DOCUMENT RESUME

ED 321 100 CE 055 259

TITLE	A Follow-up Study of the 1989 Graduates of Postsecondary Vocational-Technical Programs in Montana.
INSTITUTION	Northern Montana Coll., Havre. Montana Center for Vocational Education, Research, Curriculum and Personnel Development.
PUB DATE	May 90
NOTE	45p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Counseling; *Education Work Relationship; *Graduate Surveys; Job Placement; *Outcomes of Education; Postsecondary Education; *School Choice; Student Financial Aid; *Student Personnel Services; Technical Education; Tutoring; Vocational Education; *Vocational Followup
IDENTIFIERS	*Montana

ABSTRACT

A study of the 1989 graduates of postsecondary vocational-technical programs in Montana was designed to provide insight into how graduates selected the schools, their level of satisfaction with training and student services provided while they were in school, and information on their present employment and plans for the future. Survey packets were mailed to 1,292 graduates of 9 participating schools in February 1990. The response rate was 44 percent after 2 follow-up contacts. Among the findings were the following: (1) almost half, or 48 percent, of the graduates chose their school for preparation for a job to be obtained; (2) an additional 23 percent chose it to improve existing skills; (3) 87 percent of the respondents felt that their course work had been of direct benefit in meeting needs of future career plans; (4) 23 percent indicated they had not used financial aid services; (5) 39 percent had not used counseling services; (6) 37 percent had not used job placement services; (7) 31 percent had not used learning laboratories or tutorial services; (8) 50 percent were employed full time, 18 percent part time, 15 percent were continuing their education, and 10 percent were unemployed; (9) of those employed, 61 percent indicated their job was directly or closely related to their training; and (10) 55 percent indicated that they were satisfied with their jobs. (The report includes 25 data tables and the survey form.) (CML)

the CENTER

A FOLLOW-UP STUDY OF THE 1989 GRADUATES OF POSTSECONDARY VOCATIONAL-TECHNICAL PROGRAMS IN MONTANA

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FOREWORD

With the implementation of the Center for Vocational Education Research, Curriculum and Personnel Development, a system was created which provided for facilitating vocational education in the state. Systematic and comprehensive studies can now be done by one agency which should prove to be helpful for all providers of vocational education. Such studies provide data necessary for program planning and review, equipment purchasing, and program articulation.

In 1989 a follow-up study was undertaken by the Center for Vocational Education which surveyed the 1988 graduates of all the public post-secondary schools offering vocational education in Montana. The study resulted in reports of the findings for each of the nine schools offering vocational-technical programs in the state, and a tenth report which summarized the aggregate findings.

This report is a second effort to do a similar research study. With a minimum number of revisions to the survey instrument used above, a follow-up survey was conducted involving the 1989 graduates of the post-secondary vocational technical programs in the state.

Again the cooperating schools consisted of the states' five vocational-technical centers located at Billings, Butte, Great Falls, Helena, and Missoula; the three community colleges: Dawson at Glendive, Flathead Valley at Kalispell, Miles at Miles City, and Northern Montana College at Havre.

Separate reports have been written for each of the schools and this report represents a composite of all nine schools summarizing the findings for all the 1989 graduates of postsecondary programs in the state.

The Center is grateful to all those who cooperated in the study, especially John Oliver who was responsible for the monitoring and development of the research.

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May 1990

A FOLLOW-UP STUDY OF THE 1989 GRADUATES OF POSTSECONDARY VOCATIONAL-TECHNICAL PROGRAMS IN MONTANA

Introduction

Because of the technological and social changes in the last two decades, significant changes have occurred in the way our citizens prepare and maintain successful career paths. With a growing demand for trained, qualified people in the work force, an increased emphasis is placed on vocational-technical schools to provide quality classroom instruction linked to jobs in the labor market.

Consequently, the long-range planning goals of vocational-technical programs in Montana must meet the immediate needs of the students and the demands of the employers. One way to determine if these needs are being met by the vocational education programs in the state is to contact recent graduates of the programs and query them to determine what they experienced as they entered the labor market.

Such follow-up studies measure the success of vocational education in two ways: first, by keeping track of former students' job placement and determining their employment success; and second, by determining employers' perceptions of the effectiveness of their employees' vocational education.

One of the most important reasons to conduct vocational follow-up studies is to determine the vocational-technical programs' effectiveness in fulfilling their purpose of preparing individuals for employment. Data results which show that vocational-technical graduates are successfully employed in their areas of preparation provide a foundation for accountability. Hence, when a school board member, taxpayer, legislator, school principal or other person questions the cost of improvements in vocational programs, the vocational educator should be able to document a reply with follow-up study data.

Vocational instructors, local school personnel and students in vocational programs can all benefit from study results. Instructors can use follow-up data to update and modify existing curricula. Local school administrators find follow-up data helpful in making program modifications, including deciding when to initiate, expand, change or delete programs. And the students are the

beneficiaries of the program modifications which results in program improvements. Follow-up studies, when properly used are an effective management tool.

The Montana Center for Vocational Education Research, Curriculum and Personnel Development recognized the need for such follow-up data and consequently did two surveys of graduates of postsecondary vocational-technical programs in Montana. The first study was completed in June of 1989 and involved the graduates completing their programs during the 1987-88 school year. The second study, which is summarized in this report was a replica of the first except it involved the 1988-89 graduates of the postsecondary vocational-technical programs in Montana, and included minor revisions in the survey instrument.

Both studies were done by working cooperatively with the five vocational technical centers, three community colleges and Northern Montana College in planning, developing, and conducting the survey.

Purpose

This study was designed to gather data from the 1989 graduates of the postsecondary vocational-technical programs in Montana. The information generated was to provide insight into how graduates selected the schools and their level of satisfaction with training and student services provided while they were in school. Graduates were also asked to provide information relative to their present employment and their plans for the future.

