ASSESSING EMPLOYER-EMPLOYEE SATISFACTION WITH TRAINING AT CANADIAN VALLEY AREA VOCATIONAL-TECHNICAL SCHOOL

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PREFACE

This study was concerned with a follow-up study of graduates from the trade and industrial education programs at Canadian Valley Area Vocational-Technical School, El Reno, Oklahoma. The population involved was 142 randomly selected graduates from the 1978, 1979, and 1980 school years.

The primary goal of the study was to evaluate trade and industrial education curriculum to improve the quality of the programs, to better prepare graduates, and to fulfill the employment requirements of businesses and industries in the area school district.

The author wishes to express his appreciation to his major advisor, Dr. Lloyd Wiggins, for his guidance and assistance throughout this study. Appreciation is also expressed to Dr. Clyde Knight, Dr. Kenneth St. Clair, Dr. Zed DeVaughan, Jr., and Dr. Jim Key for their invaluable assistance.

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CHAPTER I

INTRODUCTION

Vocational educators are facing a great challenge today: a challenge from lawmakers for accountable quality programs and justification for increased funding; a challenge of a struggling inflated economy with many unskilled or improperly trained workers; and a challenge at the local level to provide meaningful educational experiences that lead to fruitful employment of graduates. All these challenges focus on the need for a productive, quality labor force trained to meet the requirements of business and industry. If vocational education is to be responsible to these challenges and meet the needs of the program graduates and the market, it must develop a pipeline of communication between educators, employers and employees. The assessment of employer satisfaction with vocational education graduates is a primary goal of vocational education. Employer-employee surveys, therefore, are important to vocational educators as a means of determining the success of their programs.

It is the responsibility of the local vocational educator to initiate the contact with employers and employees in order to feel the pulse of local business and industry and to identify needed improvements, bolster recruitment, improve student guidance services, satisfy legislative mandate, and determine what is expected of employees. This coordination between employers and graduates is a primary goal. The

achievement of this goal is the basic premise of this study.

Statement of the Problem

It is the responsibility of the local vocational educator to poll program graduates and business and industry to determine if the programs are accomplishing the task for which they were developed.

The business world and the school community expect educational institutions to be responsive to their needs and if vocational-technical education is to meet these expectations, appropriate data are needed for the modification of programs that reflect these occupational requirements. The problem is a lack of information concerning how the employers and employees perceived the training program at Canadian Valley Area Vocational-Technical School.

Purpose

The purpose of this study was to assess employer-employee satisfaction with trade and industrial programs at Canadian Valley Area Vocational School regarding the following eight skills areas: (1) manual job skills, (2) technical knowledge, (3) mathematical skills, (4) communication skills, (5) reading and interpretive skills, (6) clerical skills, (7) personal relations skills, and (8) supervisory skills. These skills areas were rated over four questions concerning (1) importance of the skill to the job, (2) skill rating of the employee, (3) relative preparation of the employee, and (4) need for further instruction or training in the eight skill areas. It is hoped this study will provide more definitive guidelines for future programs, improvement or curriculum design, and enhance Canadian Valley Area

Vocational-Technical School's mission of preparing people for meaningful employment.

Objectives of the Study

The objectives of this study were as follows:

1. To determine the employer-employee assessment of the effectiveness of the trade and industrial training programs at Canadian Valley Area Vocational-Technical School.

2. To determine the degree of agreement between employers' and former students' opinions in the eight skill areas.

3. To provide a basis for making decisions on future program development and revision.

Research Questions

To achieve the objectives of this study, the following research questions were formulated:

1. How do vocational-technical graduates perceive the importance of the eight skill areas to their job?

2. How do employers perceive the importance of the eight skill areas to the job held by their employees?

3. How do the perceptions of the employer compare with those of the employee on the importance of the eight skill areas to the job?

4. What are the perceptions of the employees in regard to their skill rating in the eight skill areas?

5. What are the perceptions of the employers in regard to employee skill rating in the eight skill areas?

6. How do the employees' perceptions of the skill rating in the

eight skill areas compare with those of the employers?

7. What are the perceptions of the employees in regard to their relative preparation compared to other entry-level workers in the eight skill areas?

8. What are the perceptions of the employers in regard to the relative preparation of the employee compared to other entry-level workers in the eight skill areas?

9. Is there a difference between the employers' and employees' perception of the relative preparation of the employee compared to other entry-level workers who have had other training?

10. What are the perceptions of the employee in regard to the need for more instruction or training in the eight skill areas?

11. What are the perceptions of the employer in regard to the need for more instruction or training in the eight skill areas?

12. How do the employer and employee compare on the perceived need for more instruction or training in the eight skill areas?

13. Is there a difference between self-employed former students and those former students employed by others in their perception of the importance of the eight skill areas to the job?

Assumptions

The following assumptions were made for the purpose of this study:

1. The respondents understood the items on the questionnaire.

2. All respondents of the employee questionnaire entered Canadian Valley Area Vocational-Technical School as juniors and satisfactorily completed the two-year trade and industrial training

program in their respective areas.

3. This study was limited to the resources and time span available to the researcher at the time of this study.

Limitation as to Study Population

The population of this study was limited to 1978, 1979, and 1980 graduates of trade and industrial education programs at Canadian Valley Area Vocational-Technical School. These programs include the following: Aero Mechanics, Auto Mechanics, Diesel Mechanics, Small Engine Mechanics, Carpentry, Drafting, Electronics, Graphic Arts, Heating and Air Conditioning, Machine Shop, Residential Wiring, and Welding.

Geographical Area

There will be no geographical limitations; all program completers will be included in the follow-up, regardless of where they are located.

Definiton of Terms

The following terms were used in the study.

Area Vocational-Technical School. Refers to a public school accredited and approved by the State Department of Education and the State Department of Vocational and Technical Education of Oklahoma and composed of several feeder high schools that make up the district and supply the student population.

Trade and Industrial Education. A division of the State Department of Vocational Education that comprises the trade and technical courses offered under provision of vocational education.

Graduate or Employee. An individual who successfully completed a two-year trade and industrial program at Canadian Valley Area Vocational-Technical School and who is employed.

Employer. A person or organization who provides employment to graduates of Canadian Valley Area Vocational-Technical School.

Manual Job Skills. Refers to skill at using or operating tools, materials, equipment, machines, in trade and technical areas commonly offered in vocational-technical schools.

Technical Knowledge. Refers to practical, everyday knowledge of work processes, methods, procedures, and knowledge of basic principles, and concepts underlying practical trade and technical endeavors.

Mathematical Skills. Refers to the ability to use arithmetic or higher mathematics to solve work problems in a trade or technical area.

Communication Skills. Refers to skill at speaking, writing, drafting, sketching, etc., to communicate ideas.

Reading and Interpretive Skills. Refers to skill at reading printed matter, blueprints, tables, and diagrams.

Clerical Skills. Refers to skill at keeping records, making out reports, and other types of routine paper work.

Personal Relations Skills. Refers to skills dealing with people, such as customers, co-workers, and other tradespeople.

Supervisory or Management Skills. Refers to skill of supervising others and managing operations, e.g., instruction, directing, evaluating, planning, and organizing.

Work Attitude. Refers to such behavior as absenteeism, rule violation, concern for quality work, and cooperation.

Hands-on Experience. Refers to activities involving the actual

performance of manual job skills under conditions as nearly similar as possible to an actual job setting.

Opinion. For the purpose of this paper an opinion is an expression of an attitude whether verbal, written, or non-verbal.

Attitude. An emotional tendency, organized through experience, to react positively or negatively toward a psychological object.

Perception. An awareness on the part of the individual of his attitude toward a condition, event, a training activity, or person.

CHAPTER II

REVIEW OF LITERATURE

This study contains a review of literature that is subdivided into five basic sections as follows:

1. Area Vocational-Technical School Concept,
2. Follow-up A Necessity for Program Improvement and Evaluation,
3. Attitudes,
4. Employer Evaluations of Vocational Education Graduates,
5. Similar Studies,
6. Summary.

Area Vocational-Technical School Concept

The area vocational-technical school concept was stated by the Oklahoma State Department of Vocational Education (1977);

> Area Vocational-Technical School were established to provide training for people to have a salable skill. These schools can meet the needs of business, industry, and agriculture. The training should be for all persons who want training, need it, and can profit from it.
>
> The concept of area vocational-technical schools became a reality with the enactment of the Vocational Act of 1963. The Oklahoma State Board of Vocational and Technical Education designated the first five area vocational technical centers. An amendment to our State Constitution was voted by the people of Oklahoma in May, 1966, which provided for the formation of Area Vocational-Technical School Districts. This amendment allows school districts to band together to form a new unit of government called the area district. This new district

> elects a board of education and votes a levy for operational purposes, shared with State and Federal funds. Provision is also made in the amendment for the new district to vote bonds for constructing buildings and equipment, with matching funds from the State and Federal governments (p. 5).

Since the formation of the area vocational-technical schools there have been 25 area schools and 37 different campuses located across the state offering vocational training for high school students along with full-time study for persons who have completed or left high school; and upgrading or retraining for advancement in employment or for a new occupation for persons who are employed.

The area school concept provides training in nearly all trade areas below the professional level where a need exists or where employment is available.

Follow-Up A Necessity for Program Improvement and Evaluation

The need for follow-up studies has been a mandatory requirement for vocational educators when complying with federal regulations regarding the operations of vocational programs. These studies undoubtedly provide valuable information at the federal, state, and local level but unfortunately they are limited as to the data obtained and to the time and resources of the local educator who makes the surveys.

Sparks (1977) reviewed a number of national, state, and institutional follow-up studies and concluded:

> Vocational graduates are doing as well as, and often better than, graduates of other curricula. Most studies show vocationals to be slightly out earning other students shortly after graduation, especially when vocationals acquire training related jobs.

> They are often more satisfied with their jobs than academic and general graduates and, for those vocational students who choose to continue their education, the openings are available. Vocational job hunters generally require less time to secure their first jobs and regard their training as important in the acquisition of those jobs. Additionally, the great majority of vocational graduates rate their prior vocational education highly (p. 35).

