A FOLLOW-UP STUDY OF THE OKLAHOMA STATE UNIVERSITY TECHNICAL EDUCATION GRADUATES 1960-1968

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CHAPTER I

THE PROBLEM

Introduction

Prior to the Second World War the word "technician" was a very abstract term. Few people were familiar with this word much less its meaning. Following the war, words like automation, computer, and transistor became symbols of an age which found the scientist, the engineer, and the technician well established in the minds of the people. These new words and ideas have caused the American society to realize a challenge to its social, economic, and educational institutions - a challenge which has caused a re-evaluation of those institutions.

The people of this nation became aware of a technological competition after the emergence of Sputnik I. This realization of competition has been marked by change in our educational institutions more than anything else - a change which transfered all emphasis to highly technical and specialized scientific endeavors.

With this new emphasis on science and technology we found engineers and engineer support personnel (the technician) much in demand. This need for technicians (engineering support personnel, semi-professional, or middle manpower) has caused an emphasis on the programs which supply these trained personnel. These programs

require competent instructors who are as much or more in demand than the technician.

If technicians are to be trained, then competent technical educators must be found. As Grant Venn has stated:

> The recruitment of competent teachers, difficult at all educational levels, is especially so in vocational and technical education. Teachers in this area, particularly with the program's present emphasis on shop instruction and job experience, must themselves have a high level of job knowledge and experience.[1]

Many degreed persons with a technical background and experience are being enticed into the industrial world by the high salaried jobs. This is but one reason for the exit of technical educators to other fields of endeavor. A study of this and other reasons is an area that merits investigation.

The Oklahoma State University has produced graduates majoring in Technical Education since 1960. The Department of Technical Education was organized to provide professional and technical preparation of teachers for post-high school technical programs.[2]

Purpose of the Study

There are many factors which effect any measurement of adequacy and effectiveness of an institution of higher education. One primary factor is the teaching faculty. Another factor is the physical facilities of the institution. The legal framework within which the institution operates represents another factor. Other important factors include the curricula, the physical and intellectual community surrounding the institution, and, of course, the student population. One often overlooked factor is the final

product of the institution, the graduate. This one factor is perhaps the most significant determinant of program adequacy and overall effectiveness.[3]

This study investigated the success, backgrounds, and occupational patterns of Technical Education graduates of the Oklahoma State University. The results of this study will facilitate:

1. The evaluation of the existing Technical Education program.
2. The placement and employment of future Technical Education graduates.
3. The future development of more effective Technical Education programs.
4. The recruitment of new Technical Education students.

Questions Investigated

The following questions were investigated in this study:

1. What were the beginning career patterns of Technical Education graduates?
2. What were the career objectives of Technical Education graduates?
3. What is the relative economic success of Technical Education graduates in educationally oriented occupations versus those in non-educationally oriented occupations?

4. What were the geographic mobility patterns and what has been the extent of out-migration of Technical Education graduates?
5. What were the geographic backgrounds of Technical Education graduates?
6. What were the graduates' stated reasons for entering the Technical Education program?
7. What were the educational patterns of Technical Education graduates?
8. What were the continuing educational patterns of Technical Education graduates?
9. What were some of the roles that Technical Education graduates play in community relations, public service, professional organizations, etc?

Definition of Terms

The term "graduates" for purposes of this study refers to any person who has received a bachelor's and/or master's degree in Technical Education at the Oklahoma State University.

The term "beginning career" for purposes of this study refers to the first years a graduate is employed after receiving his B.S. Degree in Technical Education; first years meaning one through seven inclusive.

The term "career objectives" for purposes of this study refers to the long-range or ultimate occupational aspirations of the Technical Education graduate.

The term "success" for purposes of this study will be limited

to the economic success of the Technical Education graduate in terms of monthly salary earned as a result of their primary occupations.

The term "migrate" for purposes of this study refers to the acceptance of a job and consequential moving and establishing a residence outside the boundaries of the State of Oklahoma. The out-of-state residencies of graduates in the military were considered as temporary.

The term "geographic background" for purposes of this study refers to the type of backgrounds represented by the Technical Education graduates prior to their entry into the Oklahoma State University. Two types of backgrounds were considered: (1) state (i.e., from Oklahoma or from out-of-state), and (2) urban or rural. The urban or rural background of the respondents were determined by the size of their high school graduation class. The respondents who had a high school graduating class of 125 or less would tend to represent a rural rather than an urban background and the respondents who had a high school graduating class of 126 or more would tend to represent an urban rather than a rural background.

Hypotheses

Each of the following hypotheses was tested in this study:

1. Beginning career patterns of Technical Education graduates are evenly divided into beginning careers in education and beginning careers in industry, business, or the military.

2. The career objectives of all Technical Education graduates are evenly divided into careers in education and careers in industry, business, or the military.
3. Technical Education graduates pursuing careers in industry, business, or the military tend to be more economically successful than Technical Education graduates pursuing careers in education.
4. More than half of all Technical Education graduates pursue their careers outside the State of Oklahoma.
5. More than half of all Technical Education graduates are from Oklahoma.
6. Technical Education graduates tend to represent urban rather than rural backgrounds.
7. A majority of all Technical Education graduates had been in an associate degree technical program.
8. A majority of all Technical Education graduates entered Technical Education because it was the best post-associate degree educational opportunity.
9. Technical Education graduates pursuing careers in education tend to do more post-graduate study than do Technical Education graduates pursuing careers in industry, business, or the military.
10. Technical Education graduates tend to affiliate themselves with community, public, religicus, and professional organizations.

FOOTNOTES

[1]Grant Venn, Man, Education and Work. The American Council of Education, (Washington, 1968), p. 35.

[2]Oklahoma State University Catalog, 1959-60, Oklahoma State University, (Stillwater, 1959), p. 94.

[3]Jack L. Nelson, "Follow-Up Study of Graduates", Improving College and University Teaching, XII (1964), p. 111.

CHAPTER II

REVIEW OF LITERATURE

A study dealing with a specific level of education, such as Technical Education, merits a clarification of terminology so that the reader can at least gain some perspective and understanding of the problems which come to bear on that level of education. Technical Education because of its late emergence into the educational world would under some circumstances merit a considerable amount of clarification and focalization. This study, however, will not go into great detail about the establishment of the institutions, their boards of control, the development of Technical Education, the legislation affecting Technical Education, etc., but will present the necessary information for the reader to obtain an overall view of Technical Education. For more detailed information on the various subjects the reader may wish to consult the appropriate references.

Industrial Education

Technical Education is the most recent addendum to that broad spectrum of education known as industrial education. Industrial Arts Education and Trade and Industrial Education are the two other divisions of the spectrum. There are problems in comprehending the similarities and differences among these divisions and it is of some

benefit to clarify these terms. All are related, in that they deal with the broad area of industry, technology, and work, but the purposes and objectives of the divisions are quite different. The American Vocational Association has defined Industrial Education as follows:

> A generic term applying to all types of education related to industry, including industrial arts education, vocational industrial education (trade and industrial education), and much technical education.[1]

The broad aim of industrial arts is to prepare young people to live in an industrial society. The American Vocational Association has defined industrial arts education as follows:

> Instructional shopwork of a non-vocational type which provides general educational experiences centered around the industrial and technical aspects of life today and offer orientation in the areas of appreciation, production, consumption, and recreation through actual experiences with materials and goods. It also serves as exploratory experiences which are helpful in the choice of a vocation.[2]

Industrial arts has traditionally been a part of the general education school curriculum and functioning in its role at the secondary level of instruction although there has recently been an effort to establish it in the elementary level of instruction.

Trade and Industrial Education functions as a means of preparing youth for gainful employment. This segment of Industrial Education functions predominantly at the secondary level of instruction and has of late found its real home in the area vocational-technical schools. The American Vocational Association has defined Trade and Industrial Education as follows:

> Instruction which is planned to develop basic manipulative skills, safety judgment, technical knowledge, and related occupational information for the purpose of fitting persons for initial employment in industrial occupations and upgrading or retraining workers employed in industry.[3]

Technical Education

Technical Education proposes to prepare persons for employment in jobs of technical nature, at a level above the realm of trade education. This level of instruction definitely functions as a part of post-secondary or higher education. The programs are college level and usually two years in length; however, there is some demand for four-year graduate technicians. The graduates of these programs usually receive an associate degree. The American Vocational Association has defined Technical Education as follows:

> Education to earn a living in an occupation in which success is dependent largely upon technical information and understanding of the laws of science and principles of technology as applied to modern design, production, distribution, and service.[4]

Paul V. Braden and associates define Technical Education as follows:

> Technical Education is concerned with that body of knowledge organized in a planned sequence of classroom and laboratory experiences usually at the post-secondary level to prepare pupils for a cluster of job opportunities in a specialized field of technology. The program of instruction normally includes the study of the underlying sciences and supporting mathematics inherent in a technology; and of the methods, skills, materials, and processes commonly used and services performed in the technology. A planned sequence of study and extensive knowledge in a field of specialization is required in Technical Education, including competency in the basic communication skills and related general education. Technical Education prepares for the occupational area between the skilled craftsman and the professional person such as the doctor, the engineer, and the scientist.

> The Technical Education curriculum must be so structured that it prepares the graduate to enter a job and be productive with a minimum of additional training after employment, provide a background of knowledge and skills which will enable him to advance with the developments in the technology, and enable him, with a reasonable amount of experience and additional education, to advance into positions of increased responsibility.
>
> The technician frequently is employed in direct support of the professional employee. For example, the engineering technician will be capable of performing such duties as assisting in the following engineering functions: designing, developing, testing, modifying of products and processes, production planning, writing reports, and preparing estimates, analyzing and diagnosing technical problems that involve independent decisions, and solving a wide range of technical problems by applying his background in the technical specialties--science, mathematics, and communicative and citizenship skills.[5]

Technical Education can be seen from another perspective by looking at the graduates of two-year technical programs. These graduate technicians should have certain basic abilities. The United States Office of Education, to establish a framework for technician education program development, had identified five general abilities which are common to most technicians. The five general abilities are:

1. Facility with mathematics; ability to use algebra and trigonometry as tools in the development of ideas that make use of scientific and engineering principles; an understanding of, though not necessarily facility with, higher mathematics through analytical geometry, calculus, and differential equations according to the requirements of the technology.

2. Proficiency in the application of physical science principles, including the basic concepts and laws of physics and chemistry that are pertinent to the individual's field of technology.

3. An understanding of the materials and processes commonly used in the technology.

4. An extensive knowledge of a field of specialization with an understanding of the engineering and scientific activities that distinguish the technology of the field. The degree of competency and the depth of understanding should be sufficient to enable the individual to do such work as detail design using established design procedures.

5. Communications skills that include the ability to interpret, analyze, and transmit facts and ideas graphically, orally, and in writing.[6]

The graduate technician should be able to obtain these basic abilities in technical programs which have been implemented after careful consideration and adherence to both the technical program objectives and technical curriculum design principles.

Successful curriculum design begins with a careful identification of program objectives. Once the program objectives are determined it is then possible to make decisions concerning courses, methods, facilities, equipment, and evaluation. The program to prepare individuals for work as a technician should be designed to meet the following objectives:

1. It should be complete and comprehensive to prepare the graduate for entry into his chosen field and for productivity with a minimum of "in-plant" instruction.

2. It should be of sufficient depth, breadth, and comprehensiveness to provide the graduate with the technical competence and background to permit his advancement to positions of increasing responsibility.

3. It should stimulate student's interest and encourage them to continue study in the technical field.[7]

With the philosophy of Industrial Education and especially Technical Education in mind and after careful consideration of the objective of a technical program and the abilities which a graduate technician should possess, then the principles of curriculum design should be considered. Roney has suggested that the following principles should be considered in the design of a technical curriculum:

1. The curriculum should have at least 30 credit hours of specialized course work in the field of specialization and from 15 to 20 credit hours of mathematics and science.

2. The technical specialty should be introduced in the first term by one or two major courses.

3. Mathematics and science courses should be coordinated with technical courses whenever possible, to introduce concepts as they are needed.

4. Auxiliary technical courses should be included to broaden the student's understanding of the technology.

5. Provision should be made for either individual or small group problem work during the final term to promote independent thinking and to test each individual's comprehension of the total curriculum content.

6. The total class and laboratory load for students should not include more than five courses requiring extensive outside preparation.[8]

The Technical Faculty

After reviewing the unique objectives and purposes of a technical program one realizes that the teachers in these technical programs are equally unique. Although there has been a significant demand for qualified technical teachers, there remains a relatively small number of institutions in the country graduating these technical teachers. The qualifications of the technical faculty of a technical program are a critical determinant of the success

of that program, all other factors being equal.

> The effectiveness of the curriculum depends largely upon the competence and the enthusiasm of the teaching staff. The specialized nature of the curriculum requires that the teachers of technical subjects have special competencies based on proficiency in technical subject matter and industrial experience[9] ... and a special interest in assisting students beyond the traditional teacher-student relationships. They must be master teachers. It is essential that all members of the faculty understand and accept the educational philosophy, goals, and unusual requirements that characterize a (technical) program.[10]

Another example of faculty qualifications are those found in a recent publication of the United States Office of Education. The qualifications for technical instructors are as follows:

1. The instructor should be expert in the area in which he is to teach.
   If he is to prepare students for technician level work, he should be well trained in his field and be able to adjust his teaching to the needs of the pertinent occupation.

2. The instructor should be experienced in the industry for which the training is given.
   Instructors in (the technical subjects) should be able to help students make specific applications of the content of these courses to the needs of technicians in the industry for which they are training.

3. The instructor should have the ability to apply techniques of teaching.
   Students need to understand the relationship of a specific subject to the total program in which they are enrolled. Methods of presenting materials, motivating students, developing student activities, and helping them evaluate progress are all abilities required of the instructors. It is desirable for the faculty to be skilled in the selection and use of materials which are most appropriate for instruction. Laboratory exercises, field trips, and educational films, will be valuable aids in the training program.

4. It is desirable for the instructor to possess a B. S. or M. S. Degree.
   Nearly all community colleges and similar institutions have a minimum basic requirement of a bachelor's degree for their instructors. In some states, a master's degree is the basic prerequisite. Deviations may be made from this requirement for instructors in specialized vocational-technical programs where experience and knowledge of the specific business and industry are essential. For many programs it is advisable to recruit instructors from the industry even though they may lack the suggested academic requirements.

5. The instructor should possess a certificate to teach in the public schools of the state in which he is employed.
   States which require certificate for instructors in community colleges or universities generally issue a "special certificate" for instructors of vocational technical subjects who are recruited from industry and business on the basis of their special qualifications.[11]

An example of more specific requirements for technical educators would be those of the Oklahoma State Department of Vocational and Technical Education. The requirements are as follows:

> Qualified instructors are vitally important to the growth and development of technical programs. The need for personnel with professional and technical preparation and experience is especially critical in the area of technical specialization. Each area of technical specialization will be greatly limited unless qualified instructors are employed. Therefore, unless all technical instructors of specialized technical subjects are qualified, the program cannot meet the requirements for the preparation of highly skilled technicians and will not qualify for reimbursement. A technical teacher for technician preparatory classes shall either have a baccalaureate degree in engineering or be a graduate of a two-year technical program with a degree in industrial education or technical education, or have an equivalent baccalaureate degree.
>
> Within a five-year period preceding their first certification, technical teachers shall have had at least three years of industrial employment experience, including any training period, in highly skilled occupations which they will teach and which requires a knowledge and application of mathematics, science, and engineering theory.[12]

There are instances of even more rigorous requirements which can normally be found particularly in the various institutions which offer these technical program. Many junior colleges, for example, require as a minimum for their technical staff a master's degree plus industrial experience.