The collected data should assist program planners while monitoring programs for their relevance to today's employer demands. These data will provide for the restructuring of specific curricula/programs; improve career guidance for students; and generally improve the vocational-technical programs to address student needs and labor market demands in Montana.

Population and Methodology

A planning meeting was held with Center staff members and representatives from each of the participating schools:

Billings Vocational-Technical Center	Billings, Montana
Butte Vocational-Technical Center	Butte, Montana
Great Falls Vocational-Technical Center	Great Falls, Montana
Helena Vocational-Technical Center	Helena, Montana
Missoula Vocational-Technical Center	Missoula, Montana
Dawson Community College	Glendive, Montana
Miles Community College	Miles City, Montana
Flathead Valley Community College	Kalispell, Montana
Northern Montana College	Havre, Montana

During the meeting, the survey instrument used in the 1988 study was revised and modified for reuse. The revised instrument was field-tested by mailing it to graduates and asking them to respond to the questions and provide comments relative to the design of the survey. With only minor changes, the instrument was revised and distributed to the sample population.

The population of the study consisted of all the 1988-89 graduates of the postsecondary vocational-technical programs in Montana. It also included the graduates who had completed a general studies program at the three community colleges. The names and addresses of 1292 graduates were supplied to the Center by the nine participating schools.

A complete survey packet consisting of cover letter, directions, survey instrument, and a pre-addressed, stamped envelope for return of the instrument was sent to each graduate (see Appendix). The cover letter contained an explanation of the purpose of the survey, a brief description of the survey instrument, and an assurance of confidentiality.

After a two-week period, a follow-up postcard was sent to nonrespondents encouraging them to return their questionnaires. After another time span of two weeks, the names of the nonrespondents from each school were returned to the home school for individual phone calls and encouragement to respond.

This report summarizes the findings of the study for all nine schools. It is a composite study and does not single out individual schools. A separate report has been written for each individual school.

Results

Table I shows the responses to the survey by school. Of the 1292 surveys mailed, 572 were returned for a 44 percent response. Graduates of Dawson Community College had the highest response with a 78 percent return, and Billings Vo-Tech had the lowest with a 15 percent return. The low response was partially due to the fact that the telephone follow-up at Billings Vocational-Technical Center was not completed as originally planned due to conflicts in schedules.

Table I

SUMMARY OF QUESTIONNAIRES AND RETURNS BY SCHOOL

School	No. Sent*	Number Returned	Percentage
Billings Vo-Tech Center	184	27	15%
Butte Vo-Tech Center	119	74	62%
Great Falls Vo-Tech Center	236	66	28%
Helena Vo-Tech Center	202	130	64%
Missoula Vo-Tech Center	171	60	35%
Dawson Community College	73	57	78%
Flathead Community College	63	27	43%
Miles Community College	122	75	61%
Northern Montana College	122	56	46%
	1292	572	44%

*All the students of vocational-technical programs graduating during the 1988-89 school year were mailed a questionnaire.

To provide a basis for analyzing the data the graduates were asked to list the program, certificate, or degree they had recently completed. As noted above, all the 1989 graduates were surveyed, Table II reports those figures by number sent and responses for each program area. Five-hundred and seventy-two of the 1292 graduates responded resulting in a 44 percent return. The graduates of similar programs from all the schools were combined for reporting

purposes to prevent duplication. This resulted in a total of 51 programs which were grouped into general studies, agriculture, business and marketing, health, and trades and industry. The number of graduates in each program ranged from two in several programs to 127 in Practical Nursing which is offered at all the Vocational-Technical Centers. Secretarial was the only other program area which had more than 100 graduates. Five additional programs had over 50 graduates, i.e., Business Management 91, Registered Nursing 78, Data Entry Processing 67, Automotive Mechanics 64, Word Processing 62, and Accounting/Bookkeeping 58. None of the graduates of the following programs responded to the survey, Forestry, 4 graduates; Administrative Assistant, 2 graduates; and Construction Technology, 2 graduates; consequently, the data in this report do not reflect their experiences.

Table II

RESPONDENTS BY PROGRAM

Program	No. Sent	Number Returned	Approximate Percentage of Respondents
GENERAL STUDIES:			
Associate of Arts	15	12	2.1%
General Degree	34	8	1.4%
AGRICULTURE:			
Agri-Business	9	7	1.2%
Agri-Mechanics	24	11	1.9%
Farm Management	2	2	0.4%
Forestry	4	0	.0%
BUSINESS AND MARKETING			
Accounting and Bookkeeping	58	28	4.9%
Administrative Assistant	2	0	.0%
Business Management	91	54	9.4%

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Table II

RESPONDENTS BY PROGRAM (continued)

Program	No. Sent	Number Returned	Approximate Percentage of Respondents
BUSINESS AND MARKETING (continued)			
Computer Program Operator	11	3	0.5%
Data Entry Processing	67	41	7.2%
General Assistant/Clerk	7	1	0.2%
Medical Receptionist	4	1	0.2%
Merchandising	10	4	0.7%
Microcomputer Management	11	3	0.5%
Secretarial	113	56	9.8%
Word Processing	62	21	3.7%
HEALTH CARE:			
Child Care Specialist	10	3	0.5%
Dental Assistant	12	7	1.2%
Emergency Medical Technician	24	4	0.7%
Human Services	21	12	2.1%
Nurse Attendant	38	6	1.1%
Practical Nursing	127	60	10.5%
Registered Nursing	78	47	8.2%
Respiratory Technician	36	8	1.4%
Surgical Technician	9	2	0.4%
TRADE AND TECHNICAL:			
Air Conditioning/Refrigeration	13	2	0.4%
Appliance Technician	21	3	0.5%
Automotive Body	26	6	1.1%
Automotive Mechanics	64	34	5.9%
Aviation Maintenance	28	14	2.5%
Carpentry	11	6	1.1%
Construction Technology	2	0	0.0%
Civil Engineering Technology	3	2	0.4%
Diesel Mechanic	15	4	0.7%
Drafting	23	7	1.2%
Electrical/Electronic Tech	49	34	5.9%
Food/Kitchen Management	22	7	1.2%