Sparks also found data suggesting that vocational education was serving students that were not being serviced by general or academic education.

The demand for quality vocational programs has increased significantly in the past decade. Persons involved in providing these programs must have valid and reliable data to assess the quality of current programs and to formulate needs for future programs.

Sax (1974, p. 10) defined evaluation as "a process through which a value judgment or decision is made from a variety of observations and from the background and training of the evaluator."

McKinney (1977) states:

> The need for evaluation of vocational-technical education programs was emphasized in the Report of the President's Panel of Consultants on Vocational Education in 1963 and in the Vocational Education Amendments of 1968. Public law 94-482, Education Amendments of 1976, calls for federal and state evaluations of all programs which purport to teach entry level job skills. As a result of these and other developments, students, employers, and educators, as well as the general public, have become increasingly aware of the role of vocational education in preparing people for work. Program evaluation must be an integral and continuous part of vocational education. Unless programs are properly evaluated, educators will have no basis for making decisions on program development and revision. As the public's dollar investment in education increases, there is a growing demand that education be efficient and effective. For vocational educators, the issue is not whether to evaluate, but how (p. 1).

A considerable effort has been made to evaluate vocational education programs. However, McKinney (1977) goes on to state that while many of these approaches are similar, there is no comprehensive and systematic approach to evaluation. Wedemeyer (1969) suggests several reasons for the lack of attention to evaluation.

1. Program developers do not view evaluation as a necessary part of their professional activities.
2. Evaluation receives lower priority than other activities.
3. Evaluation receives minimal financial support.
4. Program developers often are not adequately prepared to conduct evaluations.
5. Evaluation is threatening to many educators (p. 10).

Evaluation should be a continuous process and Barkley (1974) notes that it is here to stay as long as educators use public funds and work with people and people's children.

A statement by the United States Office of Education (1968) suggests a need for continuous evaluation in vocational education.

> It appears that a realistic approach to occupational education includes at least three components. The first is to begin working with respect to building a favorable image and attitude toward the world of work. The second is a more realistic approach to career planning or providing educational experience which would be highly relevant to the world of work and job requirements and, especially to provide those relevant educational opportunities for people of all ages and throughout the entire career life pattern. The third concerns the establishment in each community, preferably as a part of the on-going education system, a coordinating job placement service providing for planning and efficient job entry for young people and opportunity for upgrading throughout life, a placement service bridging the gap between the educational system and the world of work. After initial placement the school system must continue to provide services whereby the employee can efficiently reenter and efficiently re-educate himself for upward mobility in a successful career building pattern (p. 5).

In order for vocational educators to provide current programs that stay abreast of rapidly changing job requirements they must continually gather data from graduates and employers to determine what marketable skills are needed.

McKinney (1977) suggests the following recommendations regarding program evaluation.

1. Program evaluation in vocational education needs to be a continuous effort. Sporadic and "one-shot" evaluation efforts have some worth, but they sometimes force decision-makers to make inappropriate decisions. Quality decision-making depends on a continuous flow of information. Most vocational education programs are continuing; therefore, it is logical that the evaluation efforts also should be continuous.

2. There is critical need for research in all areas of methodology. A review of follow-up studies reveals a lack of consistency in the use of acceptable procedures to conduct studies. A review of other areas in evaluation shows similar problems.

3. More people should be involved in evaluation. Staff, students, parents, lay citizens, administrators, and others should assist in planning, conducting, and appraising the vocational education evaluation process (p. 24).

Attitudes

The attitude of employees has a significant impact upon their job success and ability to function in today's workplace. Employers place a high value on positive employee attitudes.

Sax (1974) defines attitudes as a generalized response to a particular group, institution, concept, or object along a favorable-unfavorable dimension.

McMemar (1948) defines attitudes as:

> The common element of most definitions of social attitudes is that such an attitudes is a readiness or tendency to act or react in a certain manner. No one has ever seen an attitude. An attitude, however real it is to its professor, in an abstraction, the existence of which is inferred either from nonverbal overt behavior or verbal and symbolic behavior (p. 289).

Attitudes of employees are important to business and industry. Hendricks (1980) quotes Gordon L. Hough, Chairman of the Board of Directors for Pacific Telephone: "In my view, a person's attitude toward work is the best predictor of his or her employment success" (p. 39). He believes while it is essential for vocational educators to teach fundamental skills to their students, it is just as important for them to "instill in students proper attitudes about work" (p. 41).

Thurston (1967) suggests that an opinion is a verbal expression of an attitude. Although attitudes can not be seen, they do exist and are measurable. The two most common instruments for measuring attitudes are the interview and questionnaire, the latter of which was used for this study.

Employer Evaluation of Vocational Education Graduates

The follow-up of former students has been both a tradition as well as a federal mandate for vocational education. Only recently has it become a part of the mandate to survey employers of vocational education graduates. The Education Amendments of 1976 require the Vocational Education Data System (VEDS) to survey employer satisfaction with the training of former vocational education students.

A review of some of the representative studies is presented here

because of their direct applicability to this study.

Wentling and Lawson (1975) suggest the following objectives for an employer survey.

1. To assess performance of former students.
2. To determine how specific program graduates compare with graduates of other training programs.
3. To elicit employer recommendations for improving the occupational program.
4. To determine the recruitment practices of employing agencies.
5. To assess the competency list of a specific course or program.
6. To estimate supply and demand for individuals in particular occupations.
7. To aid the public relations of the educational or training agency or institution (pp. 182-185).

Willett and Piland (1973) surveyed employers identified from a follow-up of graduates. All employers were sent a questionnaire. A sample of these employers was randomly selected for interview, but the investigators found the interview phase time consuming and difficult to carry out. Asche and Vogler (1980) suggest employer feedback data do have the potential of assisting planners in modifying programs, developing better guidance services, and providing information for program assessment and other uses.

Lemley (1970) studied employer and employee satisfaction of 1966-1967 graduates from Tulsa Area Vocational-Technical Center. Data were collected using the Ford Foundation Youth Opportunity Study Follow-up Form and the Goertzel Employer's Rating Scale. Five major categories of variables were:

1. Housing and marital status.
2. Employment and income status.
3. Job satisfaction report.
4. Influence of training and job opportunity.
5. Additional education and technical training report (Lemley, 1970, pp. 112-113).

The study suggests a conclusion that 67 subjects who had vocational-technical training at the Tulsa Vocational-Technical School enjoyed a significant degree of occupational success and job satisfaction. Additional results indicated that the graduates with the longest employment tenure received the employer's highest evaluation on the Goertzel Rating Scale. This suggests job advancement and growth of the employee after entrance into the work force.

Talarzyk's (1975) study of employers' attitudes toward Ohio's vocational education program suggested that vocational graduates received the highest ratings of all worker attributes except responsibility and ability to work with others.

Morton, Christensen, and Hatfield (1977) surveyed 1,215 former students and 106 employers to determine employers' evaluation of secondary level students' quality and quantity of work, and the skills within the occupation. The results showed that the majority of employers rated the graduates average or above average on the following items: quality of work, quantity of work, willingness to accept responsibility, ability to work without supervision, willingness to learn and improve, and several other items. Ninety-two percent indicated they were satisfied with the employee's vocational training.

All of these studies reveal a positive attitude by employers and employees toward the quality of vocational training. Other recent opinions of employers regarding the need for the development of close relationships between industrial leaders and educators are summarized

in the following paragraphs by Lyman (1981).

> Too many times we have encountered vocational programs that have not kept pace with industry; in some instances there are hugh math or skills components missing. Dialogue with industry when the curriculum was in the development stage would have helped. Continuous dialogue after development would assure that programs stay current (p. 54).

Hornberger (1981) believes that industry involvement in vocational education is necessary for several reasons.

1. Educators definitely do need the input of industry on the current state of the art.

2. Administrators, who have the ability to take something simple and make it complex, need to be prodded to keep it simple (p. 28).

Hornberger also feels that implementation of competency-based education will improve the quality of vocational training. He concludes by stating:

> Industry must realize the stake it has in vocational education. It must demand from public education its due return for tax dollars paid. But it must also be prepared to use its resources to help improve vocational education. Industry has shied away from this involvement. If the United States is to remain competitive in the world market, we must work toward the creation of a well-trained technical labor pool (p. 28).

Similar Studies

Many follow-up studies have been done on vocational education graduates for a multitude of purposes. A review of the literature identified several studies that had the same basic format, method and goal as this study. A study was conducted by Vicars (1972) regarding employer-employee opinions of training received by vocational-technical students at Texas State Technical Institute in Abilene, Texas. This study was conducted for the purpose of program improvement

through revision and updating of curriculum offerings as suggested by the data provided by program graduates and their employers. The study utilized a mailed questionnaire to all vocational-technical graduates for the 1970-1971 school year and their employers. The questionnaire utilized nine categories of job skills with questions regarding their importance to the job, and whether further training was needed.

The findings indicated the graduates and employers perceived the importance of the nine skill areas to the job in the same way. Both groups expressed general agreement on the need for further training in all skill areas.

Vicars recommended establishment of a continuous follow-up system, more hands-on-time, and additional emphasis on the areas of Job Practical Knowledge and Manual Job Skills for one and two year programs. He also recommended the development of orientation materials to acquaint the students with and enhance their knowledge of Personal Relations Skills, Supervisory Skills, and Communication Skills as a means for job advancement.

Another study conducted by Hodges (1973) involved the assessment of employers-employees of the effectiveness of Agricultural Mechanics training received at Modesto Junior College in California. The purpose of the study was to gather information about job entry preparation from graduates and their employers with the intentions of giving direction to curriculum development and revision. The survey instrument was a mailed questionnaire to all Agricultural Mechanics majors from 1965 to 1972 and those indivduals or companies which employed them. The questionnaire was adapted from one developed by Vicars (1972) and contained basically the same nine skill areas modified to meet the

objectives of the Modesto Junior College Agricultural Mechanics program. The questionnaire was developed to evaluate perceptions of former students and their employers regarding: (1) the importance of the nine skill areas to the job, (2) an evaluation of the former students in each skill area, (3) how former students' and employers' perceptions compared, (4) the need for additional training, (5) where the former students learned the most about the nine skill areas, and (6) how the employers evaluated the former students when compared to other entry-level workers.