The source of supply for these technical teachers is obviously limited. Qualified teachers often come from the military where they may have gained a considerable amount of technical experience. This type of experience, however, and its applicability to private industrial enterprise is sometimes questionable. Another source of recruitment has been from the ranks of the engineering profession. Engineers with the proper industrial experience have the potential to become exceptional technical educators providing they develop and accept the educational objectives and unusual requirements of the technical programs. Perhaps the best source of technical teachers are the very graduates of the technical programs who have acquired the industrial experience and the additional education which is required.

> Experience has shown that technicians who graduated from two-year technician programs, acquired employment experience, and continued a professional education which prepared them to teach often become excellent teachers in a (technical) program. Persons with this kind of background are more likely than others to understand the objectives and unusual instructional requirements of both pretechnical and technical programs. They often bring to the program a special enthusiasm and appreciation for the values of technical education and an understanding of student learning processes that are essential for its success.[13]

Technical Teacher Education

Technical Education first appeared in the Oklahoma State University 1959-60 Catalog. The Technical Education program was established with the idea that graduates of the two-year associate degree technical programs from junior colleges and technical institutes would make excellent technical teachers and that these graduates want, need, and can benefit from this additional education. The program had its first graduate in 1960.

> The Department of Technical Education is organized to provide professional and technical preparation for teachers of post-high school technical programs offered in technical institutes, community colleges, and area vocational schools.
>
> The Bachelor of Science Degree is designed primarily for graduates of technical institutes who have completed an associate degree program in a field of engineering technology. Qualified junior college graduates in pre-engineering or pre-scientific curriculums may also enter the program with advanced standing. A grade point average of 2.5 is required for admission to the teacher education program.
>
> Each student is assigned a faculty advisor who assists in planning a program of study. One hundred and twenty-six semester credit hours, exclusive of physical education and military science are required for the Bachelor of Science Degree in this department. The degree plan will normally include the following course requirements:

Study Areas

Selected technical courses.	40 hours
Mathematics and Science	26
Advanced Science and Engineering. . . .	14
Professional Education.	13
General Education and Electives	33
Total Credits	126 [14]

The following is a more detailed breakdown of requirements for the Bachelor of Science Degree in Technical Education:

	Semester Hours
Specialized Technical Courses.	30
Related Technical Courses.	10
Mathematics and Science.	26
MATH 1715 Algebra and Trig.	
MATH 1813 Analytic Geom.	
MATH 2015 Analysis I	
MATH 2115 Analysis II	
PHYS 2014 Mechanics, Heat, and Sound	
PHYS 2114 Electricity and Light	
Engineering-Science.	14
14 hours upper division - selected and approved	
Social Science	6
Suggested:	
HIST 2483 or 2493 American History	
POLSI 2013 American Government	
Humanities	4
Suggested:	
HUMAN 2114 or 2224 Humanities, Western Culture or courses from Art, Drama, Literature, Music, or Philosophy	
General Education.	9
ENGL 1113 Freshman Composition	
ENGL 1323 Freshman Composition	
SPCH 2713 Introduction to Public Speaking	
Technical Education.	13
TECED 3103 Introduction to Tech. Ed.	
INDED 4103 Methods of Teaching	
INDED 3012 Analysis Techniques	
TECED 4112 Instructional Aids	
TECED 4223 Tec. Ed. Program Planning	
INDED 5340 (1-6 hours) Spec. Problems	
Electives.	14
Upper Division - selected and approved	
Suggested:	
SOCIO 4623 Human Relat. in Industry	
PSYCH 3223 Psychology-Business and Industry	
EPSYC 4223 Educational Psychology	
ENGL 3323 Report Writing	
INDED 4470 Student Teaching	

Other Requirements:
Admission to Teacher Education (By examination)

Certification (For high school teachers)
INDED 4470 Student Teaching
BISC 1114 Biological Science I
EPSYC 4223 Educational Psychology
HIST 1062 Oklahoma History[15]

The graduate of the Bachelor of Science Degree program may also pursue a Master of Science Degree in Technical Education.

Graduate courses are offered leading to the degree of Master of Science in Technical Education. Applicants for admission to this degree program must have an adequate background in a major field of technology and must have completed an undergraduate program equivalent to that required for the B. S. in Technical Education, including engineering or science work at the junior or senior level in an accredited college or university.[16]

A minimum of 16 semester credit hours of undergraduate work in education is a prerequisite to graduate study with a major in an education area. In addition to being admitted to the Graduate College, students pursuing work toward an advanced degree must be admitted to graduate study in teacher education.

A student may receive the Degree of Master of Science in an education area under one of two plans:

Plan I. Under this plan a student completes a minimum of 26 semester credit hours of course work and writes a thesis for which four semester credit hours may be granted. This plan is recommended for those students planning to do advanced work beyond the Master's Degree.

Plan II. Under this plan the student completes a minimum of 32 semester credit hours of course work which may or may not include two credit hours seminary study.[17]

The graduate may also, if he so desires, pursue the Doctor of Education Degree with Technical Education as his chosen field.

The minimum time required for the doctor's degree is six semesters of full-time graduate study (approximately 90 semester credit hours) beyond the bachelor's degree, or four semesters of full-time graduate study (approximately 60 semester credit hours) beyond the master's degree. This includes credit for the doctoral thesis. The

> student must register for the thesis in the same way he registers for other courses. Completing a number of courses with "B" average (see General Regulation's) is only one of the requirements for the doctor's degree. The student must also (1) pass a qualifying examination, (2) prepare an acceptable thesis, (3) demonstrate the ability to do independent study, (4) show qualities of leadership in his chosen field, (5) pass final examination, and (6) comply with other requirements of his major field or department.[18]

There have been 166 graduates of the Oklahoma State Technical Education Department. The following is a follow-up study of those graduates.

FOOTNOTES

[1]Definition of Terms in Vocational-Technical and Practical Arts Education, American Vocational Association, (Washington, D.C.: The Association), n.d.

[2]Ibid.

[3]Ibid.

[4]Ibid.

[5]Paul V. Braden, James L. Harris, and Krishan K. Paul, "Interfacing Demand and Supply of Technical Manpower in Oklahoma", The Journal of Technology, VIII (1969) p. 47.

[6]U. S. Office of Education, Division of Vocational Education, Occupational Criteria and Preparation Curriculum Patterns in Technical Education Programs (Washington, D.C.: Government Printing Office, 1962), OE-80015, p. 5.

[7]U. S. Office of Education, Division of Vocational and Technical Education, Metallurgical Technology: A Suggested Two-Year Post High School Curriculum (Washington, D.C.: Government Printing Office, 1968), OE-81012, p. 19.

[8]Maurice W. Roney, Curriculum Design in Technical Education. (Stillwater: Publication of the School of Industrial Education, Oklahoma State University, 1961).

[9]U. S. Office of Education. Metallurgical Technology: A Suggested Curriculum, p. 8.

[10]U. S. Office of Education, Division of Vocational and Technical Education, Pretechnical Post High School Programs (Washington, D. C.: Government Printing Office, 1967), (OE-80049), p. 22.

[11]U. S. Office of Education, Division of Vocational and Technical Education, Grain, Feed, Seed, and Farm Supply Technology: A Suggested Two-Year Post High School Curriculum (Washington, D. C.: Government Printing Office, 1968), (OE-81014), pp. 15-16.

[12]Policies and Procedures: 1968-69. Division of Technical Education (Stillwater: Oklahoma State Department of Vocational and Technical Education), pp. 8-9.

[13]U. S. Office of Education. Pretechnical Programs, p. 23.

[14]Oklahoma State University Catalog, 1967-68, Oklahoma State University, (Stillwater, 1967), pp. 104-5.

[15]Requirements for the Bachelor of Science Degree in Technical Education, (Stillwater: Technical Education Department, Oklahoma State University, August, 1966).

[16]Oklahoma State University Catalog, 1967-68, p. 105.

[17]Oklahoma State University Graduate College Catalog, 1967-68, Oklahoma State University, (Stillwater, 1967), p. 119.

[18]Ibid., p. 65.

CHAPTER III

PROCEDURES AND ANALYSIS OF DATA

Procedures

The population for this study consisted of all 166 graduates of the Oklahoma State University's Technical Education Program from 1960 through the summer of 1968. Although the department has conferred more than 166 degrees through the summer, 1968, seven of the graduates have received a Bachelor of Science Degree in Technical Education and continued on and received a Master of Science Degree in Technical Education. These graduates are counted only once although they have received two degrees. Of this population 111 responded for a 67 percent return. Of the 166 graduates, there were no returns for the 18 international students who had, since graduation, returned to their home country. Of the 148 graduates living in the United States, there were 111 responses for a 75 percent return.

Table I illustrates the number of students who have graduated each year since 1960, the year of the first Technical Education graduate. The table reveals that in 1960 there was only one graduate, in 1961 there were six graduates, in 1962 there were 12 graduates, in 1963 there were 12 graduates, in 1964 there were 20 graduates, in 1965 there were 21 graduates, in 1966 there were 28 graduates, in 1967 there were 31 graduates, and in 1968 there were 36 graduates.

TABLE I

TECHNICAL EDUCATION GRADUATES
BY YEAR THROUGH 1968

Year	Number of Graduates
1960	1
1961	6
1962	12
1963	12
1964	20
1965	21
1966	28
1967	31
1968	36
Total	166

Source: The official graduate roles of the Oklahoma State University Department of Technical Education.

The Instrument

Since many of the graduates reside in several of the United States and a few foreign countries, a mailed questionnaire was deemed to be the most practical instrument for obtaining the relevant data.

After considering the purposes and needs of the study, a preliminary questionnaire was constructed which permitted many of the responses to be made by checks or single words. The preliminary questionnaire was administered to a selected population to test its

validity for eliciting the desired responses. Revisions were made and a final draft constructed. A copy of the questionnaire is included in Appendix A.

The mailing list of the graduates of Technical Education was obtained from personnel files in the office of the Technical Education Department.

A letter of transmittal was formulated and reproduced in quantity on stationery bearing the letterhead of the Technical Education Department. The letterhead was used to promote maximum response by indicating legitimate authority. The letter, questionnaire, and a stamped, self-addressed envelope were mailed to all persons for which addresses were obtained. References were made in the letter to the stamped envelope to enhance the factors of convenience and commitment of the respondent as recommended by Robin.[1] A copy of the transmittal letter is included in Appendix B.

The letter of transmittal, the questionnaire, and the stamped, self-addressed envelope were mailed with the Oklahoma State University Technical Education Newsletter for Spring, 1968. The writer felt that by mailing the instrument with the Spring Newsletter an increased response to the questionnaire would be realized. A copy of the Spring, 1968, Oklahoma State University Technical Education Newsletter, is included in Appendix C.

A follow-up letter was formulated and mailed with an additional questionnaire and a stamped, self-addressed envelope to those graduates who had not responded to the original questionnaire within three weeks. A second and final follow-up letter was formulated and written in longhand to promote personal appeal and again mailed with

the questionnaire and a stamped, self-addressed envelope to those graduates who had not responded to the first follow-up letter within three weeks. A copy of the first follow-up letter can be found in Appendix D. A copy of the second and final follow-up letter can be found in Appendix E.

It is expected that a similar follow-up study will be conducted by the Technical Education Department in future years, therefore, the personal data derived as a result of the questionnaires was coded and placed on computer punch cards. These cards will facilitate the mailing of any further questionnaires.

An instrument will reveal only what individuals composing the population are willing and able to communicate. It is recognized that the population represents diverse personalities, occupational and educational experiences, ages, backgrounds, and philosophies; however, no attempt was made to control or analyze the data on the basis of these extraneous variables which could have an effect upon this study.

The main weakness and serious limitations in the use of data from this follow-up study lies in the fact that there is no assurance that success or failure of these graduates can be credited purely to their having attended Oklahoma State University or specifically the Technical Education Department. The barriers to surmounting this problem are as numerous as the variables that make each graduate an individual. However, this weakness is no more serious in this follow-up study than in most human behavior research. Wise interpretation and use of the information from follow-up studies can be a great asset to higher education.[2]

Data from the questionnaires is divided into three major areas: (1) personal data, (2) educational data, and (3) occupational data. The personal data has been coded and stored on punch cards as the study will be replicated in future years.

The educational and occupational data are presented in the tables and figures in the following pages. Each table and figure is presented and interpreted in this chapter. The data was processed by tabulating the responses and presenting them on a basis of percentage or average only. Not all the items in all the questionnaires were responded upon, therefore, on computing the percentages for any one item, only those questionnaires which included a response for that one item were utilized.

Educational Data

Data in Table II pertains to the respondent's high school background. The table illustrates that 56 or 51 percent of the graduates' high school program had been general, 43 or 39 percent of the graduates had been in a college preparatory program, and 11 or 10 percent had been in a vocational program.

TABLE II

TYPE OF HIGH SCHOOL PROGRAM

Type of Program	Number Responding	Percent
General	56	51
College Preparatory	43	39
Vocational	11	10

Table III illustrates the type of high school vocational programs in which the graduates had enrolled. The table reveals that of those who had been in a vocational program at the high school three or 27 percent had been in electronics or television and radio repair, three or 27 percent in drafting, two or 18 percent in agriculture, one or 9 percent in machine shop, one or 9 percent in diversified occupations, and one or 9 percent in distributive education.

TABLE III

TYPES OF HIGH SCHOOL VOCATIONAL PROGRAMS

Vocational Programs	Number Responding	Percent
Electronics or Television and Radio Repair	3	27
Drafting	3	27
Agriculture	2	18
Machine Shop	1	9
Diversified Occupation	1	9
Distributive Education	1	9

The data in Table IV illustrates the percentage of graduates who pursued an associate degree with a specialty similar or related to their high school vocational program specialty. The table reveals that all three or 100 percent of the graduates who participated in a vocational electronics or television and radio repair in high school pursued electronics as a technical specialty in college and that all three or 100 percent of the graduates who participated in vocational drafting pursued drafting and design as a technical specialty in college. The graduates who participated in the other vocational programs at the high school level did not pursue a similar

or related program as a technical specialty in college.

TABLE IV

RELATIONSHIP OF THE GRADUATES' HIGH SCHOOL VOCATIONAL PROGRAM AND HIS ASSOCIATE DEGREE TECHNICAL SPECIALTY

Vocational Program	Number	Percent Pursuing Similar Technical Program
Electronics	3	100
Drafting	3	100
Agriculture	0	0
Machine Shop	0	0
D.O. or D.E.	0	0

The data in Figure I illustrates the size of the graduates' high school graduating class. The data presented as a bar graph in the figure reveals that three or 2.7 percent of the graduates had a high school graduating class of 10 or less, 26 or 24.7 percent had a graduating class of 11 to 30, 21 or 19.2 percent had a graduating class of 31 to 75, 12 or 10.9 percent had a graduating class of 76 to 125, 14 or 12.7 percent had a graduating class size of 126 to 200, eight or 7.2 percent had a graduating class size of 201 to 300, seven or 6.3 percent had a graduating class of between 301 to 400, and 18 or 16.4 percent had a graduating class size of 401 and over.