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Table II

RESPONDENTS BY PROGRAM (continued)

Program	No. Sent	Number Returned	Approximate Percentage of Respondents
TRADE AND TECHNICAL: (continued)			
Heavy Equipment Mechanic	10	3	0.5%
Heavy Equipment Operator	10	3	0.5%
Jewelry/Watchmaking	4	1	0.2%
Law Enforcement	14	11	1.9%
Machine/Metals Technology	13	7	1.2%
Mechanic Assistant	17	1	0.2%
Photography	2	2	0.4%
Small Engine Technician	10	3	0.5%
Surveying	9	5	0.9%
Truck Operator	22	4	0.7%
Water Quality	3	1	0.2%
Welding Technology	22	11	1.9%
	1292	572	99.3%*

*Total less than 100% due to rounding numbers

Students in vocational-technical training programs or community colleges are frequently in different stages of their education. Some are recent high school graduates who are preparing for a job, others are mature adults who are retraining or updating their occupational skills. Still others are uncertain about their future and may choose to continue their education in a related field or seek a bachelor's degree. In some cases, just the availability of a school in the geographic area may be the primary reason they are in school. Therefore, graduates were asked to identify their primary reason for attending school. Table III summarizes the findings.

Almost half of the graduates (48%) chose their school for preparation for "job to be obtained" while an additional 23 percent chose it to improve "existing skills." Other reasons the specific school was chosen were for geographic

location, eight percent; program choices, six percent; and "other," seven percent. Only two percent of the respondents chose the school for economic reasons.

Table III

PRIMARY REASON FOR ATTENDING POSTSECONDARY SCHOOL

Reason	No. Responses	Percentage
Improvement of existing "job skills"	132	23%
Preparation for "job to be obtained"	276	48%
Transfer credit for further education	25	4%
School location	44	8%
Program choices	33	6%
Least costly	14	2%
Other	37	7%
No response	11	2%
	572	100%

Since the vocational-technical programs were at less than a baccalaureate degree level, and because there has been a major emphasis in recent years for acquiring more math, science and other related skills, many students find it necessary and/or appealing to further their educational goals to insure employment success. Consequently the respondents were asked if they planned on pursuing more education and, if so, what type of program/school they would anticipate attending.

Approximately one-third (39%) of the graduates were not planning additional education at this time as shown in Table IV. However 36 percent were planning to attend a four-year college, while nine percent were going to pursue training at a vocational-technical school and six percent at a community college. Six percent also indicated some "other" type of additional training.

Table IV

CHOICE OF SCHOOL FOR ADDITIONAL EDUCATION

Type of School	Total	Percentage
Vocational-Technical	55	9%
Community college	34	6%
Four-year college	206	36%
Other	32	6%
Not planning at this time	224	39%
No response	21	4%
	572	100%

Because one- and two-year technical programs may, in some cases, be used as prerequisites for specific postsecondary degree programs or in other instances, the technical program provides a sampling of the academic rigor of a four-year degree; many students seek to continue their education as shown in Table IV above. Therefore, graduates were asked to assess the adequacy of the training program they completed as to how it helped them meet the demands that may be expected of them in an advanced program. Table V summarizes the graduates' responses. Sixty-three percent responded good to excellent, 10 percent reported fair and 19 percent said it did not apply. Only three percent rated it as poor.

Table V

ADEQUACY OF COMPLETED COURSES FOR MEETING CONTINUING EDUCATION NEEDS

Rating	No. Responses	Percentage
Excellent	118	21%
Good	240	42%
Fair	57	10%
Poor	20	3%
Doesn't Apply	110	19%
No Response	27	5%
	572	100%

Although there are many reasons for attending postsecondary institutions as mentioned above, the primary purpose of vocational-technical education is to prepare for employment. Therefore, in addition to determining if completed course work was relevant to continuing education, graduates were asked to rate how their completed courses prepared them in terms of career plans. Table VI shows the response of the graduates. As can be seen, 87 percent of the respondents felt that their course work had been of direct benefit and another eight percent considered it of indirect benefit. Only two percent considered it of no benefit.

Table VI

RATINGS OF COMPLETED COURSES MEETING THE NEEDS FOR FUTURE CAREER PLANS

Rating	No. Responses	Percentage
Of immediate, direct benefit	260	46%
Of long term, direct benefit	232	41%
Of indirect benefit	48	8%
Of no benefit	13	2%
No response	19	3%
	572	100%

Studies have shown that academic success is directly related to the quality and quantity of support services provided by an institution. Services such as financial aid, counseling, advising, library facilities, etc., all have an indirect bearing on the students' success in a program. Therefore, the quality of each school's student services must be maintained and school personnel should periodically ascertain the level of satisfaction students report for each service area. Tables VII through XIII report how the graduates rated these services in meeting their needs while students.

Financial aid services is guided by many rules and regulations which may sometimes alienate the student. For example, failure to meet minimum financial aid needs as required by regulations or failure to make application for the assistance prior to a cut-off date, along with many other reasons may cause individuals to have a low opinion of the services. Table VII shows a mixed reaction to the financial aid assistance. However, 62 percent of the group rated the services from fair to excellent and only three percent rated it as poor. It is interesting to note that 23 percent indicated they had not used financial aid services and three percent said it was not available.

