

A STUDY OF NORTHEASTERN OKLAHOMA
A & M COLLEGE'S TECHNICIAN EDUCATION
PROGRAMS AND GRADUATES FROM 1971 TO 1976

By

ROYCE KENT TUNNELL

Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

1972

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
MASTER OF SCIENCE
June, 1977

Thesis
1977
T926s
cop. 2



A STUDY OF NORTHEASTERN OKLAHOMA
A & M COLLEGE'S TECHNICIAN EDUCATION
PROGRAMS AND GRADUATES FROM 1971 TO 1976

Thesis Approved:

D S Phillips

Thesis Adviser

Richard W Innell

Wayne N. Lockwood

Norman D Durham

Dean of Graduate College

ACKNOWLEDGMENTS

I would like to express my gratitude to the many people that aided me in the development and completion of this study. I am very appreciative of the valuable assistance provided to me by my committee: Drs. Donald Phillips, Chairman; Richard Tinnell; Wayne Lockwood; and Cecil Dugger.

A special thanks is extended to those associated with technician education at Northeastern Oklahoma A & M College. Dr. J. D. Wilhoit, Assistant Dean of Occupational Education, and the individual technician education department heads provided an indispensable source of information. The cooperation of the graduates of these technician education programs who responded to make this study possible is greatly appreciated.

My wife, Louise, deserves a special thanks for the effort and sacrifice she made while aiding me in the completion of this study.

My children, Kenda and Matthew, deserve a special thanks for their patience and understanding while their mother and I were occupied with this study.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
The Problem	2
Purpose of the Study	3
Need for the Study	3
Scope of the Study	4
Questions to be Answered	4
Definitions	5
II. REVIEW OF THE LITERATURE	7
Previous Research	9
Summary	11
III. METHODOLOGY	13
Development of the Instrument	13
Collection of the Data	16
Treatment of the Data	18
Assumptions	20
IV. RESULTS	21
Student Characteristics	21
Student Personnel Program Evaluation	31
Curriculum Evaluation	33
Composite Educational Program Evaluation	33
Post Graduate Activities	36
Open Ended Responses	39
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	40
Conclusions and Recommendations	40
Other Recommendations	45
SELECTED BIBLIOGRAPHY	46
APPENDIX A - DATA COLLECTION INSTRUMENT	48
APPENDIX B - LETTER OF TRANSMITTAL	53
APPENDIX C - FOLLOW-UP LETTER	55

Chapter	Page
APPENDIX D - NAMES AND LOCATIONS OF THE COMPANIES FOR WHICH THE GRADUATES ARE WORKING	57
APPENDIX E - TITLES OF GRADUATES' PRESENT POSITIONS	63
APPENDIX F - FOUR YEAR COLLEGES OR UNIVERSITIES, MAJOR, AND DEGREE SOUGHT BY THE TRANSFER STUDENTS	68
APPENDIX G - RESPONSES TO EDUCATIONAL PROGRAM MODIFICATIONS	71
APPENDIX H - COMMENTS MADE BY GRADUATES	78
APPENDIX I - RESPONSES TO "OTHER" FACTORS CONTRIBUTING TO THE DECISION TO MAJOR IN TECHNICIAN EDUCATION AT NORTHEASTERN OKLAHOMA A & M COLLEGE	83
APPENDIX J - RESPONSES TO "I WOULD HAVE PREFERRED TO ATTEND ANOTHER INSTITUTION: HOWEVER,"	85

LIST OF TABLES

Table	Page
I. Technology Departments and Number Of Graduates 1971 To 1976	14
II. Response Rates By Department	22
III. Previous College Work	23
IV. Previous Vocational Work	23
V. Major Factors Contributing To The Decision To Major In Technician Education At Northeastern Oklahoma A & M College	25
VI. Employed While Attending Northeastern Oklahoma A & M College	26
VII. Number Of Hours Per Week Worked	26
VIII. Student Residential Location	28
XI. Students Obtaining Financial Assistance	28
X. Relationship Between Part Time Work and Financial Assistance While Attending Northeastern Oklahoma A & M College	29
XI. Enrollment In Developmental Courses	30
XII. Ability Of Developmental Courses To Aid In Overcoming Deficiencies	30
XIII. Student Personnel Program Evaluation	32
XIV. Curriculum Evaluation	34
XV. Graduates Recommending Their Program	35
XVI. Graduates Continuing Education On A Part Time Basis	37
XVII. Type Of Work Performed By Graduates	37
XVIII. Graduates Salary Distribution	38

CHAPTER I

INTRODUCTION

Higher Education in the United States has evolved through three basic philosophies concerning who should attend college. The first of these philosophies was the aristocratic philosophy, which advocated that college was for those who could afford it and needed it for their situation in life. The second philosophy was the meritocracy philosophy, which advocated that college was for only the academic elite. The third philosophy is the egalitarian philosophy, which advocates that college is for individuals that have the ability to profit from post-high school education. Medsker (1) states that:

If it were necessary to identify the single most significant emerging characteristic of education beyond the high school, most scholars in the field would probably point to its egalitarian nature (p. 137).

The adoption of this egalitarian philosophy has brought into the main stream of higher education students with diverse backgrounds and ambitions. In response to the needs of this clientele, community and junior colleges have expanded their curriculum offerings to include occupational and technician education. Medsker (1) states that:

Their location close to the homes of potential students, their nonselective admissions policies, and their tendency to offer a variety of programs (many of which lead directly to employment rather than to a baccalaureate degree) have made community colleges the most significant of all higher institutions in extending educational opportunity. ...Thus, junior colleges in the United States evolved naturally from the egalitarian premise that each individual should be allowed to develop to the limits of his capabilities (p. 11-14).

Northeastern Oklahoma A & M College initiated a division of technology in the fall of 1959. This division has since grown to 20 departments. Of these 20 departments 10 have the common objectives of providing students with information and skills required for entry level employment within an industry related technical discipline or transfer to a four year college or university to pursue an advanced program of study related to a technical discipline (2, p. 113-157). In the past five years there have been 266 individuals awarded an Associate in Arts Degree (A.A.) in these 10 technician education departments.

The Problem

Students enter the technician education programs at Northeastern Oklahoma A & M College with diverse backgrounds and ambitions. The administration and faculty constantly evaluate all educational programs in terms of their compatibility with student needs. Also, annual student questionnaires are utilized which allow students to evaluate their technician education programs. Upon graduation, follow-up information is obtained concerning post graduate activities. However, this follow-up information does not include an evaluation of their educational experiences related to post-graduate activities.

To more accurately evaluate the accomplishments of the technician education programs at Northeastern Oklahoma A & M College, there is a need to periodically allow graduates the opportunity to reflect on how beneficial each aspect of their educational experiences has been in relationship to post-graduate activities.

Purpose of the Study

The purpose of this study was to obtain and analyze follow-up information from technician education graduates from Northeastern Oklahoma A & M College. The results of this study will facilitate:

1. The evaluation of the different aspects of technician education as they relate to post graduate activities
2. The evaluation of student personnel programs offered at Northeastern Oklahoma A & M College
3. The placement of future technician graduates
4. The recruitment and retention of technician education students
5. The advisement of technician education majors
6. The improvement of existing technician education programs
7. The maintenance of graduate follow-up files

Need for the Study

Current evaluation of technician education programs are accomplished by gathering statistical indicators such as: dropout rates, student transfer rates, and graduate placement rates. Even though these indicators can provide an indication of the quality of a technician education program, they do not provide an evaluation of the student's educational experiences related to post-graduate activities.

The primary concern of an educational institution must be the quality of educational experiences offered to the student. In evaluating these educational experiences within the context of the egalitarian philosophy, the educational experiences must be beneficial to the graduate.

There is a need to allow the graduates of a technician education program the opportunity to evaluate each aspect of their educational experiences as related to post graduate activities.

Scope of the Study

This study was limited to graduates of Northeastern Oklahoma A & M College awarded an Associate in Arts Degree from the years 1971 to 1976 within the following ten technology departments.

1. Automotive Technology
2. Computer Science Technology
3. Construction Technology
4. Design and Drafting Technology
5. Electromechanical Technology
6. Electronics Technology
7. General Technology
8. Machine Shop Technology
9. Refrigeration and Air Conditioning Technology
10. Welding and Metal Work Technology

Each of these ten departments have common objectives to provide the student with educational experiences which will promote competency within an industry related technical discipline.

Questions to be Answered

It was felt that the following questions would provide information which would be beneficial to students, faculty, administrators, and counselors associated with technician education at Northeastern Oklahoma A & M College

1. Did the graduates complete any college work prior to entering the technician education program?
2. What were the major factors contributing to the graduate's decision to enter the technician education program?
3. In what types of post-graduate activities are the technician education graduates involved.
4. Do the technician education graduates perceive their composite educational experiences as being beneficial to post-graduate activities?
5. Do the technician education graduates perceive the student personnel programs at Northeastern Oklahoma A & M College as being adequate?
6. Did the graduates have vocational experiences in secondary schools prior to entering the technician education program?
7. What is the median salary for the technician education graduates?
8. What types of employment are obtained by the technician education graduates?
9. Had the technician education graduates participated in developmental courses while attending Northeastern Oklahoma A & M College?
10. Would the technician education graduates recommend his technician education program for others with similar ambitions?

Definitions

Several terms have been defined as they appear in the context of this study.

Collins (3) defines student personnel programs as follows:

By broad category, they are designed to provide the following: (1) orientation to college and to educational, personal

and career opportunities; (2) appraisal of individual potentialities and limitations; (3) consultation with students about plans, progress, and problems; (4) participation of students in activities that will supplement and enrich the classroom experience; (5) regulation to provide optimal conditions for social and academic development; (6) services enabling the student to go to college, stay in college, and make the transition to further education or employment; and (7) organization providing for articulation, evaluation, and improvement of the student personnel program (p. 29).

Roberts (4) defines technician education as follows:

A planned sequence of classroom and laboratory experiences at the post-secondary school level, but below the baccalaureate level which is designed to prepare persons for a cluster of job opportunities in a specialized field (p. 3).

Post-Graduate Activities: Activities performed by the technician education graduate such as: employment within industry, or pursuit of an advanced program of study at a four year college or university.

Developmental Courses: Courses designed to remedy learning deficiencies such as: developmental reading and basic math.

CHAPTER II

REVIEW OF THE LITERATURE

The expansion and development of our present technological advancements have created a demand for highly specialized technicians. In accepting the responsibility of providing technicians for this expansion, junior colleges have implemented technician education programs.

Brooking (5) gives evidence of the need for junior colleges to develop and maintain technician education programs.

Community or junior colleges are increasingly providing specialized occupational education and probably will expand their total offerings in technician education in most fields because of the rapidly increasing number of such institutions, the resulting enlarged percentage of all post high school education provided in them, and the increasing awareness of the importance of educating more technicians (p. 15).

The National Advisory Committee on the Junior College (6) indicates the need for educational experiences to be meaningful.

