs and services to better meet student needs.

To develop this survey instrument, the Michigan Department of Education and the Ad Hoc Committee on Follow-up, sought to gather information concerning the employment status of graduates one year after graduation. Employment status was divided into four categories: (1) Employed in a related occupation, (2) Employed in unrelated occupation, (3) Unemployed, and (4) Unavailable for employment. This categorization allows decision makers to assess the number of graduates employed in occupations for which they were trained, the number employed in unrelated occupations, the number actively seeking employment who cannot find it, and the number unavailable for employment. The unavailable for employment category was separated from the unemployed category because there are reasons, such as illness, which society recognizes as legitimate for a person not being employed.

If a person is employed one year after graduation, decision makers are interested in what the job is, where the job is located, whether it is full-time or part-time, how satisfied the person is with the job, and what is the salary they are making. This information allows decision makers to examine the types of occupations graduates of a particular program are entering, whether the graduates are

obtaining full-time employment, how satisfied the graduates are with their jobs, and how much money the graduates of a particular program are making.

Data Collection

The data collection phase of the Michigan Department of Education, Vocational-Technical Education Service's Graduate Follow-up Survey consisted of ten major process steps. A brief discussion of each of the steps follows:

1. CEPD Inservice (November, 1977) - The first step in the system was to familiarize CEPD Vocational-Technical Specialists with the system through inservice training. A set of instructions was developed and given to the CEPD Vocational-Technical Specialists in a series of regional training sessions.
2. Forms Distribution (December, 1977) - The second step in the system was the distribution of survey forms, instructions and transmittals to the CEPD Vocational-Technical Specialists.
3. Local Inservice (January, 1978) - Upon receipt of the forms from the Michigan Department of Education, CEPD Vocational-Technical Specialists conducted CEPD-wide inservices for local educational agency personnel.
4. Code Survey Forms (January, 1978) - From the local graduate mailing list, which contained student names, addresses, telephone numbers,

vocational or non-vocational status, occupation education codes and other local information; each survey form was coded to enable the local education agency to identify respondents and non-respondents.

5. Local Mailing (January, 1978) - The survey forms were mailed to the graduates at a designated time.
6. Public Relation (January, 1978) - To coincide with the local mailing, news releases were made to the media on a statewide basis.
7. Process Returned Survey Forms (February, 1978) - The seventh step was for local contact persons to log-in the returns and complete the "School Use Only" data section. This section contains information on the graduates' vocational or non-vocational status, occupational education code, cooperative status and special needs status.
8. Follow-up of Non-respondents (February, 1978) - The eighth process step was for the local agencies to identify non-respondents from the log-in process and prepare and mail a follow-up letter. Two weeks following the second mailing, non-respondents to the second mailing were called on the telephone and interviewed via a prepared telephone script.
9. Process and Return Survey Forms (February, 1978) - The ninth step was for the locals to complete

"School Use Only" part of form for each respondent, affix label identifying school district, complete information on transmittal sheet, wrap and return all forms to the CEPD Vocational-Technical Specialist by the designated date. The CEPD Vocational-Technical Specialist, upon receipt of the forms, verified the accuracy of the counts, checked to see that the "School Use Only" data were complete, grouped the returns in a CEPD package and mailed them to the Follow-up Survey Support Center.

10. Edit Survey Forms (March, 1978) - In the final step of the data collection process, the survey forms received at the Survey Support Center were logged-in, checked for accuracy and completion of "School Use Only" data, and the transmittals were checked for accuracy and completeness.

Data Processing Procedures

Upon completion of the data collection phase of the study, the following additional steps were used to process the data:

1. The survey forms were keypunched on magnetic tape and verified at the Survey Support Center. The tape was then transferred to the Michigan Department of Education, Department Services for further data processing.

2. At the Michigan Department of Education, Department Services a series of preliminary edit runs on the computer were made to ascertain that the frequency counts of the responses were accurate and the data were coded in the proper format. Once the correctness of the data was ascertained, three major reports were generated for distribution state-wide. They were:

   T1608 Item Analysis

   X0607 Job Placement Summary

   X0608 Continuing Education Summary

   These reports were generated for vocational graduates, non-vocational graduates and all graduates on a state-wide, CEPD-wide and local district basis.

3. The final step of the data processing procedures was the distribution of the reports to the constituency of the Michigan Department of Education, Vocational-Technical Education Service.

The described process represents the procedures used by the Michigan Department of Education to satisfy their follow-up requirement; however, this researcher obtained the master follow-up tape from the Michigan Department of Education for use in this study.

Subsequent data processing was done on the Michigan State University CDC 6500 computer system. This subsequent processing included sorting the mater file into

occupational education code sequence, compiling and executing an original FORTRAN program and using the Statistical Package for the Social Sciences (SPSS) for the analysis of the data.

Statistical Tools

The data analysis technique used included tabulations and summarizing of responses, two-tailed t-tests for differences between means and two-tailed t-tests for differences between percentages.

The tabulations and summary of responses were used to facilitate the study and analyses of relations by arranging data into tabular frequencies which clearly displayed trends and patterns in the relationship. The tabulations were also used to facilitate statistical analysis such as the t-test.

Student's t was the statistic used to test the differences between the sample means and to test the difference between the percents of the samples. A significant difference was said to exist when there was a difference at the .05 level of confidence. When decisions must be made using sample percents as estimates of universal percents, the problems involved are essentially the same as those inherent in dealing with means. The major difference lies in the fact that the researcher dealt with theoretical sampling distributions of percents rather than means. During the course of this study, where direction was not specified, hypotheses were nondirectional, and two-tailed

t-tests were used. Two-tailed t-tests made it possible for the investigator to tell if the observed differences were significant at the level tested.

Analysis Procedure

The hypotheses examined in this study and the procedures used to retain or not retain them are described below:

Null Hypothesis 1:

> There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed.

A t-test for differences between percentages was used to determine if there was a significant difference.