Table VII

RATINGS OF FINANCIAL AID SERVICES
ACCORDING TO NEEDS FULFILLMENT

Rating	No. Responses	Percentage
Excellent	196	34%
Good	123	21%
Fair	41	7%
Poor	16	3%
Not used	129	23%
Not available	18	3%
No response	49	9%
	572	100%

Counseling services while not always used by postsecondary students play an important part in the development of the student. Consequently, an effort was made to determine the value of the assistance received. When asked to rate the counseling services, 39 percent of the respondents reported in Table VIII they had not used the service. However, 11 percent rated it as excellent, 18 percent as good and 12 percent fair. An additional 12 percent did not respond to the question.

Table VIII

RATINGS OF COUNSELING SERVICES ACCORDING TO NEEDS FULFILLMENT

Rating	No. Responses	Percentage
Excellent	63	11%
Good	105	18%
Fair	66	12%
Poor	24	4%
Not used	223	39%
Not available	21	4%
No response	70	12%
	572	100%

Placement services are much like financial aid services when being rated by graduates, i.e., they will frequently receive low ratings due to circumstances beyond control. Lack of job availability in a geographic area or other uncontrollable variables will frequently cause a graduate to give the service a low rating when asked to evaluate it. One-hundred and ninety-nine respondents (35%) in Table IX rated the placement assistance from fair to excellent. Only eight percent reported it as poor. An exceptionally high number (210) or 37 percent of the graduates reported they had not availed themselves of the service. This is probably due to the fact that a large number were pursuing additional education. Fifteen percent did not respond to the question.

Table IX

RATINGS OF PLACEMENT SERVICES
ACCORDING TO NEEDS FULFILLMENT

Rating	No. Responses	Percentage
Excellent	47	8%
Good	90	16%
Fair	62	11%
Poor	47	8%
Not used	210	37%
Not available	28	5%
No response	88	15%
	572	100%

One important aspect of any postsecondary program is the assistance and advice given to help the student select courses and complete the requirements of the program. Most respondents were fairly satisfied with the course advisement services by rating them as excellent (18%), good (28%), fair (14%) and poor (5%). See Table X. Twenty percent had not used the service and 13 percent did not answer the question.

Table X

RATINGS OF COURSE ADVISEMENT SERVICES
ACCORDING TO NEEDS FULFILLMENT

Rating	No. Responses	Percentage
Excellent	101	18%
Good	158	28%
Fair	80	14%
Poor	33	5%
Not used	115	20%
Not available	12	2%
No response	73	13%
	572	100%

Although student activities are varied from school to school and are frequently of very little interest to postsecondary students, the graduates were asked to rate them as to how they met their needs while students. Table XI shows that 23 percent rated them good to excellent, 15 percent rated them fair, and six percent poor, 15 percent did not respond. A large number (213) or 38 percent of the group reported they had not used the services, which may indicate that not enough activities were planned to meet the needs of all students. Perhaps the non-traditional student has not been adequately served.

The library on any campus today has much to do to keep abreast of the changing needs of its student body. Table XII indicates that the libraries weren't rated too badly with 49 percent of the graduates reporting them as good or excellent. Fourteen percent rated the service as fair and three percent marked poor. A combined total of 34 percent either did not respond to the question (13%), or said they had not used the facility (13%), or reported that it was not available to them (8%).

Table XI

RATINGS OF STUDENT ACTIVITIES
ACCORDING TO NEEDS FULFILLMENT

Ratings	No. Responses	Percentage
Excellent	28	5%
Good	102	18%
Fair	88	15%
Poor	36	6%
Not used	213	38%
Not available	17	3%
No response	88	15%
	56	100%

Table XII

RATINGS OF LIBRARY SERVICES
ACCORDING TO NEEDS FULFILLMENT

Rating	No. Responses	Percentage
Excellent	90	16%
Good	186	33%
Fair	81	14%
Poor	17	3%
Not used	74	13%
Not available	48	8%
No response	76	13%
	572	100%

Tutorial services have become fairly common in postsecondary institutions which have a high enrollment of non-traditional students who may need remedial/refresher instruction in the academic areas or have needs to improve

study skills. Consequently the graduates were asked to rate the service. In Table XIII, the learning labs and tutoring services were rated good to excellent by 38 percent of the respondents, nine percent rated them fair and three percent poor. The service was not used by 31 percent of the respondents and 19 percent either did not respond or indicated it was not available.

Table XIII

RATINGS OF LEARNING LABS/TUTORING SERVICES ACCORDING TO NEEDS FULFILLMENT

Rating	No. Responses	Percentage
Excellent	96	17%
Good	122	21%
Fair	52	9%
Poor	19	3%
Not used	176	31%
Not available	16	3%
No response	91	16%
	572	100%

In doing graduate follow-up studies key indicators of a successful program have to do with the employability of the graduates. For example, some questions to find answers to include: were they successful in gaining employment; are they satisfied with their employment; and did their schooling adequately prepare them for their jobs. When asked to report their present employment status, 50 percent (320) indicated that they were employed full-time as shown in Table XIV. Another 18 percent reported part-time employment, 15 percent were continuing their education and ten percent reported they were unemployed. The question asked the graduates to mark all responses that applied, consequently the figures represent multiple responses.

Table XIV

PRESENT EMPLOYMENT STATUS OF GRADUATES

Rating	No. Responses	Percentage
Employed, full-time	320	50%
Employed, Part-time	112	18%
Unemployed, seeking employment	61	10%
Military	8	1%
Continuing education	93	15%
Unavailable for employment	14	2%
No Response	29	4%
	637*	100%

*Number is higher than 572 due to multiple responses.