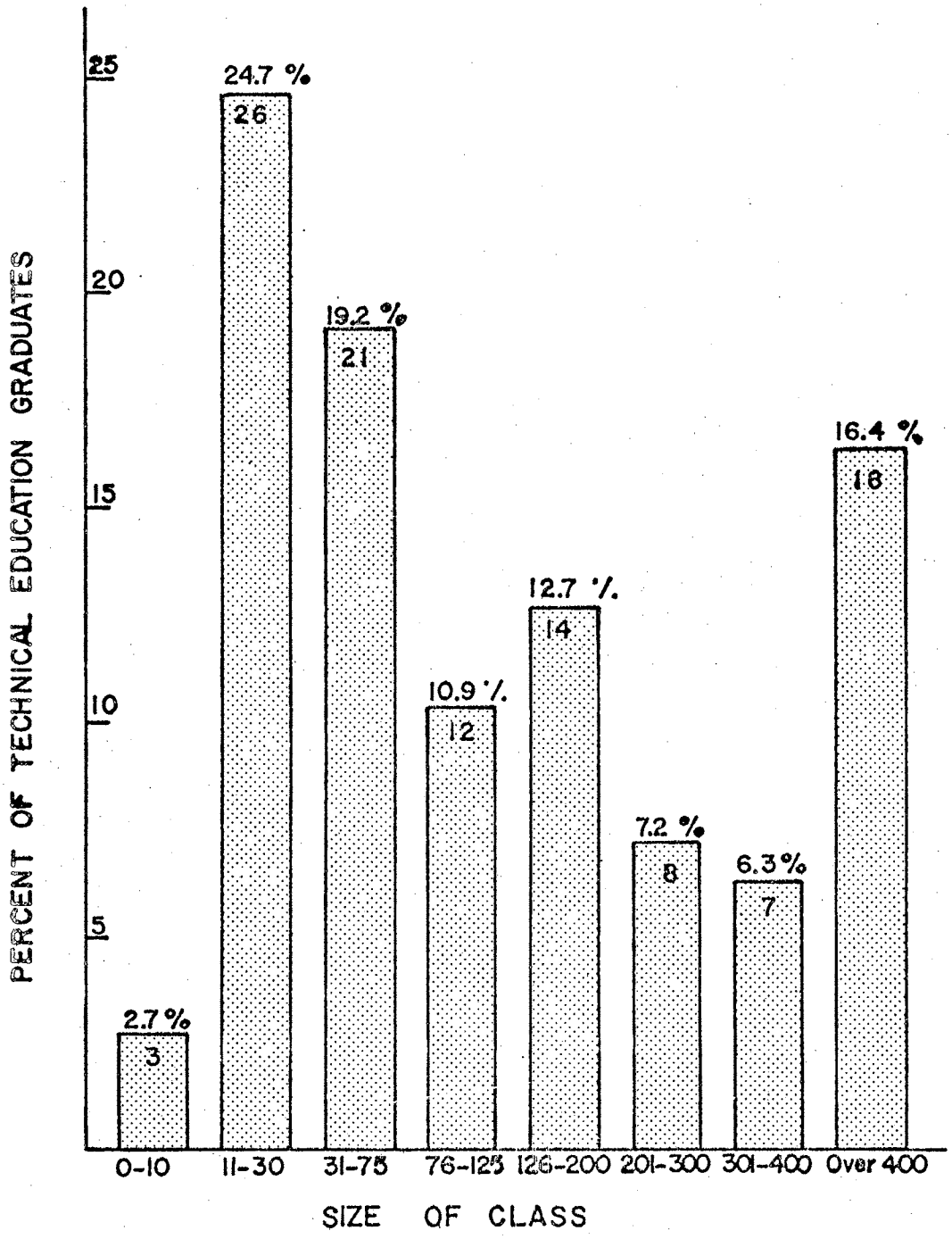

Figure 1. Size of the Graduates' High School Graduating Class

The data in Table V illustrates how the graduates rated their high school scholastic performance. The table reveals that 38 or 34.6 percent of the graduates rated their high school scholastic performance as good, 69 or 62.7 percent of the graduates rated their performance as average, and 3 or 2.7 percent of the graduates rated their scholastic performance as poor.

TABLE V

HIGH SCHOOL SCHOLASTIC PERFORMANCE

Rating	Number Responding	Percent
Good	38	34.6
Average	69	62.7
Poor	3	2.7

Although all Technical Education graduates have a technical specialty not all of the graduates have received associate degrees in that technical specialty. The data in Table VI illustrates the relationship between the associate degree recipients and the non-recipients. The table reveals that 88 or 79.3 percent of the graduates have received an associate degree and 23 or 20.7 percent have not received an associate degree.

TABLE VI

ASSOCIATE DEGREE RECIPIENTS

Degree	Number Responding	Percent
Yes	88	79.3
No	23	20.7

There were eight technical specialty areas listed by the associate degree recipients. Figure 2 illustrates those technical specialties and the percent of associate degrees received in that area. The figure reveals that 38 or 43.2 percent had majored in electronics technology, 16 or 18.2 percent had majored in drafting and design technology, 12 or 13.6 percent had majored in mechanical technology, eight or 9.1 percent had majored in aeronautical technology, seven or 8 percent had majored in fire protection technology, four or 4.5 percent had majored in civil technology, two or 2.3 percent had majored in air conditioning and refrigeration technology, and one or 1.1 percent had majored in chemical technology.

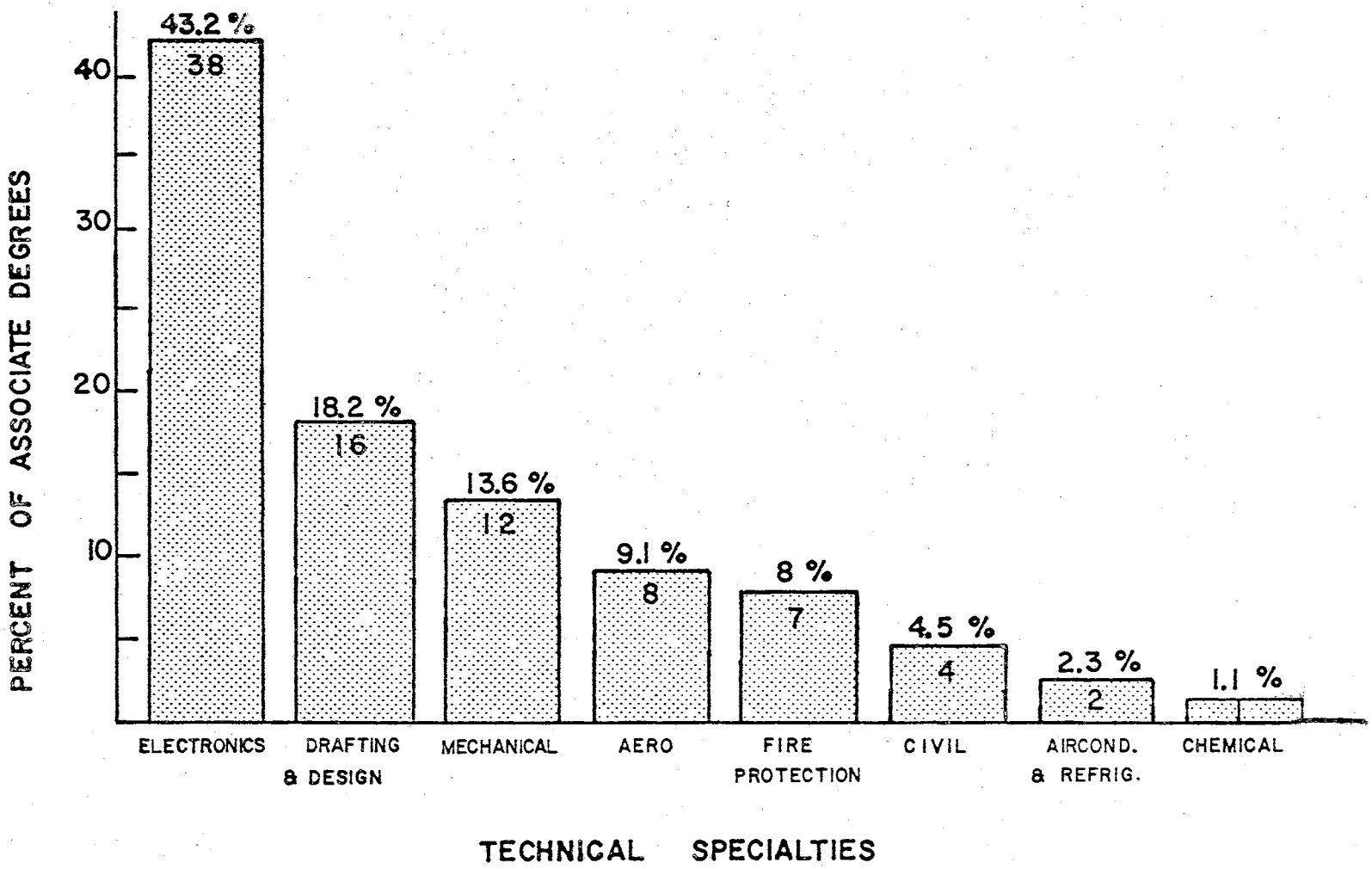

Figure 2. Technical Specialties of Associate Degree Recipients

The data in Figure 3 illustrates the institutions from which the Technical Education graduates received their associate degrees. The figure reveals that 69 or 78.5 percent of the respondents received their associate degree from the Oklahoma State University Technical Institute, Stillwater; eight or 9.1 percent of the graduates received their degree from Northeastern Oklahoma A&M College, Miami; two or 2.3 percent received their degree from Cameron State College, Lawton; two or 2.3 percent received their degrees from Dutchess Community College; two or 2.3 percent received their degrees from the Oklahoma State University Technical Institute, Oklahoma City; one or 1.1 percent received his degree from Oklahoma City University, Oklahoma City; one or 1.1 percent received his degree from Eastern State College, Wilburton; one or 1.1 percent received his degree from Kellogg Community College; one or 1.1 percent received his degree from Sayre Junior College; and one or 1.1 percent received his degree from Temple University.

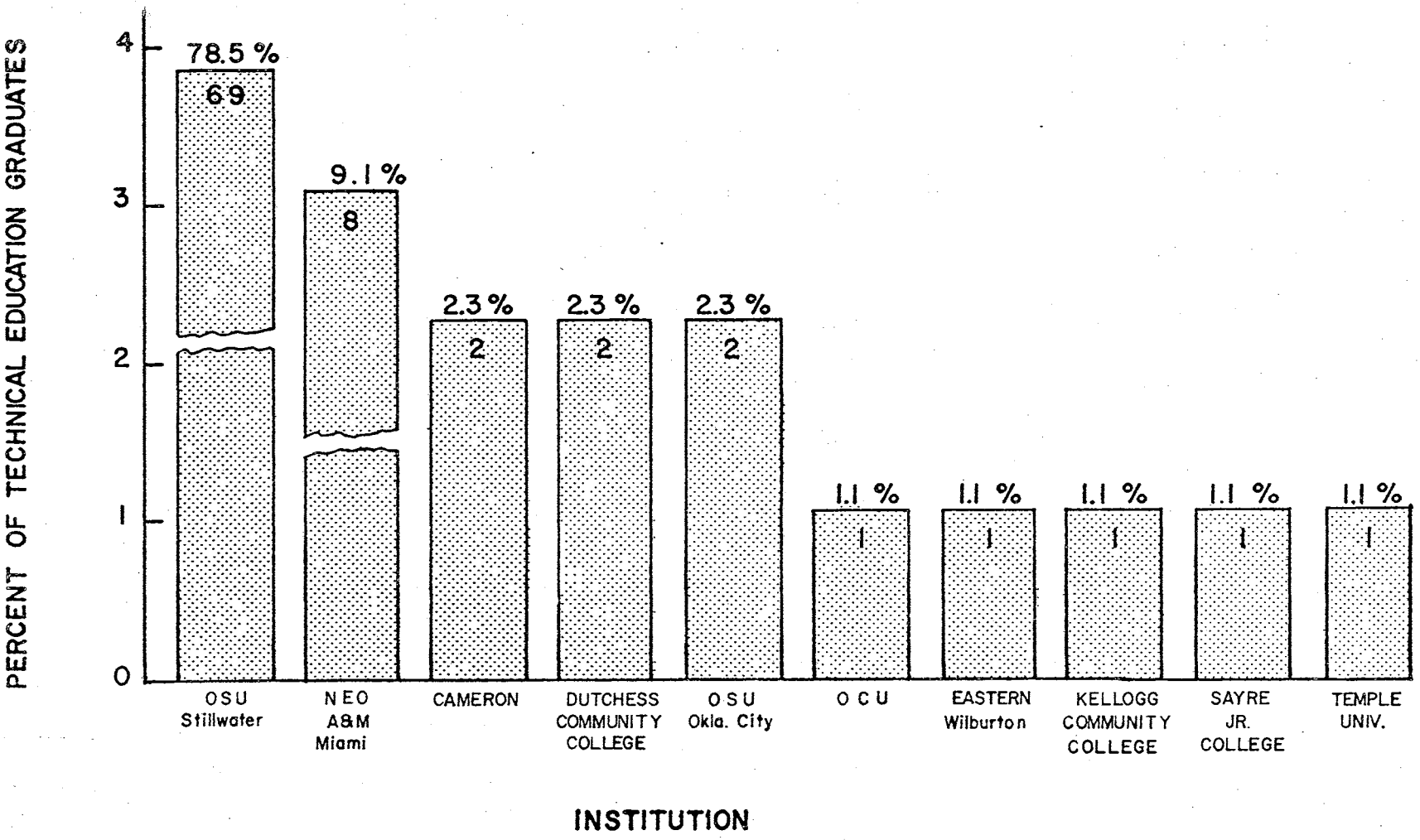

Figure 3. Institutions From Which Technical Education Graduates Received Their Associate Degrees

The data in Figure 4 illustrates the relationship between the master degree recipients and their technical specialty. The figure reveals that nine or 60 percent of the master degree recipients have electronics technology as their technical specialty, two or 13.3 percent of the master degree recipients have drafting and design technology as their specialty, two or 13.3 percent have mathematics and physics as their specialty, one or 6.7 percent have air conditioning and refrigeration specialty, and one or 6.7 percent of the master degree recipients have fire protection technology as their technical specialty.

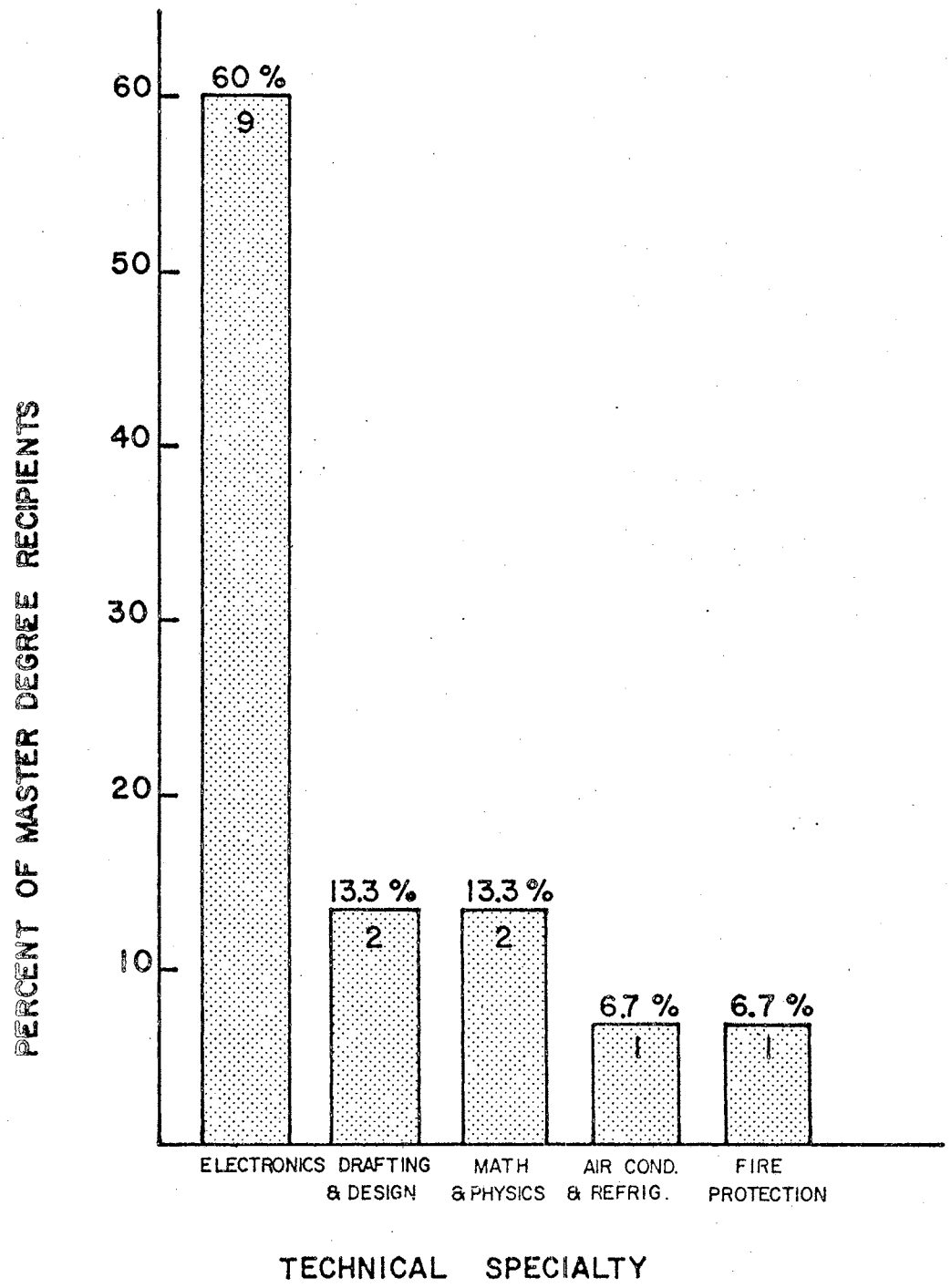

Figure 4. Master Degree Recipients and Their Technical Specialty

The data in Table VII illustrates the percentage of graduates who had enrolled in a science or engineering bachelor's degree program before they entered the Technical Education program. The table reveals that 47 or 54.6 percent of the respondents had been enrolled in a science or engineering bachelor's degree program and 39 or 45.4 percent had not.