The results of the study indicated a high degree of correlation between perceptions of former students and their employers in areas of importance of the nine skill areas to the job and student competency in the nine skill areas. The former students indicated more need for training in all skill areas than did the employers. Also the employers rated the competence of former students in the middle 50 percent as compared to other job-entry level employees. The Agricultural Mechanics program was considered the place where the majority of the nine skill areas were learned.

Hodges (1973) recommended a need for more training in Personnel Relations Skills, Supervisory or Management Skills, and Diesel Mechanics Skills. He also suggested a need for improved job placement activities between Agricultural Mechanics instructors and industry to improve work experience opportunities for graduates plus better articulation with four year institutions. It was further concluded that a program to develop a continuous follow-up system should be instituted to maintain information necessary for further curriculum revisions.

A further study by Darcy (1980) was conducted for the purpose of evaluating selected aspects of the Mechanized Agriculture program at Texas A & M University. The study included all the graduates of Mechanized Agriculture 1968 through 1979. A questionnaire was developed from an instrument used by Vicars (1972) and Hodges (1973) who conducted similar studies. The questionnaire consisted of 10 skill areas identified as being necessary competencies required of Mechanized Agriculture graduates. The employers and former graduates were asked basically the same following questions: (1) how important is the skill to the job, (2) how would you evaluate the employee on this skill, and (3) how does the employee compare with other workers who had other training?

The author concluded that the skill areas of personnel relations, supervisory and management, communications and business skills to be of most importance to both employer and former student, with a need for further instruction in these areas. The needs of self-employed former students were found to be different than those of students employed by others. Graduates of the Mechanized Agriculture program compared favorably with other entry level workers with different training, and with the exception of vocational counseling they were satisfied with the Mechanized Agriculture Department.

The recommendations included a need for more emphasis in the skill areas of business, personnel relations, supervisory and management and communications plus more consideration to self-employed former students.

Darcy (1980) identified a need for more instruction in practical mechanics including consideration of additional courses. He suggested

a need for more emphasis on vocational guidance and counseling by the Agricultural Engineering Department, a review of facilities and equipment for possible upgrading, and another study to include the latest graduates for updating of the data base.

Summary

One of the primary responsibilities of area vocational-technical schools is to provide a program that produces productive, effective employees that satisfy the requirements of business and industry of the respective districts over the state of Oklahoma.

One method for achieving external evaluation of the programs offered in vocational education is to institute a continuous follow-up of graduates and their employers. This follow-up can be invaluable in the planning of future programs, determining the success of current programs, discovering future training needs, satisfying legislative mandates and improving education-employer relations.

Studies analyzing employer opinions and attitudes regarding the effectiveness of vocational programs and their products seem to indicate a positive response on the part of business and industry. However, many employers express concern that too little communication exists between employers and educators.

Similar studies reinforce the feasibility and need for the inclusion of follow-up studies as a necessity for effective program evaluation and resulting curriculum changes in vocational education offerings. If vocational education is to keep pace with the demands of the market place, it must provide for a systematic and comprehensive information system for determining the needs of youth and industries who employ them.

CHAPTER III

METHODOLOGY

The purpose of this study was to assess employer-employee satisfaction with trade and industrial programs at Canadian Valley Area Vocational-Technical School regarding the following eight skill areas: (1) manual job skills, (2) technical knowledge, (3) mathematical skills, (4) communication skills, (5) reading and interpretive skills, (6) clerical skills, (7) personal relations skills, and (8) supervisory skills. These skill areas were rated over four questions concerning, (1) importance of the skill to the job, (2) skill rating of the employee, (3) relative preparation of the employee, and (4) need for further instruction or training in the eight skill areas. In order to collect and analyze the data required to achieve the objectives of this study it was necessary to perform the following steps:

1. Identify the population,
2. Develop the survey instruments,
3. Collect the data, and
4. Choose appropriate Statistical procedures.

Identification of the Population

The population of this study was comprised of a random sampling of all the two-year graduates of trade and industrial programs at Canadian Valley Area Vocational-Technical School, El Reno, Oklahoma, for

the years 1978, 1979, and 1980 and those individuals or companies which employed them.

The population was graduates drawn from the follow-up files of Canadian Valley Area Vocational-Technical School plus individual files of respective trade and industrial teachers within the School. Graduates were also located from computer printouts supplied by the Oklahoma State Department of Vocational-Technical Education.

The population of employers who hired graduates of trade and industrial programs between 1978 and 1980 were identified from information supplied in the employee questionnaire mailed to the graduates, by telephone interview with the graduates, and by interviewing individual instructors of the graduates.

Develop the Survey Instruments

The instrument used in this study was a modification of one developed by Vicars (1972, Hodges (1973), and Darcy (1980) from a larger instrument used in a project in Quincy, Massachusetts public schools called Project Able (1971).

The survey instrument was organized to study eight skill areas plus one open-ended question:

1. Manual job skills.
2. Technical knowledge, which includes job practical and theoretical knowledge.
3. Mathematical skills.
4. Communication skills.
5. Reading and interpretative skills.
6. Clerical skills.

7. Personal relations skills.

8. Supervisory skills.

9. Employees' questionnaire: other skills.

   Employers' questionnaire: work attitude.

Two variables were rated across five point Likert Type Scales. The points for the employer were:

1. Concern of the importance of the skill to the job.

2. Evaluating the employee on his skill rating.

3. Relative preparation of employee compared to other entry-level workers without vocational-technical training rated across a four-point Likert Scale.

For the employee the three-point Likert Type Scales were:

1. The importance of the skill to the job, five-point Likert Scale.

2. The skill rating of skills learned at Canadian Valley Area Vocational-Technical School, five-point Likert Scale.

3. Relative preparation of employee skills to other entry workers who have had other training, four-point Likert Scale.

Also the employer and employee questionnaire included an opportunity to indicate whether or not the respondent felt the employee needed further training in the eight areas.

The employee is asked to rate 10 specific items regarding the training program at Canadian Valley Area Vocational-Technical School across a five-point Likert Type Scale. The employee and employer are asked to respond on the back of the questionnaire to any pertinent changes or improvements that they feel need to be made. Also included with the employee questionnaire is a release of the

information form.

The questionnaires were field tested by 20 members of the faculty and administration of Moore-Norman Area Vocational-Technical School to determine the adequacy of the instrument to accomplish the purpose of the study. It was the staff's opinion that with minor modifications sufficient information could be gathered by the questionnaires to provide data required for this study.

Some of the suggestions, comments, and guidelines were:

1. Type too small and difficult to read.
2. Employee's questionnaire should include permission form to contact employer.
3. Areas well covered.
4. Wording of the questionnaire was good.
5. Put the questionnaire on two sheets to allow larger print and make it easier to read.
6. This study looks very beneficial to a vocational-technical school.

Collect the Data

In order to accomplish the objectives of this study, it was decided that because of the large number of persons involved, the magnitude of the area to be covered, and the desire for maximum return from the respondents, the following approaches would be used.

1. A telephone call to parents of randomly selected graduates to obtain correct mailing addresses.
2. A mailed questionnaire to all graduates located.
3. After two weeks a follow-up phone call to non-respondent

graduates to solicit return of the questionnaire.

4. A telephone call to all employers identified by graduates to determine correct mailing addresses, briefly explain study and solicit return of questionnaire.

5. After two weeks a telephone call to non-respondent employers to request return of questionnaire, plus a second mailer to those employers who had lost or misplaced first mailing.

Wentling and Lawson (1975) state that the telephone and personal interview are proven techniques in sociological research and public opinion polls. Flanagan (1954) suggests that the interview allowed data gathering flexibility for work requirements specific to individual programs which may not have been covered in the questionnaire.

A cover letter was drafted to accompany the employer's and employee's mailed questionnaires to reinforce the importance of supplying the necessary data and return as soon as possible. The questionnaires were designed with a reverse fold and mailer on the back side with prepaid postage for return of the instrument by the U.S. Mail.

Choose Appropriate Statistical Procedures

For all data gathered, responses were anlayzed using descriptive statistics including frequency distributions, percentages, and means.

In addition to descriptive statistics, matched pair t-tests, Chi-square and analysis of variance were used to further analyze the data.

In research questions number three, six, and nine matched pair t-tests were used to compare employer-employee responses on the eight skill areas in regard to skill to the job, skill rating, and relative

preparation of the employee respectively. The t-test was used to find the significance of difference between the group means.

The researcher decided the responses met the following assumptions required for the t-test.

1. The responses were expressed as interval data.

2. The data was assumed to be normally distributed in the population.

3. The variances were assumed to be homogeneous.

The following computational formula for correlated t-test given by Popham (1973) was used.

Correlated t-test:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r\left(\frac{s_1}{\sqrt{n_1}}\right)\left(\frac{s_2}{\sqrt{n_2}}\right)}}$$

The null hypothesis used was H_o: There was no significant difference in the perceptions of the employers and employees concerning the skills to the job, skill rating, and relative preparation of the employee in the eight skill areas. The significance level was set at the .05 level. The significant table value of two-tailed t with 31 degrees of freedom is 2.04. A calculated t value exceeding the table value suggests that the null hypothesis be rejected.

Research question 12 compared employer and employee responses to the need for more instruction or training in the eight skill areas. This question required the use of a one-way Chi-square because the data are nominal and the binominal yes-no comparison fit the Chi-square test well.

The null hypothesis was H_o: There was no significant difference in the perceptions of the employers and employees in need for more instruction in the eight skill areas. Significance level was set at the .05 level for the stated hypothesis. The table value with one degree of freedom for the 2 x 2 cell table is 3.84. Any calculated Chi-square value greater than the table value suggests that the null hypothesis be rejected. The computational formula for Chi-square as given by Bartz (1975) is:

$$X^2 = \frac{(\text{Observed Frequencies} - \text{Expected Frequencies})^2}{\text{Expected Frequencies}}$$

As a result of using a 2 x 2 cell table with one degree of freedom the Yates correlation for continuity formula was required. The formula is as follows:

$$X^2 = \frac{(\text{Observed Frequencies} - \text{Expected Frequencies} - 0.5)^2}{\text{Expected Frequencies}}$$

Research question 13 is a comparison of the self-employed former student and the student employed by others and their perception of the importance of the eight skill areas to the job.