Null Hypothesis 2:

> There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed full-time in an occupation (area) related to their training.

This hypothesis was tested using 30 hours or more per week as the criterion for full-time employment.

A t-test for differences between percentages was used to compare the two delivery systems in terms of full-time

employment in a related area.

Null Hypothesis 3:

> There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed part-time in an area related to their training.

This hypothesis was tested using 29 hours or less of work per week as the criterion for part-time employment.

A t-test for differences between percentages was used to compare the two delivery systems in terms of part-time employment in a related area.

Null Hypothesis 4:

> There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates unemployed.

A t-test for differences between percentages was used to compare the two delivery systems for the proportion of graduates unemployed.

Null Hypothesis 5:

> There is no significant difference between the graduates of area vocational programs and the graduates of local

vocational programs in the amount of hourly wage they earn.

This hypothesis was examined using two criteria, i.e., hourly wage and type of delivery system.

A t-test for differences between means was used to compare the hourly wage of the area vocational program graduates with that of local vocational program graduates.

Null Hypothesis 6:

There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the degree of their job satisfaction.

A t-test for differences between means was used to compare the job satisfaction of the area vocational program graduates with that of local vocational program graduates.

Null Hypothesis 7:

There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education.

A t-test for differences between percentages was used to compare the two delivery systems in terms of graduates continuing their education.

Null Hypothesis 8:

> There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education full-time in an area related to their vocational training.

A t-test for differences between percentages was used to compare the two delivery systems in terms of graduates continuing their education full-time in an area related to their vocational training.

Null Hypothesis 9:

> There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education part-time in an area related to their vocational training.

A t-test for differences between percentages was used to compare the two delivery systems in terms of graduates continuing their education part-time in an area related to their vocational training.

Summary

The population of this study consisted of all the 1977 graduates of the Michigan Department of Education

Vocational-Technical Education Service approved secondary vocational programs in the State of Michigan.

The data were collected as a normal function of the Michigan Department of Education, Vocational-Technical Education Service annual follow-up survey of secondary graduates.

The sample for this study consisted of two randomly selected groups of graduates who completed their vocational training in an area vocational program or a local vocational program and who responded to the Follow-up Questionnaire.

The data were then analyzed using a t-test for differences between means and differences between percentages.

Chapter Four

FINDINGS

In this chapter, the results of the investigation are presented. The procedures followed were in accordance with the methodology outlined in Chapter Three. Each hypothesis is stated in the null form, followed by a narrative account of the research findings. Tables summarizing the findings for each hypothesis accompany the discussion.

Disposition of the Hypotheses

Null Hypothesis 1

Null Hypothesis 1: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed," was retained on the basis of a computed probability greater than .30 that the t-ratio could be obtained by chance. The computed probability was above the a priori .05 level which signified rejection (see Table 1). This indicated that a higher percentage of employment could not be attributed to the delivery system.

The comparison of employed graduates by occupational area are shown in Table 2. The computed probability for each area was above the a priori .05 level therefore, no significant difference was found between the delivery

Table 1

Comparison of Employed Graduates by Delivery Systems

Delivery System	N	N Emp	% Emp	$\bar{P}$	SD	t	df	p
Area Vocational Program	903	663	73.4	71.7	.002	1.00	>120	.300
Local Vocational Program	3171	2258	71.2					

NOTE: In this and subsequent tables the following symbols will be used: N = number of subjects; $\bar{P}$ = mean percentage; SD = standard deviation; t = t-ratio; df = degrees of freedom; p = level of significance; SE = standard error; M = mean; * = significant at .05.

systems for any of the occupational areas. Although not significant, the occupational area of trade and industry for area vocational program graduates had the highest percentage of graduates employed. The area of home economics for local vocational graduates had the lowest percentage of graduates employed.

Null Hypothesis 2

Null Hypothesis 2: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed full-time in an occupation (area) related to their training," was retained on the basis of a computed probability greater than .10 that the t-ratio

Table 2

Comparison of Employed Graduates by Occupation Area and Delivery Systems

Occupational Area	Delivery System										
	Area Vocational Program			Local Vocational Program							
	N	N Emp	% Emp	N	N Emp	% Emp	$\bar{P}$	SD	t	df	p
Agriculture	43	29	67.4	114	80	70.2	69.4	.083	.34	>120	.700
Distributive	56	37	66.1	673	470	69.8	69.5	.065	.57	>120	.500
Health	103	67	65.0	222	144	64.9	64.9	.057	.02	>120	.900
Home Economics	98	65	66.3	201	122	60.7	62.5	.060	.93	>120	.300
Business & Office	145	100	69.0	1006	703	69.9	69.8	.041	.22	>120	.700
Trade & Industry	458	365	79.9	955	739	77.4	78.1	.024	.98	>120	.300

*Significant at .05

could be obtained by chance. The computer probability was above the a priori .05 level which signified rejection (see Table 3). This indicated that a higher percent of full-time related employment could not be attributed to the delivery system. Local vocational program graduates had a full-time related employment percent of 32.2 and area vocational program graduates had a full-time related employment percent of 29.9.

Table 3

Comparison of Graduates Employed Full-Time in a Related Occupation

Delivery System	N	N Emp	% Emp	$\bar{P}$	SD	t	df	p
Area Vocational Program	903	270	29.9	31.7	.017	1.35	120	.100
Local Vocational Program	3171	1022	32.2					

*Significant at .05

Although the difference was not significant, when the comparison between graduates employed full-time related for each occupation area was made, business and office was found to be significantly different (see Table 4). This indicated that the higher percent of full-time related employment in the business and office area could be attributed to the delivery system.

The researcher's analysis of the data in Table 4 also shows that the occupational area of business and office for local vocational graduates has the highest percentage of graduates employed full-time in an area related to their vocational training. Conversely, agriculture occupations for area vocational graduates had the lowest percentage of graduates employed full-time in a related occupation.