TABLE VII

GRADUATES PREVIOUSLY MAJORING IN SCIENCE OR ENGINEERING

Previous Major	Number Responding	Percent
Yes	47	54.6
No	39	45.4

Figure 5 illustrates the reasons given by the respondents for entering the Technical Education program. The respondents were to indicate their reasons by numbering a set of eight choices one, two, and three in order of importance. (See Appendix A, Item No. 21)

The figure reveals that, "Planned on Technical Education before high school graduation", was not chosen as a reason for any of the three choices.

The figure also reveals that for Reason 2, "It was the best post-associate degree educational opportunity", 24 or 22 percent indicated it as a first choice, 16 or 18.8 percent indicated it as a second choice, and 16 or 26.7 percent indicated it as a third choice for a composite of 67.5 percent.

The figure also reveals that for Reason 3, "With the associate degree, I felt limited", nine or 8.2 percent of the respondents indicated it as a first choice, 25 or 29.4 percent indicated it as a second choice, and 15 or 25 percent indicated it as a third choice for a composite of 62.6 percent.

The figure also reveals that for Reason 4, "I had wanted to teach in a technical institute or junior college and this was the proper channel for preparation", 20 or 18.4 percent of the respondents indicated it as a first choice, 12 or 14.1 percent indicated it as a second choice, and 10 or 16.7 percent indicated it as a third choice for a composite of 49.2 percent.

The figure also reveals that for Reason 5, "After the associate degree, I wanted a better technical background for industrial work without going into an engineering program", 22 or 20.2 percent of the respondents indicated it as a first choice, 22 or 25.9 percent indicated it as a second choice, and 12 or 20 percent indicated it as a third choice for a composite of 66.1 percent.

The figure also reveals that for Reason 6, "I really wanted an engineering degree but...", 21 or 19.3 percent of the respondents indicated it as a first choice, five or 5.9 percent indicated it as a second choice, and two or 3.3 percent indicated it as a third choice for a composite of 28.5 percent. The respondents completed the statement with the following: grades were too low, poor mathematics background, got tired of engineering, no evening program, interests changed, technical education was easier, disliked so much theory, lacked finances, technical education required less study time, engineering was beyond capabilities, technical education fit

my goals with better workload, and the technical education degree could be obtained with fewer courses.

The figure further reveals that for Reason 7, "The selective service draft was a factor", two or 3.3 percent of the respondents indicated it as a third choice and it was not chosen as a first or second choice by any of the respondents.

Lastly, the figure reveals that for Reason 8, "Other", 13 or 11.9 percent of the respondents indicated it as a first choice, five or 5.9 percent indicated it as a second choice, and three or 5 percent indicated it as a third choice for a composite of 22.8 percent. The respondents listed the following as other reasons for entering the Technical Education program: best course transfer, liked Technical Education, encouraged by associate degree program instructor, needed for advancement, required for present teaching position, Technical Education provided a broad background for applied engineering, only major to utilize educational background and capabilities, good reputation and competent staff, and chance occurrence.

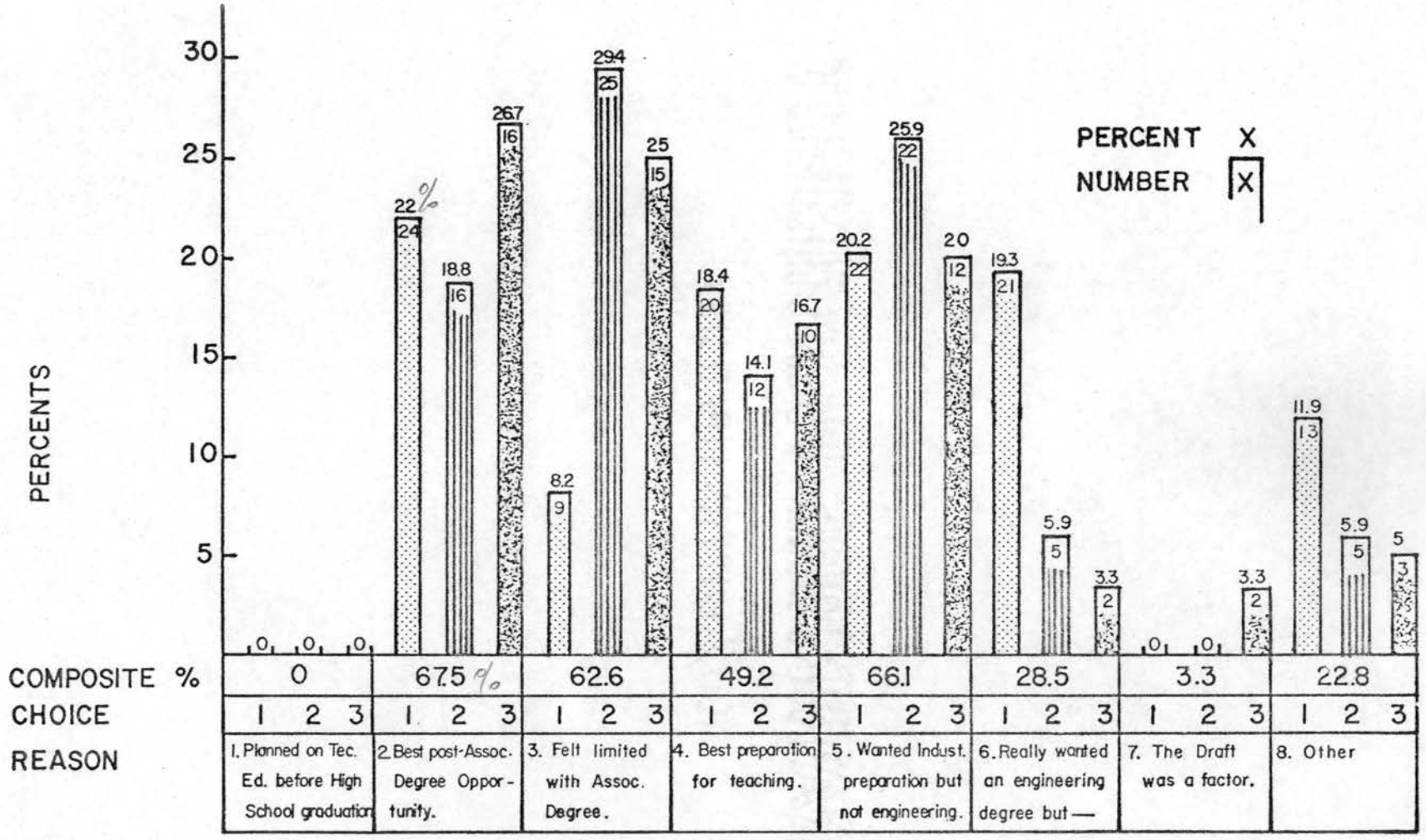

Figure 5. Reasons for Entering Technical Education

The data in Table VIII illustrates the percent of undergraduate college expenses the respondents earned. The table reveals that 33 or 30 percent of the respondents earned 100 percent of their college expenses, 35 or 31.8 percent of the respondents earned 75 percent of their college expenses, 22 or 20 percent of the respondents earned 50 percent of their college expenses, 13 or 11.8 percent of the respondents earned 25 percent of their college expenses, and seven or 6.4 percent of the respondents did not earn any part of their college expenses.

TABLE VIII

PERCENT OF UNDERGRADUATE COLLEGE EXPENSES EARNED

Percent of Respondents	Number Responding	Percent Expense Earned
30.0	33	100
31.8	35	75
20.0	22	50
11.8	13	25
6.4	7	0

The data in Table IX illustrates the relationship of graduates who migrated, establish a residence outside the State of Oklahoma, and those who do not migrate. The table reveals that 66 or 59 percent of the graduates migrate and 45 or 41 percent do not.

TABLE IX

RELATIONSHIP OF GRADUATE MIGRANT TO NON-MIGRANT

Migrant	Number Responding	Percent
Yes	66	59
No	45	41

The data in Table X illustrates the tendency of out-of-state students to migrate after their graduation. The table reveals that 27 or 76 percent of out-of-state students migrate out of the State of Oklahoma and seven or 24 percent of the students remain in the state.

TABLE X

MIGRATORY TENDENCY OF OUT-OF-STATE STUDENTS

Status of Out-of-State Students	Number Responding	Percent
Migrant	27	76
Non-Migrant	7	24

The data in Table XI illustrates the tendency of Technical Education graduates who attended high school in the State of Oklahoma to remain in the state after graduation. The table reveals that 39 or 47.5 percent of the Technical Education graduates who graduated from Oklahoma high schools remain in the state and 43 or 52.5 percent of the graduates from Oklahoma high schools migrate out of the state.

TABLE XI

MIGRATORY TENDENCY OF TECHNICAL EDUCATION GRADUATES WHO ATTENDED OKLAHOMA HIGH SCHOOLS

Graduate Status	Number Responding	Percent
Migrant	43	52.5
Non-Migrant	39	47.5

The data in Table XII illustrates the relationship of responding master degree holders whose occupation can be classified in the areas of industry, business, or the military. The table reveals that 12 or 80 percent of the responding master degree holders are in education and three or 20 percent of the responding master degree holders are in industry, business, or the military.

TABLE XII

RELATIONSHIP OF MASTER DEGREE HOLDERS IN EDUCATION AND IN INDUSTRY, BUSINESS, OR THE MILITARY

Status	Number Responding	Percent
Master Degree Holders in Education	12	80
Master Degree Holders in Industry, Business, or the Military	3	20

The data in Table XIII illustrates the course work the respondents may have acquired since receiving their bachelor's degree in Technical Education. The table reveals that 61 or 56.5 percent of the respondents had acquired additional course work since receiving

their bachelor's degree and 47 or 43.5 percent had not acquired additional courses since their graduation.

TABLE XIII

EDUCATIONAL EXPERIENCES SINCE RECEIVING THE BACHELOR'S DEGREE IN TECHNICAL EDUCATION

Additional Experience	Number Responding	Percent
Yes	61	56.5
No	47	43.5

The data in Table XIV illustrates the type of educational experience those graduates obtained after their bachelor's degree in Technical Education. The table reveals that of those graduates who had acquired some course work since graduation, 44 or 73.4 percent had been college credit, eight or 13.3 percent had taken non-credit, in-house industrial or business courses, seven or 11.6 percent had received military training, and one or 1.7 percent had received training through a local, state, or federal governmental organization.

The table also illustrates that of those graduates who had received college credit 32 or 72.8 percent were working on a master's degree, ten or 22.7 percent were not working on a degree, and two or 4.5 percent was working on another bachelor's degree or a doctor's of education degree.

TABLE XIV

TYPES OF EDUCATIONAL EXPERIENCES SINCE RECEIVING THE BACHELOR'S DEGREE IN TECHNICAL EDUCATION

Type			Number Responding	Percent
College Credit			44	73.4
Toward M.S. Degree	32	72.8		
Not toward Degree	10	22.7		
Toward B.S./EdD	2	4.5		
Noncredit (in-house industrial or business)			8	13.3
Military training			7	11.6
Governmental (local, state, or fed.)			1	1.7

The data in Table XV illustrates the respondents' intentions to pursue an advanced degree. The table reveals that 89 or 88.2 percent of the Technical Education graduates intend to pursue an advanced degree and 12 or 11.8 percent did not.

TABLE XV

INTENTIONS TO PURSUE AN ADVANCED DEGREE

Intention	Number Responding	Percent
Yes	89	88.2
No	12	11.8

The data in Table XVI is related to the data in Table XV in that it illustrates the type of degrees which will be sought by those graduates who indicated intentions to pursue an advanced degree.

The table reveals that 44 or 61.1 percent of those graduates intend to pursue a master's degree in Technical Education, 9 or 12.5 percent intend to pursue a doctor's degree in education, 7 or 9.7 percent indicated intentions to pursue a master's of business administration, and another 12 or 16.7 percent indicated intentions to pursue a master's degree with various majors including mathematics, physics, engineering, trade and industrial education, economics, science, chemistry, and computer science.

TABLE XVI

ADVANCED DEGREES SOUGHT BY TECHNICAL EDUCATION GRADUATES

Type	Number Responding	Percent
M.S. Degree in Technical Education	44	61.1
Doctor's Degree in Education	9	12.5
Master of Business Administration	7	9.7
Various Master Degrees	12	16.7

The data in Table XVII illustrates the occupations of those graduates who intend to pursue an advanced degree. The table reveals that 41 or 57 percent of the graduates who intend to pursue an advanced degree are in education and 31 or 43 percent of the graduates are in industry, business, or the military.

TABLE XVII

OCCUPATION OF GRADUATES WHO INTEND TO PURSUE AN ADVANCED DEGREE

Occupation	Number Responding	Percent
Education	41	57
Industry, Business, or Military	31	43

The data in Table XVIII is related to the data in Table XVII in that it illustrates the intentions of the respondents who are now in industry, business, or the military to enter the teaching field as well as pursue a master's degree. The table reveals that 35 or 87.5 percent of the graduates in industry, business, or the military intend to pursue a master's degree and enter the teaching field and five or 12.5 percent of those graduates intend to pursue a master's degree but remain in their present fields.

TABLE XVIII

GRADUATES IN INDUSTRY, BUSINESS, OR MILITARY WHO INTEND TO PURSUE A MASTER'S DEGREE AND ENTER THE TEACHING FIELD

Intend to Pursue a M.S. Degree and Teach	Number Responding	Percent
Yes	35	87.5
No	5	12.5

Occupational Data

The data in Table XIX illustrates the primary occupations of Technical Education graduates. The table reveals that 57 or 51.3 percent of the respondents are in the field of education and 54 or 48.7 percent of the respondents are in industry, business, or the military.