One way between subjects analysis of variance was the statistic chosen due to the following considerations:

1. The data were interval in nature.
2. The data were normally distributed.
3. Variances were assumed to be homogeneous.
4. The data consisted of an unequal number of scores between the self-employed and the employee.

The null hypothesis was H_o: There was no significant differences in the perception of the self-employed former student and the student employed by others in the importance of the eight skill areas to the

job. The significance level was set at the .05 level for the stated hypothesis. The table value with one and 48 degrees of freedom was F = 4.08. Any calculated F value greater than the table value suggests that the null hypothesis be rejected.

The computational formula for analysis of variance given by Bartz (1975) is as follows:

Total Sum of Squares	Within Groups Sum of Squares	Between Groups Sum of Squares

$$\sum^{k}\sum^{N_G}(X - \bar{X}_T)^2 = \sum^{k}\sum^{N_G}(X - \bar{X}_G)^2 + \sum^{k} N_G(\bar{X}_G - \bar{X}_T)^2$$

Where:

K = number of groups

G = number of the group

N = number of scores in the group

$\bar{X}$ = mean of the group

$\bar{X}_T$ = mean of the total group

All remaining research questions not specifically noted were dealt with utilizing descriptive statistical methods discussed previously.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Purpose and Explanation of Statistical Procedures

The purpose of this chapter is to present and analyze the data collected in questionnaires returned from graduates of Canadian Valley Area Vocational-Technical School and their employers. The data are organized around 13 research questions presented in Chapter I. To provide assistance in analyzing the data and to accomplish the purposes of the study, several statistical procedures were chosen. These procedures were selected to provide in-depth comparison of employer and employee perceptions of skills developed in 12 trade and industrial education programs and specifically to answer the research questions formulated for the study.

Eight of the 13 research questions require descriptive statistics involving number, percentages, and mean calculations. Research questions number three, six, and nine compare the responses of the employees and their employers as to the importance of the eight skill areas in respect to skill to the job, skill rating and relative preparation of the employee. For these questions the matched pair t-test was used.

Research question number 12 compares employee-employer responses to the question: do you feel a need for more instruction or training

in the eight skill areas? These yes-no responses were analyzed using the Chi-square test described in Chapter III, statistical procedures section.

Question number 13 compares the responses of the self-employed former student and the student employed by others as to their perception of the importance of the eight skill areas to the job. One-way analysis of variance was used to compare group means to determine what type of relationship existed.

An additional question was included in the employer questionnaire to allow respondents to provide input as to the work attitude of the employee. Employers were also encouraged to suggest changes or improvements that would enhance the employability of Canadian Valley Area Vocational-Technical School graduates. The employee's questionnaire requested the respondents to list other skills that were required in the performance of their job but not listed. Also the employees were asked to provide opinions on 10 items evaluating the curriculum at Canadian Valley Area Vocational-Technical School, plus list improvements they felt should be made. These additional responses requested of employer and employee were not included as part of the study, but provided useful information for future program improvement.

Description of Population and Returns

The population of this study was comprised of a random sampling of all second-year graduates of the 12 trade and industrial education programs at Canadian Valley Area Vocational-Technical School for the years 1978, 1979, and 1980 plus their employers.

The graduate portion of the population consisted of 396 program

completers. A random sampling of 142 graduates were selected from the total population. Of the total sampling 53 graduates returned the mailed questionnaire representing a 37 percent response ratio. Eleven of these were self-employed in a variety of trade areas, three were unemployed, and the remaining 39 graduates were employed by others.

The employer response was much higher than those of the program graduates. Thirty-two employers returned the mailed questionnaire, representing a return of 82 percent.

The questionnaires were mailed to program graduates after telephone contact with parents to determine correct mailing address. After two weeks a follow-up phone call was made to non-respondents to solicit return of the questionnaire. The employed graduate identified his employer and immediate supervisor who was contacted by phone to determine correct mailing addresses, briefly explain the purpose of the study and solicit return of the questionnaire.

Two weeks after questionnaires were mailed to employers, non-respondents were contacted to request return of the questionnaire. A second questionnaire was sent to those employers who had lost the first mailing.

Research Question Number One

How do vocational-technical graduates perceive the importance of the eight skill areas to their jobs?

Research question number one was designed to get the opinions of the graduates (employees) as to the importance of the eight skill areas to their present job. The degree of importance was rated on a scale of one to five, with one being of no real importance to five

representing critical importance.

The responses of the employed graduates and their ratings of the eight skill areas are reported in Table I. The information in this table represents the following in each skill area: number of respondents (42), percentage of response, number of no responses, and mean score response. The mean score response ranged from a low of 2.43 in clerical skills to a high of 3.74 in technical knowledge. The mean score of 2.43 would indicate clerical skills were considered least important of the eight skill areas by the graduate, while a mean score of 3.74 would indicate technical knowledge would rank highest in importance.

Research Question Number Two

How do employers perceive the importance of the eight skill areas to the job held by their employees?

Research question number two analyzes employer responses on the questionnaire as to the importance of the eight skill areas to the job. These responses from the employer as to how they perceived the eight skill areas as they relate to the training of their employees is of critical importance to Canadian Valley Area Vocational-Technical School, not only in regard to modification of current training programs, but for planning of future course offerings.

Employer responses and their rating of the eight skill areas are reported in Table II. The data in this table identifies the following information in each skill area: number of respondents (32), percentage of responses, number of no responses, and mean score response.

The mean score response of employers ranged from a low of 2.94 in

TABLE I

PERCEPTIONS OF EMPLOYEES AS TO THE IMPORTANCE OF THE EIGHT SKILL AREAS TO THE JOB

Skill Area	1 No Importance		2 Some Importance		3 Considerable Importance		4 Major Importance		5 Critical Importance		No Response		Mean
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Manual Job Skills	1	2.4	6	14.3	11	26.2	8	19.0	12	28.6	4	9.5	3.63
Technical Knowledge	2	4.8	5	11.9	8	19.0	9	21.4	14	33.3	4	9.5	3.74
Mathematical Skills	3	7.1	10	23.8	12	28.6	6	14.3	6	14.3	5	11.9	3.05
Communication Skills	5	11.9	13	31.0	7	16.7	6	14.3	7	16.7	4	9.5	2.92
Reading & Interpretive Skills	5	11.9	2	4.8	10	23.8	10	23.8	10	23.8	5	11.9	3.49
Clerical Skills	9	21.4	12	28.6	10	23.8	3	7.1	3	7.1	5	11.9	2.43
Personal Relations Skills	1	2.4	4	9.5	13	31.0	11	26.2	9	21.4	4	9.5	3.61
Supervisory Skills	7	16.7	9	21.4	12	28.6	6	14.3	4	9.5	4	9.5	2.76

N = 42

TABLE II

EMPLOYER PERCEPTIONS OF THE IMPORTANCE OF THE EIGHT SKILL AREAS TO THE JOBS OF IMPORTANCE

	No Importance		Some Importance		Considerable Importance		Major Importance		Critical Importance		No Response		
	1		2		3		4		5				
Skill Area	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Mean
Manual Job Skills	2	6.3	3	9.4	4	12.5	12	37.5	11	34.4	0	0	3.84
Technical Knowledge	0	0	3	9.4	7	21.9	11	34.4	11	34.4	0	0	3.94
Math Skills	3	9.4	4	12.5	12	37.5	12	37.5	1	3.1	0	0	3.13
Communication Skills	2	6.3	7	21.9	8	25.	11	34.4	4	12.5	0	0	3.25
Reading & Interpretive Skills	1	3.1	3	9.4	7	21.9	11	34.4	9	28.1	1	3.1	3.77
Clerical Skills	3	9.4	9	28.1	11	34.4	5	15.6	4	12.5	0	0	2.94
Personal Relations	1	3.1	2	6.3	9	28.1	12	37.5	8	25.	0	0	3.75
Supervisory	4	12.5	6	18.8	12	37.5	6	18.8	3	9.4	1	3.1	2.94

N = 32

clerical and supervisory skills which was also rated lowest by employees. The highest mean score was 3.94 for technical knowledge followed closely by 3.84 for manual job skills. Employer response was the same as employees response on skill areas rated highest and lowest.

Research Question Number Three

How do the perceptions of the employer compare with those of the employee on the importance of the eight skill areas to the job?

This research question was a comparison of employer to employee responses concerning the importance of the eight skill areas to the job. The comparison of the two groups sought to identify the degree of difference at a predetermined significance level.

The employers and their respective employees were matched using 32 pairs, and the statistical procedure used was the matched pair t-test, two-tailed. The significance level was set at .05 level and the computational formula is found in the statistical procedures section of Chapter III.

The table value of t at the .05 level was 2.04 with 31 degrees of freedom. A t value was calculated for each of the eight skill areas and the results plus the group means are reported in Table III.

An analysis of Table III indicates all calculated t values in the eight skill areas fall below the table value of the.05 level which implies that there is no significant difference between the means in any of the skill areas. As a result of these comparisons the researcher might assume the employer and employee opinions as to the importance of the eight skill areas tended to be the same. The null hypothesis was accepted.

TABLE III

MATCHED PAIR T-TEST COMPARISON OF EMPLOYER-EMPLOYEE RESPONSE ON THE IMPORTANCE OF THE EIGHT SKILL AREAS TO THE JOB

Skill Area	Group Means Employer	Group Means Employee	t Value
Manual Job Skills	3.84	3.68	.634
Technical Knowledge	3.93	3.81	.494
Mathematical Skills	3.09	3.18	- .332
Communication Skills	3.25	3.03	.683
Reading and Interpretive Skills	3.65	3.59	.225
Clerical Skills	2.93	2.56	1.417
Personal Relations Skills	3.75	3.65	.385
Supervisory Skills	2.81	2.84	- .137

Significance level = .05
Degrees of freedom = 31
Number of pairs = 32
Critical table value = 2.04

Research Question Number Four

What are the perceptions of the employees in regard to their skill rating in the eight skill areas?

