

A SURVEY OF COURSE OFFERINGS IN INDUSTRIAL
ARTS IN OKLAHOMA JUNIOR COLLEGES
DURING 1966-67

By

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CHAPTER I

INTRODUCTION

With the current emphasis upon obtaining a college education, enrollment has increased greatly during recent years, and even greater growth is anticipated in the future. This situation has enabled the junior college to be of value as a means of providing formal education beyond the twelfth grade. Educators need to be concerned with offering a general education that will provide all students with a background which is applicable to present day needs.¹ Industrial arts is one of the areas of American culture which has been distinguished as an integral part of education. A complete education must provide the individual with optimum development in the knowledge and attitudes which are needed by all individuals.²

Volumes have been written presenting the views of industrial arts teachers concerning the subjects necessary in a complete program of general education. The selection of content for industrial arts remains a problem. The dynamic nature of knowledge makes continuous demands for

¹Robert D. Ryan, "Educated Leisure," The Journal of Industrial Arts Education (November-December, 1966), p. 5.

²G. S. Wall, "Industrial Arts and Education," Approaches and Procedures in Industrial Arts, Fourteenth Yearbook of the American Council on Industrial Arts Teachers Education (Bloomington, Illinois, 1965), pp. 31-32.

change on the part of man.³ Since well over 50 per cent of all workers in the United States are employed in some phase of industry, it seems imperative that the schools assume a positive attitude toward industrial enlightenment.⁴

Industrial arts as an area of general education may be used on the junior college level to broaden understandings of the technical problems and the appreciation of skills in our industrial society. Individual and social values of industrial arts courses offered at the junior college level come from the general educational training. This training allows young people to put abstract concepts into action through direct experience.⁵

Colleges and universities are facing a need for new approaches and methods of organization in industrial arts. The purpose of this study is to survey the industrial arts programs through instructors in Oklahoma junior colleges with the intent of describing conditions and practices that exist and compare them with recommended objectives.

The Problem

The problem is: What are existing phenomena in industrial arts programs in Oklahoma junior colleges during 1966-67? This study is concerned with the instructional program, the characteristics of

³ Wesley L. Face, Eugene R. F. Flug, and Robert S. Swanson, "Conceptual Approach to American Industry," Approaches and Procedures in Industrial Arts, Fourteenth Yearbook of the American Council on Industrial Arts Teachers Education (Bloomington, Illinois, 1965), p. 65.

⁴ Oklahoma State Department of Education, Industrial Arts in Oklahoma, Bulletin No. 105 (Oklahoma City, 1951), p. 1.

⁵ Ibid., p. 46.

instructors, the nature of pupils, the classroom facilities, the objectives emphasized, and the status of the program. These and other areas are probed by the study. Of particular concern is the fact that industrial arts, as defined by the State Department of Education, is not meeting the recommended objectives.

Need for the Study

Most educators will admit that industrial arts does not occupy a central position in the curriculum structure of our schools. Learning theory has changed quite radically, while the general practice of industrial arts remains the same.⁶ Unless a detailed description of existing phenomena is compiled and analyzed and a full-scale program of renewal launched, industrial arts as an element in education will surely dwindle.

"The current industrial arts curriculum does not measure up to the program recommended by the profession 10 to 20 years ago."⁷ There is a need for a curriculum suggesting new structures which would reorganize the instructional content to reflect the technology around the emerging subject areas in manufacturing, research and development, communications, and electricity.

Much study is necessary before a new industrial arts curriculum, or any other new approach to teaching industrial arts, can be of value

⁶ Daniel Malia, "A Far, Far Better Way," The Journal of Industrial Arts Education (November-December, 1966), p. 7.

⁷ Marshall R. Schmitt and Albert L. Pelley, Industrial Arts Education--A Survey of Programs, Teachers, Students, and Curriculum, U. S. Circular No. 791 (Washington, 1966), p. 30.

to the current program and improve the technological literacy of the American public.⁸ Junior colleges need to assess their offerings in industrial arts and expand them where necessary. Tradition-bound instructional procedures can be improved only through changes in attitudes and values.⁹

The Hypotheses

The following hypotheses have been established for the study:

1. Junior colleges in Oklahoma need to improve and expand their program in industrial arts.
2. Junior colleges in Oklahoma are not meeting the objectives of the industrial arts program, as defined by the Oklahoma State Department of Education.