TABLE XIX

PRIMARY OCCUPATION OF TECHNICAL EDUCATION GRADUATES

Occupation	Number Responding	Percent
Education	57	51.3
Industry, Business, or Military	54	48.7

The data in Table XX illustrates the relationship of the Technical Education graduates who are now teaching or intend to teach compared with those graduates who do not intend to teach. The table reveals that 98 or 88.3 percent of the respondents are now teaching or intend to teach at some future date and that 13 or 11.7 percent of the respondents never intend to enter the teaching profession.

The reader should bear in mind the fact that 11 of the 54 respondents in industry, business, or the military are serving in the military and that only three of these respondents indicated the military as their career objective. The military involvement of the other eight respondents is considered temporary and this would affect the data illustrated in Table XIX.

TABLE XX

RELATIONSHIP OF TECHNICAL EDUCATION GRADUATES WHO ARE EITHER NOW TEACHING OR INTEND TO TEACH TO GRADUATES WHO NEVER INTEND TO ENTER THE TEACHING PROFESSION

Teaching Status	Number Responding	Percent
Now Teaching or Intend to Teach	98	88.3
Never Intend to Teach	13	11.7

The data in Table XXI illustrates when the Technical Education graduates made their decision to enter the teaching field, whether they are now teaching or plan to teach in the future. The table reveals that 47 or 54.6 percent of the respondents made their decision to enter the teaching field after they entered the Oklahoma State University Technical Education program and 39 or 45.4 percent of the respondents made their decision to enter the profession before they entered the program.

TABLE XXI

DECISION TO ENTER THE TEACHING PROFESSION AFTER ENTERING THE OSU TECHNICAL EDUCATION PROGRAM

Time of Decision	Number Responding	Percent
After Program Entry	47	54.6
Before Program Entry	39	45.4

The data in Figure 6 illustrates the starting salary of the graduates at their first job after receiving their bachelor's degree in Technical Education. The figure reveals that six or 5.9 percent of the respondents' first starting salary was below $400 per month, 25 or 24.8 percent received $400 to $499 per month, 29 or 28.7 percent received $500 to $599 per month, 16 or 15.8 percent received $600 to $699 per month, 17 or 16.8 percent received $700 to $799 per month, three or 3 percent received $800 to $899 per month, three or 3 percent received $900 to $999 per month, and two or 2 percent received $1,000 to $1,099 per month at their first job. The average starting salary of all the respondents at their first job after receiving the bachelor's degree was $620 per month.

The data in Figure 7 illustrates the present salaries of Technical Education graduates. The figure reveals that two or 1.8 percent are making below $400 per month, seven or 6.4 percent of the graduates are making $400 to $499 per month, nine or 8.3 percent are making $500 to $599 per month, 20 or 18.3 percent are making $600 to $699 per month, 24 or 22 percent are making $700 to $799 per month, 22 or 20.2 percent are making $800 to $899 per month, 12 or 11 percent of the graduates are making $900 to $999 per month, five or 4.6 percent are making $1,000 to $1,099 per month, one or .9 percent are making $1,100 to $1,199 per month, three or 2.8 percent are making $1,200 to $1,299 per month, and four or 3.7 percent of the graduates are making over $1,300 per month. The average salary of all the respondents was $754 per month.

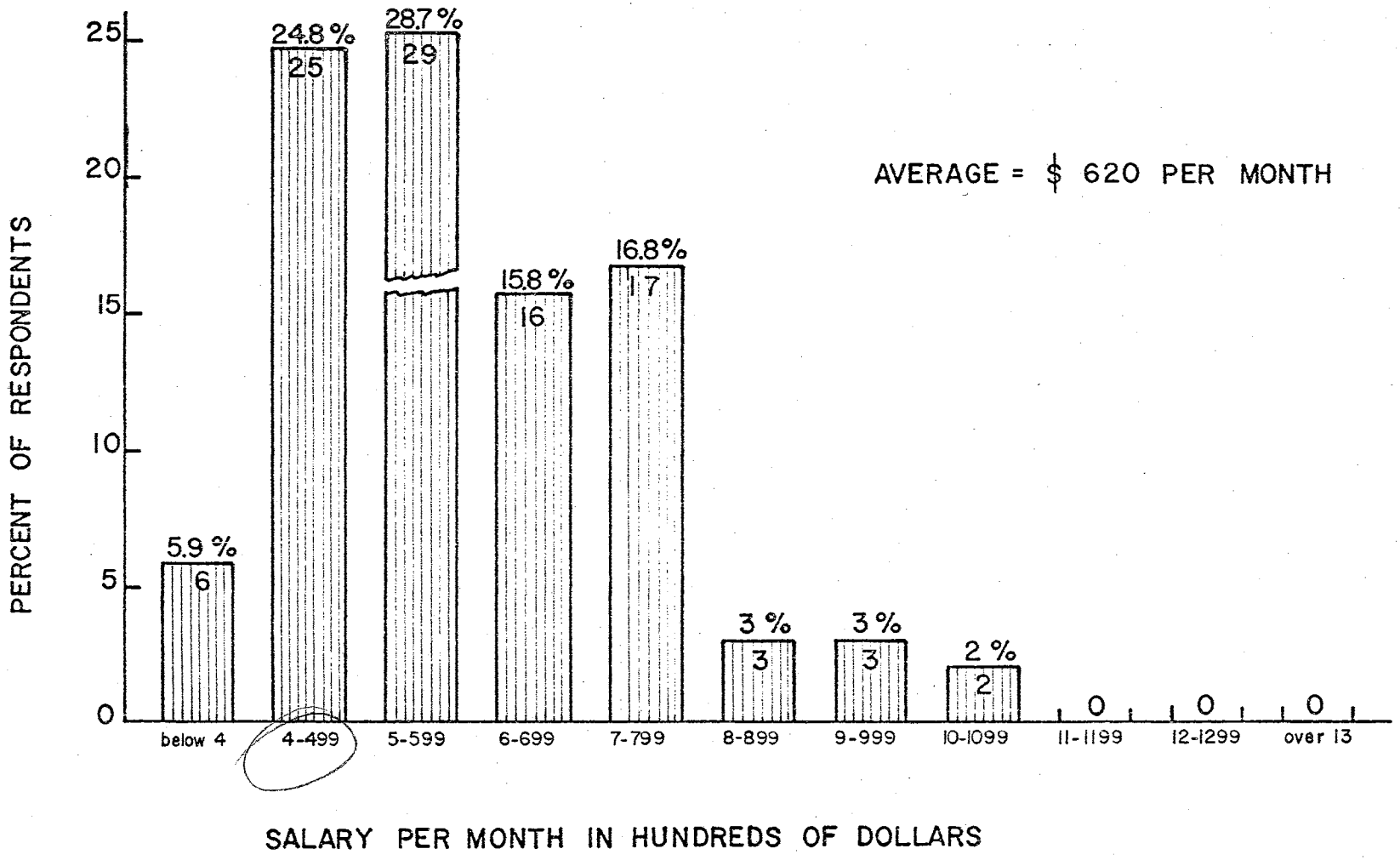

Figure 6. Starting Monthly Salary of Technical Education Graduates at Their First Job After Receiving Their Bachelor's Degree

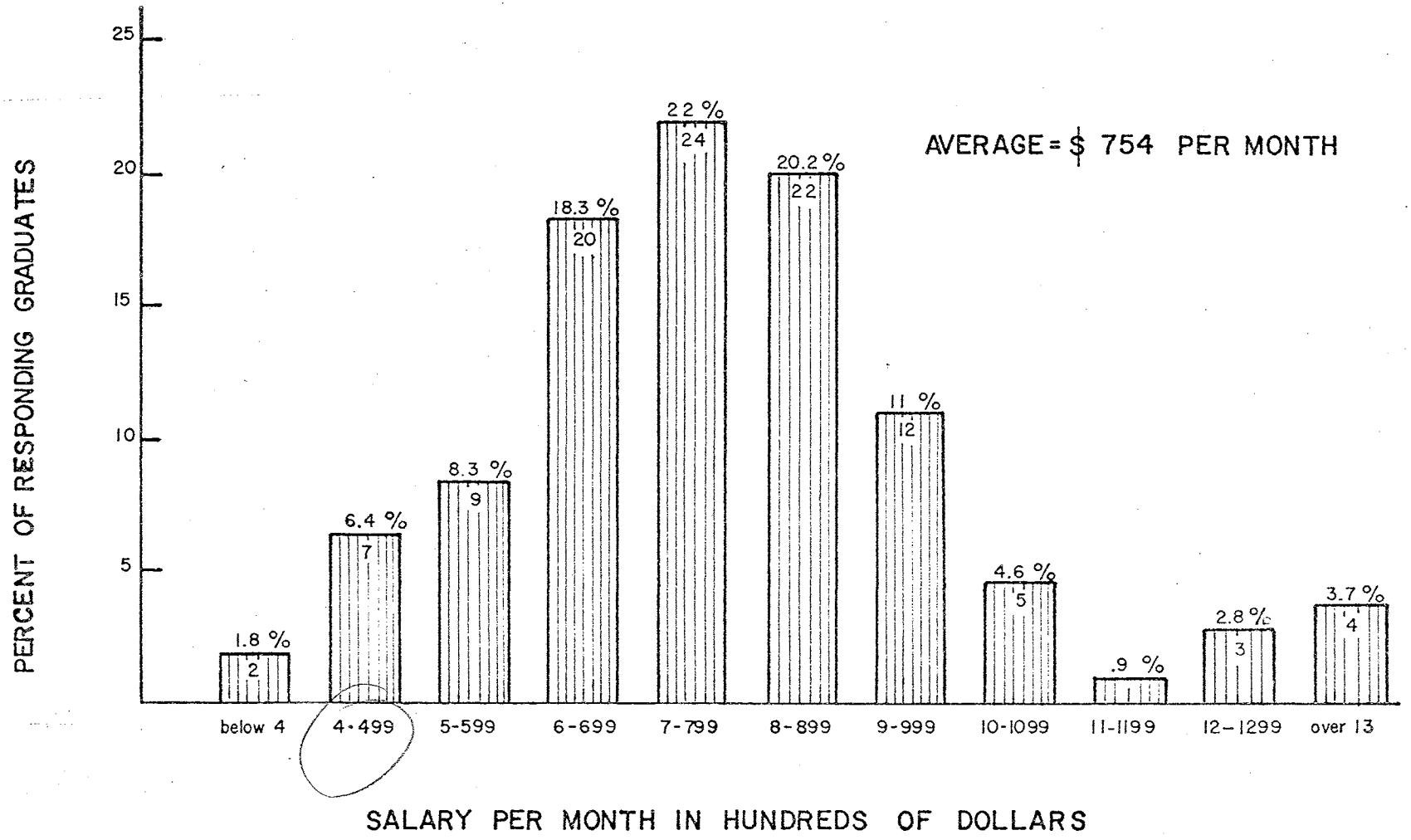

Figure 7. Present Salary of Technical Education Graduates

The data in Table XXII illustrates the average present salary of Technical Education graduates based on their year of graduation. The table reveals that the average salary of the respondents who graduated in 1960 is $950 per month, the average salary of 1961 graduates is also $950 per month, the average salary of 1962 graduates is $750 per month, the average salary of 1963 graduates is $787 per month, the average salary of 1964 graduates is $850 per month, the average salary of 1965 graduates is also $850 per month, the average salary of 1966 graduates is $820 per month, the average salary of 1967 graduates is $785 per month, and the average salary of 1968 graduates is $677 per month.

TABLE XXII

AVERAGE SALARIES OF TECHNICAL EDUCATION GRADUATES RELATIVE TO DATE OF GRADUATION

Graduation Date	Average Salary Per Month
1960	$950
1961	950
1962	750
1963	787
1964	850
1965	850
1966	820
1967	785
1968	677

The data in Figure 8 illustrates the present salaries of Technical Education graduates who reside in the State of Oklahoma. The figure reveals that one or 2.4 percent of the graduates are making less than $400 per month, three or 7.1 percent of the graduates are making $400 to $499 per month, seven or 16.6 percent are making $500 to $599 per month, 10 or 23.8 percent are making $600 to $699 per month, nine or 21.4 percent are making $700 to $799 per month, six or 14.3 percent are making $800 to $899 per month, three or 7.1 percent are making $900 to $999 per month, one or 2.4 percent are making $1,200 to $1,299 per month, and two or 4.8 percent are making over $1,300 per month. The average salary of all Technical Education graduates residing in the state is $736.10 per month.

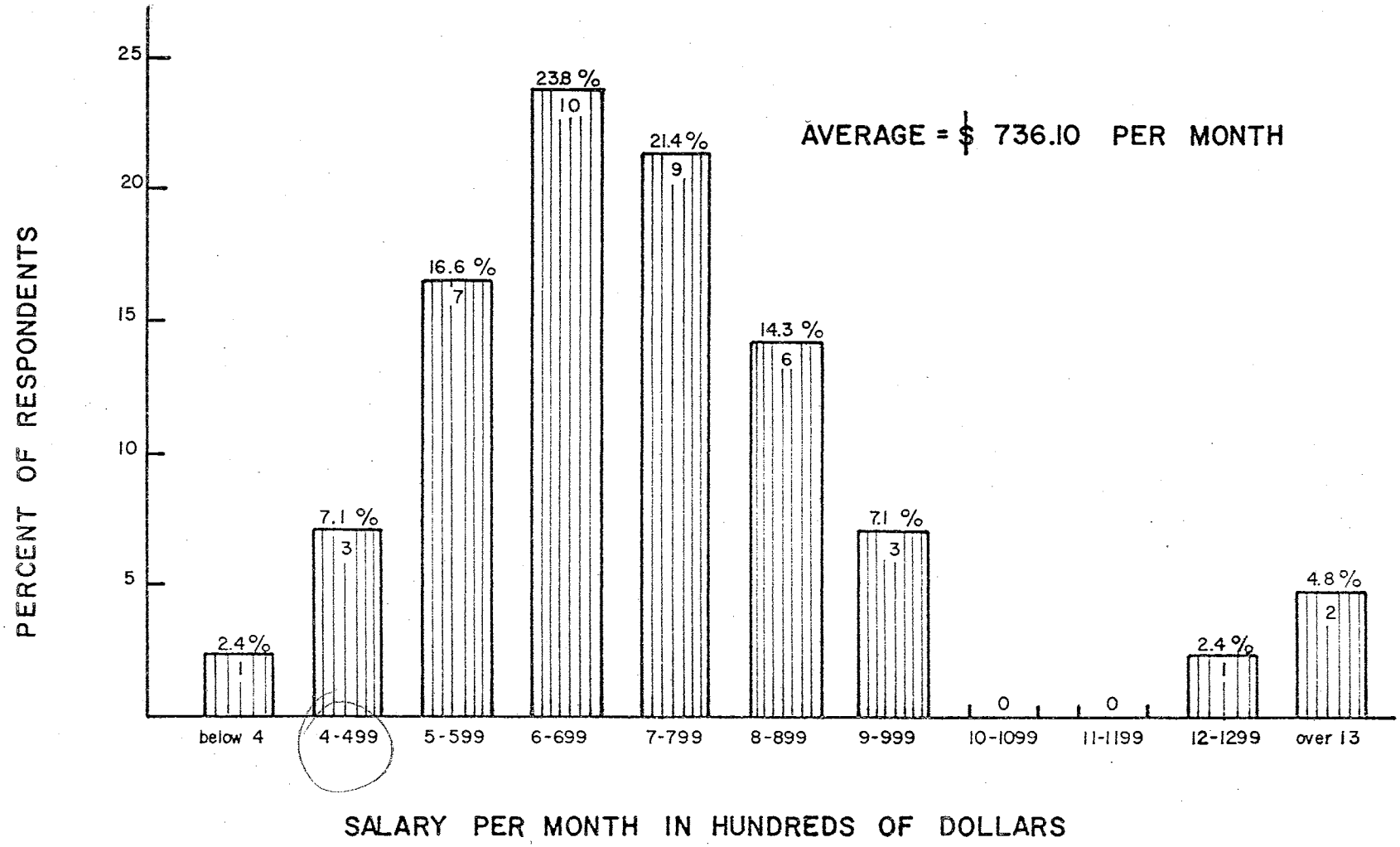

Figure 8. Salaries of In-State Technical Education Graduates

The data in Figure 9 illustrates the present salaries of Technical Education graduates who reside outside the State of Oklahoma. The figure reveals that one or 1.5 percent are making below $400 per month, four or 6 percent are making $400 to $499 per month, two or 3 percent are making $500 to $599 per month, 10 or 15 percent are making $600 to $699 per month, 15 or 22.4 percent are making $700 to $799 per month, 16 or 23.8 percent are making $800 to $899 per month, nine or 13.4 percent are making $900 to $999 per month, five or 7.4 percent are making $1,000 to $1,099 per month, one or 1.5 percent are making $1,100 to $1,199 per month, two or 3 percent are making $1,200 to $1,299 per month, and two or 3 percent are making over $1,300 per month. The average salary of all responding Technical Education graduates residing outside the State of Oklahoma is $818.95.