Research question number four seeks to determine the employee's perception as to his own skill rating in regard to the eight skill areas. The rating scale ranged from one to five with one representing a need for much improvement, two below average, three average, four above average, to five outstanding.

The employee's ratings of his skills as related to the eight skill areas are reported in Table IV. The information in the table denotes the following in each skill area: number of respondents, 42, percentage of response, number of no responses, and the mean score response.

The mean score response ranged from a low of 3.08 in clerical skills to a high of 3.63 in manual job skills. The mean score of 3.08 would indicate clerical skills were of least importance or about average of the eight skill areas and that a score of 3.63 for manual job skills would be of most importance. However a 3.63 mean score is only slightly above average on the skill-rating scale.

Research Question Number Five

What are the perceptions of the employers in regard to employee skill rating in the eight skill areas?

This question seeks to determine employer responses on the questionnaire as to their opinions of the skill ratings of their employees in the eight skill areas. The rating scale ranged from one to five with one representing very poor, two poor, three neutral, four good, and five very good.

TABLE IV

PERCEPTIONS OF EMPLOYEES IN REGARD TO THEIR SKILL RATINGS IN THE EIGHT SKILL AREAS

Skill Area	1 Need Much Improvement		2 Below Average		3 Average		4 Above Average		5 Outstanding		No Response		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Mean
Manual Job Skills	0	0	0	0	18	42.9	16	38.1	4	9.5	4	9.5	3.63
Technical Knowledge	0	0	0	0	18	42.9	15	35.7	3	7.1	6	14.3	3.58
Mathematical Skills	0	0	9	21.4	14	33.3	12	28.6	1	2.4	6	14.3	3.14
Communication Skills	0	0	4	9.5	24	57.1	9	21.4	0	0	5	11.9	3.14
Reading & Interpretive Skills	2	4.8	4	9.5	18	42.9	9	21.4	4	9.5	5	11.9	3.24
Clerical Skills	1	2.4	6	14.3	22	52.4	5	11.9	3	7.1	5	11.9	3.08
Personal Relations Skills	1	2.4	2	4.8	20	47.6	12	28.6	2	4.8	5	11.9	3.32
Supervisory Skills	3	7.1	3	7.1	20	47.6	9	21.4	2	4.8	5	11.9	3.11

N = 42

The employer responses and their ratings of their employees in the eight skill areas are reported in Table V. The data in the table identifies the following information in each of the eight skill areas: number of respondents, 32, percentage of responses, number of no responses, and mean score response.

The mean score response of employers ranged from a low of 3.41 in supervision to a high of 4.32 in manual job skills. The high mean score of 4.32 in manual skills compares to the high mean score of 3.63 in manual skills of the employee questionnaire, indicating both the employer and employee regard manual job skill much the same. Employer's ratings were slightly higher.

On the low ratings the comparisons of employer-employee responses differed with the employers rating supervisory skills low with a mean score of 3.41, and the employee rating clerical skills low 3.08, followed closely by supervisory skills rating of 3.11.

The employers' ratings of the skill areas were generally higher across all eight skill areas than the employees.

Research Question Number Six

How do the perceptions of the employees' skill rating in the eight skill areas compare with employers?

Research question number six was a comparison of employer to employee responses concerning employee skill ratings in each of the eight skill areas. The comparison of the two groups was designed to identify the degree of difference at the .05 significance level.

The employers and their respective employees were matched using 32 pairs, with the statistical procedure being the matched pair t-test,

TABLE V

PERCEPTIONS OF EMPLOYERS IN REGARD TO EMPLOYEES' SKILL RATINGS IN THE EIGHT SKILL AREAS

Skill Areas	1 Very Poor		2 Poor		3 Neutral		4 Good		5 Very Good		No Response		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Mean
Manual Job Skills	0	0	0	0	4	12.5	13	40.6	14	43.8	1	3.1	4.32
Technical Knowledge	0	0	1	3.1	4	12.5	17	53.1	10	31.3	0	0	4.13
Mathematical Skills	0	0	0	0	9	28.1	15	46.9	7	21.9	1	3.1	3.94
Communication Skills	0	0	1	3.1	10	31.3	16	50.	5	15.6	0	0	3.78
Reading & Interpretive Skills	0	0	1	3.1	4	12.5	15	46.9	10	31.3	2	6.3	4.13
Clerical Skills	0	0	2	6.3	8	25.	15	46.9	6	18.8	1	3.1	3.81
Personal Relations Skills	0	0	3	9.4	6	18.8	12	37.5	11	34.4	0	0	3.97
Supervisory Skills	1	3.1	3	9.4	13	40.6	7	21.9	5	15.6	3	9.4	3.41

N = 32

two tailed. The computational formula for the matched pair t-test is found in the statistical procedures section of Chapter III.

Table value of t at the .05 level was 2.04 with 31 degrees of freedom. A matched pair t-test was calculated for each of the eight skill areas and the results plus the group means are reported in Table VI.

Of the eight skill areas compared, seven indicated a significant difference between the two groups in the skill rating of the employees. The skill areas indicating a significant difference were: (1) manual job skills, (2) technical knowledge, (3) mathematical skills, (4) communication skills, (5) reading skills, (6) clerical skills, and (7) personal relations skills. The employers ranked these areas higher than did their employees. The highest t value was mathematical skills with a t value of 5.81, followed by 5.35 in communication skills. These results indicate a significantly higher opinion by employers for all skill areas except supervisory skills. Therefore, due to the significant difference between the employer and their respective employee opinions as to the skill rating of the employee in the eight skill areas the null hypothesis must be rejected in all skill areas except supervisory skills.

Research Question Number Seven

What are the perceptions of the employees in regard to their relative preparation compared to other entry-level workers in the eight skill areas?

This research question seeks to determine the employee's perception in regard to his relative preparation compared to other

TABLE VI

MATCHED PAIR T-TEST COMPARISON OF EMPLOYER-EMPLOYEE RESPONSES ON THE SKILL RATING OF THE EIGHT SKILL AREAS

Skill Area	Group Means Employer	Group Means Employee	t Value
Manual Job Skills	4.32	3.68	3.97*
Technical Knowledge	4.12	3.61	3.46*
Mathematical Skills	3.93	3.16	5.81*
Communication Skills	3.78	3.15	5.35*
Reading and Interpretive Skills	4.13	3.31	4.79*
Clerical Skills	3.80	3.18	3.59*
Personal Relations Skills	3.96	3.34	2.98*
Supervisory Skills	3.41	3.21	.900

*Significant at the .05 level
Degrees of freedom = 31
Number of pairs = 32
Critical table value = 2.04

entry-level workers in the eight skill areas. The rating scale ranged from one to four, with one representing no basis for comparison, two better prepared, three about the same, and four less prepared.

The employees' ratings of their relative preparation are reported in Table VII. Information in the table identifies the following in each skill area: number of respondents, 42, percentage of response, number of no response, and the mean score response.

The mean score response ranged from a low of 2.34 in manual job skills to a high of 2.89 in personal relation skills. The mean score of 2.34 would seem to indicate the employees felt they were better prepared than entry-level workers with other training. All other mean scores ranging from 2.44 for technical knowledge to 2.89 for personal relations skills indicate the employees felt they were generally better prepared than their counterparts who had other training.

Research Question Number Eight

What are the perceptions of the employers in regard to the relative preparation of the employee compared to other entry-level workers in the eight skill areas?

Research question number eight involved a determination of employers' perceptions as to the relative preparation of their employees compared to other entry-level workers in the eight skill areas. The rating scale ranged from one to four with one representing no basis for comparison, two, the student is better prepared, three, both are about the same, to four, the student is less prepared.

Employers' ratings of relative preparation of their employee is identified in Table VIII. The data in Table VIII reports the following

TABLE VII

PERCEPTIONS OF EMPLOYEES IN REGARD TO THEIR RELATIVE PREPARATION COMPARED TO OTHER ENTRY-LEVEL WORKERS IN THE EIGHT SKILL AREAS

	1 No Basis For Comparison		2 Better Prepared		3 About the Same		4 Less Prepared		No Response		
Skill Area	No.	%	No.	%	No.	&	No.	%	No.	%	Mean
Manual Job Skills	5	11.9	16	38.1	16	38.1	1	2.4	4	9.5	2.34
Technical Knowledge	5	11.9	13	31.	15	35.7	3	7.1	6	14.3	2.44
Math Skills	6	14.3	10	23.8	15	35.7	4	9.5	7	16.7	2.49
Communication Skills	5	11.9	7	16.7	20	47.6	5	11.9	5	11.9	2.68
Reading & Interpretive Skills	3	7.1	14	33.3	12	28.6	6	14.3	7	16.7	2.6
Clerical Skills	7	16.7	3	7.1	22	52.4	5	11.9	5	11.9	2.68
Personal Relations	1	2.4	7	16.7	24	57.1	5	11.9	5	11.9	2.89
Supervisory	7	16.7	8	19.	17	40.5	4	9.5	6	14.3	2.5

N = 42

TABLE VIII

PERCEPTIONS OF EMPLOYERS IN REGARD TO RELATIVE PREPARATION OF THE EMPLOYEE COMPARED TO OTHER ENTRY-LEVEL WORKERS IN THE EIGHT SKILL AREAS

	No Basis For Comparison		Better Prepared		About The Same		Less Prepared		No Response		
	1		2		3		4				
Skill Area	No.	%	No.	%	No.	%	No.	%	No.	%	Mean
Manual Job Skills	12	37.5	11	34.4	8	25.	1	3.1	0	0	1.93
Technical Knowledge	9	28.1	14	43.8	7	21.9	2	6.3	0	0	2.06
Math Skills	12	37.5	11	34.4	6	18.8	2	6.3	1	3.1	1.93
Communication Skills	9	28.1	6	18.8	16	50.	0	0	1	3.1	2.22
Reading & Interpretive Skills	7	21.9	12	37.5	8	25.	3	9.4	2	6.3	2.23
Clerical Skills	9	28.1	9	28.1	10	31.3	2	6.3	2	6.3	2.16
Personal Relations	10	31.3	8	25.	8	25.	5	15.6	1	3.1	2.25
Supervisory	9	28.1	8	25.	6	18.8	6	18.8	3	9.4	2.30

N = 32

information in each of the eight skill areas: number of respondents, 32, percentage of response, number of no responses, and the mean score response for each skill area.