Previous Research

Relatively little investigation has been made concerning industrial arts at the junior college level. In reviewing the literature on this subject, a minimal amount of material was found pertinent to the study.

Kenneth Wiseman¹⁰ in 1950 wrote "A Survey of Industrial Arts and Industrial Education in Forty-eight Selected Junior Colleges" in which it was indicated that junior colleges seemed to be the natural channel

⁸Ibid.

⁹Donald Ross Green, Educational Psychology (Englewood Cliffs, New Jersey, 1964), p. 112.

¹⁰Kenneth Wiseman, "A Survey of Industrial Arts and Industrial Education in Forty-eight Selected Junior Colleges" (unpub. M.S. report, Oklahoma A. and M. College, 1950), p. 46.

for the promotion of terminal industrial education programs. The author stated that, although many junior colleges had excellent industrial arts and industrial education programs with the enthusiastic support of civic, school, and community leaders, yet programs could be developed to render further service to the community.

Curriculum plays an important part in an industrial arts program. Harrison¹¹ states that "The greatest difficulty in considering curricular approaches, particularly as applied to industrial arts education, is definition." Curriculum changes are dependent on the enlightenment of the instructor. Objectives must be determined and aimed toward changing students' behavior.

Seefeld¹² reports that it appears that the industrial arts teacher education profession is growing and will provide teachers in spite of friction suffered through drop-out and loss to industry and in spite of population growth, change of educational emphasis, and size of classes. He states that one of the problems of industrial arts teacher education is the hardship suffered by the lack of prestige. Seefeld also emphasizes that the lack of prestige is due to three reasons: (1) they are not academic purists, (2) they are relatively young, and (3) they are victimized by limited research.

¹¹Paul E. Harrison, "Curricular Approaches," A Sourcebook of Readings in Education, Sixth Yearbook of the American Council on Industrial Arts Teachers Education (Bloomington, Illinois, 1957), pp. 109 and 132.

¹²Kermit Seefeld, "Development of the Collegiate School Industrial Arts," Graduate Study in Industrial Arts, Tenth Yearbook of the American Council on Industrial Arts Teachers Education (Bloomington, Illinois, 1961), p. 82.

Industrial education in junior colleges began soon after statehood and has continued to expand. A survey made in 1946 indicated that only five of the public junior colleges at that time were offering any industrial arts courses.¹³ However, a follow-up study in 1948 indicated that three other junior colleges had added industrial courses, although course offerings were limited and enrollments were small. "There were only 155 pupils enrolled in industrial courses in the twelve junior colleges."¹⁴

There has been little research work done by industrial arts teachers. Rowlett¹⁵ states that few people in the industrial arts field devote full time to research for any period of time. Initiative to do research rests with the individual industrial arts teacher.

When we begin to really recognize that research is as important as most of our traditional teacher education functions, we will likely experience progress of the sort that is without precedent in our profession.¹⁶

In 1964 Wendell Deen¹⁷ conducted a study to investigate the degree to which industrial arts teachers were fulfilling the objective of developing student understanding of modern tools, processes, and

¹³ Charles W. Moore, "Industrial Education in Junior Colleges" (unpub. M.S. problem study, University of Oklahoma, 1950).

¹⁴ Marion Edmund Franklin, "A History of Industrial Education in Oklahoma Up to 1950" (unpub. Ed.D. dissertation, University of Oklahoma, 1952), p. 119.

¹⁵ John D. Rowlett, ed., Status of Research in Industrial Arts, Fifteenth Yearbook of the American Council on Industrial Arts Teachers Education (Bloomington, Illinois, 1966), p. 12.

¹⁶ Ibid.

¹⁷ Wendell M. Deen, "Teaching Industrial Awareness in Industrial Arts" (unpub. M.S. thesis, California State College, 1964).

materials of industry. He found that: (1) cooperative group studies, field trips, and speakers from industry were not used commonly in teaching industrial arts and (2) few instructors require modern industrial occupational research.