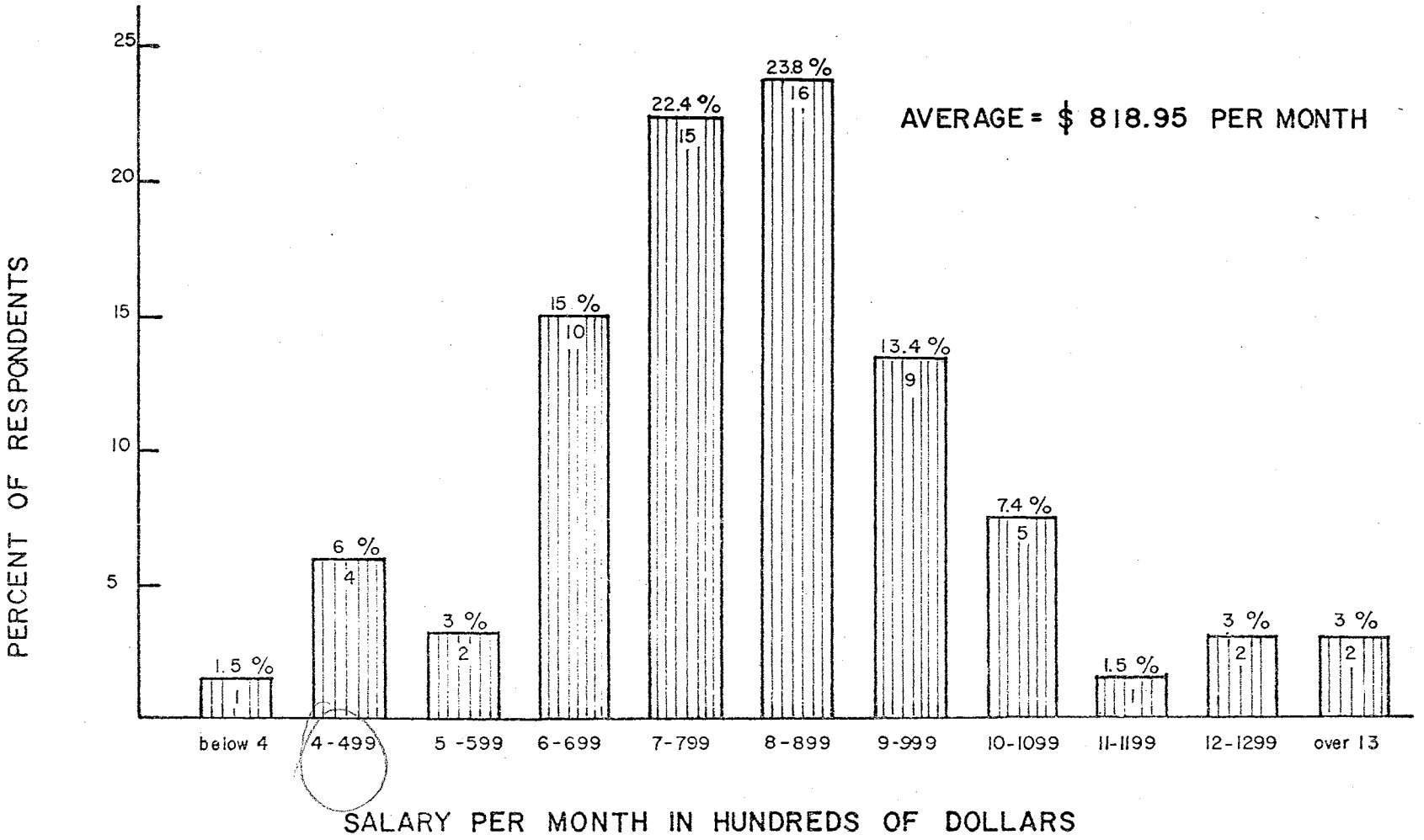

Figure 9. Salaries of Out-of-State Technical Education Graduates

The data in Figure 10 is related to Figures 8 and 9 in that it illustrates the present salaries of Technical Education graduates who reside in the State of Oklahoma and who are in the educational profession. The figure reveals that one or 3.3 percent of the graduates are making less than $400 per month, one or 3.3 percent of the graduates are making $400 to $499 per month, six or 20 percent are making $500 to $599 per month, six or 20 percent are making $600 to $699 per month, five or 16.7 percent are making $700 to $799 per month, five or 16.7 percent are making $800 to $899 per month, three or 10 percent are making $900 to $999 per month, one or 3.3 percent are making $1,200 to $1,299 per month, and two or 6.7 percent are making over $1,300 per month. The average salary of all responding Technical Education graduates residing in the State of Oklahoma and who are in the educational field is $714 per month.

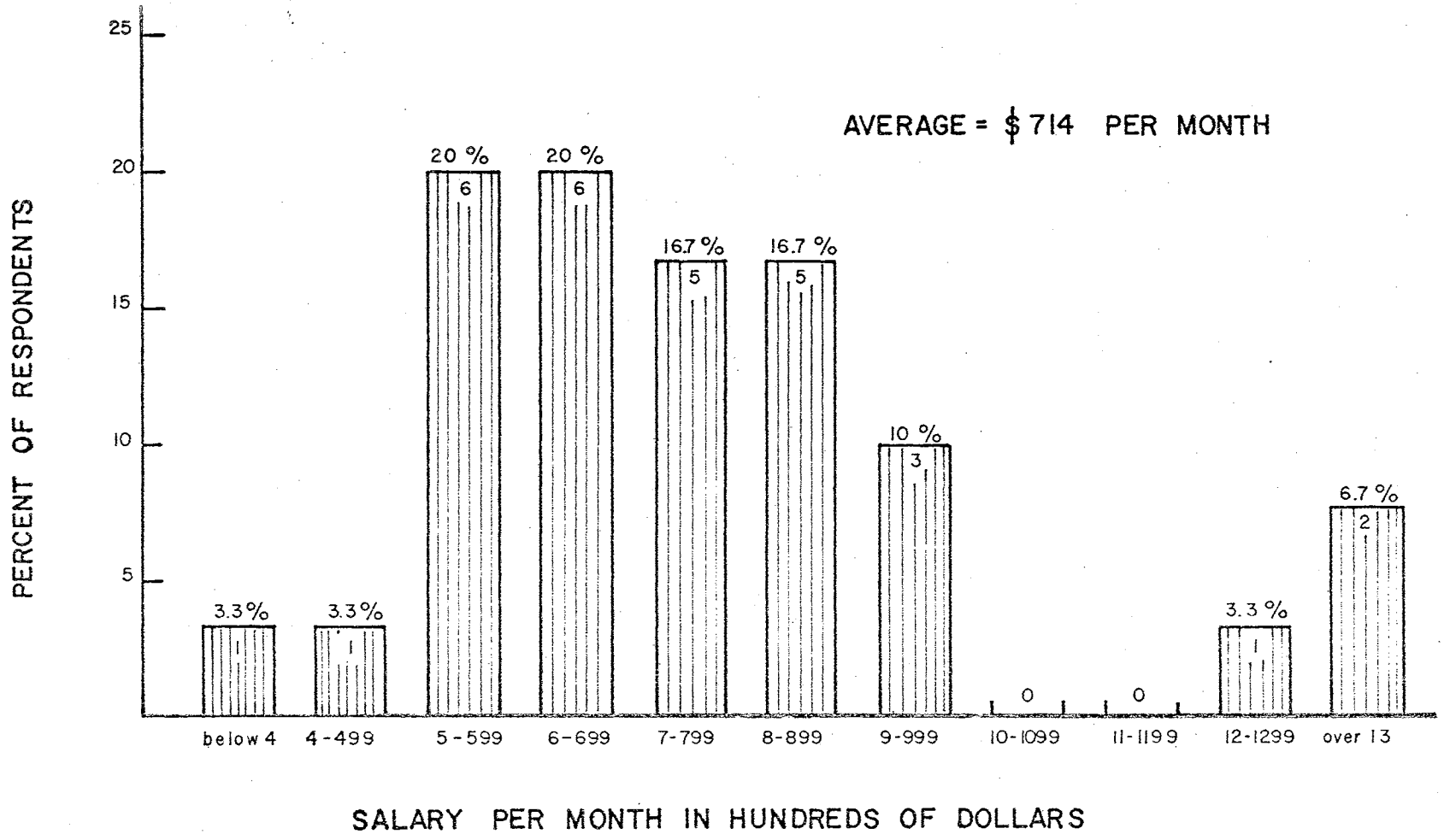

Figure 10. Salaries of In-State Technical Education Graduates in Education

The data in Figure 11 is related to Figure 10 in that it illustrates the present salaries of responding Technical Education graduates who reside outside the State of Oklahoma and who are in the educational profession. The figure reveals that one or 4.3 percent of these graduates are making less than $400 per month, two or 8.7 percent are making $600 to $699 per month, two or 8.7 percent are making $700 to $799 per month, six or 26.1 percent are making $800 to $899 per month, five or 21.8 percent are making $900 to $999 per month, two or 8.7 percent are making $1,000 to $1,099 per month, one or 4.3 percent are making $1,100 to $1,199 per month, two or 8.7 percent are making $1,200 to $1,299 per month, and two or 8.7 percent are making over $1,300 per month. The average salary of all responding Technical Education graduates residing outside the State of Oklahoma and who are in the educational profession is $1,010 per month.

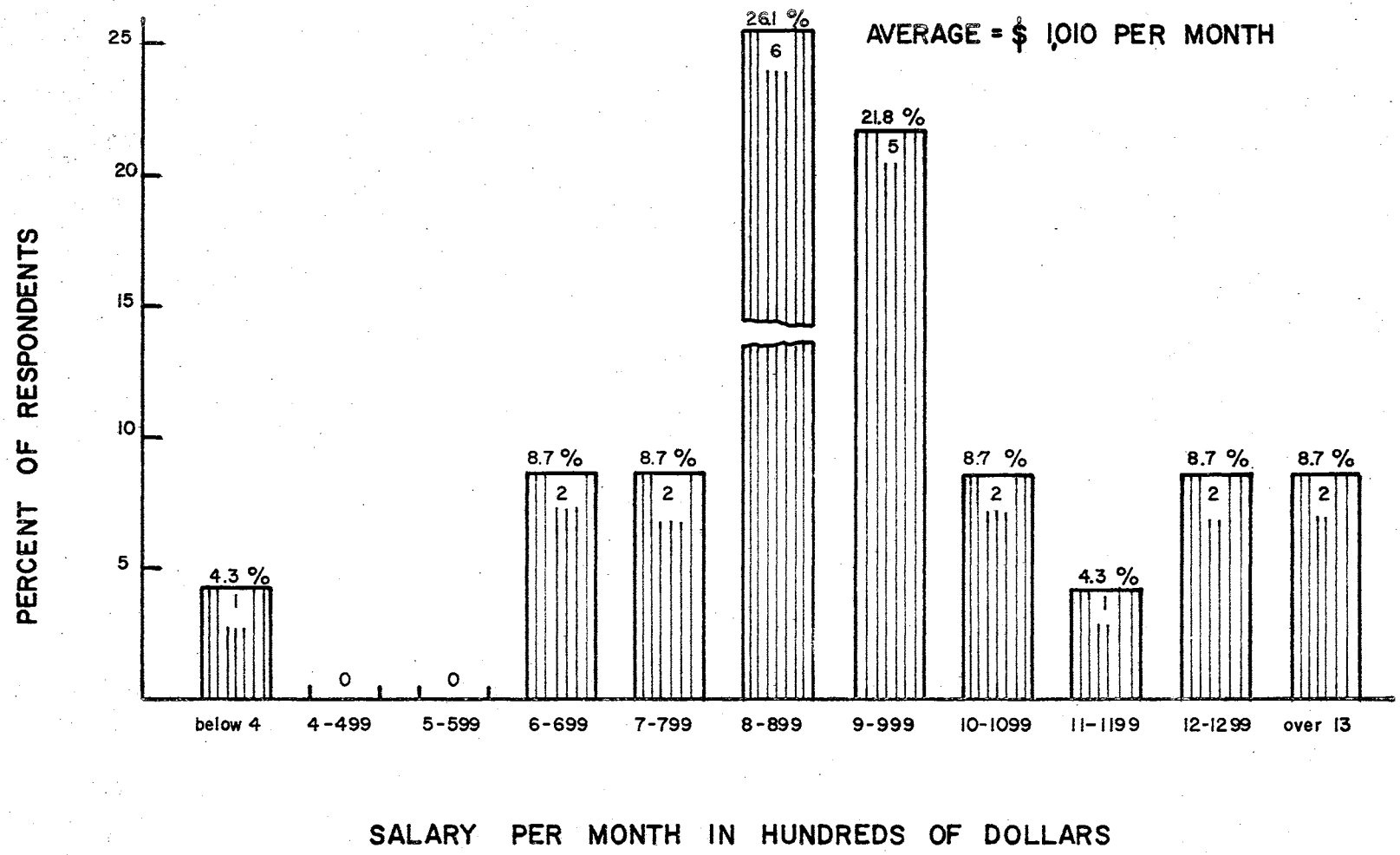

Figure 11. Salaries of Out-of-State Technical Education Graduates in Education

The data in Figure 12 illustrates the present salaries of responding Technical Education graduates who reside in the State of Oklahoma and who are in industry or business. The figure reveals that two or 16.8 percent of these graduates are making $400 to $499 per month, one or 8.3 percent are making $500 to $599 per month, four or 33.3 percent are making $600 to $699 per month, four or 33.3 percent are making $700 to $799 per month, and one or 8.3 percent are making $800 to $899 per month. The average salary of all responding Technical Education graduates who reside in the State of Oklahoma and who are in industry or business is $677 per month.