Therefore, any discussion of the expansion of educational opportunity beyond the high school must take into account the changing manpower needs of the nation coupled with the hopes and aspirations of millions of Americans for individual fulfillment in jobs, home, and the community. If education is to be expanded, then the experiences that are provided must be meaningful. Training for specific purposes as well as general or liberal education must be provided.

The program content of these technician education programs must not only be compatible with the needs of industry, but they must also be compatible with their students' backgrounds and ambitions. The diversities of backgrounds and ambitions of Junior College students are

enumerated by Hall (7).

In summary, community junior college students are individuals. They represent a cross section of the American community served by the college. They will return to the community and become the parents, technician, businessmen, board members, public officials, and sports fans after they have completed their education. They are a mixture of full-time and part-time students with a very large number working while attending college. They are not accurately described as two-year college students; fully half will attend one year or less; a fourth will attend for more than two years (p. 12).

When considering the attributes of technician education, one cannot limit himself to discussing only the aspects of the education directly related to the technical speciality. The composite educational program should provide activities designed to promote social-interaction and personal development.

Venn (8) states:

Intramural activities such as debating, athletics, and musical activities and organized hobby clubs, recreational activities, student publications, and social activities make important contributions to the educational programs for technicians (p. 52).

O'Connor (9) identifies the need for well-designed follow-up research of junior college graduates.

The junior college is an institution committed to being responsive to student and social needs. To achieve these aims demands a full measure of effort by those who represent it. When these efforts are directed by the findings of well-designed, follow-up research, there is no better reason to expect that they will succeed in performing the complex tasks which society has given to the junior college (p. 53).

The evaluation of junior college education programs is a universally accepted procedure. However, the techniques employed in these evaluations have taken several forms.

Cross (10) offers a proposal for junior college evaluation techniques.

Most of the modifications in higher education that have been made--or even suggested--to accommodate the egalitarian era are concerned with the structures and forms of college programs rather than the content. Major energies have been directed toward getting New Students into college and keeping them there. Open admissions, special recruitment of disadvantaged students, and financial-aid programs are practices in widespread use throughout the country to attract New Students to college. Remedial courses, counseling, and pass-fail grading are common methods designed to keep New Students in college. Since getting New Students into--and preferably through--college has been the almost single-minded goal, virtually all evaluation of our achievements has been concerned with quoting statistics on increased rates of access and retention.

Only recently have a few scattered voices questioned whether recruitment and retention are really the goals. I think they are not. The goal of educators is to educate. We have, however, sold out to the false goal of certification, and in our eagerness to get degrees in the hands of New Students we are afraid to ask ourselves whether we are educating them. We have been told for so long that the quality of education makes little or no difference in the outcome that we have succumbed to fatalistic acceptance of the notion that the credential will do as much for the New Student as the education. There are cheaper and more honest ways to certify (p. 163).

During the winter of 1973, Williams and Snyder (11) surveyed the 720 public comprehensive two-year colleges, which began offering occupational and technician education programs prior to September 1970. The purpose of this study was to determine the manner and extent to which two-year colleges offering occupational and technician education conducted follow-up studies. The results of this study indicated that nearly all community colleges conducted some kind of follow-up study of former occupational-technical students. Of those that conducted follow-up studies, less than one-half could provide formal written reports. The follow-up studies were designed by college staff members for a variety of reasons, including curriculum evaluation, external accountability, and student services evaluation.

In order to evaluate the effectiveness of the Maryland Community

Colleges, Hurley (12) investigated the following five areas.

1. Student academic and demographic characteristics
2. Student goals or primary reasons for attending community college
3. Student employment experiences
4. Student transfer experiences and performance at other post-secondary institutions
5. Student perception of community college environment and services

Hurley's data reflected that the community college student can no longer be characterized as the traditional transfer student. When asked if they had achieved their educational objectives, over three-fifths of the respondents replied positive. Of those employed, 3.1 percent utilized the college faculty or the college placement service in locating their jobs. When asked if they would recommend their program of study to a friend, 72.4 percent responded yes while more than 85 percent said they would recommend their community college.

Houston (13) conducted a study in 1974 to examine the curricula, types of degrees, opinions and immediate plans of the 1972, 1973, and 1974 graduates at Virginia Western Community College. The findings of Houston's study indicated that Virginia Western Community College has been very successful in attracting new students. Some of the new student groups to receive degrees included disadvantaged students, female students, students past traditional college ages, and married students. When asked if they would recommend their program of study to others, 94 percent of all the graduates indicated that they would.

A study conducted by Southwestern College, Chula Vista, California (14)

obtained follow-up information from fall 1972 and spring 1973 graduates from twenty-eight different vocational programs.

The findings of this study indicated:

The colleges' Vocational Program as a whole received high ratings from the graduates. The average rating of the students were particularly favorably in the areas of:
 The Colleges' reputation in the community
 Over-all rating of occupational program
 Quality of occupational instruction
 The course content and training up-to-date

Still favorable, but lower ratings were given to:
 Quality of general education instruction
 Adequacy of instructional facilities
 Adequacy-availability of instruction material
 Counseling and guidance

Significantly lower ratings were given to:
 The college's effectiveness in job placement

Summary

It is evident, from the literature, that the junior college has an important role in preparing technicians for our changing society. The content of these composite educational experiences cannot be limited to dealing only with the technical speciality areas. The technician education student should be provided with opportunities for social-interaction and personal development. The students served by the junior college programs represent a cross-section of the community population and have diverse backgrounds and ambitions.

The literature also reflects the need for educational experiences to be meaningful. In evaluating these educational experiences much emphasis has been placed on quoting statistics on increased rates of access and retention and not on the primary goal of educators "to educate."

The majority of junior colleges conduct follow-up studies; however,

few provide formal written reports. Previous research has been conducted by Hurley (12), Houston (13), and by Southwestern College, Chula Vista, California (14) to determine how effectively the junior college environment meet the needs of their clientele.

CHAPTER III

METHODOLOGY

The population of this study included all of the graduates of the ten technician education departments at Northeastern Oklahoma A & M College from 1971 to 1976. The population size was 266. Of this population four graduates were international students and were eliminated from the study. Therefore, the survey size was 262 out of a population of 266 or 98.5 percent of the total population. A breakdown by departments and number of graduates is included in Table I.

Development of the Instrument

The instrument developed for this study was designed to allow graduates the opportunity to provide inputs into the technician education programs at Northeastern Oklahoma A & M College. Also, this instrument was designed to identify specific characteristics of the technician education graduates.

After consideration of the objectives of the study, a questionnaire was developed containing twenty-two individual questions. The questionnaire was designed to be completed by the graduate with minimum effort. The majority of the questions could be answered with a check mark. However, open ended questions were utilized in some cases to allow for individualized responses.

The questionnaire was pretested prior to mailing. A select group

TABLE I
TECHNOLOGY DEPARTMENTS
AND NUMBER OF GRADUATES
1971 TO 1976

Technology	Number of Graduates Sruveyed
Automotive	19
Computer Science	95
Construction	17
Design and Drafting	51
Electromechanical	6
Electronics	43
General	13
Machine Shop	4
Refrigeration and Air Conditioning	10
Welding and Metal Work	4

of prospective graduates were asked to evaluate the questionnaire for appropriateness and clarity.

Follow-up information for educational institutions normally comes from two sources: teachers and graduates.

Paul (15) lists several disadvantages of acquiring follow-up information from teachers.

1. Teacher responses are generally based on the students' intentions at the time of graduation or leaving school. A notable exception to this will be in the case of students from rural schools where graduates tend to remain in the area after leaving school. In such cases the teacher responses may be based on actual knowledge of the students' employment status at the time of reporting. In the case of urban schools, however, the students are more mobile and therefore teachers lose contact with them more often. Follow-up information in these cases is based on the last known intentions of the students. In many cases the information is outdated by six to seven months by the time teachers normally supply follow-up data to their respective supervisors.
2. In cases where the intentions of graduating students are not known to their teachers, there is a great temptation to guess the responses which are socially acceptable and politically expedient.
3. There is no known valid method of collecting certain detailed but important data from teachers. These data include information about wages, job satisfaction, mobility, etc.
4. Even when teachers have information on the placement of their former students, they are less likely to know the relatedness of each job to the preparation received in a vocational program than the persons actually working on those jobs. Thus, the quality of these data collected from teachers would be lower than from students.
5. There is a general complaint from teachers that they are required to spend too much time on nonteaching functions, such as reporting, leaving less time for classroom teaching. This problem is more acute in popular vocational programs (such as auto mechanics) in urban schools where the class size and the number of graduates is generally large.

6. Since this mode of data collection depends entirely on continued personal contacts between teachers and their former students, a teacher's departure from the scene affects the quantity and quality of data.
7. Since one of the important objectives of follow-up data collection is program evaluation, it is potentially very tempting for the teachers to introduce enough bias into the data to make them 'look good' (p. 14).

The graduates were mailed the questionnaire along with a letter explaining the purpose of the study. The letters were reproduced on Northeastern Oklahoma A & M College, Division of Technology letterhead. The questionnaire appears in Appendix A and the letter appears in Appendix B. The students' names were individually placed on the letter and signed by the appropriate department head. The letter, questionnaire, and a return self-addressed, stamped envelope were mailed on March 31, 1977.

After five weeks (May 6, 1977) a revised letter, questionnaire, and return self-addressed, stamped envelope were mailed to the graduates that had not responded to the first mailing. The second letter appears in Appendix C.

To evaluate the effectiveness of an educational program, the primary goal and objective of that program must first be identified. The function of an educational program must be to provide high quality educational experiences which will aid the graduates in accomplishing their objectives. Using the criteria of applicability of educational experiences to post graduate activities, the effectiveness of the educational program may be determined. The instrument of this study was designed to allow the graduate the opportunity to rate each aspect of his program as it applies to his current activities.

In addition to providing classroom educational experiences, an

educational institution must provide student personnel programs. The primary goal and objective of these programs is to provide high quality services to the student. Since the students are the ones receiving these services, it is apparent that they should be the ones to evaluate the effectiveness of the programs. The instrument of this study asked the graduates to evaluate their student personnel programs.

With the acceptance of the egalitarian philosophy, higher education has become more easily accessible to the public. This has provided a student population with diverse characteristics. If higher education is to provide meaningful educational experiences, it is necessary to be aware of student characteristics. The instrument of this study identifies the following student characteristics.

1. Do the majority of technician education students have college work prior to entering the technician education program?
2. Do the majority of technician education students have vocational training prior to attending Northeastern Oklahoma A & M College?
3. Do the majority of technician education students take employment while attending Northeastern Oklahoma A & M College?
4. Do those employed work less than forty hours per week?
5. Do the majority of technician education students live on campus?
6. Do the majority of technician education students require financial assistance?
7. Do the technician education students enroll in developmental courses?
8. Do the technician education students that enroll in developmental courses feel the courses have helped overcome deficiencies?