Operational Definitions

Industrial arts, as defined by the Oklahoma State Department of Education, is as follows:¹⁸

Industrial arts is that aspect of education concerned with industrial materials, and the tools and machines of industry used to adapt them to useful products. It shares the responsibility with other curriculum areas of transmitting the social culture which is becoming increasingly technical.

The seven areas identified as industrial arts are:¹⁹

1. Woodworking
2. Metalworking
3. Drafting
4. Electricity-Electronics
5. Power Mechanics
6. Graphic Arts
7. Industrial Crafts

Industrial education:²⁰

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.

¹⁸Oklahoma State Department of Education, A Guide to Improvement of Industrial Arts in Oklahoma Schools (Oklahoma City, 1965), p. 2.

¹⁹Ibid., p. 6.

²⁰American Vocational Association, Inc., Definitions of Terms in Vocational Technical and Practical Arts Education (Washington, 1967), p. 11.

Technical education for use in this thesis will be defined as:²¹

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.

There are many different conceptions and definitions of the terms education and general education. Good²² defines these terms as follows:

Education - the aggregate of all the processes by means of which a person develops abilities, attitudes, and other forms of behavior of positive value in the society in which he lives.

General education - those phases of learning which should be the common experience of all men and women.

The words curriculum, junior college, and phenomenon will be used frequently in this thesis. Webster²³ defines these words as follows:

Curriculum - a specific course of study.

Junior college - a college in which but a two-years' course in regular college work is given.

Phenomenon - any fact, circumstance, or experience that is apparent to the senses and that can be scientifically described or appraised.

Procedures

Names and addresses of twenty-eight instructors of seven Oklahoma junior colleges which offer industrial education programs were obtained from the "Annual Directory of Industrial Arts Teachers, Trade and

²¹Ibid., p. 20.

²²Carter V. Good, ed., Dictionary of Education (New York, 1959), pp. 191 and 245.

²³Webster's New Twentieth Century Dictionary (Unabridged ed., New York, 1964), pp. 447, 992, and 1345-1346.

Industrial Teachers, and Other Teachers of Shopwork Courses in Oklahoma Universities, Colleges, and High Schools for the School Year 66-67"

(see Appendix A). A survey instrument in the form of a questionnaire was designed to be used in this study. The questionnaire was used to obtain answers to questions concerning the instructional program, the characteristics of instructors, the nature of pupils, the classroom facilities, the objectives emphasized, and the status of the program.

The survey instrument underwent numerous revisions during the developmental stages of the study. After improvements were made, the questionnaire, along with a transmittal letter stating the purposes of the study, was mailed to twenty-eight instructors responsible for instruction of industrial education in seven Oklahoma junior colleges (see Appendix B). A self-addressed, stamped envelope was included with the material sent to the twenty-eight instructors in order to facilitate the respondent in returning the questionnaire.

After a period of three weeks, a follow-up letter was sent to those instructors not responding to the questionnaire in order to obtain a substantial return. Another copy of the questionnaire, as well as another self-addressed, stamped envelope, was included with the letter (see Appendix C). Responses to the items in the questionnaire were tabulated and analyzed. For purposes of analysis, the questionnaires were divided into two groups. One group consisted of those instructors classifying themselves as industrial arts. The other group consisted of those instructors classifying themselves as other than industrial arts, generally technical.

In order to assist in surveying the offerings of Oklahoma junior colleges in industrial arts, postcards were sent to the registrars of

the seven junior colleges, requesting a catalogue for use in this study (see Appendix D). Each catalogue was used as a source for the history of the junior college and as an aid in analyzing the industrial arts program.

Limitations

In making this survey, several problems seem apparent. These limiting factors are listed below:

1. The subjective value judgments of the instructor may influence his responses to items in the questionnaire.
2. The instructor's age, teaching experience, and intellectual capacity may affect his interpretation of the questionnaire.
3. The subjective value judgments of the author may influence the selection of questions used in the survey instrument.
4. The prejudices of the author may affect his evaluation of the data.
5. The catalogue offerings may not provide a realistic picture of courses presently being taught.

CHAPTER II

THE DEVELOPMENT OF INDUSTRIAL ARTS IN OKLAHOMA

Since the beginning of recorded history, man has been striving to pass on facts, concepts, and skills to posterity.