Null Hypothesis 3

Null Hypothesis 3: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates employed part-time in an area related to their training," was retained on the basis of a computed probability greater than .30 that the t-ratio could be obtained by chance. The computed probability was above the a priori .05 level which signified rejection (see Table 5). This indicated that the percent of part-time employment in a related area could not be attributed to the delivery system. Area vocational program graduates had an 8.3 percent rate of part-time related employment and local vocational program graduates had a 9.3 percent rate of part-time related employment. Although the difference is not statistically significant, there was a significant difference between the area vocational graduates and local vocational graduates in the area of agriculture, distributive, health and home economics.

Table 4

Comparison of Graduates Employed Full-Time Related by Occupational Area and Delivery Systems

Occupational Area	Delivery System										
	Area Vocational Program			Local Vocational Program							
	N	N Emp	% Emp	N	N Emp	% Emp	$\bar{P}$	SD	t	df	p
Agriculture	43	7	16.3	114	22	24.6	18.5	.075	1.11	>120	.200
Distributive	56	19	33.9	673	203	30.2	30.5	.065	.57	>120	.500
Health	103	23	22.3	222	58	26.1	24.9	.052	.73	>120	.400
Home Economics	98	19	19.4	201	36	17.9	18.4	.048	.31	>120	.700
Business & Office	145	40	27.6	1006	368	36.6	35.4	.043	2.11	>120	.050*
Trade & Industry	458	162	35.4	955	329	34.5	34.7	.027	.33	>120	.700

*Significant at .05

Table 5

Comparison of Graduates Employed Part-Time in a Related Occupation

Delivery System	N	N Emp	% Emp	$\bar{P}$	SD	t	df	p
Area Vocational Program	903	75	8.3	9.1	.011	.926	120	.300
Local Vocational Program	3171	295	9.3					

The researcher's analysis of the data in Table 6 indicate the t-ratios which were compared with the absolute t-ratio of 1.96 for each occupation area.

Without considering significance, the health occupations for local vocational graduates has the highest percentage of graduates employed part-time in an occupational area related to the graduates' vocational training. On the other hand, agriculture occupations for local vocational graduates has the lowest percentage of graduates employed part-time in an area related to their training.

Null Hypothesis 4

Null Hypothesis 4: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates unemployed," was not retained on the basis of a computed probability of less than .02 that the t-ratio could be obtained by chance. The computed probability was

Table 6

Comparison of Graduates Employed Part-Time Related by Occupational Area and Delivery Systems

Occupational Area	Delivery System										
	Area Vocational Program			Local Vocational Program							
	N	N Emp	% Emp	N	N Emp	% Emp	$\bar{P}$	SD	t	df	p
Agriculture	43	6	13.9	114	3	2.6	5.7	.009	12.98	>120	.001*
Distributive	56	6	10.7	673	58	8.6	8.8	.011	1.97	>120	.050*
Health	103	8	7.8	222	33	14.9	12.6	.013	5.68	>120	.001*
Home Economics	98	9	9.2	201	26	12.9	11.7	.012	3.08	>120	.010*
Business & Office	145	16	11.0	1006	104	10.3	10.4	.012	.61	>120	.500
Trade & Industry	458	30	6.5	955	71	7.4	7.1	.009	.93	>120	.300

*Significant at .05

below the a priori .05 level which signified rejection (see Table 7). This indicated that there was a significant difference between the unemployment rates for the delivery systems. The researcher's analysis of the data in Table 7 shows that the percentage for area vocational program graduates was 13.3 and the unemployment percentage for local vocational program graduates was 10.3.

Table 7

Comparison of Unemployed Graduates by Delivery Systems

Delivery System	N	N Unemployed	% Unemployed	$\bar{P}$	SD	t	df	p
Area Vocational Program	903	120	13.3	10.9	.012	2.55	>120	.020
Local Vocational Program	3171	446	10.3					

When the hypothesis was tested by occupational areas, home economics was the only area which had no significantly different percent of unemployment (see Table 8).

The researcher's analysis of the data in Table 8 also shows that distributive occupations for area vocational graduates has the highest percentage of unemployment whereas, agriculture occupations for local vocational graduates has the lowest percentage of unemployment.

Null Hypothesis 5

Null Hypothesis 5: "There is no significant difference between the graduates of area vocational programs and

Table 8

Comparison of Unemployed Graduates by Occupational Area and Delivery Systems

Occupational Area	Delivery System										
	Area Vocational Program			Local Vocational Program							
	N	N Unemployed	% Unemployed	N	N Unemployed	% Unemployed	$\bar{P}$	SD	t	df	p
Agriculture	43	7	16.3	114	10	8.8	10.8	.012	6.41	>120	.001*
Distributive	56	12	21.4	673	76	11.3	12.1	.012	8.21	>120	.001*
Health	103	13	12.6	222	23	10.4	11.1	.012	1.86	>120	.050*
Home Economics	98	19	19.4	201	36	17.9	18.4	.015	1.03	>120	.300
Business & Office	145	16	11.0	1006	91	9.1	9.2	.011	1.74	>120	.050*
Trade & Industry	458	53	11.6	955	90	9.4	10.1	.011	1.94	>120	.050*

*Significant at .05

the graduates of local vocational programs in the amount of hourly wage they earn," was retained on the basis of a computed probability of 0.421 that the t-ratio could be obtained by chance. The 0.421 probability was above the a priori .05 level which signified non retention (see Table 9). This indicated that a higher hourly wage could not be attributed to the delivery system. Area vocational program graduates earned $3.94 per hour and local vocational program graduates earned $3.75 per hour.

Table 9

Comparison of Hourly Wage by Delivery System

Delivery System	N	M	SD	SE	T	df	p
Area Vocational Program	468	3.94	4.79	.221	-.81	557	.421
Local Vocational Program	1735	3.75	2.82	.068			

The researcher's analysis of the data in Table 10 indicate that there is no significant difference in the wages earned when they tested for each occupational area.