When asked about the relationship between their present occupation and the courses they had completed 61 percent indicated their job was directly or closely related to their training. Table XV also shows that 15 percent were working in unrelated jobs and nine percent were unemployed, 15 percent did not respond to the question which accounts for the difference in the percent shown as unemployed in Table XIV (10%) and those shown in Table XV (9%).

Table XV

RELATIONSHIP BETWEEN PRESENT OCCUPATION AND COMPLETED COURSES

Ratings	No. Responses	Percentage
Directly related	252	44%
Closely related	97	17%
Not related	84	15%
Not employed	52	9%
No response	87	15%
	572	100%

Table XVI shows a further analysis of the employment data by program area. In analyzing each occupational area, no particular pattern can be identified, i.e., most show that the majority of the group is employed. However, many are on a part-time basis and about ten percent were unemployed which is slightly higher than the state's job employment record. It is important to note that 93 or 16 percent of the graduates were continuing their education.

TABLE XVI

PRESENT EMPLOYMENT STATUS BY PROGRAM AREA

Program	Employment Status*	Related to Occupation	Continuing Education
GENERAL STUDIES:			
Associate of Arts (12)	1 FT	1	
	2 PT	1	
	2 UE		1
	7 NR		7

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TABLE XVI

PRESENT EMPLOYMENT STATUS BY PROGRAM AREA (continued)

Program	Employment Status*	Related to Occupation	Continuing Education
GENERAL STUDIES (continued):			
General Degree (7)	4 FT	2	
	3 NR		3
AGRICULTURE:			
Agri-Business (7)	2 FT	1	
	2 PT	1	2
	2 UE		
	1 NR		
Agri-Mechanics (11)	10 FT	9	
	1 PT		
Farm Management (2)	2 NR		1
BUSINESS:			
Account/Bookkeeping(28)	20 FT	18	3
	3 PT	2	
	2 UE		
	3 NR		1
Business Management (54)	22 FT	19	1
	13 PT	9	2
	8 UE		4
	11 NR		4
Computer Program Operator (3)	1 FT	1	
	1 PT		
	1 NR		1
Data Processing (42)	24 FT	18	
	3 PT	1	1
	7 UE		1
	8 NR		1

(continued on page 21)

TABLE XVI

PRESENT EMPLOYMENT STATUS BY PROGRAM AREA (continued)

Program	Employment Status*	Related to Occupation	Continuing Education
BUSINESS (continued):			
General Assist/Clerk (1)	1 FT	1	
Medical Receptionist (1)	1 UE		
Merchandising (4)	1 FT	1	
	2 PT	1	1
	1 UE		
Microcomputer Mgmt (3)	3 FT	3	
Secretarial (56)	29 FT	26	
	17 PT	9	1
	5 UE		
	5 NR		3
Word Processing (21)	15 FT	15	1
	3 PT		
	1 UE		
	2 NR		
HEALTH CARE:			
Child Care Specialist (3)	3 FT	3	
Dental Assistant (7)	4 FT	3	
	1 PT	1	
	1 UE		
	1 NR		
Emergency Medical Tech (4)	4 FT	3	
			4

(continued on page 22)

TABLE XVI

PRESENT EMPLOYMENT STATUS BY PROGRAM AREA (continued)

Program	Employment Status*	Related to Occupation	Continuing Education
HEALTH CARE (continued)			
Human Services (12)	4 FT	2	1
	4 PT	3	2
	4 NR		
			4
Nurse Attendant (6)	1 FT	1	
	3 PT	3	
	1 UE		
	1 NR		1
Practical Nurse (60)	36 FT	36	4
	18 PT	17	4
	1 UE		
	5 NR		2
Registered Nurse (47)	34 FT	33	1
	8 PT	7	2
	1 UE		
	4 NR		4
Respiratory Tech (8)	7 FT	7	
	1 PT	1	
Surgical Technician (2)	2 FT	2	
TECHNICAL STUDIES:			
AC/Refrigeration (2)	1 FT		
	1 PT		
Appliance Technician (3)	1 FT		
	1 PT		1
	1 UE		1
Automotive Body (6)	3 FT	3	
	2 PT	2	2
	1 NR		

(continued on page 23)

TABLE XVI

PRESENT EMPLOYMENT STATUS BY PROGRAM AREA (continued)

Program	Employment Status*	Related to Occupation	Continuing Education
TECHNICAL STUDIES (continued)			
Auto Mechanics (34)	18 FT	17	
	5 PT	1	1
	5 UE	1	2
	6 NR		2
Aviation Maintenance (14)	13 FT	11	1
	1 UE		
Carpentry (6)	2 FT		
	1 PT	1	
	3 NR		
Civil Engineering Tech (2)	2 UE		1
Diesel Mechanic (4)	2 FT	2	
	1 PT	1	
	1 NR		
Drafting (7)	3 FT	2	
	1 PT		1
	3 NR		
Electrical/Electronic Technology (34)	19 FT	15	1
	4 PT	3	1
	6 UE		1
	5 NR		3
Food/Kitchen Managmt (7)	4 FT	4	
	3 PT	2	
Heavy Equipment Mechanic (3)	2 FT	2	
	1 PT		
Heavy Equipment Operator (3)	1 UE		
	2 NR		2

(continued on page 24)

TABLE XVI

PRESENT EMPLOYMENT STATUS BY PROGRAM AREA (continued)

Program	Employment Status*	Related to Occupation	Continuing Education
TECHNICAL STUDIES (continued)			
Jewelry/Watchmaking (1)	1 FT		
Law Enforcement (11)	4 FT	3	
	2 PT		
	5 UE		1
			1
Machine/Metals Tech (7)	2 FT	2	
	3 PT	1	
	2 NR		
			1
Mechanic Assistant (1)	1 FT	1	
Photography (2)	1 PT		
	1 UE		
Small Engine Tech (3)	1 PT		1
	2 UE		
Surveying (5)	3 FT	3	
	2 UE		
Truck Operator (4)	3 FT	1	
	1 UE	1	
Water Quality (1)	1 PT		
Welding Technology (11)	10 FT	6	
	1 PT		
			1
TOTAL	320 FT	346	93
	111 PT		
	60 UE		
	81 NR		
	572		

*FT=Full-time, PT=Part-time, UE=Unemployed, NR=No response

Providers of vocational-technical programs must be continuously aware of the supply and demand of the job market. However, with our mobile population these statistics may be misleading, since the supply may be short on a national level but show a surplus at a local geographic area and vice versa. Therefore the graduates were asked to report the supply and demand as they had observed it to be both in their occupational area in general and in their occupational area in their geographic setting. Seventy percent of the respondents in Table XVII reported the job availability in general as fair to excellent while only 16 percent reported it as poor.