The mean score response ranged from 1.93 for manual job and math skills to 2.30 for supervisory skills. All mean scores seemed to indicate the employer felt his employee or vocational-technical graduate was better prepared than other entry-level workers who had other training.

Research Question Number Nine

Is there a difference between the employers' and employees' perception of the relative preparation of the employee compared to other entry-level workers who have had other training?

In research question number nine the researcher investigates a comparison between employers and employees in regard to their perceptions as to the relative preparation of the employee compared to other entry-level workers in the eight skill areas. The comparison seeks to identify the degree of difference at the .05 significance level.

Employers and their respective employees were matched using 32 pairs, utilizing the two tailed matched pair t-test as the statistical procedure. The formula for the t-test is identified in the statistical procedures section of Chapter III.

The table value of t at the .05 level was 2.04 with 31 degrees of freedom. A matched pair t-test was calculated for each of the eight skill areas and the results are reported in Table IX.

Of the eight skill areas compared, math, communication, clerical and personal relations skills indicated a significant difference

TABLE IX

MATCHED PAIR T-TEST COMPARISON OF EMPLOYER-EMPLOYEE RESPONSES ON THE RELATIVE PREPARATION OF THE EMPLOYEE IN THE EIGHT SKILL AREAS

Skill Area	Group Mean Employer-Employee		t Value
Manual Job Skills	1.93	2.25	-1.66
Technical Knowledge	2.06	2.47	-2.01
Mathematical Skills	1.03	2.40	-2.11*
Communication Skills	2.22	2.65	-2.10*
Reading and Interpretive Skills	2.23	2.51	-1.27
Clerical Skills	2.16	2.65	-2.17*
Personal Relations Skills	2.25	2.90	-3.34*
Supervisory Skills	2.30	2.54	- .98

*Significant at the .05 level
Degrees of freedom = 31
Number of pairs = 32
Critical table value - 2.04

between the means of the two groups. All t values were negative values indicating a stronger response from the employees and corresponding higher mean scores than the employers. The results of these negative t-test values would seem to indicate a marginal higher concern by employees than employers in regard to their relative preparation in the eight skill areas as compared to other entry-level workers. The exception to this analysis is a -3.34 t value calculated for personal relations value which is significantly higher. Therefore as a result of these significant t values the null hypothesis for math, communication, clerical and personal relations must be rejected.

Research Question Number Ten

What are the perceptions of the employee in regard to the need for more instruction or training in the eight skill areas?

This phase of the questionnaire asked the employee to indicate if he felt a need for more instruction or training in the skill areas. This question was designed to provide information to help determine a need for further instruction in the trade and industrial education program at Canadian Valley Area Vocational-Technical School. Employee responses were "yes" or "no" to indicate their opinions.

The results of research question 10 are reported in Table X. In addition to the yes-no response, percentages of yes and no answers are given, plus the number of percentages of no responses.

Of those employees responding, 54.8 percent, 47.6 percent, and 45.2 percent were the highest "yes" ratings in math, reading and supervisory skills respectively. The highest "no" response was 69 percent in the manual job skills. These "no" responses indicate no felt need

TABLE X

PERCEPTIONS OF EMPLOYEES IN REGARD TO THE NEED FOR MORE INSTRUCTION OR TRAINING IN THE EIGHT SKILL AREAS

Skill Area	Responses					
	Yes	%	No	%	No Response	%
Manual Job Skills	9	21.4	29	69.0	4	9.5
Technical Knowledge	14	33.33	22	52.4	6	14.3
Mathematical Skills	23	54.8	14	33.3	5	11.9
Communication Skills	18	42.9	19	45.2	5	11.9
Reading and Interpretive Skills	20	47.6	17	40.5	5	11.9
Clerical Skills	15	35.7	22	52.4	5	11.9
Personal Relations Skills	15	35.7	22	52.4	5	11.9
Supervisory Skills	19	45.2	18	42.9	5	11.9

N = 42

for training.

Research Question Number Eleven

What are the perceptions of the employer in regard to the need for more instruction or training in the eight skill areas?

Research question number eleven asked the employer to identify a need for more instruction or training for his employee in each of the eight skill areas. The employers were asked to respond "yes" or "no" to indicate whether they felt employees needed further instruction or training in the eight skill areas. This question was of particular concern to the researcher because the employers identified skill areas that should receive more or less emphasis.

Table XI reports the responses of the employers, plus percentages and number of yes-no responses, as well as those left blank. Employers rated manual job skills and technical knowledge about 68.8 percent as needing no further instruction, while reading and supervisory skills were rated 27.5 percent reporting "yes" which would suggest a need for further training. Both the employer and employee rated manual job skills at 68.8 and 69 percent "no" respectively, indicating no felt need for further training.

Research Question Number Twelve

How do the employer and employees compare on the need for more instruction or training in the eight skill areas?

This research question was designed to compare the responses of employers and their employees, former graduates of Canadian Valley Area Vocational-Technical School, on the perceived need for further

TABLE XI

PERCEPTIONS OF EMPLOYERS IN REGARD TO THE NEED FOR MORE INSTRUCTION OR TRAINING IN THE EIGHT SKILL AREAS

Skill Area	Responses					
	Yes	%	No	%	No Response	%
Manual Job Skills	7	21.9	22	68.8	3	9.4
Technical Knowledge	8	25.0	22	68.8	2	6.3
Mathematical Skills	10	31.3	18	56.3	4	12.5
Communication Skills	8	25.0	20	62.5	4	12.5
Reading and Interpretive Skills	12	37.5	15	46.9	5	15.6
Clerical Skills	10	31.3	17	53.1	5	15.6
Personal Relations Skills	10	31.3	18	56.3	4	12.5
Supervisory Skills	12	37.5	16	50.0	4	12.5

N = 32

instruction in the skill areas.

The Chi-square statistical procedure was used to compare employer-employee responses to determine if a significant difference existed between the two groups. As a result of the number of responses and the 2 x 2 Chi-square design, the Yates Correlation formula was used. Table XII lists the employer-employee "yes" and "no" responses for each skill, plus the calculated Chi-square values. The only skill area to show a significant difference between the two groups was math skills with a Chi-square of 4.52, which exceeded the table value of 3.84 at the .05 level.

Therefore, the null hypothesis for research question 12 was accepted for all skill areas, excluding math skills.

Research Question Number Thirteen

Is there a difference between self-employed former students and those former students employed by others in their perception of the importance of the eight skill areas to the job?

The purpose of research question number 13 was to compare self-employed former students and those employed by others in their perception of the importance of the eight skill areas to the job. This question is a comparison of these two groups to determine if the self-employed perceived the importance of the skill areas differently than those employed by others.

A one-way analysis of variance was used to determine if a significant difference existed between the two groups. Table XIII identifies group means for self-employed and employees, plus the calculated F values for each of the eight skill areas. The significance level was

TABLE XII

CHI-SQUARE COMPARISON OF EMPLOYER-EMPLOYEE ON THE NEED FOR MORE INSTRUCTION OR TRAINING IN THE EIGHT SKILL AREAS

Skill Areas	Employee			Employers			X^2
	Yes	No	No Response	Yes	No	No Response	
Manual Job Skills	9	29	4	7	22	3	.083
Technical Knowledge	14	22	6	8	22	2	1.185
Mathematical Skills	23	14	5	10	18	4	4.52*
Communication Skills	18	19	5	8	20	4	2.76
Reading and Interpretive Skills	20	17	5	12	15	5	.64
Clerical Skills	15	22	5	10	17	5	.152
Personal Relations Skills	15	22	5	10	18	4	.229
Supervisory Skills	19	18	5	12	16	4	.526

*Significnat at the .05 level
Degrees of freedom = 1
Critical table value x^2 = 3.84

TABLE XIII

COMPARISON OF SELF EMPLOYED FORMER STUDENT AND THOSE EMPLOYED BY OTHERS ON THE IMPORTANCE OF THE EIGHT SKILL AREAS TO THE JOB

Skill Area	Group Means		F Value
	X = Self-Employed	Y = Employee	
Manual Job Skills	4.09	3.64	1.49
Technical Knowledge	3.63	3.71	.038
Mathematical Skills	3.36	3.00	.794
Communication Skills	2.81	2.92	.052
Reading and Interpretive Skills	3.27	3.35	.036
Clerical Skills	3.45	2.41	6.589*
Personal Relations Skills	3.45	3.58	.134
Supervisory Skills	3.90	2.76	.109

*Significant at the .05 level
Degrees of freedom = 1 and 48
N: X = 11, Y = 39
Critical table value = F - 4.08

set at the .05 level for one and 48 degrees of freedom.

Of the eight skill areas, only clerical skills was found to show a significant difference between the perceptions of the two groups. A calculated F value of 6.58 exceeded the critical table value of 4.08. All other skill areas were well below the significance level. Therefore, the null hypothesis was accepted and it was concluded that both groups viewed the importance of the eight skill areas to the job in the same manner, except for clerical skills.

Summary of Employers' and Employees' Comments

Each questionnaire asked the employer and employee to make any comments they desired regarding changes or improvements they felt should be made at Canadian Valley Area Vocational-Technical School that would better prepare future trade and industrial education graduates for entering the work force. Listed below is a summary of employer and employee comments:

Students need more exposure to mathematical skills prior to entry into vocational-technical programs.

The background and training of graduates appear to be excellent.

I personally feel there was too little screening as far as individual interest.

I strongly encourage a busier work program on real job materials instead of the simpler shop (first grade material) jobs.

I feel that stricter discipline would help better control the classroom and work area so that disruptive students do not interfere with those trying to learn.

I think more emphasis could be put on the VICA program and the high personal rewards that can come from this organization.