The highest wage was earned in the occupational area of business and office for local vocational graduates. The lowest wage was earned in the occupational area of home economics for area vocational graduates.

Table 10

Comparison of Hourly Wage by Occupational Area and Delivery System

Delivery System	N	M	SD	SE	T	df	p
Agriculture							
AVP	18	3.85	1.56	.367	.72	71	.474
LVP	55	4.17	1.65	.222			
Distributive							
AVP	26	3.76	2.09	.410	.13	34	.896
LVP	348	3.70	3.12	.167			
Health							
AVP	53	3.08	1.26	.174	.77	163	.445
LVP	121	3.29	2.30	.209			
Home Economics							
AVP	49	3.01	.778	.111	1.49	108	.138
LVP	96	3.65	3.99	.408			
Business and Office							
AVP	70	4.63	11.45	1.37	.97	69	.336
LVP	587	3.31	1.01	.042			
Trade and Industry							
AVP	252	4.12	2.26	.142	1.05	732	.293
LVP	528	4.35	3.70	.161			

*Significant at .05

Null Hypothesis 6

Null Hypothesis 6: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the degree of their job satisfaction," was retained on the basis of a computed probability of 0.059 that the t-ratio could be obtained by chance. The computed probability of 0.59 was above the a priori .05 level which signified retention (see Table 11). This indicated that difference in job satisfaction could not be attributed to the delivery system.

Table 11

Comparison of Job Satisfaction by Delivery System

Delivery System	N	M	SD	SE	T	df	p
Area Vocational Program	580	73.02	28.90	1.20	1.89	2710	.059
Local Vocational Program	2132	75.46	27.21	.59			

*Significant at .05

The researcher's analysis of the data in Table 12, also shows no significant difference in job satisfaction for any of the occupational areas.

The highest degree of mean job satisfaction was found in the occupational area of business and office for local vocational graduates. The lowest degree of mean job satisfaction was found in the area of home economics for area vocational graduates.

Table 12

Comparison of Job Satisfaction by Occupational Area and Delivery System

Delivery System	N	M	SD	SE	T	df	p
Agriculture							
AVP	24	68.08	30.36	6.19	1.15	94	.252
LVP	72	75.99	28.68	3.38			
Distributive							
AVP	31	74.29	28.85	4.82	.02	477	.986
LVP	448	74.37	25.18	1.19			
Health							
AVP	58	73.09	25.38	3.33	.79	196	.430
LVP	140	76.49	28.44	2.40			
Home Economics							
AVP	56	66.77	34.26	4.58	1.40	84	.167
LVP	112	73.94	24.69	2.33			
Business and Office							
AVP	90	73.42	29.67	3.13	1.60	108	.111
LVP	681	78.70	26.64	1.02			
Trade and Industry							
AVP	321	74.24	28.39	1.58	.69	998	.493
LVP	679	72.91	28.76	1.10			

*Significant at .05

Null Hypothesis 7

Null Hypothesis 7: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education," was not retained on the basis of a computed probability less than .001 that the t-ratio could be obtained by chance. The computed probability was below the a priori .05 level which signified non retention (see Table 13). This indicated that difference between the percentage of graduates continuing their education was significant.

Table 13

Comparison of Graduates Continuing Education by Delivery Systems

Delivery System	N	N Cont.	% Ed.	$\bar{P}$	SD	t	df	p
Area Vocational Program	903	206	22.8	33.6	.018	7.75	120	.001*
Local Vocational Program	3171	1161	36.6					

*Significant at .05

The researcher's analysis of the data in Table 14 indicate that the difference in percentage is significant for all occupational areas except agriculture, and business and office.

The greatest percentage of graduates continuing their education had their training in the health occupations in

Table 14

Comparison of Graduates Continuing Education by Occupational Area and Delivery System

Occupational Area	Delivery System										
	Area Vocational Program			Local Vocational Program							
	N	N Cont. Ed.	%	N	N Cont. Ed.	%	$\bar{P}$	SD	t	df	p
Agriculture	43	7	16.3	114	32	28.1	24.8	.078	1.51	>120	.100
Distributive	56	12	21.4	673	248	36.8	35.7	.067	2.30	>120	.050*
Health	103	35	33.9	222	112	50.5	45.2	.060	2.77	>120	.010*
Home Economics	98	14	14.3	201	64	31.8	26.0	.054	3.22	>120	.010*
Business & Office	145	49	33.8	1006	424	42.1	41.1	.044	1.89	>120	.058
Trade & Industry	458	89	19.4	955	281	29.4	26.2	.025	4.00	>120	.001*

*Significant at .05

local vocational programs. Conversely, the smallest percentage had their training in the home economics occupations in area vocational programs.

Null Hypothesis 8

Null Hypothesis 8: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education full-time in an area related to their vocational training," was not retained on the basis of a computed probability less than .001 that the t-ratio could be obtained by chance. The computed probability was below the a priori .05 level which signified non retention (see Table 15). This indicated that the difference in percentage favoring the graduates of the local vocational program was significant.

Table 15

Comparison of Graduates Continuing Education Full-Time in a Related Occupation

Delivery System	N	N Cont.	% Ed.	$\bar{P}$	SD	t	df	p
Area Vocational Program	903	113	12.5	17.1	.014	4.15	>120	.001*
Local Vocational Program	3171	582	18.4					

*Significant at .05

Although the overall difference was significant, the analysis of the data in Table 16 indicates that the only only occupational area where the percentage of graduates continuing their education in an area related to their training was significant was home economics.

The analysis of Table 16 also indicates that the health occupations in local vocational programs has the highest percentage of graduates continuing their education full-time in a related program of study. The program which had the lowest percentage is agriculture occupations taught in area vocational programs.

Null Hypothesis 9

Null Hypothesis 9: "There is no significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the percentage of graduates continuing their education part-time in an area related to their vocational training," was not retained on the basis of a computed probability less than .05 that the t-ratio could be obtained by chance. The computed probability was less than the a priori .05 level which signified non retention (see Table 17). This indicated that a higher percent of part-time related continuing education could not be attributed to the delivery system.