Table XVII

JOB AVAILABILITY IN OCCUPATIONAL AREAS

Rating	No. Responses	Percentage
Excellent	103	18%
Good	165	29%
Fair	131	23%
Poor	92	16%
No response	81	14%
	572	100%

Since these data have more direct application to specific programs, Table XVIII was developed to show the relationship by program. Registered nursing showed a high level of job availability with 31 of the 46 graduates of the program rating it as excellent and eight rating it as good. With very few exceptions, the respondents from the other program areas split their rating of job availability between good and fair. For the most part more graduates rated it excellent than rated it as poor.

Table XVIII

JOB AVAILABILITY IN OCCUPATIONAL AREA BY PROGRAM

Program	Excellent	Good	Fair	Poor
GENERAL STUDIES:				
Associate of Arts	4	4	1	
General Degree	1	2	2	1
AGRICULTURE:				
Agri-Business	1	2	4	
Agri-Mechanics	3	1		2
Farm Management		2	1	
BUSINESS:				
Accounting/Bookkeeping	1	8	11	4
Business Management	4	17	15	10
Computer Program Operator		2	1	
Data Processing	3	5	14	12
General Assistant/Cierk		1		
Merchandising		3	1	
Microcomputer Management		1	1	1
Secretarial	4	20	13	10
Word Processing	4	8	3	3
HEALTH:				
Child Care Specialist	2	1		
Dental Assistant	2	3	2	
Emergency Medical Technician	1	1		1
Human Services		4	2	3
Nurse Attendant		4	1	
Practical Nurse	21	27	10	1
Registered Nurse	31	8	5	2
Respiratory Technician	4	2	2	
Surgical Technician	1		1	
TECHNICAL STUDIES:				
Air Conditioning/Refrigeration				2
Appliance Technician	1	1	1	
Automotive Body		4	1	
Automotive Mechanics	2	8	10	6
Aviation Maintenance	4	6	1	
Carpentry		1		1
Civil Engineering Technology	1		1	
Diesel Mechanic		1	1	
Drafting	1	1	2	1

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Table XVIII

JOB AVAILABILITY IN OCCUPATIONAL AREA BY PROGRAM (continued)

Program	Excellent	Good	Fair	Poor
TECHNICAL STUDIES: (continued)				
Electrical/Electronic Tech	4	5	4	16
Food/Kitchen Management			4	3
Heavy Equipment Mechanic		1	1	1
Heavy Equipment Operator			1	
Jewelry/Watchmaking				1
Law Enforcement		5	3	2
Machine/Metals Tech	1	1	1	2
Mechanic Assistant			1	
Photography			1	1
Small Engine Technician				1
Surveying		2	1	2
Truck Operator	1		1	1
Water Quality			1	
Welding Technology	1	3	5	2
No Response (81)				
	103	165	131	92

Since some graduates are "place bound" and not able to move about to obtain employment the survey attempted to get their evaluation of the job availability in their immediate geographic area. Table XIX reports the data. Although 26 percent of the graduates did not respond, those that did were quite varied in their assessment with more rating the situation toward the lower end of the scale than toward the top. The rating categories of excellent, good, fair and poor, received a rating of 10, 18, 26, and 20 percent respectively.

Table XIX

JOB AVAILABILITY BY OCCUPATIONAL AREA IN GEOGRAPHIC AREA

Rating	No. Responses	Percentage
Excellent	56	10%
Good	102	18%
Fair	146	26%
Poor	118	20%
No response	150	26%
	572	100%

A key indicator of a successful educational program is the ability of the graduates to effectively perform when employed. This type of feedback has direct application to the curriculum and the equipment used in the program. As shown in Table XX, 76 percent of the respondents reported the relationship as good to excellent. Only two percent indicated a poor relationship existed. Most of the graduates apparently felt strongly about the relationship since only four percent did not respond to the question and eight percent indicated that the question didn't apply to them as they were continuing their education.

TABLE XX

RATINGS OF TRAINING IN RELATIONSHIP TO USEFULNESS ON THE JOB

Rating	No. Responses	Percentage
Excellent	191	33%
Good	244	43%
Fair	58	10%
Poor	11	2%
Doesn't apply	47	8%
No response	21	4%
	572	100%

Many people find it necessary to enroll in technical programs to secure additional training or retraining to update their occupational skills. Therefore, in addition to determining the current employment status of the graduates, the survey asked if they had been employed in their occupational area prior to enrolling in the program/courses. Table XXI shows that 20 percent of the respondents had been employed in their occupational area prior to enrollment while 63 percent trained for their new career without having had previous work experience. In checking the employment data in Table XVI "Present Employment Status of Graduates" it appeared that those who had previous work experience in the occupation were most likely to be employed in a related occupation after completing the training program.