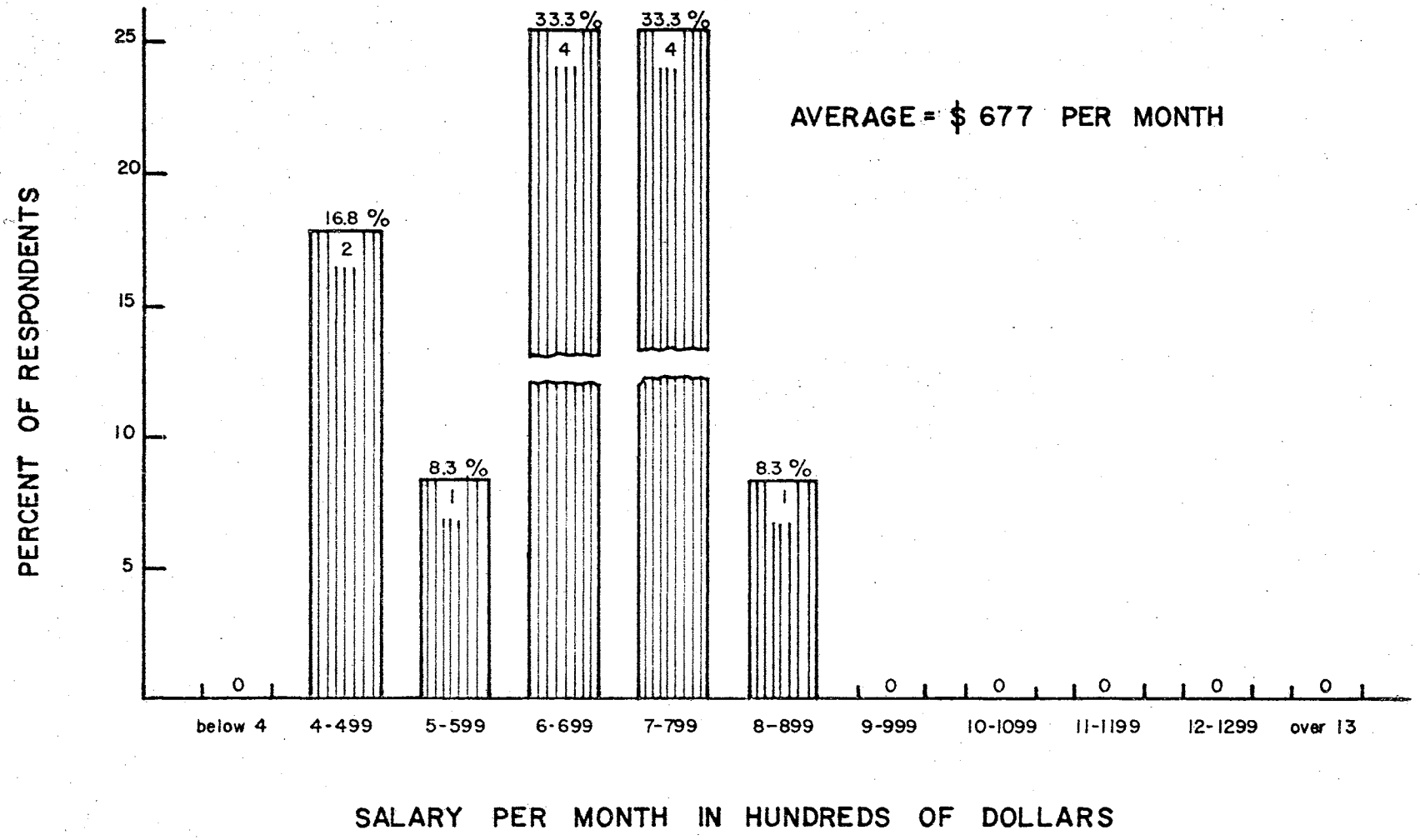

Figure 12. Salaries of In-State Technical Education Graduates in Industry or Business

military

The data in Figure 13 is related to the data in Figure 12 in that it illustrates the present salaries of all responding Technical Education graduates who reside outside the State of Oklahoma and who are in industry, business, or the military. The figure reveals that four or 9.1 percent of these graduates are making $400 to $499 per month, two or 4.5 percent are making $500 to $599 per month, eight or 18.2 percent are making $600 to $699 per month, 13 or 29.5 percent are making $700 to $799 per month, 10 or 22.8 percent are making $800 to $899 per month, four or 9.1 percent are making $900 to $999 per month, and three or 6.8 percent are making $1,000 to $1,099 per month. The average salary of all responding Technical Education graduates who reside outside the State of Oklahoma and who are in industry, business, or the military is $784 per month.

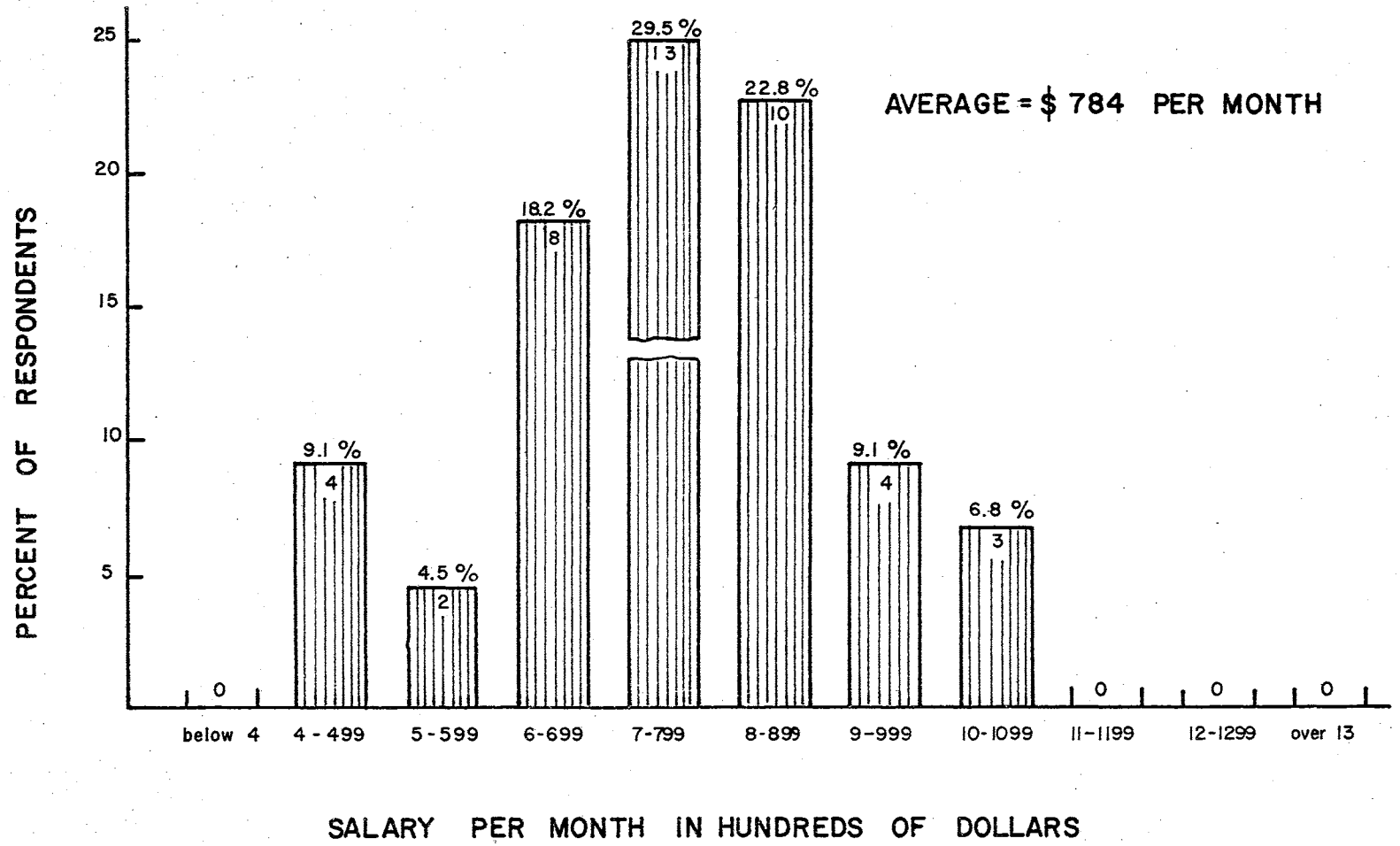

Figure 13. Salaries of Out-of-State Technical Education Graduates in Industry, Business, or the Military

The data in Table XXIII illustrates the type of work the responding Technical Education graduates would ultimately prefer to do. The table reveals that 36 or 39.1 percent of the respondents intend to enter or remain in the teaching profession, 18 or 19.6 percent of the respondents intend to pursue educational administration as a career, six or 6.5 percent of the respondents intend to pursue a career in industrial management, 18 or 19.6 percent of the respondents intend to pursue an industrial career, five or 5.4 percent of the respondents specifically indicated a career in computer work as their ambition, three or 3.3 percent of the respondents indicated a career objective of industrial research and development, one or 1.1 percent of the respondents indicated as their objective a career in private business, two or 2.2 percent indicated career objectives of industrial management at the executive level, and another three or 3.3 percent indicated as their objective a military career at the staff level.

TABLE XXIII

TYPES OF CAREER OBJECTIVES

Type of Career	Number Responding	Percent
Teaching	36	39.1
Educational Administration	18	19.6
Industrial Management	6	6.5
Industry	18	19.6
Computer and/or Data Processing	5	5.4
Industrial Research and Development	3	3.3
Private Business	1	1.1
Executive Industrial Management	2	2.2
Military at Staff Level	3	3.3

The data in Table XXIV illustrates the roles the responding Technical Education graduates play in professional, community, and service organizations. The table reveals that 56 or 50.5 percent of the respondents are affiliated with at least one professional organization, 45 or 40.5 percent are affiliated with a religious organization, 17 or 15.3 percent are affiliated with a community service organization, 10 or 9 percent are affiliated with a hobby or sport organization, three or 2.7 percent are affiliated with a civil rights organization, three or 2.7 percent are affiliated with the Boy Scouts of America, and two or 1.8 percent are affiliated with a community social organization.

TABLE XXIV

AFFILIATION WITH PROFESSIONAL, COMMUNITY SERVICE, AND RELIGIOUS ORGANIZATIONS

Organization	Number Responding	Percent
Professional	56	50.5
Religious	45	40.5
Service	17	15.3
Hobby or Sport	10	9.0
Civil Rights	3	2.7
Boy Scouts of America	3	2.7
Social	2	1.8

FOOTNOTES

[1]Stanley S. Robin, "A Procedure for Securing Returns to Mailed Questionnaires", Sociology and Social Research, Volume 50, No. 1, (October, 1965), pp. 24-25.

[2]Jack L. Nelson, "Follow-Up Study of Graduates", Improving College and University Teaching, XII (1964), p. 111.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to investigate the status of the Oklahoma State University Technical Education graduates. A questionnaire containing 26 pertinent items was prepared and mailed to all 166 graduates of which 111 or 67 percent were returned and analyzed.

Summary

The educational and occupational data derived from the returned questionnaires is presented in Chapter III. A brief summary of that data is as follows:

1. Ninety-nine or 90 percent of the respondents' high school program was general or college preparatory.
2. Sixty-two or 57.5 percent of the respondents' high school graduating class size was 125 or less.
3. One hundred and seven or 97.3 percent of the respondent's rated their high school scholastic performance as good or average.
4. Eighty-eight or 79.3 percent of the respondents hold an associate degree.
5. Sixty-nine or 78.5 percent of the respondents holding associate degrees received their degrees from Oklahoma State University, Stillwater.

6. Forty-seven or 54.6 percent of the respondents had previously been enrolled in a science or engineering bachelor's degree program.

7. A composite of 67.5 percent of the respondents chose as their reason for entering Technical Education, "It was the best post-associate degree educational opportunity".

8. Ninety or 81.8 percent of the respondents earned 50 or more percent of their undergraduate college expenses.

9. Sixty-six or 59 percent of the respondents migrated, established a residence outside the State of Oklahoma, after graduation.

10. Twelve or 80 percent of the master degree graduates are in the educational profession.

11. Sixty-one or 56.5 percent of the respondents have had additional educational experiences since graduation of which 44 or 73.4 percent had been college credit toward another degree.

12. Eighty-nine or 88.2 percent of the respondents intend to pursue an advanced degree of which 53 or 73.6 percent will be a Master's in Technical Education or a Doctor's in Education.

13. Thirty-five or 87.5 percent of the respondents in industry, business, or the military intend to pursue a master's degree and enter the educational profession.

14. Fifty-seven or 51.3 percent of the respondents are now in education.

15. Ninety-eight or 88.3 percent of the respondents are now in education or intend to enter the profession of which 47 or 54.6 percent made this decision after they entered the Technical Education program.

16. The average starting salary of all the respondents at their first job after receiving the bachelor's degree was $620 per month.

17. The average present salary of all respondents was $754 per month.

18. The average present salary of respondents residing in the State of Oklahoma is $736.10 per month; whereas, the average present salary of respondents residing outside the state is $818.95 per month.

19. Of the respondents in the educational profession, those working in the state had an average salary of $714 per month and those working outside the state had an average salary of $1,010 per month.

20. Of the respondents working in industry or the business, or the military those working in the state had an average salary of $677 per month and those outside the state had an average salary of $784 per month.

21. Fifty-four or 50.7 percent of the respondents would ultimately prefer a career in teaching or educational administration.

22. Fifty-six or 50.5 percent of the graduates (are) affiliated with at least one professional organization.

Conclusions

Eight hypotheses are stated in Chapter I and subsequently tested in this study. Each hypothesis and the pertinent findings related to it are listed below. The reader should bear in mind that any and all conclusions derived from this study are based on information obtained from 67 percent of the population.

1. Beginning career patterns of Technical Education graduates are evenly divided into beginning careers in education and beginning careers in industry, business, or the military.

   This hypothesis is supported on the basis that 57 or 51.3 percent of the graduates are presently in the educational profession.

2. The career objectives of all Technical Education graduates are evenly divided into careers in education and careers in industry, business, or the military.

   This hypothesis is supported on the basis that 54 or 58.7 percent of the graduates would ultimately prefer a career in teaching or educational administration.

3. Technical Education graduates pursuing careers in industry, business, or the military tend to be more economically successful than Technical Education graduates pursuing careers in education.

This hypothesis is rejected on the basis that the average salary of graduates in the educational profession is $807 per month and the average salary of graduates in industry, business, or the military is $746 per month.

4. More than half of all Technical Education graduates pursue their careers outside the State of Oklahoma.

   This hypothesis is supported on the basis that 66 or 59 percent of the graduates out-migrated from Oklahoma after graduation and are presently pursuing careers outside the state.

5. More than half of all Technical Education graduates are from Oklahoma.

   This hypothesis is supported on the basis that 82 or 74 percent of the respondents graduated from Oklahoma high schools.

6. Technical Education graduates tend to represent urban rather than rural backgrounds.

   This hypothesis is supported on the basis that 62 or 57 percent of the respondents had a high school graduating class size of 125 or less. The urban or rural background of the respondents were determined by the size of their high school graduating class. The respondents who had a high school graduating class of 125 or less would tend to represent a rural rather than an urban background.

7. A majority of all Technical Education graduates had been in an associate degree technical program. This hypothesis is supported on the basis that 88 or 79.3 percent of the respondents had received an associate degree.

8. A majority of all Technical Education graduates entered Technical Education because it was the best post-associate degree educational opportunity. This hypothesis is supported on the basis that a composite of 67.5 percent of the respondents chose as their reason for entering Technical Education, "It was the best post-associate degree educational opportunity".

9. Technical Education graduates purusing careers in education tend to do more post-graduate study than do Technical Education graduates pursuing careers in industry, business, or the military. This hypothesis is supported on the basis that 12 or 80.0 percent of the master's degree recipients are presently in the educational profession.

10. Technical Education graduates tend to be active in community, public, religious, and professional organizations. Not enough information was obtained to lead to a disposition of this hypothesis although 76 or 68.5 percent of the graduates indicated affiliation

with at least one type of organization, 56 or 50.5 percent indicated an affiliation with at least one professional organization, and 45 or 40.5 percent indicated an affiliation with a religious organization.