The analysis of Table 18 indicates that trade and industry was the only occupational area where the difference in part-time related continuing education was significant.

Table 16

Comparison of Graduates Continuing Education Full-Time in a Related Program of Study by Occupational Area and Delivery System

Occupational Area	Delivery System										
	Area Vocational Program			Local Vocational Program							
	N	N Cont.	% Ed.	N	N Cont.	% Ed.	$\bar{P}$	SD	t	df	p
Agriculture	43	2	4.65	114	18	15.8	12.7	.06	1.34	>120	.100
Distributive	56	6	10.7	673	118	17.5	17.5	.053	1.28	>120	.200
Health	103	24	23.3	222	59	26.6	28.6	.054	.61	>120	.400
Home Economics	98	6	6.1	201	32	15.9	12.7	.041	2.39	>120	.020*
Business & Office	145	31	21.4	1006	227	22.6	22.4	.037	.32	>120	.700
Trade & Industry	458	44	9.6	955	118	12.4	11.5	.018	1.55	>120	.100

*Significant at .05

Table 17

Comparison of Graduates Continuing Education Part-Time in a Related Occupation by Delivery System

Delivery System	N	N Cont.	% Ed.	$\bar{P}$	SD	t	df	p
Area Vocational Program	903	27	3.0	4.9	.008	2.38	120	.05
Local Vocational Program	3171	171	5.4					

*Significant at .05

A further analysis of Table 18 indicates that trade and industry for local vocational programs and health for area vocational programs has the highest percentage of graduates continuing their education in a related program of study. Agriculture, as an occupational area, has the lowest percentage of graduates continuing their education part-time in a related program of study.

Summary

In summary, the findings, as shown in Table 19, indicate that there is no significant difference between the two groups in the overall percentage of graduates employed. When the two groups were compared by the percentage of graduates employed full-time in a related occupation there was found to be no significant difference, however, in the area of business and office the difference was significant in favor of graduates of local vocational programs.

Table 18

Comparison of Graduates Continuing Education Part-Time in a Related Program of Study by Occupational Area and Delivery System

Occupational Area	Delivery System										
	Area Vocational Program			Local Vocational Program							
	N	N Cont.	% Ed.	N	N Cont.	% Ed.	$\bar{P}$	SD	t	df	p
Agriculture	43	0	---	114	3	2.6	---	---	---	---	---
Distributive	56	2	3.6	673	30	4.5	4.4	.029	.31	120	.700
Health	103	5	4.9	222	9	4.1	4.3	.024	.33	120	.700
Home Economics	98	2	2.0	201	8	3.9	3.3	.022	.86	120	.300
Business & Office	145	6	4.1	1006	74	7.4	6.9	.023	1.43	120	.100
Trade & Industry	458	12	2.6	955	47	4.9	4.2	.011	2.02	120	.050*

Significant at .05

In terms of overall part-time related employment there was no significant difference between the two groups; however, there was a significant difference found in the occupational areas of agriculture and distributive which favored the area vocational program and a significant difference in health and home economics which favored local vocational programs.

In the area of unemployment there was a significant difference in the percentage of graduates unemployed which favored the local vocational program. When the hypothesis was examined by occupational areas, home economics was the only area which had no significantly different percentage of unemployment.

The higher wage earned by area vocational program graduates was found not to be significantly different from the wage of the local vocational program graduates.

There was also no significant difference found in the degree of job satisfaction between the graduates of area vocational programs and local vocational program graduates.

In the area of continuing education there was a significant difference found in the percentage of graduates continuing their education and the difference favored graduates of local vocational programs. This significant difference also was found to exist in all occupational areas except agriculture.

There was a significant difference in the percentage of graduates continuing their education full and part-time

in areas related to their secondary training. The data show, in the case of those graduates continuing their education full-time in a related area, that the only occupational area where the percentage was significant was in the area of home economics. For those graduates continuing their education part-time in an area related to their training, the only occupational area that was significant was trade and industry.

Table 19

Occupational Achievement Significance Matrix

Occupational Achievement Indicies	Agriculture	Distributive	Health	Home Economics	Business	Trade & Industry	Overall Significance
1. Employment	No	No	No	No	No	No	No
2. Full-Time Employment	No	No	No	No	Yes (L)	No	No
3. Part-Time Employment	Yes (A)	Yes (A)	Yes (L)	Yes (L)	No	No	No
4. Unemployment	Yes (L)	Yes (L)	Yes (L)	No	Yes (L)	Yes (L)	Yes (L)
5. Wage	No	No	No	No	No	No	No
6. Satisfaction	No	No	No	No	No	No	No
7. Continuing Education	No	Yes (L)	Yes (L)	Yes (L)	Yes (L)	Yes (L)	Yes (L)
8. Full-Time Related	No	No	No	Yes (L)	No	No	Yes (L)
9. Part-Time Related	--	No	No	No	No	Yes (L)	Yes (L)

Note: (A) = Favors Area Vocational Program

(L) = Favors Local Vocational Program

Chapter Five

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The author presents in this chapter (1) a summary of the problem, procedures and findings of the study; (2) conclusions derived from the findings as presented in Chapter Four with considerations of limitations and assumptions of the study and (3) recommendations based on the conclusions.

Summary

This study was a follow-up investigation of the occupational achievement of area vocational program graduates and local vocational program graduates in Michigan who completed high school in June, 1977.

The researcher's purpose in this study was to compare the occupational achievement of students who graduated from area vocational programs with the occupational achievement of students who graduated from local vocational programs. This comparison was done to ascertain if there was a difference between the two delivery systems and which one held the advantage.

The data used in this study were collected by the Michigan Department of Education, Vocational-Technical

Education Service Follow-Up System. The questionnaire and data collection procedures represent the methods used by that organization to gather information.