Another important concern of an educational program is the

activities and financial success of its graduates. The instrument of this study was designed to identify the activities and financial success of the graduates.

Evaluation of the various aspects of an educational program do not provide a direct evaluation of the composite educational experiences treated as a whole. Therefore, there is a need to allow the graduate an opportunity to evaluate his composite educational experiences as a unit. The instrument of this study was designed to determine if the graduate would recommend his total educational program to others with similar ambitions.

Treatment of the Data

The data was subdivided into six categories: student characteristics, student personnel program evaluation, curriculum evaluation, composite educational program evaluation, post graduate activities, and open ended responses.

In analyzing student characteristics, the following areas were investigated.

1. Previous college work
2. Previous vocational training
3. Factors contributing to the decision to enter technical education at Northeastern Oklahoma A & M College
4. Student employment while attending Northeastern Oklahoma A & M College
5. Number of hours per week worked
6. Financial need
7. Enrollment in developmental courses

8. Student deficiencies corrected with the aid of developmental courses

The data concerning these areas was tabulated and analyzed for frequency and percentage of responses.

The graduates were asked to evaluate the various aspects of their student personnel programs. A scale from zero to ten was utilized for this evaluation. Zero was to be the poorest evaluation where as ten was to be a perfect evaluation. This data was then analyzed for means, medians, modes, frequency, and percentage.

The criteria used to evaluate the various aspects of the curriculum was applicability of the educational experiences to post graduate activities. The various aspects of the curriculum were evaluated by the graduates using a scale from zero to ten. Zero was to be the poorest evaluation where as ten was to be a perfect evaluation. This data was then analyzed for means, medians, modes, frequency and percentage. Individualized responses were generated by asking the graduates to indicate any changes they would make in their curriculum. All of these open ended responses were then listed.

The composite technician education was evaluated by asking the graduates if they would recommend their program to others with similar ambitions. This data was then analyzed for frequency and percentage.

The post graduate activities were investigated in the following areas.

1. Name and location of company of employment
2. Title of present position
3. Type of work performed
4. Present annual salary

5. If accepted employment, continuing education on a part time base

6. Transfer to a four year college or university, major, and degree sought

The data concerning these areas were tabulated and analyzed for frequency and percentage of responses where applicable. Listings were provided for all individualized responses.

In providing for open ended responses the graduates were asked to make comments concerning the items in the questionnaire or any other items. A complete listing of these comments was provided.

After data analysis, each department head was given the responses associated with his department.

Assumptions

In analyzing the data associated with this study, the following assumptions were made:

1. The graduate would accurately evaluate each aspect of his curriculum in relation to his current activities.
2. The graduate would make a true and honest appraisal of the student personnel programs offered to him.
3. The graduate would provide personal data in a true and honest fashion.

CHAPTER IV

RESULTS

The purpose of this study was to obtain and analyze follow-up information from technician education graduates of Northeastern Oklahoma A & M College. During the years 1971 to 1976 there have been 266 graduates of these technician education programs. Of this population, four graduates were international students and were not included in the study. The survey size was 262.

The response rate was 112 out of the survey size of 262, or 42.7 percent of the total. One response was completed by the parents of the graduate. The data listed in Table II identifies the response rate for each department included in the study.

Student Characteristics

The graduates were asked if they had completed any college work prior to entering their technician education program. Of the 112 respondents, 99 or 88.4 percent indicated that they had not completed any prior college work. Thirteen or 11.6 percent indicated that they had completed prior college work. These results are shown in Table III.

Of the 112 respondents, 83 or 74.1 percent indicated they had not completed any vocational education related to their chosen technical discipline prior to attending Northeastern Oklahoma A & M College. Twenty-nine or 25.9 percent indicated they had previous vocational

TABLE II
RESPONSE RATES BY DEPARTMENT

Department	Survey Size	Responses	Percentage
Automotive Technology	19	8	42.1
Computer Science Technology	95	37	38.9
Construction Technology	17	9	52.9
Design and Drafting Technology	51	23	45.1
Electromechanical Technology	6	2	33.3
Electronics Technology	43	23	53.5
General Technology	13	3	23.1
Machine Shop Technology	4	2	50.0
Refrigeration and Air Conditioning Technology	10	3	30.0
Welding and Metal Work Technology	4	2	50.0
TOTAL	262	112	42.7

TABLE III
PREVIOUS COLLEGE WORK

	Number Responding	Percentage
Yes	13	11.6
No	99	88.4

TABLE IV
PREVIOUS VOCATIONAL WORK

	Number Responding	Percentage
Yes	29	25.9
No	83	74.1

training. These results are shown in Table IV.

When asked to identify the major factors contributing to the graduates' decision to major in technician education at Northeastern Oklahoma A & M College, 258 total responses were obtained. The larger number of responses was created by graduates who identified more than one factor. Of the 258 total responses 64 or 24.8 percent identified geographic location of Northeastern Oklahoma A & M College as a major factor; 46 or 17.8 percent identified employment opportunities; 39 or 15.1 percent identified quality of facilities and instructors; 28 or 10.9 percent identified total college environment; 24 or 9.3 percent identified recommendation by high school instructors and counselors; 17 or 6.6 percent identified contacts with Northeastern Oklahoma A & M College recruitment personnel; 15 or 5.8 percent identified recommendation by a friend; 14 or 5.4 percent identified other; 11 or 4.3 percent identified would have preferred another institution. This data is shown in Table V.

Individualized responses were given for the categories "other" and "I would have preferred to attend another institution." The responses for "other" are listed in Appendix I. The responses for "I would have preferred to attend another institution" are listed in Appendix J.

When asked if they were employed while attending Northeastern Oklahoma A & M College, 76 or 67.9 percent of the graduates replied "yes", while 35 or 31.3 percent replied "no." Of the 112 total respondents, 1 or 0.9 percent did not reply to this question. This data is shown in Table VI.

Of the 76 employed while attending Northeastern Oklahoma A & M College, 75 indicated their total number of hours per week worked.

TABLE V

MAJOR FACTORS CONTRIBUTING TO THE DECISION TO MAJOR IN
TECHNICIAN EDUCATION AT NORTHEASTERN OKLAHOMA A & M COLLEGE

Factor	Number of Responses	Percentage of Total Responses
Geographic Location	64	24.8
Employment Opportunities	46	17.8
Quality of Facilities and Instructors	39	15.1
Total College Environment of Northeastern Oklahoma A & M College	28	10.9
Recommended by High School Instructors and Counselors	24	9.3
Contact with Northeastern Oklahoma A & M College Recruitment Personnel	17	6.6
Recommended by a Friend	15	5.8
Other	14	5.4
I Would Have Preferred to Attend Another Institution: However	11	4.3

TABLE VI
EMPLOYED WHILE ATTENDING
NORTHEASTERN OKLAHOMA A & M COLLEGE

	Number of Responses	Percentage of Total Responses
Yes	76	67.9
No	35	31.3
No Response	1	0.9

TABLE VII
NUMBER OF HOURS PER WEEK WORKED

Hours Worked Per Week	Number of Responses	Percentage of Total Responses
0-10	7	9.2
10-20	31	40.8
20-30	17	22.4
30-40	11	14.5
Over 40	9	11.8
No Response	1	1.3

Seven or 9.2 percent indicated 0 to 10, 31 or 40.8 percent indicated 10 to 20, 17 or 22.4 percent indicated 20 to 30, 11 or 14.5 percent indicated 30 to 40, and 9 or 11.8 percent indicated that they had worked over 40 hours per week. One or 1.3 percent of the respondents which were employed did not reply to this question. This data is shown in Table VII.

Of the 112 total respondents, 60 or 53.6 percent lived on campus while 51 or 45.5 percent lived off campus. One respondent or 0.9 percent did not reply to this question. This data is shown in Table VIII.

When asked if they applied for and obtained financial assistance, 63 or 56.3 percent replied "yes", while 48 or 42.9 percent replied "no." Of the 112 total respondents 1 or 0.9 percent did not reply to this question. This data is shown in Table IX.

Of the 112 total respondents, 42 or 37.5 percent were employed and obtained financial assistance while attending Northeastern Oklahoma A & M College, 32 or 28.6 percent were employed and did not obtain financial assistance, 21 or 18.8 percent obtained financial assistance and were not employed, 16 or 14.3 percent did not obtain financial assistance and were not employed while attending Northeastern Oklahoma A & M College. One or 0.9 percent did not reply to these questions. This data is shown in Table X.

The data in Table XI indicates that 28 or 25.0 percent of the 112 total respondents enrolled in developmental courses, while 83 or 74.1 percent did not enroll in developmental courses. One respondent or 0.9 percent did not reply.

Of the total 28 respondents which enrolled in developmental courses, 24 or 85.7 percent felt the courses had aided them in overcoming

TABLE VIII
STUDENT RESIDENTIAL LOCATION

Location	Number of Responses	Percentage of Total Returns
On Campus	60	53.6
Off Campus	51	45.5
No Response	1	0.9

TABLE IX
STUDENTS OBTAINING FINANCIAL ASSISTANCE

	Number of Responses	Percentage of Total Responses
Yes	63	56.3
No	48	42.9
No Response	1	0.9

TABLE X
 RELATIONSHIP BETWEEN PART TIME
 WORK AND FINANCIAL ASSISTANCE WHILE
 ATTENDING NORTHEASTERN OKLAHOMA A & M COLLEGE

	Number of Responses	Percentage of Total Responses
Employed and Obtained Financial Assistance	42	37.5
Employed and Did Not Obtain Financial Assistance	32	28.6
Not Employed and Obtaining Financial Assistance	21	18.8
Not Employed and Not Obtaining Financial Assistance	16	14.3
No Response	1	0.9

TABLE XI
ENROLLMENT IN DEVELOPMENTAL COURSES

	Number of Responses	Percentage of Total Responses
Yes	28	25.0
No	83	74.1
No Response	1	0.9

TABLE XII
ABILITY OF DEVELOPMENTAL COURSES TO AID
IN OVERCOMING DEFICIENCIES

	Number of Responses	Percentage of Total Responses
Yes	24	85.7
No	3	10.7
No Response	1	3.6

deficiencies, while 3 or 10.7 percent did not feel the course aided them in overcoming deficiencies. One respondent or 3.6 percent did not reply to this question. This data is listed in Table XII.

Student Personnel Program Evaluation

Each graduate was asked to evaluate the various aspects of the student personnel programs. This evaluation was accomplished on a scale from 0 to 10; 0 was the poorest evaluation, where as 10 was to be a perfect evaluation. The frequency distribution is reflected in Table XIII.

Financial assistance received a mean score of 6.8, a median of 7, and a mode of 10. Of the 112 total respondents, 93 or 83.0 percent participated in the evaluation.

In the area of counseling, a mean score of 7.2, a median of 8, and a mode of 10 were indicated. Of the 112 total respondents, 107 or 95.5 percent participated in the evaluation.