Class needs more shop time compared to classroom time. Hands-on experience helps to understand all of the theory.

More personalized training is needed.

Better student-teacher relationships are needed.

Instructors with more interest in the students (all the students) would also be helpful to the learning process.

In the two-year Electronics course there needs to be a lot more digital electronics.

More freedom to the instructor to do what he deems necessary to do the job.

I would like to see an automotive machine shop program started.

I think all forms of trade programs at Canadian Valley Area Vocational-Technical School should have some sort of correspondence course in all kinds of management.

More math.

A course on production machining would be helpful.

The only area I wish to comment on is the training of students in all technical fields to use automated computer devices in their jobs.

I have seen a drafting room full of drafting boards cleared out for computer graphics workstations, and as technology advances I believe you will see this type revolution take place in every technical field from auto mechanics to welding technicians.

I think the diesel program should give a broader range of instruction. I had to learn electrical, hydraulics, air conditioning, and transmissions and differential overhaul on my own.

Vo-Tech needs to try to touch on different brands or types of shop equipment, also needs to help with customer relations to each different trade.

I think the school should provide a better counseling service to the students in what they want to accomplish.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to assess employer-employee satisfaction with trade and industrial education programs at Canadian Valley Area Vocational-Technical School regarding the following eight skill areas: (1) manual job skills, (2) technical knowledge, (3) mathematical skills, (4) communication skills, (5) reading and interpretative skills, (6) clerical skills, (7) personal relations skills, and (8) supervisory skills. These skill areas were rated over four questions concerning: (1) importance of the skill to the job, (2) skill rating of the employee, (3) relative preparation of the employee, and (4) need for further instruction or training in the eight skill areas. To accomplish this purpose, a follow-up of program graduates and their employers was initiated utilizing a mailed questionnaire to determine information required for this study. This information was then analyzed to arrive at conclusions as to the strength and weakness of specific programs and identify areas of needed improvement. With this type of input it was felt that modifications in these programs would more accurately reflect the requirements of industry and better meet the needs of program graduates.

A mailed questionnaire was sent to a random sampling of second-year program graduates for the school years 1978, 1979, and 1980 and

to their employers. Both questionnaires identified eight skill areas that were rated over four questions concerning: (1) importance of the skill to the job, (2) skill rating of the employee, (3) relative preparation of the employee, and (4) need for further instruction or training in the eight skill areas. Each skill area was identified as being necessary competencies vocational-technical graduates should possess, and that business and industry required. The skill areas common to both questionnaires were:

1. Manual Job Skills. Refers to skill at using or operating tools, equipment, materials, machines, etc. in your work.

2. Technical Knowledge. Refers to practical everyday knowledge of work processes, methods, procedures, and to knowledge of basic principles and concepts underlying the practical trade work.

3. Mathematical Skills. Refers to ability to use arithmetic or higher mathematics to solve work problems.

4. Communication Skills. Refers to skill at speaking, writing, drafting, sketching, etc., to communicate ideas.

5. Reading and Interpretative Skills. Refers to skill in reading printed matter, blueprints, tables, diagrams, etc.

6. Clerical Skills. Refers to skill at keeping records, making out reports, and other types of routine paper work.

7. Personal Relations Skills. Refers to skill at dealing with people, such as customers, co-workers, other trades, etc.

8. Supervisory Skills. Refers to skill at supervising others, e.g., instructing, directing, evaluating, planning, organizing, etc.

The questionnaires were field-tested by 20 members of the faculty and administration of Moore-Norman Area Vocational-Technical School,

Moore, Oklahoma, as to adequacy of the content to accomplish the purposes of the study. Several modifications were made as per their suggestions and the instrument was approved by the researcher's committee.

The rating scale of the first two questions, skill to job and skill rating, was a one-to-five point scale. One, the lowest rating, represented no real importance to five, the highest, representing critical importance. The third question on relative preparation ranged from a one-to-four scale, with one indicating no basis for comparison, two better prepared, three about the same, and four less prepared. The final question concerning need for more instruction both employer and employee responded with a "yes" or "no" answer.

Upon determination of the skill areas 13 research questions were developed to achieve the objectives of the study.

1. How do vocational-technical graduates perceive the importance of the eight skill areas to their job?

2. How do employers perceive the importance of the eight skill areas to the job held by their employees?

3. How do the perceptions of the employer compare with those of the employee on the importance of the eight skill areas to the job?

4. What are the perceptions of the employees in regard to their skill rating in the eight skill areas?

5. What are the perceptions of the employers in regard to employee skill rating in the eight skill areas?

6. How do the perceptions of the employees' skill rating in the eight skill areas compare with those of the employers?

7. What are the perceptions of the employees in regard to their

relative preparation compared to other entry-level workers in the eight skill areas?

8. What are the perceptions of the employers in regard to the relative preparation of the employee compared to other entry-level workers in the eight skill areas?

9. Is there a difference between the employers' and employees' perceptions of the relative preparation of the employee compared to other entry-level workers who have had other training?

10. What are the perceptions of the employee in regard to the need for more instruction or training in the eight skill areas?

11. What are the perceptions of the employer in regard to the need for more instruction or training in the eight skill areas?

12. How do the employer and employee compare on the need for more instruction or training in the eight skill areas?

13. Is there a difference between self-employed former students and those former students employed by others in their perception of the importance of the eight skill areas to the job?

Summary of Findings

The analysis of the data indicates the following major findings of this study:

1. The responses of the employee on the importance of the eight skill areas to the job indicated technical knowledge, manual job skills and personal relations skill as having the highest rating over the five point scale.

2. Employers rated technical knowledge and manual job skills high on the importance of the skill areas to the job in much the same

manner as their employees.

3. Employees felt that more instructions were needed in clerical skills, as did the employers.

4. Employer and employee comparison as to their opinions regarding the importance of the eight skill areas to the job were much the same.

5. The employees' responses as to their skill rating in the eight skill areas showed that manual job skills and technical knowledge rated highest while clerical skills and supervision skills were of least importance.

6. The employers rated manual job skills high and supervision low in regard to employee skill rating in the eight skill areas.

7. The employers' and employees' comparisons in skill rating in the eight skill areas indicated a significant difference of opinion in all skill areas except supervisory skills, with employers giving the higher rating.

8. Employees' responses in regard to their relative preparation compared to other workers suggested that they were better prepared than their fellow workers who had other training.

9. Employers also felt their employees or former vocational-technical graduates were better prepared than those workers who had other training.

10. A comparison between employers and employees in regard to their opinions of the relative preparation of their employees suggests a significant difference exists when comparing them to other workers in math, communication, clerical and personal relations skills with employee indicating higher rating for their relative preparation

than the employer.

11. Employees' responses indicated a need for more instruction in the areas of math, reading, and supervisory skills.

12. Employers felt reading and supervisory skills should require further instruction.

13. The employer and employee comparison of opinion in regard to the need for more instruction indicated no significant difference except in the math skills area with employer seeing no need for additional instruction.

14. Self-employed former students and former students employed by others differed in their comparison in the importance of the eight skill areas to the job only in the clerical skills area with the self-employed seeing clerical skills to be of greater importance.

Conclusions

The skill areas of technical knowledge, manual job skills, and personal relations skills are of special interest to both employers and former students. Employers and employees share the same opinions regarding the importance of the eight skill areas to the job.

Both the employer and employee feel that manual job skills rate the highest of the eight skill areas.

Employers' opinions differ significantly from those of the employee in regard to the skill rating of the employees. The employers have a higher concern for manual job skills, technical knowledge, math skills, communication skills, reading skills, clerical skills, and personal relations skills than do the employees.

The employer and employee felt the employee and former vocational-

technical graduate was better prepared in the eight skill areas of the study than the entry-level workers who had other training.

Employees have a higher concern than the employer regarding the relative preparation of the employee in the eight skill areas compared to other workers.

The employer and employee tended to feel no need for further instruction or training in manual job skills. However, both groups agreed on a need for further instruction in reading and supervisory skills. Both employer and employee shared the same opinion in regard to the need for further instruction except in the math skill areas with the employers feeling no need for further instruction.

Self-employed former students and those employed by others viewed the importance of the eight skill areas to the job in much the same manner. The only significant difference of perception was in the clerical skills area.

The program graduates generally felt their vocational-technical training was superior to fellow workers who had other training; their employers also shared this opinion.

Recommendations

The following recommendations are based on the data obtained during this study, comments by employers, and program graduates and the conclusions drawn from the analysis of data in Chapter IV.

1. Canadian Valley Area Vocational-Technical School should institute steps to solicit more input on trade and industrial programs from business, industry, and former graduates and to establish a more effective follow-up system.

2. Consideration should be given to increased training in reading, math, and supervisory skills training.

3. Although the majority of the former graduates was found working in the trade area for which they were trained or a related area, more emphasis should be placed on job placement of graduates exiting the programs and those former graduates who may need employment in later years.

4. Since self-employed students identified needs somewhat different from those students with other occupational interests, consideration should be given to provide entrepreneurship options within the trade and industrial programs for those students with self-employment as a career goal.

5. Trade and industrial teachers need to make more concerted efforts to visit their respective trade employers to determine training needs, to more nearly simulate actual work requirements and to enhance the productivity aspects of their programs.

6. It is recommended that further training and instruction in diesel mechanics areas of fuel systems, hydraulics, electrical systems, power transmission systems, air conditioning, and differential overhaul be considered.

7. Program facilities and equipment should continually be reviewed by faculty and industry advisory committees to insure current state-of-the-art instruction.

8. In the elctronics program more emphasis should be placed on digital electronics.

9. All students involved in technical training areas should be exposed to automated computers specific to their particular program.

10. Each trade and industrial program should be equipped with different brands and types of equipment to more accurately reflect what the graduate will encounter on the job.

11. It is recommended each student receive more in-depth counseling from the voc-tech and the sending school to assist him/her in making better career choices.