The sample of students used in this study consisted of a random sample of 4074 nineteen hundred and seventy-seven high school graduates who completed their vocational training in a Michigan Department of Education, Vocational-Technical Education Service approved vocational program and responded to the questionnaire. The graduates were divided into two groups based upon the type of delivery system used to impart their vocational training. The two groups were further stratified by occupational education code. The occupation education codes were then matched for the two groups.

For the purpose of comparing the occupational achievement of area vocational program graduates and local vocational program graduates, nine indicies were developed as the criteria for this study. They were: (1) current earnings; (2) employment status, (3) full and (4) part-time related; (5) unemployment; (6) post-secondary status, (7) full and (8) part-time related and (9) job satisfaction.

The results of various analyses produced several findings in this study.

I. Occupational Activities of Area Vocational Program and Local Vocational Program Graduates.

A. Employment Status

1. Seventy-three percent of the area vocational graduates are employed, compared to seventy-one percent of the local vocational graduates.
2. Thirty-two percent of the local vocational graduates are employed full-time in a related occupation, compared to almost thirty percent for area vocational graduates.
3. Over nine percent of the local vocational graduates are employed part-time in a related occupation, whereas, a little over eight percent are area vocational graduates.
4. Over thirteen percent of the area vocational graduates are unemployed, compared to the ten percent for local vocational graduates.
5. Of the area vocational program graduates, the largest percent working full-time in a related occupation were trained in trade and industry courses; the largest percent unemployed were trained in distributive courses.
6. Of the local vocational program graduates, the largest percent working full-time in a related occupation were trained in business and office courses; the largest percent unemployed were trained in wage earning home economics.

B. Post-secondary Status

1. Thirty-six percent of local vocational graduates are continuing their education, compared to almost twenty-three percent of the area vocational graduates.
2. Over eighteen percent of the local vocational graduates are continuing their education full-time in an area related to their training compared to over twelve percent of the area vocational graduates.
3. Over five percent of the local vocational graduates are continuing their education part-time in an area related to their training, compared to only three percent for local vocational graduates.
4. Of the local vocational graduates, the largest percent continuing their education full-time in an area related to their training were trained in health courses; the smallest percent were trained in the trade and industry courses.
5. Of the area vocational graduates, the largest percent continuing their education full-time in an area related to their training also were trained in health courses, the smallest percent were trained in agriculture courses.
6. Of the local vocational graduates, the largest percent continuing their education part-time in an area related to their training were

trained in business and office courses, the smallest percent were trained in agriculture courses.

7. Of the local vocational graduates, the largest percent continuing their training were trained in health courses, the smallest percent were trained in agriculture.

C. Current Earnings

1. The average hourly wage earned by area vocational graduates was $3.94, compared to the $3.75 earned by local vocational graduates.
2. Of the local vocational graduates the highest wage earners were those graduates trained in trade and industry courses, the lowest wage was earned by graduates of health occupations.
3. Of the area vocational graduates the highest wage earners were those graduates trained in business and office courses, the lowest wage was earned by graduates of home economics.

D. Job Satisfaction

1. The job satisfaction index for graduates of the local vocational program was 75.46, compared to the 73.02 for area vocational graduates.
2. For local vocational graduates, the highest job satisfaction was in the area of business

and office, the lowest was in the area of trade and industry.

3. For area vocational graduates, the highest job satisfaction was in the area of distributive, the lowest was in the area of home economics.

II. Comparison of Occupational Achievement Area Vocational and Local Vocational Program Graduates.

A. Comparison of the sample size of the two groups of graduates

1. The local vocational graduates are made up of 3171 graduates who were randomly selected from graduates who had their training in local high school programs.

2. The area vocational graduates are made up of 903 graduates who had their training in area vocational programs.

B. Comparison of Employment Status

1. Employed - When the two groups were compared on the proportion of employment, no significant difference was found. This is shown by a t-ratio less than the absolute value of 1.96 and greater than 120 degrees of freedom.

2. Related Employment - The local vocational graduates held proportionately more full-time related and part-time related jobs than the

area vocational graduates. However, neither of the differences was statistically significant.

3. Unemployment - When the two groups were compared on the proportion of unemployment, area vocational program graduates had a higher proportion of unemployed graduates than local vocational graduates and the difference was statistically significant.

C. Comparison of Post-secondary Education Status

1. Continuing Education - When the two groups were compared to the proportion of graduates continuing their education, the local program graduates receiving post-secondary training were proportionately higher than area program graduates and the difference between the groups was significant.

2. Related Post-secondary Training - When the two groups were compared on the proportion of graduates continuing their education full-time in an area related to their training, local program graduates had a higher proportion continuing their education than area program graduates and the difference was significantly different. This same situation was found to be true for local program graduates continuing

their education part-time in an area related to their training.

D. Comparison of Current Earnings

The average wage earned by area program graduates was $3.94 per hour, compared to $3.75 per hour for local program graduates. However, the probability of greater than .05, with 120 degrees of freedom, indicates that there are no statistically significant differences.

E. Comparison of Job Satisfaction

The local program graduates expressed a higher degree of job satisfaction than the area program graduates, however, the differences in the degrees of job satisfaction were not statistically significant.

Findings

The researcher's primary objective in this study was to provide comparative data showing whether the occupational achievement in the business and industrial world was any better for the graduates of area vocational programs when compared to the graduates of local vocational programs.

The researcher's findings presented in Chapter Three indicated that the differences between the delivery systems of vocational education were significant for some of the indicies of occupational achievement. Those include the indicies of unemployment and post-secondary status (full

and part-time related). Those indicies of occupational achievement found not significant were hourly wage, job satisfaction and employment status (full and part-time related).

When the occupational achievement of the two groups was compared by aggregating the data from each occupational area, the results of the study showed that unemployment was lower and a higher proportion of graduates continued their training when they had their vocational education in a local vocational program. On the other hand, the results were clearer and somewhat more conclusive when the occupational achievement was viewed by each occupational area.