Concerning recreation, a mean score of 6.8, a median of 7, and a mode of 5 were indicated. Of the 112 total respondents, 104 or 92.9 percent participated in the evaluation.

Residential facilities received a mean score of 6.7, a median of 7, and a mode of 8. Of the 112 respondents, 88 or 78.6 percent participated in the evaluation.

In the area of student involvement in college governance, a mean score of 5.7, a median of 5, and a mode of 5 were received. Of the 112 total respondents, 97 or 86.6 percent participated in the evaluation.

The placement services received a mean score of 5.9, a median of 6, and a mode of 5. Of the 112 total respondents, 92 or 82.1 percent

TABLE XIII

STUDENT PERSONNEL PROGRAM EVALUATION

Program	Evaluation Responses											
	No Response	0	1	2	3	4	5	6	7	8	9	10
Financial Assistance	19 (17.0%)	4 (3.6%)	1 (0.9%)	3 (2.7%)	3 (2.7%)	5 (4.5%)	16 (14.3%)	5 (4.5%)	12 (10.7%)	14 (12.5%)	13 (11.6%)	17 (15.2%)
Counseling	5 (4.5%)	2 (1.8%)	0 (0%)	4 (3.6%)	2 (1.8%)	6 (5.4%)	16 (14.3%)	7 (6.3%)	14 (12.5%)	16 (14.3%)	18 (16.1%)	22 (19.6%)
Recreation	8 (7.1%)	2 (1.8%)	0 (0%)	3 (2.7%)	4 (3.6%)	7 (6.3%)	18 (16.1%)	10 (8.9%)	16 (14.3%)	17 (15.2%)	11 (9.8%)	16 (14.3%)
Residential Facilities	24 (21.4%)	1 (0.9%)	3 (2.7%)	1 (0.9%)	2 (1.8%)	4 (3.6%)	18 (16.1%)	9 (8.0%)	11 (9.8%)	19 (17.0%)	12 (10.7%)	8 (7.1%)
Student Involvement in College Governance	15 (13.4%)	3 (2.7%)	2 (1.8%)	5 (4.5%)	9 (8.0%)	4 (3.6%)	26 (23.2%)	13 (11.6%)	10 (8.9%)	13 (11.6%)	8 (7.1%)	4 (3.6%)
Placement Service	20 (17.9%)	10 (8.9%)	0 (0%)	4 (3.6%)	4 (3.6%)	4 (3.6%)	20 (17.9%)	7 (6.3%)	12 (10.7%)	9 (8.0%)	12 (10.7%)	10 (8.9%)

A "0" was to be the poorest evaluation, while "10" was to be a perfect evaluation.

participated in the evaluation.

Curriculum Evaluation

The criteria used in the curriculum evaluation was applicability to post graduate activities. The curriculum evaluation was limited to the following types of course work: technical speciality, mathematics, science, communications, social science, and auxiliary and supporting technician education. A scale from 0 to 10 was used. A 0 was to be the poorest evaluation, while 10 was to be a perfect evaluation. The frequency distribution appears in Table XIV.

Technical speciality courses received a mean score of 7.4, a median of 8, and a mode of 8. Of the 112 total respondents, 110 or 98.2 percent participated in the evaluation.

The mathematics courses received a mean score of 6.6, a median of 7, and a mode of 10. Of the 112 total respondents, 106 or 94.6 percent participated in the evaluation.

The science courses received a mean score of 5.1, a median of 5, and a mode of 5. Of the 112 total respondents, 102 or 91.1 percent participated in the evaluation.

The communication courses received a mean score of 6.0, a median of 6, and a mode of 5. Of the 112 total respondents, 107 or 95.5 percent participated in the evaluation.

The social science courses received a mean score of 5.3, a median of 5, and a mode of 5. Of the 112 total respondents, 110 or 98.2 percent participated in the evaluation.

The auxiliary and supporting technician education courses received a mean score of 6.2, a median of 7, and bimodal with 5 and 8. Of the

TABLE XIV

CURRICULUM EVALUATION

Courses	Evaluation Responses											
	No Response	0	1	2	3	4	5	6	7	8	9	10
Technical Speciality	2 (1.8%)	5 (4.5%)	1 (0.9%)	2 (1.8%)	2 (1.8%)	2 (1.8%)	12 (10.7%)	5 (4.5%)	12 (10.7%)	27 (24.1%)	19 (17.0%)	23 (20.5%)
Mathematics	6 (5.4%)	5 (4.5%)	2 (2.7%)	5 (4.5%)	6 (5.4%)	7 (6.3%)	8 (7.1%)	9 (8.0%)	10 (8.9%)	18 (16.1%)	14 (12.5%)	21 (18.8%)
Science	10 (8.9%)	18 (16.1%)	1 (0.9%)	3 (2.7%)	8 (7.1%)	6 (5.4%)	19 (17.0%)	11 (9.8%)	11 (9.8%)	10 (8.9%)	4 (3.6%)	11 (9.8%)
Communications	5 (4.5%)	9 (8.0%)	1 (0.9%)	5 (4.5%)	7 (6.3%)	7 (6.3%)	17 (15.2%)	8 (7.1%)	13 (11.6%)	16 (14.3%)	12 (10.7%)	12 (10.7%)
Social Science	2 (1.8%)	11 (9.8%)	4 (3.6%)	6 (5.4%)	10 (8.9%)	10 (8.9%)	19 (17.0%)	9 (8.0%)	10 (8.9%)	12 (10.7%)	10 (8.9%)	9 (8.0%)
Auxiliary and Supporting Technician Education	6 (5.4%)	10 (8.9%)	0 (0%)	5 (4.5%)	4 (3.6%)	3 (2.7%)	18 (16.1%)	11 (9.8%)	13 (11.6%)	18 (16.1%)	13 (11.6%)	11 (9.8%)

The criteria for evaluation was applicability to post graduate activities.

A "0" was to be the poorest evaluation, while a "10" was to be a perfect evaluation.

112 total respondents, 106 or 94.6 percent participated in the evaluation.

Composite Educational Program Evaluation

The graduates were asked if they would recommend their technician education program to others with similar ambitions. Of the 112 total respondents, 102 or 91.1 percent replied "yes", while 7 or 6.3 percent replied "no"; 3 or 2.7 percent did not respond. This data is illustrated in Table XV.

Post Graduate Activities

Of 112 total respondents, 61 or 54.5 percent replied to the question "If you accepted employment upon graduation from the technician education program, did you continue your education on a part-time basis?" Of those that replied, 15 or 24.6 percent said "yes", while 46 or 75.4 percent said "no." This data is reflected in Table XVI.

When asked to identify the type of work they were presently performing, a total of 121 total responses were recorded. Of the 112 total respondents, 74 or 66.1 percent replied to this question. Of the 74 that replied, 22 or 29.7 percent indicated more than one area. Of these 121 total responses, 32 or 26.4 percent were production, 24 or 19.8 percent were design, 20 or 16.5 percent were maintenance, 18 or 14.9 percent were research, 18 or 14.9 percent were installation, 9 or 7.4 percent were sales. This data is illustrated in Table XVII.

When asked to identify their present annual salary, 86 or 76.8 percent of the total 112 respondents replied. Of these 86, 31 or 36.0 percent made under \$9,000 per year, 16 or 18.6 percent made between

TABLE XV
GRADUATES RECOMMENDING THEIR PROGRAM

	Number of Responses	Percentage of Total Responses
Yes	102	91.1
No	7	6.3
No Response	3	2.7

TABLE XVI
GRADUATES CONTINUING EDUCATION
ON A PART TIME BASIS

	Number of Responses	Percentage of Total Responses
Yes	15	24.6
No	46	75.4

TABLE XVII
TYPE OF WORK PERFORMED BY GRADUATES

Type of Work	Number of Responses	Percentage of Total Responses
Production	32	26.4
Design	24	19.8
Maintenance	20	16.5
Research	18	14.9
Installation	18	14.9
Sales	9	7.4

TABLE XVIII

GRADUATES SALARY DISTRIBUTION

Under \$9,000	\$10,000- \$11,000	\$11,000- \$12,000	\$12,000- \$13,000	\$13,000- \$14,000	\$14,000- \$15,000	\$15,000- \$16,000	\$16,000- \$17,000	Over \$17,000
N=31	N=16	N=11	N=6	N=6	N=4	N=4	N=4	N=4
(36.0%)	(18.6%)	(12.8%)	(7.0%)	(7.0%)	(4.7%)	(4.7%)	(4.7%)	(4.7%)

\$10,000 and \$11,000, 11 or 12.8 percent made between \$11,000 and \$12,000, 6 or 7.0 percent made between \$12,000 and \$13,000, 6 or 7.0 percent made between \$13,000 and \$14,000, 4 or 4.7 percent made between \$14,000 and \$15,000, 4 or 4.7 percent made between \$15,000 and \$16,000, 4 or 4.7 percent made between \$16,000 and \$17,000, and 4 or 4.7 percent made over \$17,000 per year. This data is shown in Table XVIII.

A complete listing of the names and locations of the companies for which the graduates are working, is provided in Appendix D. In order to add clarity, the type of technical major of the respondent was included with the corresponding company name.

A complete listing of the graduates' titles of their present positions is provided in Appendix E. In order to add clarity, the type of technical major of the respondent was included with the corresponding title.

A complete listing of the four year colleges or universities, major, and degree sought by the transfer students are included in Appendix F.

Open Ended Responses

The graduates were asked if they had the opportunity to add to, delete from or change any courses in their technician education program, what modifications would they make. A complete listing of these responses are provided in Appendix G.

The graduates were asked if they would like to elaborate on any of the items or make comments concerning other items. A complete listing of these responses are provided in Appendix H. In all cases when reference was made to an individual, the individual's name was left blank.

CHAPTER V

The purpose of this study was to obtain and analyze follow-up information from technician education graduates from Northeastern Oklahoma A & M College. The population of the study was 266; however, four of the graduates were international students and were not included in the study. With a survey size of 262, a response rate of 112 or 42.7 percent was received.

Conclusions and Recommendations

The findings presented in Chapter IV have been interpreted and recommendations have been made where applicable. The findings have been divided into the six major areas investigated: student characteristics, student personnel program evaluation, curriculum evaluation, composite educational program evaluation, post graduate activities, and open ended responses.

Student Characteristics

Of the total respondents, only 25.9 percent had vocational training related to their technical discipline prior to entering their technician education program and even fewer, 11.6 percent, had previous college work. It is apparent that to the majority of students entering technician education programs at Northeastern Oklahoma A & M College, it is the student's first exposure to the technical discipline and to college work.

The major factors contributing to the graduates' decision to major in technician education at Northeastern Oklahoma A & M College are: geographic location 24.8 percent, employment opportunities 17.8 percent, quality of facilities and instructors 15.1 percent, total college environment 10.9 percent, recommendation by high school instructors and counselors 9.3 percent, contacts with Northeastern Oklahoma A & M College recruitment personnel 6.6 percent, recommendation by a friend 5.8 percent, and other 5.4 percent. It becomes evident that the most important factors in recruitment of technician education students are geographic location and the manner in which the college enables the students to accomplish their goals.