The increasing complexity of our industrial economy and the increasing amount of mechanization encountered in almost every phase of our daily living makes it essential that industrial arts experiences be regarded as basic and fundamental for all youth.¹

Industrial arts, originally called manual training, was first introduced into the United States in 1880 through the efforts of Dr. Calvin M. Woodward. Dr. Woodward established a manual training school in St. Louis, Missouri, in connection with Washington University. It was financed by private funds. A similar school was established three years later in Chicago.

The movement took root and spread eastward to Toledo, Baltimore, Philadelphia, Boston, and other cities. After these modest beginnings and a realization of its potential, public funds were reluctantly appropriated for schools of this type.²

The first Manual Training High School to be supported at public expense was located in Baltimore in 1884, and by 1900 Manual Training

¹Heber A. Sotzin, "The Scope of Industrial Arts," Graduate Study in Industrial Arts, Tenth Yearbook of the American Council on Industrial Arts Teachers Education (Bloomington, Illinois, 1961), p. 4.

²Ibid., p. 3.

had been introduced into over 100 high schools in the United States.³

Industrial arts had its beginning with the early work of missionaries. As early as 1736, Jesuit Christian Priber was sent by the Catholics to work among the Cherokee Indians. Protestant missionaries began their work among the Indians twenty-five to thirty years later.⁴

Appropriations were made by the Continental Congress for work among the Indians. In making these appropriations, mention was made of promoting industrial training.⁵

Missionary schools were established within the territories of all of the Five Civilized Tribes at a very early date. Most of these schools were operated on the manual labor plan. The Chickasaw Manual Labor School opened in the summer of 1851 two miles east of Tishomingo. Sixty pupils started in the school and a full quota of one hundred and twenty was reached shortly. A school for girls known as Wapanucka Institute was started in 1852.

Although mission schools were closed during the Civil War, some were opened as contract schools. The Chickasaw Manual Labor School became known as the Harley Institute and was re-established near Tishomingo. Print shop work was taught at this institute around 1855. These types of schools were located on 160 acre farms and sought to combine industrial training with academic work.⁶

³Oklahoma State Department of Education, Industrial Arts in Oklahoma, p. 15.

⁴Franklin, p. 17.

⁵Abraham Eleazer Knepler, "Education in the Cherokee Nation," Chronicles of Oklahoma, XXI, No. 4 (December, 1943), pp. 378-379.

⁶Franklin, pp. 18-19.

There is little to indicate that the teaching of industrial work was carried on beyond the academy or high school level in Indian Territory. Reservation schools were established to educate the Indians around 1871. A school near El Reno and one near Ft. Sill were operated on the manual labor basis in 1873 and 1874. "Industrial training" was the name given the type of work under this program.⁷

By the time of the opening of the Oklahoma Territory to white settlement in 1889, the "Manual Training" movement was sweeping across the nation. However, few schools, if any, were able to finance this type of work.

Although almost all of the industrial training of the mission schools among the Indians and of later government supervised boarding schools had been of the manual labor type, it seems as though the first organized manual training shop work and drawing taught in the classroom may have been in one of these schools.⁸

"The program of Industrial Arts in Public Schools of Oklahoma began about the year 1904."⁹ In 1903 H. F. Rusch was employed to teach in the Jones Academy near Hartshorne. He taught shop work and drawing as part of his duties, with a full-time program in the second year. In September, 1905, Mr. Rusch took charge of a program of manual training in Oklahoma City which had just been started the year before.¹⁰ By statehood, in 1907, manual training had been introduced into other schools.

⁷Ibid., pp. 20-22.

⁸Ibid., p. 24.

⁹Oklahoma State Department of Education, Industrial Arts in Oklahoma, p. 15.

¹⁰Ibid.