The data for the agricultural occupations indicated that for six of the indicies there was no advantage for either delivery system. However, there was an advantage favoring the area vocational programs in part-time related employment and an advantage favoring local vocational programs in the amount of unemployed graduates.

The data for the distributive occupations indicate that for six of the indicies, there was no advantage for either delivery system. However, the proportion of part-time related employment favored area vocational programs and the proportion of unemployment and continuing education favored the local vocational programs.

The data for the health occupations indicate that for six of the indicies there was no advantage for either delivery system. However, the proportion of part-time

employment, unemployment and continuing education favored local vocational programs.

The data for the home economics occupations indicate that for six of the indicies, there was no advantage for either delivery system. However, the proportion of part-time related employment, continuing education, and continuing education full-time in a related occupation favored the local vocational program.

The data for business and office occupations indicate the for six of the indicies there was no advantage for either delivery system. However, the proportion of full-time related employment, unemployment and continuing education favored local vocational programs.

The data for the trade and industry occupations indicate that for six of the indicies there was no advantage for either delivery system. However, the proportion of unemployment, continuing education and continuing education part-time in a related occupation favored local vocational programs.

Conclusions

Given that there is no overall significant difference between the graduates of area vocational programs and the graduates of local vocational programs in the proportion of graduates employed, employed full-time in a related occupation, employed part-time in a related occupation, wages, and job satisfaction; and there is an overall significant difference in the proportion of unemployment,

continuing education, continuing education full-time in a related occupation and continuing education in a part-time related occupation favoring local vocational program; the investigator can conclude that:

1. Those graduates who had their vocational training in a local vocational program have better occupational achievement than those graduates who had their training in an area vocational program in the state of Michigan.
2. Those students enrolled in or planning to enroll in business and office subjects and whose primary objective is to secure full-time employment in an area related to their training should be advised to have their vocational training in a local vocational program.
3. Those students enrolled in or planning to enroll in health and home economics subjects and whose primary objective is to secure part-time employment in an area related to their training should be advised to have their vocational training in a local vocational program.
4. Those students enrolled in or planning to enroll in agriculture, distributive, health, business and office or trade and industry subjects and are concerned about the unemployment rate should be advised to have their vocational training in a local vocational program.

5. Those students enrolled in or planning to enroll in distributive, health, home economics, business and office or trade and industry subjects and who are planning to continue their education beyond the secondary level should be advised to have their vocational training in a local vocational program.
6. Those students enrolled in or planning to enroll in agriculture or distributive subjects and whose primary objective is to secure part-time employment in an area related to their training should be advised to have their vocational training in an area vocational program.

Recommendations

The researcher's findings in this study did not merely serve to satisfy the academic curiosity of the investigator. They were more meaningful in providing facts about the occupational achievement of area vocational program graduates and local vocational program graduates for policy makers, vocational educators, and the concerned public. The following recommendations will provide a direction for some aspects of vocational education.

1. It is recommended that the State Department of Education take a leadership role in providing information to high school students, counselors, teachers, and administrators on the specific

differences between area vocational programs and local vocational programs.

2. It is recommended that local educational agencies study the relationship between their program offerings and the job market in their area.
3. It is recommended that similar studies be conducted which use the experimental design and control for such factors as sex, race, teaching methodology, location, academic achievement and support services.
4. It is recommended that a cost benefit analysis be made for the two delivery systems to determine their cost effectiveness.
5. It is recommended that thorough needs assessments be made for each occupational area before area vocational or local vocational programs are reduced, modified or expanded.

APPENDIX A

FE-4045-A
9 77

Michigan Department of Education

Please return survey form to:

_____
_____
_____
_____

SCHOOL DISTRICT LABEL

FOLLOW-UP SURVEY OF 1977 GRADUATES

By answering the following questions you can help us to plan better educational programs. The information you return will be used for educational purposes only. Thank you for your cooperation and assistance in completing this survey.

PLEASE ANSWER THE ITEMS IN THIS SURVEY BY PLACING AN "X" IN THE BOX NEXT TO THE RESPONSE OF YOUR CHOICE.

PART 1

1. Check ALL that apply.

   A. 15 ☐ 1 I am now employed.
   I work about _____ 16 hours per week
   B. 18 ☐ 1 I am unemployed and looking for a job.
   C. 19 ☐ 1 I am a full time student.
   ☐ 2 I am a part time student.
   D. 20 ☐ 1 I am a homemaker.
   E. 21 ☐ 1 I am in (or will be by April 1978) the military service.

2. Check the WORD that best describes how well your high school (or area vocational education center) courses prepared you to do what you are doing now. (Check ONE only.)

   22 ☐ 1 Excellent
   ☐ 2 Good
   ☐ 3 Fair
   ☐ 4 Poor

3. Sex:

   23 ☐ 1 Male
   ☐ 2 Female

4. Racial-Ethnic Group:

   24 ☐ 1 American Indian or Alaskan Native or Native American
   ☐ 2 Black, not of Latino or Hispanic origin
   ☐ 3 Asian or Pacific Islander
   ☐ 4 Latino or Hispanic
   ☐ 5 White, not of Latino or Hispanic origin

IF YOU ARE EMPLOYED FULL OR PART TIME NOW, OR IF YOU ARE IN THE MILITARY, PLEASE COMPLETE PART 2 OF THE SURVEY. OTHERWISE GO DIRECTLY TO PART 3, UNEMPLOYED — SEEKING WORK.

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PART 2 — EMPLOYED

Name of Company or Branch of Military	City	State
Your Job Title		

5. In addition to training you, what did your HIGH SCHOOL or AREA VOCATIONAL EDUCATION CENTER do to HELP you FIND a job?
(Check ALL that apply.)