Approximately two-thirds of the technician education graduates were employed while attending Northeastern Oklahoma A & M College. Of those employed the majority were involved in part time work. Also, over half (56.3%) of the technician education graduates applied for and obtained financial assistance while attending Northeastern Oklahoma A & M College.

The majority (53.6%) of the graduates were housed on campus while attending Northeastern Oklahoma A & M College.

A relatively small percentage (25.0%) of the graduates participated in developmental courses; however, a very large percentage (85.7%) of those that participated felt the courses were beneficial in overcoming deficiencies.

Student Personnel Program Evaluation

The graduates evaluated their student personnel programs on a scale from 0 to 10. A 0 was assigned the poorest rating, while 10 was

assigned a perfect evaluation.

The following ranking was accomplished by using the graduate evaluation mean scores.

1. Counseling (Mean = 7.2)
2. Financial Assistance (Mean = 6.7634)
3. Recreation (Mean = 6.7596)
4. Residential Facilities (Mean = 6.7)
5. Placement Services (Mean = 5.9)
6. Student Involvement in College Governance (Mean = 5.7)

The mean scores associated with placement services and student involvement in college governance were lower than the other areas.

The lower score for student involvement in college governance could be a result of the majority of the students working part time while attending Northeastern Oklahoma A & M College leaving less time for extra-curricula activities.

During previous research on the community junior college, Hurley(5) and Southwestern College, Chula Vista, California (13) indicated a low rating for the junior college placement services.

Curriculum Evaluation

The curriculum was evaluated by the graduates, using the criteria of applicability of educational experiences to post-graduate activities. A scale from 0 to 10 was used. A 0 was assigned the poorest rating, while 10 was assigned a perfect rating.

The following ranking was accomplished by using the graduate evaluation mean scores.

1. Technical Speciality (Mean = 7.4)

2. Mathematics Courses (Mean = 6.6)
3. Auxiliary and Supporting Technician Education (Mean = 6.2)
4. Communications (Mean = 6.0)
5. Social Sciences (Mean = 5.3)
6. Science (Mean = 5.1)

The low rating for science may be due to the fact that all the technology programs did not require science course work.

Composite Educational Program Evaluation

The composite educational program was evaluated by asking the technician education student if he would recommend his program to someone else with similar ambitions. Of the respondents 91.1 percent said that they would recommend their program, while 6.3 percent said that they would not: 2.7 percent of the respondents did not reply to the question.

This percentage compares favorably with Houstons' (4) survey at Virginia Western Community College, in which he obtained a 94 percent "yes" response to the same question. However, it exceeds Hurleys' (5) study of the Maryland Community Colleges, in which he received a 72.4 percent "yes" response to the same question.

Post Graduate Activities

Upon graduation from the technician education program, approximately three-fourths of those obtaining employment did not continue their education on a part time basis.

The type of work performed by the graduates of the technician education programs is ranked below in the order of frequency of responses.

1. Production (26.4 percent)

2. Design (19.8 percent)
3. Maintenance (16.5 percent)
4. Research (14.9 percent)
4. Installation (14.9 percent)
6. Sales (7.4 percent)

The median salary for the technician education graduates was between \$10,000 and \$11,000 per year. There was no attempt made to describe the mean or mode due to the large number of respondents that indicated they made below \$9,000 per year.

It is recommended that additional research be conducted which will more accurately describe the graduates' annual salaries below \$9,000 per year and attempt to correlate the annual salary with the type of work being performed.

The majority of students that transfer to a four year college or university, transfer to Oklahoma State University and major in an area that is directly related to their technician education program at Northeastern Oklahoma A & M College.

Open Ended Responses

Of 112 total respondents, 78 open ended responses were obtained to "If you had the opportunity to add to, delete from, or change any courses in your technician education program, what modifications would you make?" This tends to indicate that the graduates of a technician education program are concerned with the content of the program and can provide a valuable source of information required to maintain the technician education programs current with today's needs.

Of the 112 total respondents, 39 open ended responses were obtained

to the question "If a short response was not sufficient for the items listed, please enter any additional comments you would like to make concerning these items or any others." This large number of responses reflects a concern by the graduate for the technician education programs and their college.

Other Recommendations

The composite findings of this study indicate the following suggestions.

1. If technician education in the junior college is to maintain its dynamic image, it should continually obtain information concerning the characteristics and ambitions of its students.

2. The technician education graduates can be an indispensable source of information concerning the applicability of education experiences to post graduate activities. As such, the graduates should be asked periodically to evaluate the applicability of their educational experiences to their current activities.

3. An accurate and complete graduate follow-up file should be maintained by those involved in technician education.

4. It is recommended that prior to technician education program evaluations, a complete listing of graduates be obtained. A representative sample from this listing should be mailed questionnaires asking for an evaluation of their technician education program as related to post graduate activities.

SELECTED BIBLIOGRAPHY

- (1) Medsker, Leland L., and Dale Tillery. Breaking the Access Barriers. McGraw-Hill, 1971.
- (2) Northeastern Oklahoma A & M College 1976-1977. Miami, Oklahoma: Northeastern Oklahoma A & M College, 1976.
- (3) Collins, Charles C. Junior College Student Personnel Programs: What They Are and What They Should Be. AAJC, 1967.
- ✓(4) Roberts, Lonnie Dale. "A Study of Oklahoma State University Technical Education Graduates." (Unpub. M.S. thesis, Oklahoma State University, 1975.)
- (5) Brooking, Walter J., and Alexander C. Ducat. Criteria For Technician Education: A Suggested Guide. Washington D.C.: Government Printing Office, 1968.
- (6) National Advisory Committee on the Junior College. A National Resource for Occupational Education. American Association of Junior Colleges, 1964.
- (7) Hall, George L. 100,000 and Under: Occupational Education in the Rural Community Junior College. American Association of Junior Colleges, 1968.
- (8) Venn, Grant. Man Education and Work. American Council on Education, 1964.
- ✗(9) O'Connor, Thomas J. Follow-Up Studies in Junior Colleges: A Tool for Institutional Improvement. American Association of Junior Colleges, 1965.
- (10) Cross, K. Patricia. Beyond the Open Door. Jossey-Bass, 1971.
- ✗(11) Williams, William G., and Fred A. Snyder. "Follow-up Studies of Former Occupational-Technical Students at Community Colleges." Virginia State Department of Community Colleges, Richmond, Virginia, 1974. ERIC Document Reproduction Service, ED 104 499.
- ✗(12) Hurley, Rodney G. "Maryland Community Colleges Student Follow-Up Study: First Time Students, Fall 1970." State Board for Community Colleges, Annapolis, Maryland, 1974. ERIC Document Reproduction Service, ED 100 475.

- (13) Houston, C. A. "A Discriptive Study of 1972, 1973, and 1974 Graduates at Virginia Western Community College." Virginia Western Community College Roanoke, Virginia, 1974. ERIC Document Reproduction Service, ED 097 058.
- 4(14) Southwestern College Chula Vista, California. "Vocational Follow-Up Report Students Completing Programs Fall 1972 and Spring 1973." ERIC Document Reproduction Service, ED 097 932, 1974.
- ck(15) Paul, Krishan K. "A Manual for Conducting Follow-Up Surveys of Former Vocational Students: Research and Development Series No. 106." National Inst. of Education (DHEW), Washington D. C., 1975. ERIC Document Reproduction Service, ED 114 625.

APPENDIX A

DATA COLLECTION INSTRUMENT

7. If the answer to question number six was yes, how many hours per week did you work? () 0 to 10 hours () 10 to 20 hours
() 20 to 30 hours () 30 to 40 hours () over 40 hours
8. Did you live on campus while attending NEO? () yes () no
9. Did you apply for and obtain financial assistance while attending NEO? () yes () no
10. Did you enroll in any developmental courses while attending NEO? () yes () no
11. If the answer to question number ten is "yes", do you feel these courses helped you overcome deficiencies in the particular subject area? () yes () no
12. Evaluate each aspect of your educational experiences as they relate to your current activities. 0 is to be the poorest evaluation, while 10 is to be a perfect evaluation.
- A. Technical Speciality 0 1 2 3 4 5 6 7 8 9 10
(Basic and advanced courses in your technical speciality)
- B. Mathematics Courses 0 1 2 3 4 5 6 7 8 9 10
(Examples: Algebra, Trigonometry, Analytic Geometry, Applied Calculus, etc.)
- C. Science Courses 0 1 2 3 4 5 6 7 8 9 10
(Examples: Physics, Chemistry, etc.)
- D. Communications 0 1 2 3 4 5 6 7 8 9 10
(Examples: English, Speech, etc.)
- E. Social Sciences 0 1 2 3 4 5 6 7 8 9 10
(Examples: History, Government, Human Relations, etc.)
- F. Auxiliary and Supporting Technician Education 0 1 2 3 4 5 6 7 8 9 10
(Technician education course work taken that is related to but not part of your technical speciality)

13. Evaluate each aspect of the following student personnel programs.

0 is to be the poorest evaluation, while 10 is to be a perfect evaluation.

- | | |
|--|------------------------|
| A. Financial Assistance | 0 1 2 3 4 5 6 7 8 9 10 |
| B. Counseling | 0 1 2 3 4 5 6 7 8 9 10 |
| C. Recreation | 0 1 2 3 4 5 6 7 8 9 10 |
| D. Residential Facilities | 0 1 2 3 4 5 6 7 8 9 10 |
| E. Student Involvement in College Governance | 0 1 2 3 4 5 6 7 8 9 10 |
| F. Placement Services | 0 1 2 3 4 5 6 7 8 9 10 |

14. If you accepted employment upon graduation from the technician education program, did you continue your education on a part-time basis?
 yes no

15. If you transferred directly to a four year college or university, list the school, major, and degree sought. _____

16. Name and location of the company for whom you are presently employed.

17. Title of your present position _____

18. What is the type of work you are presently doing? (check one)

- | | |
|---------------------------------------|-------------------------------------|
| <input type="checkbox"/> Installation | <input type="checkbox"/> Production |
| <input type="checkbox"/> Maintenance | <input type="checkbox"/> Research |
| <input type="checkbox"/> Sales | <input type="checkbox"/> Design |

19. Present annual salary (circle one)

- | | | |
|------------------------|------------------------|------------------------|
| A. Under \$9,000 | D. \$12,000 - \$13,000 | G. \$15,000 - \$16,000 |
| B. \$10,000 - \$11,000 | E. \$13,000 - \$14,000 | H. \$16,000 - \$17,000 |
| C. \$11,000 - \$12,000 | F. \$14,000 - \$15,000 | I. Above \$17,000 |

20. Would you recommend your technician education program to others with similar ambitions? () yes () no
21. If you had the opportunity to add to, delete from, or change any courses in your technician education program, what modifications would you make?