Table XXI

PREVIOUSLY EMPLOYED IN OCCUPATIONAL AREA
PRIOR TO ENROLLMENT

Response	No. Responses	Percentage
Yes	116	20%
No	359	63%
No response	97	17%
	572	100%

The survey sought data related to wage earnings. Those who were employed full-time were asked to report their gross yearly salary. Table XXII reports these data in $5,000 increments. The largest response of 132 people (23%) reported an income in the $11,000 to $15,999 range. Fourteen percent reported in the $6,000 to $10,999 range and ten percent in the $16,000 to $20,999 range. Ten percent reported income over $21,000 annually. As in most surveys respondents are reluctant to report salary related information, this was no exception with 43% not reporting.

Table XXII

FULL-TIME EMPLOYEE'S YEARLY GROSS SALARY RANGE

Yearly Gross Salary	No. Responses	Percentage
$6,000-$10,999	80	14%
$11,000-$15,999	132	23%
$16,000-$20,999	55	10%
$21,000-$25,999	40	7%
More than $26,000	16	3%
No response	249	43%
	572	100%

The salary data are usually of more value if they can be related to specific occupational areas; consequently, Table XXIII reports it by program area. The registered nursing graduates reported salary at the top of the income levels, while the other programs were quite scattered and did not show any pattern.

Table XXIII

SALARY RANGE BY PROGRAM AREA

Program	$ 6,000 to $10,999	$11,000 to $15,999	$16,000 to $20,999	$21,000 to $25,999	Over $26,000
GENERAL STUDIES:					
Associate of Arts		1			
General Degree	2		1		2
AGRICULTURE:					
Agri-Business		2			
Agri-Mechanics	2	3	2		
BUSINESS:					
Accounting/Bookkeeping	5	14	2		
Business Management	9	6	4	2	2
Computer Program Operator			1		
Data Processing	10	8	2		1
General Assistant/Clerk	1				
Microcomputer Management	1	1	1		
Secretarial	7	20			1
Word Processing	4	10			
HEALTH:					
Child Care Specialist	1	1			
Dental Assistant	3	2			
Emergency Medical Technician		3		1	
Human Services	1	2	1	1	
Nurse Attendant	1	2			
Practical Nurse	5	20	11		1
Registered Nurse	1		9	26	2
Respiratory Technician		1	4	2	
Surgical Technician	1	1			

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Table XXIII

SALARY RANGE BY PROGRAM AREA (continued)

Program	$ 6,000 to $10,999	$11,000 to $15,999	$16,000 to $20,999	$21,000 to $25,999	Over $26,000
TECHNICAL STUDIES:					
Air Conditioning/Refrigeration					2
Appliance Technician	1				
Automotive Body	2	2			
Automotive Mechanics	6	8	3	1	
Aviation Maintenance	1	4	3	3	1
Carpentry			1		
Civil Engineering Technology		1			
Diesel Mechanic		2	1		
Drafting		2			
Electrical/Electronic Tech	4	6	6	1	2
Food/Kitchen Management	4				
Heavy Equipment Mechanic	2	1			
Law Enforcement	1	2	1		
Machine/Metals Tech	1			2	
Mechanic Assistant		1			
Surveying		2	1	1	
Truck Operator	1				1
Water Quality	1				
Welding Technology	2	4	1		
No Response (250)					
TOTAL	80	132	55	40	15

The survey also attempted to ascertain the graduates' feelings toward their newly found job by asking them to indicate if they were satisfied with their employment and if they were not, to indicate why. These data are reported in Tables XXIV and XXV. Three-hundred and seventeen or 55 percent reported they were satisfied with their jobs while 22 percent reported they were not happy with their employment situation as shown in Table XXIV.

TABLE XXIV

PRESENT EMPLOYMENT SATISFACTION

Rating	No. Response	Percentage
Yes	317	55%
No	124	22%
No response	131	23%
	572	100%

The 124 dissatisfied respondents were asked to mark a list of five reasons why they were dissatisfied as shown in Table XXV. Salary seemed to be the biggest reason for dissatisfaction with a 43 percent response; this was followed by a response of 22 percent indicating "work unrelated to training" as a reason for dissatisfaction "and the temporary nature of the job" was a concern to 18 percent of the respondents. Geographic location of the job and personnel relationship were marked by nine and eight percent respectively. Although 124 respondents indicated dissatisfaction with their employment situation, 181 responses were marked as some graduates gave more than one reason for dissatisfaction.

Table XXV

REASONS FOR JOB DISSATISFACTION

Reason	No. Responses	Percentage
Salary	77	43%
Temporary	32	18%
Geographic location	17	9%
Personnel Relationships	14	8%
Work unrelated to training	41	22%
	181*	100%

*Total exceeds 124 due to multiple responses

Summary and Recommendations

This was the second year that a comprehensive statewide graduate follow-up study was developed and implemented for vocational-technical schools and colleges by the Center for Vocational Education. It is recommended that annual studies be conducted in the future to help identify trends in vocational-technical education as well as to review and revise the current information as deemed necessary by a planning committee.

While the specific information in this report may be helpful to each school's faculty and administrators, a comparison analysis between the individual school's report and this composite state-wide report of all postsecondary vocational-technical schools should be made. Such a comparison should provide additional information relative to each school as it compares the cumulative results from all the state's vocational-technical schools/programs to its own.

Follow-up studies done two or three years after graduation should also be considered to further investigate graduates' employment status, training, educational needs, and perceptions of their completed course work as it relates to their jobs. It appears from the results of this study, as well as last year's study, that many graduates have not established permanent jobs and in many cases are continuing their education. Consequently, the relevancy of their

training to the job requirement cannot be accurately assessed. It is highly recommended that the graduates surveyed in the past two years be surveyed again within the next two years. This would be a more realistic time frame and would better show the employment patterns of the graduates.

The Center suggests cooperative joint planning by school staff to address specific needs or problem areas as identified by survey results. These group efforts can successfully identify strategies to overcome specific weaknesses and perpetuate strengths for schools that share common problems.