Recommendations

On the basis of the information compiled in this study the following recommendations are suggested:

1. The annual spring Oklahoma State University Technical Education Newsletter should be continued and expanded to include information on the following: (1) teaching positions and salaries, (2) industrial job opportunities, (3) graduate level educational opportunities, and (4) availability of education fellowships, scholarships, and assistantships.
2. The follow-up study should be continued annually and kept up to date.
3. Further studies should be conducted to determine how the career objectives of Technical Education graduates are established and how these objectives might be altered to include teaching or educational administration.
4. Further studies should be conducted to determine how the out-migration of Technical Education graduates might be reduced.

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APPENDIX A

THE QUESTIONNAIRE

GRADUATE INFORMATION SHEETS
TECHNICAL EDUCATION DEPARTMENT
OKLAHOMA STATE UNIVERSITY
APRIL 15, 1968

1. Name_____ Date_____
   Mo. Day Yr.
2. Present mailing address_____
   (Number and Street)
   _____
   City State Zip Area Code Telephone
3. Permanent mailing address (if different)_____
   _____
   (Number and Street)
   _____
   City State Zip Area Code Telephone

EDUCATIONAL BACKGROUND (respond to those that apply)

4. Associate Degree: Date_____ Major _____
   Institution_____
5. B.S. Degree: Date_____ Major_____
   Institution_____
6. M.S. Degree: Date_____ Major_____
   Institution_____
7. Ed.D. Degree: Date_____ Major_____
   Institution_____
8. Other degree: Date_____ Major_____
   Institution_____
9. Name and location of high school_____
   Name
   _____
   City State
10. High school program was: (check one)
    general_____ college preparatory _____ vocational_____
11. If vocational, please specify_____
    (drafting, auto mechanics, etc.)

12. Approximate size of graduating class _____
(Number)

13. Looking back, how would you rate yourself as to your high school scholastic performance? _____
(poor--average--good)

14. Present employer _____
Address _____
City State
Major Duties _____

Present salary (check one):

_____ between $400 and $499 per month
_____ between $500 and $599 per month
_____ between $600 and $699 per month
_____ between $700 and $799 per month
_____ between $800 and $899 per month
_____ between $900 and $999 per month
_____ between $1000 and $1099 per month
_____ between $1100 and $1199 per month
_____ between $1200 and $1299 per month
_____ over $1300 per month

15. Have you had additional educational courses since receiving your B.S. Degree? Yes_____ No_____

16. If yes, please indicate by checking in the appropriate spaces below:

	College Credit		Non-credit (in-house) Industrial and/or Business Training	Military Training	Governmental School (Fed.--State--Local)	Other (Specify)
Year	Toward Master's Degree	Not Toward Master's Degree				
19						
19						
19						
19						
19						
19						
19						
19						
19						
19						

17. Do you intend to pursue an advanced degree at some future date?
Yes_____ No_____ _____
(Please specify degree and major)

18. Were you ever enrolled in a science or engineering B.S. Degree Program? Yes_____ No_____

19. If you are now teaching or if you intend to teach in the future, did you make this decision after entering the B.S. Technical Education Program? Yes_____ No_____

20. If you are not now teaching, do you ever intend to?
Yes_____ No_____

21. What were your reasons for entering the Technical Education Program at Oklahoma State University? (Indicate no more than three by numbering in order of importance: 1, 2, or 3.)

_____ Planned on Technical Education before high school graduation.
_____ It was the best post associate degree educational opportunity.
_____ With the associate degree, I felt limited.
_____ I had wanted to teach in a Technical Institute or junior college and this was the proper channel for preparation.
_____ After the associate degree, I wanted a better technical background for industrial work without going into an engineering program.
_____ I really wanted an engineering degree but _____
_____
(give reason)
_____ The selective service draft was a factor.
_____ Other: (please explain)_____
_____

22. Please indicate the kinds of occupational experiences. (Check all those that apply and specify date, position, employer, and address.)

Year (Specify)	Teaching: Industry or Business	Teaching: School	Teaching: Government	Teaching: Military	Non Teach: Industry or Business	Non Teach: Government	Non Teach: Military	Area: Out of Oklahoma	Area: Oklahoma	Specify position, employer, city, and state.
19										
19										
19										
19										
19										
19										
19										
19										
19										
19										

23. What was your starting salary at your first job after receiving your B.S. Degree?_____

24. What type of work would you ultimately prefer to do?

_____

_____

_____

25. Check the proportion of your total undergraduate college expenses you earned.

0% _____ 50% _____ 100% _____

25% _____ 75% _____

26. What community organizations such as clubs, lodges, church, or professional organizations do you presently belong to?

Name of Organization	Offices Held (If Any)
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

APPENDIX B

TRANSMITTAL LETTER

OKLAHOMA STATE UNIVERSITY • STILLWATER

Department of Technical Education 74074
Industrial Building Room 104
FRontier 2-6211, Ext. 7261

April 23, 1968

We hope you enjoy the enclosed copy of the 1968 Spring Newsletter. In it you will find the following highlights: The new electromechanical grant, the breakdown of last year's survey by occupation and degree, degrees available at Oklahoma State University, the statewide study of occupational education and staff changes in the Technical Education department.

As a professional, you are aware that graduate follow-up studies are of considerable importance in keeping our Technical Education curriculum updated and in the determination of the extent to which we are meeting our established objectives. The Oklahoma State Technical Education program is one of the best in the nation because you answer questions every year which we feel will help improve the total curriculum.

For your convenience we have also enclosed a self-addressed, stamped envelope to return the form as soon as possible.

Your address and occupational position will be reported in our next newsletter. All other information will, of course, be held confidential.

We sincerely hope that you enjoy your newsletter, and we want to thank you in advance for your cooperation on the questionnaire for which we are most grateful.

Sincerely,

M W Roney

Maurice W. Roney, Director
School of Occupational and
Adult Education

MWR:br

Enclosures

APPENDIX C

NEWSLETTER

OKLAHOMA STATE UNIVERSITY
TECHNICAL EDUCATION NEWSLETTER
Spring 1968

OSU TECHNICAL EDUCATION GRADUATE KILLED. Funeral services for 2nd Lt. James Terry Ranstead, USMC, who graduated from Oklahoma State University last May in Technical Education, were held in Miami, February 1, 1968. He was killed January 22 in South Vietnam by an enemy land mine while on patrol. He had been in South Vietnam 20 days. The services were held at the First Christian Church, Miami, and burial was at Vinita.

Lt. Ranstead attended Northeastern Oklahoma A & M College before coming to OSU. While an OSU student, Terry was elected charter president of Semper Fidelis, the Marine Corps fraternity on campus, and was a member of the Society of Mechanical Technicians.

The young officer's father, James T. Ranstead, was killed during WW II while on a combat mission in the Philippines. Survivors include his wife, Jean, daughter, Cherri Linn, 3, son, Terry Lee, 5, all of 1025 M. Street, Miami; mother, Mrs. Justin Garren, Miami; and sister Mrs. Ann Caddell, Independence, Missouri.

THE "SCHOOL OF INDUSTRIAL EDUCATION" IS NOW THE SCHOOL OF OCCUPATIONAL AND ADULT EDUCATION. It is expected that this new School will provide a framework for the development of interdisciplinary programs of research and professional study through a system of joint appointments for specialists from a number of academic and vocational fields.

TECHNICAL EDUCATION STAFF AT OSU. Dr. Maurice Roney returned from a six month professional teacher education consultation with Pakistan in June, 1967, and immediately joined Dr. Braden and other staff members in a state wide study of "Occupational Education Beyond the High School in Oklahoma." The final report of the study was released in January 1968, and one of the recommendations indicated that a central system of technical manpower development is needed in Oklahoma and that it should include: Manpower research, industrial planning services, and occupational education.

Cecil Dugger, who expects to finish his doctoral dissertation in July 1968, will spend two years as a teacher education consultant in Thailand. This project is sponsored by AID and will assist vocational teacher educators in that country. The project is for three years and will be directed by Clyde B. Knight, our Trade and Industrial Teacher Trainer. Mr. Dugger will return to OSU in September, 1970.

Donald Phillips, who recently completed his doctoral, is on leave of absence to assit with a bio-medical equipment technical demonstration program at Springfield Community Technical College, Springfield, Massachusetts. He will return in August of 1968 as assistant director of the electromechanical technician demonstration program.

Perry McNeill joined the staff in January and is teaching professional education courses and is very much involved with planning the new electromechanical demonstration program. As many of you will remember, Mr. McNeill was a former electronics instructor with the OSU Technical Institute in Stillwater, and was with Los Alamos

Scientific Lab, Los Alamos, New Mexico, just prior to joining the staff.

Paul Braden, who joined the staff two years ago to work with the new Manpower Research and Training Program, is heavily involved with master's and doctoral candidates in addition to the Manpower Fellows. He is presently teaching a course in Occupational Analysis for the second time, and editing the "Journal of Technology" for the Oklahoma Technical Society. He invites you to correspond with him on any papers you think might be interesting to Oklahoma Technical Educators.

THE 1967 TECHNICAL EDUCATION GRADUATE SURVEY RESULTS INDICATED THE FOLLOWING BREAKDOWN BY DEGREES EARNED AND OCCUPATION

	Bachelor's	Master's	Doctor's	Total
Student	3	1	0	4
Teacher or Education Administrator	37	7	2	46
Industry	29	1	0	30
Military	7	4	1	12
Unknown	6	7*	0	13
Total Technical Education Graduates	82	20	3	105

Former International Students *

TECHNICAL INSTITUTE PROFESSOR PUBLISHES LAB MANUAL. Rodney B. Faber, OSU Technical Institute Electronics Instructor and Russell Heiserman, with Hickok Teaching Systems, recently published two lab manuals for the first year electronics program in conjunction with McGraw-Hill.

MANPOWER RESEARCH AND TRAINING PROGRAM. You recently received some literature on the manpower fellowships here at OSU. Howard Hardt and David Anderson, former electronic technicians and technical education graduates and Bob Freed will graduate from the two-year master's program this spring. As you might recall, persons from each of four fields of study; economics, sociology, psychology, and industrial education participated. Their commitment to the program was for a period of two years, during which they obtain a master's degree in their own major field and take an additional amount of course work in the other three fields involved. Studies also involve work common to all four areas in the broader field of Manpower Research and Training.

Of 150 universities submitting proposals to the Department of Labor for backing of such a program, OSU was one of the seven chosen. The Office of Manpower Policy, Evaluation and Research provided the University with a $225,000 grant to be used at the rate of $75,000 per year for three years. Thirty-six thousand dollars of the sum in the first two years is being used to provide fellowship grants to the 12 participating students. Their fellowships will be continued for two years. This fall 12 more students will enter with fellowship grants of $3,000 per year. Larry Barker, Kenneth Ritter, Bryn Whatley, and Yokio Yokoyama have been accepted for the 1968-1970 period.

NEED FOR TECHNICAL TEACHERS IN 1967-68 GREAT. A survey conducted recently by Purdue University showed that 800 teachers are needed now and additional hundreds for programs in the immediate future.

Notify us if you have any interests in this area since we have constant inquiries.

TECHNICIAN NEEDS--1975. The total requirements for technicians in the U. S. will reach nearly 1.5 million according to a recent study by the Department of Labor entitled, "Technician Manpower: Requirements, Resources, and Training Needs," published by the Bureau of Labor Statistics. The projected need represents an increase of over 77% from the 1963 employment level. State governments will emerge as the largest governmental employers of technicians.

ELECTROMECHANICAL STUDY. The Electromechanical Demonstration Project is flying high. OSU, along with Lowell Technical Institute, Lowell, Massachusetts, and James Connally Technical Institute, Waco, Texas, has received $3/4 million dollars to develop an Associate Degree program in Electromechanical Technology. The first enrollments for the program will be accepted for Fall 1968. Since many of you are electronic or mechanical graduates, you will be interested in how the students fare and of what the curriculum consists. A copy of the curriculum is included. If you have any observations, we would be happy to hear from you.

This $3/4 million grant came to OSU after years of effort. Under a grant from the U. S. Office of Education, a feasibility study was begun on an Electromechanical Technology curriculum in October, 1965. The curriculum objective is to train technicians in an area common to both mechanical and electronics technology. Maurice Roney of OSU and Austin Fribance, on leave from the Rochester Institute of Technology,

worked closely with educational and industrial consultants in developing the two year training program to accomplish this objective.

ELECTROMECHANICAL GRADUATE ASSISTANTSHIPS. We have five graduate assistant positions open for the fall term of 1968. Four of these assistantships are in the Electromechanical Technology program and one is in the Thailand project. These positions pay $3,000 per year for 20 hours per week and enable the individual to take 10 hours of graduate work per semester.

APPENDIX D

FIRST FOLLOW-UP LETTER

OKLAHOMA STATE UNIVERSITY • STILLWATER

Department of Technical Education
Industrial Building Room 104
FRontier 2-6211, Ext. 7261

74074

May 27, 1968

A few weeks ago you received a copy of the 1968 Spring Newsletter and a questionnaire. If your completed questionnaire is already in the mail, we appreciate it. If you have misplaced it, or if it never reached you, won't you take a few minutes to fill out this second copy.

Technical Education at OSU is relatively new. At this time we have fewer than 140 graduates, so your part in this survey is very important.

Please take a few minutes to complete and return this vital information. Don't forget, this information is used in part to notify of opportunities (industrial and teaching positions, fellowships, scholarships, etc.).

Sincerely,

M W Roney

Maurice W. Roney, Director
School of Occupational and
Adult Education

MWR:br

Enclosures--questionnaire
stamped envelope

APPENDIX E

SECOND FOLLOW-UP LETTER

OKLAHOMA STATE UNIVERSITY • STILLWATER

Department of Technical Education
Industrial Building Room 104
FRontier 2-6211, Ext. 7261

74074

June 18, 1968

Several weeks ago you received a questionnaire along with our 1968 Technical Education Newsletter. At this time we have not yet received your completed questionnaire.

The information which you provide us through this questionnaire is very important. About the only way we have to effectively evaluate our program, the one in which you graduated, is to evaluate the success of our graduates.

As you know, Technical Education is relatively new and we haven't many graduates; so your part in this survey is vitally important. We hope that you are interested enough and will take only a few minutes to fill out this questionnaire.

If you have already mailed your questionnaire, please accept our thanks. If you have not yet mailed yours, we are awaiting its receipt. Thank you.

Sincerely,

J. Barry Ballard

J. Barry Ballard

(This letter was written in longhand.)

VITA

James Barry Ballard

Candidate for the Degree of

Master of Science

Thesis: A FOLLOW-UP STUDY OF THE OKLAHOMA STATE UNIVERSITY TECHNICAL EDUCATION GRADUATES 1960-1968

Major Field: Technical Education

Biographical:

Personal Data: Born in Charleston, South Carolina, March 27, 1945, the son of James H. and Marie Ballard.

Education: Graduated from Duncan High School, Duncan, Oklahoma, in 1963; received an Associate Degree from the Oklahoma State University Technical Institute with a major in Drafting and Design Technology in 1966; received the Bachelor of Science Degree from Oklahoma State University with a major in Trade and Industrial Education in 1967; completed requirements for the Master of Science Degree in Technical Education at Oklahoma State University in August, 1969.

Professional Organizations: American Insitute of Design and Drafting, American Technical Education Association, National Education Association, Oklahoma Technical Society, Oklahoma Education Association, Red Red Rose, and Kay County School Masters Association.

Professional Experience: Civil Draftsman for the City of Stillwater, Oklahoma, 1966-67; Structural Steel Detailer for Ricketts-Weaver Engineering Service, Stillwater, Oklahoma, 1967-68; Drafting Instructor for the Technical Institute at Oklahoma State University, Stillwater, 1966-67; and Instructor of Drafting and Design Technology at Northern Oklahoma College, Tonkawa, Oklahoma, 1967-69.