25 ☐ Told me about job openings
26 ☐ Sent me for an interview
27 ☐ Taught me to fill out a job application
28 ☐ Gave information about me to my employer
29 ☐ Other (please specify) _____
30 ☐ None of the above

6. Who helped you to find a job?
(Check ALL that apply.)

31 ☐ High school or area vocational education center counselor
32 ☐ Teacher or co-op coordinator
33 ☐ Parent, other relative or friend
34 ☐ High school or area vocational education center placement office
35 ☐ Public employment agency
36 ☐ Private employment agency
37 ☐ College placement office
38 ☐ Other (please specify) _____
39 ☐ No one but myself

7. On your present job, how much do you use the vocational training you received in high school or area vocational education center?
(Check ONE only.)

40 ☐ A lot
☐ Some
☐ Hardly any
☐ None

8. Overall, how satisfied are you with your present job?
(Check ONE only.)

41 ☐ Very satisfied
☐ Somewhat satisfied
☐ Not very satisfied
☐ Not at all satisfied

9. On my present job I am paid about $ ____ per hour.
42

IF YOU ARE PRESENTLY UNEMPLOYED AND ARE LOOKING FOR A JOB, COMPLETE PART 3 OF THE SURVEY. OTHERWISE, GO DIRECTLY TO PART 4 — FURTHER EDUCATION.

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PART 3 — UNEMPLOYED — SEEKING WORK

10. Whom have you asked for help in finding a job?
(Check ALL that apply.)

46 ☐ High school or area vocational education center counselor
47 ☐ Teacher or co-op coordinator
48 ☐ Parent, other relative or friend
49 ☐ High school or area vocational education center placement office
50 ☐ Public employment agency
51 ☐ Private employment agency
52 ☐ College placement office
53 ☐ Other (please specify) _____
54 ☐ None of the above

IF YOU ARE NOW ATTENDING SCHOOL OR ARE ENROLLED IN A TRAINING OR APPRENTICESHIP PROGRAM, PLEASE COMPLETE PART 4 OF THE SURVEY. OTHERWISE, GO DIRECTLY TO PART 5 — COMMENTS.

PART 4 — FURTHER EDUCATION

Name of School Training or Apprentice Program	City	State

11. Check the type of school or program you are now attending.
(Check ONE only.)

55 ☐ 2 year college (vocational-technical training program)
☐ 2 year college (liberal arts program)
☐ 4 year college or university
☐ Business or trade school
☐ Apprentice Program
☐ Other (please specify.) _____

12. My major area of study (or training) is _____

13. In your major area of study (or training), how much do you use the vocational training you received in high school or area vocational education center?
(Check ONE only.)

56 ☐ A lot
☐ Some
☐ Hardly any
☐ None

14. Check all who assisted you in finding and/or getting into your present educational or training program.
(Check ALL that apply.)

57 ☐ High school or area vocational education center counselor
58 ☐ Teacher or co-op coordinator
59 ☐ Parent, other relative or friend
60 ☐ High school or area vocational education center placement office
61 ☐ Training or apprentice program recruiter
62 ☐ Other (please specify) _____
63 ☐ No one but myself

ANY COMMENTS OR SUGGESTIONS YOU MAY HAVE CAN BE WRITTEN IN PART 5. (INCLUDE ANY TYPE OF ASSISTANCE YOU MIGHT NEED NOW AND LIST THE TYPES OF ASSISTANCE OR PROGRAMS YOU HAD IN YOUR SCHOOL THAT WERE MOST BENEFICIAL TO YOU.)

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PART 5 — COMMENTS

Comments and/or Suggestions:

SCHOOL USE ONLY

1
64

If an AREA CENTER, report student's home district identification. CEPD CODE 73

2. O E. Code 65

Information obtained by telephone contact 80

Name of Program

3

4
72

APPENDIX B

O. E. CODE

COMPOSITION OF OCCUPATIONAL AREAS

Occupational Areas

Agriculture (6)

- 01.0100 Production Agriculture
- 01.0300 Agriculture Mechanics
- 01.0301 Ag Power & Machinery
- 01.0500 Ornamental Horticulture
- 01.0504 Landscaping
- 01.0600 Agriculture Resources

Distributive (3)

- 04.0100 Advertising Services
- 04.0600 Food Distribution
- 04.0800 General Merchandise

Health (7)

- 07.0101 Dental Assistant
- 07.0203 Medical Lab Assistant
- 07.0302 Practical Nursing
- 07.0303 Nursing Assistant Aide
- 07.0904 Medical Office Assistant
- 07.9802 Health Occupation Cluster
- 07.9900 Health Occupation Education

Home Economics (5)

09.0201 Child Care & Guidance

09.0202 Cloth Mgt Prod Service

09.0203 Food Mgt Production & Services

09.0204 Home Furnishing

09.0205 Institute Home Mgt

Office (13)

14.0102 Bookkeepers

14.0105 Tellers

14.0201 Computer & Console Operators

14.0202 Peripheral Equip Operators

14.0203 Programmers

14.0298 Computer & Console Operators

14.0303 General Office Clerks

14.0703 Stenographers

14.0797 Medical Secretary

14.0901 Clerk Typist

14.9700 Clerical Lab

14.9800 Steno/Clerical Lab

14.9900 Office Occupation Clerical/Sec Lab

Trade and Industry (23)

17.0100 Air Conditioning

17.0200 Appliance Repair

17.0301 Body and Fender

17.0302 Auto Mechanics

17.0700 Commercial Art Occupations

17.1000 Construction & Maintenance (in school)

17.1001 Carpentry

17.1004 Electricity

17.1098 Construction & Maintenance (on-site)

17.1100 Custodial Services

17.1300 Drafting Occupations

17.1398 Eng/Architectural Drafting

17.1400 Electrical Occupations

17.1500 Electronics Occupations

17.1503 Radio and Television

17.1598 Radio & Television Broadcasting

17.1900 Graphic Arts Occupations

17.2302 Machine Shop

17.2306 Welding and Cutting

17.2602 Cosmetology

17.2802 Law Enforcement

17.3100 Small Engines

17.3601 Millwork-Cabinet Making

Grand Total (57)

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