22. If a short response was not sufficient for the items listed, please enter any additional comments you would like to make concerning these items or any others.

APPENDIX B

LETTER OF TRANSMITTAL



DIVISION OF TECHNOLOGY
NORTHEASTERN OKLAHOMA A & M COLLEGE

MIAMI, OKLAHOMA 74354

We at Northeastern Oklahoma A & M College would like to invite you to participate in our graduate follow-up study. This study is designed to allow you the opportunity to reflect on your educational experiences while attending Northeastern Oklahoma A & M College.

As a graduate of a technician education program, you possess valuable information concerning the technician education programs at Northeastern Oklahoma A & M College. It is hoped that you will be willing to share this information with us.

Please complete the enclosed questionnaire and return it in the self-addressed stamped envelope.

Your help is certainly appreciated.

Sincerely yours,

APPENDIX C

FOLLOW-UP LETTER



DIVISION OF TECHNOLOGY
NORTHEASTERN OKLAHOMA A&M COLLEGE

MIAMI OKLAHOMA 74354

You have recently been asked to participate in our graduate follow-up study. If you have not returned the enclosed questionnaire, we need your help. If you have already returned the questionnaire, please disregard this letter.

In order to insure that the technician educational experiences are compatible with our graduates' needs, it is imperative that communications exist between N.E.O. and its graduates. You, as a graduate, can provide the necessary information required to determine the relevancy of your educational experiences to post-graduate activities.

Your assistance in providing this valuable information is greatly appreciated. Please complete the enclosed questionnaire and return it in the self-addressed, stamped envelope.

Sincerely yours,

APPENDIX D

NAMES AND LOCATIONS OF THE COMPANIES
FOR WHICH THE GRADUATES ARE WORKING

<u>Name and Location of Company</u>	<u>Technical Major</u>
B. F. Goodrich Miami, Oklahoma	Automotive
Eagle Picher Industries Quapaw, Oklahoma	Automotive
Goodyear Service Store Harrison, Arkansas	Automotive
Pizza Hut Inc. Baxter Springs, Kansas and Church of Christ Salina, Oklahoma	Automotive
Vanzandt Motors Inc. Bartlesville, Oklahoma	Automotive
Amoco Production Company Tulsa, Oklahoma	Computer Science
Bacone Jr. College Muskogee, Oklahoma	Computer Science
B. F. Goodrich Miami, Oklahoma	Computer Science
C. E. Natco Tulsa, Oklahoma	Computer Science
Cities Service Company Tulsa, Oklahoma	Computer Science
Computer Center Inc. Miami, Oklahoma	Computer Science
DFB Data Consultants Inc. Fort Scott, Kansas	Computer Science
Doane Products Company Joplin, Missouri	Computer Science
Doane Products Company Joplin, Missouri	Computer Science
Electronic Data Systems Dallas, Texas	Computer Science
First National Bank & Trust Oklahoma City, Oklahoma	Computer Science

First State Bank Hulbert, Oklahoma	Computer Science
Frontier Federal Savings & Loan Oklahoma City, Oklahoma	Computer Science
Greenawalt-Armstrong Engineering Bartlesville, Oklahoma	Computer Science
Ingersoll-Rand Compression Services Tulsa, Oklahoma	Computer Science
Kansas State College of Pittsburg Pittsburg, Kansas	Computer Science
Lee F. Adkison C. P. A. Miami, Oklahoma	Computer Science
McKissick Products Company Tulsa, Oklahoma	Computer Science
Miami Baptist Hospital Miami, Oklahoma	Computer Science
Mistletoe Express Service Oklahoma City, Oklahoma	Computer Science
National Sharedata Corp. Oklahoma City, Oklahoma	Computer Science
Northeastern Oklahoma A & M College Miami, Oklahoma	Computer Science
Northeastern Oklahoma A & M College Miami, Oklahoma	Computer Science
Otasco Inc. Tulsa, Oklahoma	Computer Science
Phillips Petroleum Company Bartlesville, Oklahoma	Computer Science
Phillips Petroleum Company Bartlesville, Oklahoma	Computer Science
Safeway Stores Inc. Tulsa, Oklahoma	Computer Science
Schmidt Construction Company Inc. Miami, Oklahoma	Computer Science
Security Bank & Trust Company Miami, Oklahoma	Computer Science

Sherwin-Williams Miami, Oklahoma	Computer Science
Standard Oil Company Tulsa, Oklahoma	Computer Science
Topeka & Shawnee County Health Dept. Grantville, Kansas	Computer Science
Hughes Brothers Construction Bernice, Oklahoma	Construction
Lamar Public Schools Lamar, Missouri	Construction
Mr. Quick Joplin, Missouri	Construction
Price Appliances Columbus, Kansas	Construction
Salamander Ind. Inc. Miami, Oklahoma	Construction
Self-employed Bernice, Oklahoma	Construction
Self-employed Thomasville, Georgia	Construction
Southwestern Bell Telephone Co. Miami, Oklahoma	Construction
Al C. Young & Assoc. Miami, Oklahoma	Design and Drafting
Babcock and Wilcox Lynchburg, Virginia	Design and Drafting
City of Miami Miami, Oklahoma	Design and Drafting
Eastman Kodak Company Windsor, Colorado	Design and Drafting
George E. Failing Company Enid, Oklahoma	Design and Drafting
Gulf Oil Company Oklahoma City, Oklahoma	Design and Drafting
Koehring of Enid Enid, Oklahoma	Design and Drafting

Lewis Refrigeration Tulsa, Oklahoma	Design and Drafting
Phillips Petroleum Company Bartlesville, Oklahoma	Design and Drafting
Phillips Petroleum Company Bartlesville, Oklahoma	Design and Drafting
Phillips Petroleum Company Bartlesville, Oklahoma	Design and Drafting
Postal Service Rogers, Arkansas	Design and Drafting
Rockwell International Bethany, Oklahoma	Design and Drafting
TRW Reda Bartlesville, Oklahoma	Design and Drafting
U.S.D. 286 Sedan, Kansas	Design and Drafting
Williams Pipe Line Company Tulsa, Oklahoma	Design and Drafting
American Television & Communications Co. Bartlesville, Oklahoma	Electronics
B. F. Goodrich Miami, Oklahoma	Electronics
B. F. Goodrich Miami, Oklahoma	Electronics
Dresser Atlas Woodward, Oklahoma	Electronics
Eagle Picher Inc. Joplin, Missouri	Electronics
Exxon Production Research Houston, Texas	Electronics
Instrumentation Laboratory Inc. Tulsa, Oklahoma	Electronics
Melody Point Resort Grove, Oklahoma	Electronics
Seismograph Service Corporation Tulsa, Oklahoma	Electronics

Self-employed Adair, Oklahoma	Electronics
Telex Computer Products Inc. Tulsa, Oklahoma	Electronics
Time Mark Corporation Tulsa, Oklahoma	Electronics
U. S. Metal Container Company Miami, Oklahoma	Electronics
Glenberry Mfg. Company Commerce, Oklahoma	General
Ross Construction Bernice, Oklahoma	General
Clark Oil Company Kansas City, Kansas	Machine Shop
Phillips Petroleum Company Bartlesville, Oklahoma	Machine Shop
Jay Plumbing Jay, Oklahoma	Refrigeration and Air Conditioning
Ken's Pizza Parlor Tulsa, Oklahoma	Refrigeration and Air Conditioning
Cities Service Oil Co. Berwick, Louisiana	Welding and Metal Work
Fluor Cont. Woodward, Oklahoma	Welding and Metal Work

APPENDIX E

TITLES OF GRADUATES' PRESENT POSITIONS

<u>Title of Present Position</u>	<u>Technical Major</u>
Cook and Youth Minister	Automotive
Industrial Mechanic	Automotive
Machinist in Optics Department	Automotive
President of Corporation and General Manager	Automotive
Service Manager	Automotive
Administrative Systems Programmer	Computer Science
Assistant Manager	Computer Science
Bookkeeper	Computer Science
Bookkeeper	Computer Science
Computer Operator	Computer Science
Computer Operator	Computer Science
Computer Operator - Cobal Programmer	Computer Science
Computer Operator - Future Programmer	Computer Science
Computer Operator	Computer Science
Computer Programmer	Computer Science
County Sanitarian	Computer Science
CPCS Programmer (computer programmer)	Computer Science
Data Processing Manager	Computer Science
Data Processing Supervisor	Computer Science
Driver - Salesman	Computer Science
Engineering Draftsman	Computer Science
Exploration Technologists Jr.	Computer Science
IMS Data Base Analyst	Computer Science
Inventory Control Clerk	Computer Science
Loan Officer	Computer Science

Operations Manager	Computer Science
Programmer	Computer Science
Programmer	Computer Science
Programmers' Aid	Computer Science
Production Coordinator	Computer Science
Proof Machine Operator	Computer Science
School College Relations	Computer Science
Secretary	Computer Science
Senior Program Analyst	Computer Science
Supervisor of Accounting and Payroll Clerk	Computer Science
System Analyst	Computer Science
Systems Engineer	Computer Science
Foreman	Construction
Industrial Arts Instructor	Construction
Owner	Construction
Relief Manager	Construction
Saw Operator	Construction
Serviceman	Construction
Station Installer	Construction
Aircraft Assembler	Design and Drafting
Assistant City Engineer	Design and Drafting
Automated Drafting System Operator	Design and Drafting
Design Engineer	Design and Drafting
Design Technician	Design and Drafting
Drafter I	Design and Drafting
Draftsman	Design and Drafting
Draftsman	Design and Drafting

Draftsman	Design and Drafting
Draftsman	Design and Drafting
Drafting Technician I	Design and Drafting
Fireman	Design and Drafting
Junior High and High School Teacher	Design and Drafting
Mechanical Engineer	Design and Drafting
Piping Design Draftsman	Design and Drafting
Senior Design Draftsman	Design and Drafting
Quality Control Surveillance Representative	Design and Drafting
Assistant Chief Engineer	Electronics
Associate Geophysysist	Electronics
Compounder	Electronics
Electrician	Electronics
Electronic Engineer	Electronics
Engineering Technician	Electronics
Field Service Engineer	Electronics
Jr. Field Engineer	Electronics
Laborer	Electronics
Logging Engineer	Electronics
Maintenance	Electronics
Maintenance Helper	Electronics
Manager	Electronics
Helper	General
Seamstress	General
Maintenance Utility Man	Machine Shop
Manager	Machine Shop
Maintenance	Refrigeration and Air Conditioning

Plumber

Refrigeration and Air Conditioning

Pipefitter Welder

Welding and Metal Work

Production Platform (Oil) Worker

Welding and Metal Work

APPENDIX F

FOUR YEAR COLLEGES OR UNIVERSITIES, MAJOR,
AND DEGREE SOUGHT BY THE TRANSFER STUDENTS

Central State University
Business Administration, B. B. A. & M. B. A.

Central State University
Computer Science/General Business, B. S.