Recommendations for Further Study

It should be noted that this study was limited to trade and industrial programs which comprise only a segment of courses offered at Canadian Valley Area Vocational-Technical School. Additional research should be initiated utilizing a similar format to study those areas that are of equal importance. In addition a second follow-up of the same group of respondents should be undertaken in three to five years to determine their employment status and perceptions of training. This could result in additional information concerning persistence in trade and industrial job clusters and the transfer ability of training received. Comprehensive follow-up studies of former students is essential if educational programs are to effectively reflect the rapidly changing needs of technology.

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APPENDIXES

APPENDIX A

LETTERS OF TRANSMITTAL

P.O. Box 579 El Reno, Oklahoma 73036 (405) 262-2629 OKC 354-1841

January 27, 1984

Dear Former Graduate:

The Canadian Valley Area Vocational and Technical School administration and staff are highly concerned about the status of our graduates. In order for the school to continue to provide quality educational experiences to future graduates, it is necessary to upgrade and improve the organization through evaluation.

In vocational-technical education today, more than any other time in the past, changes are occurring at a rapid pace, making it necessary that we maintain excellence and relevance in our programs. We believe we can gain information from our trade and industrial graduates to provide guidelines to more adequately evaluate our programs and implement necessary changes.

Your cooperation in the prompt completion of this questionnaire would be extremely important in providing information for this followup study. If you are self-employed please indicate on your questionnaire.

The questionnaire has been designed to take a minimum amount of time. Complete the form, fold as indicated on the back, use enclosed tab to seal, and return to the school. Postage has been prepaid.

We appreciate your cooperation and are confident it will aid in improving educational opportunities at Canadian Valley Vo-Tech School.

Sincerely,

Earl Cowan

Earl Cowan
Assistant Superintendent

CANADIAN VALLEY AREA
Vocational & Technical School

P.O. Box 579 El Reno, Oklahoma 73036 (405) 262-2629 OKC 354-1841

Date

Name
Firm
Street
Town

Dear (Employer's Name):

The administration and staff at Canadian Valley Area Vocational Technical School need your assistance. We are highly concerned with providing quality, state-of-the art educational experiences for our graduates. In order to provide this type of training it is necessary to evaluate and improve our programs. We believe invaluable information can be gained from employers of our graduates to provide guidelines to help implement necessary changes. As the employer or supervisor of Mr. Employee, your opinion as to the adequacy of training received by Mr. Employee at Canadian Valley Vocational Technical School would be of great value to the institution and future students.

We would appreciate your completion of the enclosed questionnaire. The information will be strictly confidential and used in a professional manner for educational purposes only.

The questionnaire has been designed to take a minimum of time. Also enclosed is a copy of the signed information release by Mr. Employee. Please fold as indicated, use tab to seal, and return to the school. Postage has been prepaid.

We at Canadian Valley are proud of our many graduates and are equally proud that you chose to employ them. Your cooperation in the completion and return of this questionnaire will have a definite input in improving future Vo-Tech training programs.

Sincerely,

Earl Cowan

Earl Cowan
Assistant Superintendent

EC:ll
Enc: 1 questionnaire
1 release form

CANADIAN VALLEY AREA
Vocational & Technical School

APPENDIX B

DATA COLLECTION INSTRUMENTS

EMPLOYER'S QUESTIONNAIRE

ALL INFORMATION ON THIS QUESTIONNAIRE WILL BE HELD IN STRICT CONFIDENCE AND USED FOR EDUCATIONAL PURPOSES ONLY

Company or Firm _____ Date _____
Address _____ Phone _____
Department or Shop _____
Rating Supervisor _____
Name of Employee _____
Job Title _____

Please give approximate starting salary

Monthly _____
Hourly _____

For each of the skill areas listed below, answer the questions at the right. Indicate your answers by checking appropriate boxes.	SKILL TO JOB: How important is this skill to employees present job?					SKILL RATING: How would you evaluate employee's skill?					RELATIVE PREPARATION: How does employee compare with other entry workers who have had other training?					Do you feel a need for more instruction or training in this area?	
	1. Of No Real Importance	2. Of Some Importance	3. Of Considerable Importance	4. Of Major Importance	5. Of Critical Importance	1. Very Poor	2. Poor	3. Neutral	4. Good	5. Very Good	1. No Basis For Comparison	2. This Student Is Better Prepared	3. Both Are About The Same	4. This Student Is Less Prepared		Yes	No
MANUAL JOB SKILLS Refers to skill at using or operating tools, equipment, materials, machines, etc. in your work.																	
TECHNICAL KNOWLEDGE Refers to practical everyday knowledge of work processes, methods, procedures, and knowledge of basic principles and concepts underlying the practical trade work.																	
MATHEMATICAL SKILLS Refers to ability to use arithmetic or higher mathematics to solve work problems.																	
COMMUNICATION SKILLS Refers to skill at speaking, writing, drafting, sketching, etc., to communicate ideas.																	
READING AND INTERPRETIVE SKILLS Refers to skill in reading printed matter, blueprints, tables, diagrams, etc.																	
CLERICAL SKILLS Refers to skill at keeping records, making out reports, and other types of routine paper work.																	
PERSONAL RELATIONS SKILLS Refers to skill at dealing with people, such as customers, co-workers, other trades, etc.																	
SUPERVISORY SKILLS Refers to skill at supervising others, e.g., instructing, directing, evaluating, planning, organizing, etc.																	
WORK ATTITUDE Refers to such behavior as absenteeism, rule violation, concern for quality work, cooperation etc.																	

Please make any comments you wish on the reverse side of this questionnaire concerning changes or improvements that you feel would better prepare the graduates of Canadian Valley Area Vocational Technical School for entry level positions in your company.

WHEN COMPLETED - FOLD DOWN FIRST

EMPLOYEE'S QUESTIONNAIRE

Name_____ Date_____
Last First Middle

Name of Employer_____
Address of Employer_____
Street City State Zip-Code

Job Title_____ Phone_____

Name of Immediate Supervisor _____

If not employed please indicate status below.

Circle one.

1 Continuing Education
2 Military Service
3 Unemployed
4 Employed part-time only

For each of the skill areas listed below, answer the questions at the right.

Indicate your answers by checking appropriate boxes

	SKILL TO JOB — How important is this skill for your present job?					SKILL RATING — How would you evaluate yourself on this skill?					RELATIVE PREPARATION — How would you compare your skills to entry workers who have had other training?					
	1 Of No Real Importance	2 Of Some Importance	3 Of Considerable Importance	4 Of Major Importance	5 Of Critical Importance	1 Need Much Improvement	2 Below Average	3 Average	4 Above Average	5 Outstanding	1 No basis for comparison	2 better prepared	3 About the same	4 Less prepared	Yes	No
MANUAL JOB SKILLS. Refers to skill at using or operating tools, equipment, materials, machines, etc. in your work.																
TECHNICAL KNOWLEDGE. Refers to practical everyday knowledge of work processes, methods, procedures, and to knowledge of basic principles and concepts underlying the practical trade work.																
MATHEMATICAL SKILLS. Refers to ability to use arithmetic or higher mathematics to solve work problems.																
COMMUNICATION SKILLS. Refers to skill at speaking, writing, drafting, sketching, etc., to communicate ideas.																
READING AND INTERPRETIVE SKILLS. Refers to skill in reading printed matter, blueprints, tables, diagrams, etc.																
CLERICAL SKILLS. Refers to skill at keeping records, making out reports, and other types of routine paper work.																
PERSONAL RELATIONS SKILLS. Refers to skill at dealing with people, such as customers, co-workers, other trades, etc.																
SUPERVISORY SKILLS. Refers to skill at supervising others, e.g., instructing, directing, evaluating, planning, organizing, etc.																
OTHER SKILLS. Add what you feel applies to your job and is not covered above _____ _____ _____																

Do you feel a need for more instruction or training in this area?

Please give your frank opinion about the following items concerning your education at Canadian Valley AVTS.

	Poor	Fair	Satisfactory	Excellent	Outstanding
1. Quality of instruction from shop instructors					
2. Comparison of school equipment to that of industry					
3. Condition of shop facilities and equipment					
4. General physical condition of school					
5. Vocational counseling given to students					
6. Help given students to find jobs					
7. Opportunity for extracurricular activities					
8. Interest shown by teachers in student problems					
9. Reputation of the school in community					
10. Strictness of school in maintaining discipline					

PLEASE MAKE ANY COMMENTS YOU WISH IN THE SPACE BELOW CONCERNING CHANGES OR IMPROVEMENTS YOU WOULD LIKE TO SEE MADE AT CANADIAN VALLEY AREA VOCATIONAL TECHNICAL SCHOOL.

I GIVE MY PERMISSION FOR MY SUPERVISOR/EMPLOYER TO RATE MY SKILL AND PREPARATION ON A QUESTIONNAIRE THAT IS BASED ON THE SAME QUESTIONS TO WHICH I HAVE RESPONDED. I UNDERSTAND THAT ALL INFORMATION WILL BE HELD CONFIDENTIAL.

NAME (PLEASE PRINT) _____

SIGNATURE _____

DATE _____

VITA

Earl William Cowan

Candidate for the Degree of

Doctor of Education

Thesis: ASSESSING EMPLOYER-EMPLOYEE SATISFACTION WITH TRAINING AT CANADIAN VALLEY AREA VOCATIONAL-TECHNICAL SCHOOL

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Maysville, Oklahoma, December 28, 1938.

Education: Graduated from Capitol High High School in May 1957; received Bachelor of Science degree in Industrial Arts Education from Central State University in 1961; received Master of Education degree from Central State University in 1969; completed requirements for the Doctor of Education degree at Oklahoma State University in July 1984.

Professional Experience: Metalwork teacher, Classen High School, Oklahoma City, 1961-1969; Vocational Welding teacher, Canadian Valley Area Vocational-Technical School, 1970-1979; Adult Education Coordinator, Canadian Valley Area Vocational-Technical School, 1980-1981; Assistant Superintendent, Canadian Valley Area Vocational-Technical School, 1981-1984; Superintendent, Canadian Valley Area Vocational-Techncial School, 1984.

Professional Organizations: American Vocational Association, Oklahoma Vocational Association, National Council of Local Administrators, Oklahoma Council of Local Administrators, National Association of Trade and Industrial Instructors, American Welding Society.