In addition, schools should make provisions for updating curriculum by reviewing current state and national business and industrial literature. Data from the Montana State Department of Labor, the reports of various technical committees, the State Occupational Information Coordination Committee, and others can provide relevant information on the state's supply and demand needs to assist in curriculum change.

APPENDIX

February 8, 1990

Hello 1989 Graduate!

(Name of school) is conducting a Student Follow-up Survey about you! As a 1989 graduate from our school, we would appreciate your input by taking a few moments to complete the enclosed questionnaire.

The purpose of the survey is to collect data from the 1989 graduates from our school and to utilize this data to improve, change and further support our vocational programs. You are the most important source of information about our school and we need your help!

Our Student Follow-up survey is being conducted in combined effort with the Center for Vocational Education located at Northern Montana College, where the surveys are being compiled.

Please complete the questionnaire and return it by February 22, 1990, in the enclosed pre-addressed, stamped envelope. All information will be kept confidential and will certainly contribute to the success of the survey. Any comments, suggestions or questions are welcome.

Thank you for your help. On behalf of (name of school). we extend to you our best wishes for a successful 1990.

Sincerely,

The above letter, which was on the appropriate letterhead and signed by a representative from the school, was sent to each of the graduates. The school's representatives are listed below.

Gus Korb	Northern Montana College
Jolene Myers	Dawson Community College
Bonnie Whitehouse	Flathead Valley Community College
Toni Herzog	Miles Community College
Diane Murray	Butte Vocational-Technical Center
Shelley Gratton	Billings Vocational-Technical Center
Pat Kercher	Great Falls Vocational-Technical Center
Sandra Merdinger	Helena Vocational-Technical Center
Dennis Lerum	Missoula Vocational-Technical Center

MONTANA POSTSECONDARY VOCATIONAL-TECHNICAL
GRADUATE FOLLOW-UP STUDY
(1988-89 Graduates)

Please give your current name (and any other names used) and address.

1. Name _____
Last First Middle

2. Address: _____
Street/Box # City/State/Zip Code Home Phone #

3. Program, Certificate or Degree Completed: _____

Please Check (✓) or Fill-in Appropriate Blank(s)

1. What was your primary reason for attending our school?

____ a. improvement of existing "job skills"
____ b. preparation for "job to be obtained"
____ c. transfer credit for further education
____ d. school location
____ e. program choices
____ f. least costly
____ g. other (describe)
_____
_____

2. If you plan to pursue more education, please indicate the type of school.

____ a. vocational-technical school
____ b. community college
____ c. four-year college
____ d. other
____ e. not planning to continue my education at this time.

3. How well did the courses you completed prepare you for continuing your education? (transferability to other levels of training)

____ a. excellent
____ b. good
____ c. fair
____ d. poor
____ e. doesn't apply*

4. How would you rate the courses completed at our school in terms of your career plans?

____ a. of immediate, direct benefit
____ b. of long term, direct benefit
____ c. of indirect benefit
____ d. of no benefit

5. How would you rate the programs and training received at our school in relation to usefulness when performing your job?

____ a. excellent
____ b. good
____ c. fair
____ d. poor
____ e. doesn't apply*

6. Please rate (by number) each of our school's services you have utilized, according to fulfillment of your needs. (5=excellent, 4=good, 3=fair, 2=poor, 1=not used, 0=not available)

____ a. financial aid
____ b. counseling
____ c. placement
____ d. course advisement
____ e. student activities
____ f. library
____ g. learning labs/tutoring

7. Which one best describes your present status? Mark all that apply.

____ a. employed, full time
____ b. employed, part-time
____ c. unemployed, seeking employment
____ d. military
____ e. continuing education at (school name)
_____
____ f. unavailable for employment

8. If you are employed, please complete the following:

_____
Job title

Brief job description:
_____
_____
_____
_____

_____
Employer Name

_____
Employer Address

_____
Employer city/state/zip code

9. Is your present occupation related to courses completed at school?

____ a. yes, directly related
____ b. yes, closely related
____ c. no, not related
____ d. not employed

10. Were you employed in this occupational area prior to enrolling in your program?
____ a. yes ____ b. no

11. If you are employed full-time, please indicate your yearly salary range (will be kept confidential).

____ a. $ 6,000-$10,999 (up to $5.28/hr)
____ b. $11,000-$15,999 ($5.29-$7.70/hr)
____ c. $16,000-$20,000 ($7.71-$10.10/hr)
____ d. $21,000-$25,999 ($10.11-$12.50/hr)
____ e. More than $26,000 (over $12.51/hr)

12. How would you rate the availability of jobs in your: (Please check one in each category.)

Occupational area	Geographical area
____ a. excellent	____ a. excellent
____ b. good	____ b. good
____ c. fair	____ c. fair
____ d. poor	____ d. poor

13. Are you satisfied with your present employment? ____ yes _____ no

If no, please mark all that apply.

____ a. salary
____ b. temporary
____ c. geographic location
____ d. personnel relationships
____ e. work is unrelated to training

THANK YOU FOR YOUR PROMPT RESPONSE

If You Are Still Seeking Employment, Contact Your School Placement Office

*Comments On Any Of The Questions Are Welcomed

Postcard Reminder

February 28, 1990

Dear Graduate:

This is a reminder to let you know that we have not received your response to the Graduate Follow-up survey sent to you on February 12. The response to the survey has been great however, it is very important to the study that we have a response from 100% of the people contacted.

Therefore, we would appreciate it if you would take a few minutes to complete the survey within the next few days so we can begin to tabulate the results. Thank you for your assistance.

Sincerely,

Gus Korb

A.W. "Gus" Korb, Director
Center for Vocational Education