Kansas State College of Pittsburg

Kansas State College of Pittsburg
Automotive Technology, B. S. (2)

Kansas State College of Pittsburg
Business Data Processing, B. S. B. A. (4)

Kansas State College of Pittsburg
Information Systems, B. S.

Missouri Southern State College

Missouri Southern State College
B. A. A.

Missouri Southern State College
Business

Missouri Southern State College
Elementary Education, B. S.

Missouri Southern State College and
Kansas State College of Pittsburg

Northeastern Oklahoma State University
Business Administration

Northeastern Oklahoma State University
Education, B. S.

Northeastern Oklahoma State University
Industrial Arts Education, B. S.

Northeastern Oklahoma State University
Management, B. S.

Oklahoma State University
Business Administration, B. S.

Oklahoma State University
Electrical Engineering, B. S. (2)

Oklahoma State University
Electrical Power Technology, B. S. (5)

Oklahoma State University
Electronics Technology, B. S. (8)

Oklahoma State University
Engineering, B. S.

Oklahoma State University
Industrial Arts, B. S.

Oklahoma State University
Management, B. B. A.

Oklahoma State University
Marketing, B. S.

Oklahoma State University
Mechanical Agriculture, B. S.

Oklahoma State University
Mechanical Design Technology, B. S. (6)

Oklahoma State University
Technical Education, B. S. (12)

Oklahoma State University
Trade and Industrial Education, B. S.

Oklahoma State Tech

Ozark Bible College
Sacred Literature, B. S.

University of Arkansas
Industrial Arts Education, B. S.

University of Tulsa
Computer Science, B. S.

APPENDIX G

RESPONSES TO EDUCATIONAL PROGRAM MODIFICATIONS

1. I was happy with what I had.
2. I think Northeastern Oklahoma A & M College is a first class education institution that was perfected long before I arrived on the scene.
3. They were all satisfactory
4. He would make none, I feel sure. As parents, we thought Northeastern Oklahoma A & M College was a valuable educational experience, and liked its insistence on liberal arts as well as technical courses.
5. None - I thought it was a well balanced program.
6. I feel from talking to my past instructor that any modifications I would suggest have already been made.
7. Northeastern Oklahoma A & M College has an outstanding program for business majors and anyone who wants to learn the computer business.
8. I felt that the program was handled very well, while I attended Northeastern Oklahoma A & M College.
9. At the time I attended Northeastern Oklahoma A & M College the courses in my major were more than adequate and average. I feel that the only change would be more updated equipment and machines in the data processing department. The change which I understand has been made was in my opinion necessary.
10. I realize that you have already made a lot of changes, but I feel that having an IBM computer would have been beneficial. Also, I wish there had been more on disc applications, JCL and utility programs, especially the sort merge.
11. I would like to have had a mathematics course at Northeastern Oklahoma A & M College related directly to technical education, dealing with construction type problems.
12. Encourage students to take statistics and strengths, both courses of physics, and math through calculus, especially those who plan to continue their education.
13. Make major courses more practical. (more on the job work) Require more math requirements. Make non-major science courses less elementary. (beef up)
14. Know math better
15. Take more math
16. I would make a change in more math courses and one in personal relations. (interviews, technical writings, and formal writing)

17. I would require a supportive area like in business or math depending on interest and or college transfer requirement.
18. Add additional accounting courses and math. Accounting is first choice and math is second choice.
19. I think the non-majors course in electronics should only be teaching electricity involved in practical use.
20. I would like to have taken a few more electronics courses.
21. Strengthen my electronics knowledge
22. Something in the line of human resources or general management
23. I believe an industrial safety course would be beneficial due to the recent OSHA regulations and inspections.
24. There should be a technical writing course and also you should take accounting classes regularly.
25. Possible to have taken a course in drafting and blue print reading
26. More auxiliary and supporting technical education welding, machine design, electronics
27. I would change all the book work I did and just stick with my major. It will give me more experience in my work.
28. Add more woodworking and carpentry courses
29. Improve carpenter courses by lengthening them and actually doing more of the tasks on things like portable buildings, etc.
30. Revise the credit system for the auto-shop. Encourage dealers in the area to provide training programs, so the student can practice if nothing else minor tune-up.
31. We should have had more time for lab work in my major. I didn't see much point in courses like English, History, and etc., that didn't pertain to a major in mechanics.
32. More theory was needed in the machine technology and welding technology courses. The student should be orientated as to the type work he is most likely to be faced with.
33. Might add an advanced class in pipe welding and blue-print reading
34. I feel much more emphasis should be placed on electronic communications in its various forms - broadband, digital, etc. The industry seems to need people in communications.

35. Supplement one of the second year courses with some recognition of large power applications and relate its effect on the overall electronics industrial base.
36. More computer science courses
37. I would probably attempt to replace the electronic communications book if possible and possibly make the course more credit hours.
38. FCC license 1st, 2nd, and 3rd Elements 1, 2, 3, and 4. Everyone passing a A. A. in Northeastern Oklahoma A & M College's Electronics program would be able to pass the above licenses.
39. Should increase all area of the EET Program; with special consideration for a particular speciality, etc., Bio-Med; Communication; Computer; Industrial.
40. More courses in digital electronics
41. Upon my experience, I think more bench work and less theory. The only place a person will learn, is getting into a piece of equipment.
42. In the electronics area, teach and practice more trouble shooting techniques and systems analysis in trouble shooting. A television set for bugging and debugging would present a good system to work on. We log wells in a truck on location, sometimes 150 miles from base. When we have a problem we must know how to find it so that we can determine if we can fix it or if we need different tools or panels, and time is very important. I feel that the electronics department is in good shape and up to date, and the rest of the technician education program is in good shape. If you would like to have more information on Presser Atlas Well Logging, let me know.
43. Now used at our company is tolerancing and dimension, and it is very difficult to learn. It is required of us to learn it. The book used is Dimension and Tolerancing ANSI y14.5-1973. We were given a short course from an Oklahoma University professor, but no one really learned anything except how to look it up in the book or notebook we were given. We also use all decimals instead of inches. I wish we would have learned to change back and forth easily.
44. Add directly related courses to industry type drafting and design courses such as civil, pipeline, pressure vessel instead of production illustration courses.
45. Use more ink in drafting classes
46. Should offer TPGII - I; More accounting and math required
47. Perhaps more operation time on computer

48. I understand the educational program was changed somewhat after I graduated with the acquisition of the IBM 360. With knowledge of the new techniques used in business, I would add introductory and technical type courses in structured programming, the programmers team concept, and other efficiency oriented techniques. Also, some type of seminar or 1 hour course for second year students which could guide them into an area of computing which interests them. Such a course could include discussion of the types of jobs available in a computing facility, new advances in hardware and software technology, what to expect in a four year institution and other timely subjects. I know this overlaps somewhat with the counseling aspects, but it would be one way to reach all the students. I think it would be very beneficial (and interesting) to those students who are not quite sure what they really want to do.
49. Delete all "electromechanical machines" courses. Implement a Business (M6MT/Administration) oriented class. Evaluate hardware and software companies. Deemphasize programming/emphasize data processing.
50. Provide "hands on" computer operation courses. Stress file organization - layout. Provide examples of industry system operation.
51. I would take more courses with work dealing directly with the computer itself.
52. Add PLI to curriculum, more teaching and use of job control language.
53. Write programs that are similar to a production environment of a normal working job. Give students a general idea what it is like working in a business environment.
54. More of a business course schedule recommended. PL1, advanced Cobol, and JCL courses extended. For people who do not plan on going for additional education a possible operations class. A course for computer management and terminology. Course work dealing with online-teleprocessing concepts and terminology. For people interested in systems work a course on internals, advanced assembles, system generation and device configuration.
55. More and better explanation of the new computer systems and their use (batch processing, terminals, time sharing, remote job entry).
56. A class on computer hardware and installation
57. One of the main things I would have changed while I was attending Northeastern Oklahoma A & M College would be offering higher level programming such as: PL1; System Design; Basic on Assembler.
58. Give each student very extensive operating time on your new computer. More operating experience that they have, it will be easier

- for them to get a job in data processing field.
59. Stronger analytical program for accounting and business majors. Very often we are asked to make a comparison study, for example, and often find an effective method slow to develop.
 60. I would make courses, directly related to the program, more relevant to present business needs.
 61. Possibly advanced classes or accelerate classes for those who can advance faster than others.
 62. Additional Data Processing elective courses. To allow greater scope of system backgrounds. Thus enhancing the students knowledge of a variety of systems and equipment.
 63. I would have the advisors find out where the student plans to attend school upon completion at Northeastern Oklahoma A & M College. Then build their program around that.
 64. Get more basic courses if going on to a four year college.
 65. Coordinate degree requirements for Northeastern Oklahoma A & M College with degree requirements for Oklahoma State University. Since most go on to Oklahoma State University found many courses would not transfer or had to be retaken and some need not be taken at all. It would save considerable time and expense. Get an Oklahoma State University catalog and a EET degree requirement sheet. Thanks a lot for everything you did for me at Northeastern Oklahoma A & M College _____. If you are ever in Houston look me up.
 66. Divide the class a little more and not have beginning students with the advanced students.
 67. I would have changed my major to either welding or industrial electricity.
 68. A more strict grading system. I think I for one was over graded.
 69. My technician education program was set up very nicely. However, at the time of my schooling the instructor of my speciality was "not up to par", causing the program to be less than what it should have been. I understand that this problem with the program has been resolved, and this is the reason for my checking of question number 20 as "yes."
 70. I had no respect for a Mr. _____ and his teachings; he contributed little and devoted less to my learning.
 71. I think that classes like History, Government, and English should be deleted and some kind of design course that is more closely related to actual job experience is added. If a person had not

previously had education in their special subject, I would recommend the program. If a person had already completed a high school technical course, I would suggest that they try to get work experience because the fact that they have a degree in that course does not mean much to employers because you still have to start at the bottom just as if you had a one or two year course. Experience goes farther than a degree.

72. Upgrade the quality of the technical courses, (strength of materials, calculus, physics, electronics) so they would cover the complete spectrum of each subject.
73. I would have majored in Machine Shop. I've seen that when conditions get tight in a large corporation such as the one I work for, the draftsmen are among the first persons to be laid off. I have a much more secure job as a aircraft assembler than the highest paid draftsman in the whole company. I don't believe I'd major in drafting if I had it all to do over again, however, I do feel that _____ and _____ are among the finest instructors to be found in this country.
74. I was very displeased to find that the absence of "statics" from "Statics and Strengths of Materials" has tremendously hurt me in my major.
75. I would not go into computer education being a woman and living in the Miami area.
76. Make courses more complete, tougher. Weed out those that don't belong. My guess would be less than 10 percent graduating would be qualified to begin programming most businesses.
77. There is too much time spent in the educational facilities of today on irrelevant topics. More emphasis should be placed upon training which will prepare you to make it in the real world. The real world is not quite the same as the one the schools would have you believe in.
78. I would change my technical education completely.

APPENDIX H

COMMENTS MADE BY GRADUATES

1. In response to questions 16 and 18 I would like to inform you that I am presently looking for a teaching job in the field of industrial arts for the following school year. After I left Northeastern Oklahoma A & M College, I went on to get my teaching degree at Northeastern Oklahoma State University. I graduated in December of 1976 and was unable to find a job.
2. Item 12E: Even though these courses have had no effect on my continued education I am still required to take 8 hours of humanities and poly science. Northeastern Oklahoma A & M College offers the best technical program, and is highly spoken of at Oklahoma State University. Item 9: Even though I obtained financial aid, the _____ was very unfriendly and unconcerned. This man does not fit in the environment I found at Northeastern Oklahoma A & M College.
3. You should help students who have decided to go to a four year school prepare better. School doesn't place enough emphasis toward anything needed for four year degrees. Not everybody wants to stop at an A. A. degree of technical training.
4. I believe that Northeastern Oklahoma A & M College has a fine program and that the instruction is tops. The only problem I can see is that the student planning to go on need more science courses, writing, and accounting. Also math in the tech program. I believe that _____ is a fine instructor and has helped me a great deal. If you need more information I will be glad to help in any way. I want Northeastern Oklahoma A & M College to stay strong in its tech program and help it to improve. Thanks for asking. _____
5. The technical education program at Northeastern Oklahoma A & M College was excellent, however, I do not feel I can say the same for the continuing program at Oklahoma State University. When one graduates from Northeastern Oklahoma A & M College in the tech ed program, he or she feels prepared for most challenges in industry. Mr. _____ Keep it up!
6. Northeastern Oklahoma A & M College's electronic program is superior compared to Oklahoma State University. The lab equipment is the big difference. The type of personal help offered by the instructors is absent at Oklahoma State University, where as Northeastern Oklahoma A & M College was more concerned.
7. The electronics technician program at Northeastern Oklahoma A & M College was very good due to the competence of the instructor Mr. _____. There would be a great loss in the program if he left. I wish he taught in a four year college.
8. Mr. _____, "Hi", hope to get around and see you some time. If your electronics class going down the river this year? If so, when? This year is very hard in trying to hold a 2.00 GPA. I would rather be at Northeastern Oklahoma A & M College anytime. Drop me a line if you get a chance. Your worst student. _____

9. The courses there are on a par with the engineering courses here. They are much better than the EET courses here.
10. I was only enrolled in these technical courses for one semester, but I can make a high opinion of Mr. _____ as a teacher, not only is this my opinion but one of all the kids I know that were enrolled in his courses. As for my counselor, I am very much dissatisfied with his efforts. For the most part I would advise friends of mine to attend the four year institution and avoid the hassle of losing credits by transferring and prolonging their education.
11. If I were to advise anyone about going to college with thoughts of obtaining a B. S., I would say they should go directly to the four year university. The big problem I saw was in all cases the basic and fundamental classes such as calculus, strengths, electronics, and physics did not cover the complete subject well enough to give you a concrete foundation for further study of the sciences. This was not all Northeastern Oklahoma A & M College's problem because I seriously doubt that any two year school could cover the same material in detail. Oklahoma State University was very thorough in the study of fundamental materials.
12. I felt Northeastern Oklahoma A & M College prepared me quite well in the drafting department for entering mechanical design technology, with the one and only one exception of the missing statistics course.
13. I am planning on going back to college and get a master in Business.
14. Northeastern Oklahoma A & M College's computer science department and staff far exceed the educational requirements I have found at all other colleges, vo-techs and private schools I've attended.
15. I feel like electronics was the only technical course I had. Since attending Northeastern Oklahoma A & M College I have taken refrigeration and welding at Tulsa Vo-Tech. I learned very much. My other classes at Northeastern Oklahoma A & M College I feel were very valuable to me. I will always have that knowledge.
16. Although the work _____ is doing is not directly related to his tech speciality (welding), he could not have gotten this job without the training and degree from your school.
17. I think someone should go out and see what types of jobs are done by different companies and design studies along this line of work. Examples are concrete pump bases, electrical wiring diagrams, and installation of whole pump stations. In other words just go into more detail because I think that it is unfair for a person to work hard for a degree and have to start at the bottom with high school graduates, etc.
18. For about a year and a half after I left Northeastern Oklahoma A & M College I worked in a data processing installation. I found

the equipment at Northeastern Oklahoma A & M College obsolete. Most people just getting out of school must start as a computer operator, so if they had modern machines to practice on in school that would advance them terrifically once they found employment.

19. The only thing I felt was needed in the computer science courses were more high powered equipment to allow for better training for the real world. I feel the new system has done this.
20. I understand that data processing department has implemented an IBM 360 system which is a vast improvement over the equipment available at the time of my study. However, this system is obsolete industry wide. Higher education institutions should not be allowed to instruct with out moded equipment and design features.
21. If you need any additional information feel free to write me. If you have any students which you would recommend for a fulltime job which graduates in May or this fall please pass me their name. I will recommend them to be reviewed for a possible interview. I know of a few places in town which are hiring. I thought you would enjoy the attached article. Have a good semester.
22. The main problem with a lot of programmers or system analysts that come out of college is their inability to evaluate beyond one program at a time rather than to see a whole system at a time. If a system design course was offered to let the student see a whole system from start to finish, it would help to alleviate the problem.
23. My present unemployment problem is caused by lack of experience. That's why each student in the Data Processing field should be given as much as possible operating time on the computer. Then when they leave Northeastern Oklahoma A & M College they can have their A. A. degree plus two years on hands experience with an up-to-date computer.
24. The type of work I do does not include programming.
25. Northeastern Oklahoma A & M College's electronics department was going through a major change while I was attending from 1971 to 1973. Because the course was disrupted, it isn't really fair that the program as a whole be judged by the progress of myself or the other students of electronics of those years.
26. You ought to have whoever signs these letters to type his name under his signature.
27. On item 10 I am not quite sure what a development course is. On item 12 the reason for the 0 rating is my job is not computer related.
28. In response to question 4, I completed vocational non-college courses while attending Northeastern Oklahoma A & M College.

29. Questions 12 and 13 are hard to answer because most of the areas do not really apply to me. Also none of the categories in question 18 are the area I'm actually in.
30. Any technical course is well worth the time and efforts but I suggest that the school try and involve the off campus student in something. In my opinion this would help to motivate interest and a sense of purpose into the person.
31. As a rule Northeastern Oklahoma A & M College is a good Technical Junior College as far as the educational process is concerned. There is a need, however, for more student social activities not for the purpose of making college fun but for the purpose of keeping students out of trouble on campus. I believe also that the student senate should not be soulfully responsible for creating more activities.
32. The cafeteria food is not sufficient and needs improvement. Also better security on campus, but not too strong and confining. There is a large waste of government financial aid. (money not given to most deserving and the rules need to be changed and revised)
33. Say "Hi" to Mr. _____ for me.
34. It was a pleasure to attend this fine college.
35. I enjoyed Northeastern Oklahoma A & M College, the students, and teachers were great.
36. It is my opinion that Northeastern Oklahoma A & M College has one of the finest technician education programs, as well as instructors, of any college or university in this area. I would highly recommend it to anyone interested in this field of study.
37. The objectives of a college are the criteria by which a curriculum must be set up. Generally a Junior College needs to first decide whether to train for employment or for further education. The perfect situation would be one in which a student could gain marketable skills and at the same time collect that education that would allow him to continue his educational pursuit. Within Northeastern Oklahoma A & M College's organization this is an easily accomplished task, if the student knows his wants.
38. I think the technology at Northeastern Oklahoma A & M College is one of the finest for a two year school.
39. The computer science courses at Northeastern Oklahoma A & M College are very good and the instructors are very good.

APPENDIX I

RESPONSES TO "OTHER" FACTORS CONTRIBUTING
TO THE DECISION TO MAJOR IN TECHNICIAN EDUCATION
AT NORTHEASTERN OKLAHOMA A & M COLLEGE

1. Not particular, but I would have rather attended a four year institution
2. Oklahoma State University
3. Scholarship and department job
4. It was the nearest one to my home
5. Started Northeastern Oklahoma A & M College in 1966, dropped out, went to the service, came back to finish my two year program
6. The price of the college hours
7. Low cost of tuition
8. Could not afford to go to a four year institution
9. Had a regents scholarship for tuition and could live at home
10. I applied to your college and two in New York. I was accepted to your school and one in New York. The distance to New York and Oklahoma was the same from Georgia. I picked Northeastern Oklahoma A & M College because the courses sounded the same as the New York school, and I had never seen Oklahoma.
11. Actually I took only a non majors electronics course
12. Courses offered met Ford Motor Company scholarship
13. I entered a practical field that I can use for the rest of my life
14. My major was electronics. I really wished I had learned industrial electricity and house wiring.

APPENDIX J

RESPONSES TO "I WOULD HAVE PREFERRED TO
ATTEND ANOTHER INSTITUTION; HOWEVER,"

1. I chose Northeastern Oklahoma A & M College because of a tuition scholarship I received, and to play baseball.
2. Most four year institutions did not offer the technical course that interested me.
3. I believe junior college is excellent for whatever purpose desired.
4. Finances minimized my choice
5. Others were over my budget
6. Due to the fact I was from a small school I felt a middle step was required before a university.
7. Northeastern Oklahoma A & M College was a small college and coming from a small town it was a big help.
8. Financial problems
9. Lack of finances prevented me from attending Kansas University.
10. It would cost less to go to Northeastern Oklahoma A & M College my first two years of college.
11. Since I was learning a trade, a technical school would probably have been more sufficient.

VITA¹

Royce Kent Tunnell

Candidate for the Degree of

Master of Science

Thesis: A STUDY OF NORTHEASTERN OKLAHOMA A & M COLLEGE'S TECHNICIAN
EDUCATION PROGRAMS AND GRADUATES FROM 1971 TO 1976

Major Field: Technical Education

Biographical:

Personal Data: Born in Miami, Oklahoma, April 15, 1950, the son of
Mr. and Mrs. Leonard H. Tunnell.

Education: Graduated from Miami High School, Miami, Oklahoma, in
May 1968; received Associate in Arts degree in Electronics
from Northeastern Oklahoma A & M College in 1970; received
Bachelor of Science degree in Technical Education from Okla-
homa State University in 1972, completed requirements for
the Master of Science degree with a major in Technical Educa-
tion in July, 1977.

Professional Experience: Equipment Specialist, Oklahoma City Air
Material Area, 1972-1973; Electronics Engineering Technolo-
gist, Telex Computer Products, 1973; Electromechanical In-
structor, Central Area Vocational Technical School, 1973-1974;
Electronics Instructor, Northeastern Oklahoma A & M College,
1974-1977.

Professional Organizations: Phi Delta Kappa, Oklahoma Technical
Society, Ancient and Beneficent Order of the Red Red Rose, and
International Association of Turtles Inc.