It is unfortunate that the term "manual training" was the first used in connection with shop work in Oklahoma public schools. However, the term designated the work offered then. "As concepts changed concerning the relative importance of objectives, the new term 'Industrial Arts' came into use."¹¹

Three institutions of higher education were provided for by the first legislature before the close of the year 1890. One of these, Oklahoma Normal School at Edmond was for the purpose of training teachers for manual training as well as training pupils in the classes in the model school. Classes were started in 1904 with Lee N. Taplin as Director.¹²

The second normal school, the Northwestern Normal School, was located at Alva. A manual training teacher was employed by the school in 1904, and a full two-year course was outlined in teacher training. In addition to woodworking and drawing, work in Venetian iron, clay modeling, and reed and raffia work were a part of the program.

The Colored Agricultural and Normal University at Langston was established by the legislature of 1897. Mechanical and industrial arts were provided for in the wording of the act. The school opened in the fall of 1897 with four teachers and forty students.

In 1901 the legislature provided for the establishment of a third normal school. This Southwestern Normal School opened in 1903 in Weatherford. Interest was shown in manual training here as early as 1904. A course in mechanical drawing, clay modeling, and cardboard

¹¹Ibid.

¹²Ibid.

modeling was offered through the art department. A Manual Training Department was established in the fall of 1906 with L. P. Whitcomb as a teacher.

The territorial legislature made provisions for establishing the University of Oklahoma at Norman. Mechanical drawing was taught in 1901 and 1902 as part of the engineering program. Shop equipment was purchased during the years 1905 and 1906. Four courses were offered in shop work in 1906-07. These courses were taught as technical courses under the school of engineering.

The territorial legislature also made provisions for establishing an Oklahoma and Mechanical College in 1890 to be located at Stillwater. Classes began in the fall of 1891. In the first year a one-semester course in woodwork and two-semester course in mechanical drawing were required courses in the Department of Mechanical Engineering. In 1901 courses were taught in pattern making, forge, and foundry. Until statehood all the shop and drafting courses were offered for technical purposes in connection with the work in engineering.

As a result of demand for education at the secondary school level, the University Preparatory School was established at Tonkawa in 1901. A Manual Training Department was set up in 1904.¹³

"Oklahoma became a state in 1907 with a well organized plan for education."¹⁴ Two or three schools in addition to Oklahoma City may have offered courses in manual training before statehood. The Muskogee schools began work in manual training in 1908. This same year manual

¹³Franklin, pp. 26-27.

¹⁴Ibid., p. 29.

training also was introduced into the Duncan High School. Other schools soon began a program in manual training. Some of these are: (1) Logan County High School - 1910, (2) Guthrie grade schools - 1910, (3) Mangum High School - 1910, and (4) Tulsa Old Central High School - 1913.

Ninety public schools were offering manual training in 1916-17. These schools had \$114,536.56 invested in equipment, the amount varying from \$20.00 to \$30,000.00.

With statehood teacher training institutions increased and manual training departments increased. The first state legislature provided for the establishment of an Industrial Institute and College for Girls, which was later located at Chickasha; a School of Mines and Metallurgy located at Wilburton; the Whitaker Orphan's Home at Pryor; the Oklahoma School for the Blind at Ft. Gibson, which was later moved to Muskogee; and an orphan's home for Negro children at Taft. Six secondary level agricultural schools were established with industrial work as part of the program of training.

Colleges were established by the second legislature. Three normal schools were located on the east side in 1909. These were: (1) East Central State Normal at Ada, (2) Northeastern State Normal at Tahlequah, and (3) Southeastern State Normal at Durant. The Eastern University Preparatory School was located at Claremore at the same time. The three normal schools either opened with manual training departments or made provisions for this work soon after opening. The new State Board of Education in 1911-12 set up a uniform program for all the normal schools which provided for three terms of twelve weeks required in manual training.

More and better teachers became a necessity with the opening of the many new schools. As a result, the State Superintendent urged the establishment of a course in the Agricultural and Mechanical College to be known as the "Teacher's Normal Course." Shop work soon was made a requirement for those taking training in the Teacher's Normal Division, and by 1915 the requirement was broadened.

A special program to prepare manual training teachers was not organized at the University of Oklahoma until after 1915. However, there was a Department of Mechanical Drawing set up in 1909 under the College of Engineering. Shop courses were also offered.

The state legislature established the Oklahoma School of Mines and Metallurgy in 1908 at Wilburton. It also established six secondary agricultural schools in which some industrial courses (shop work and drawing) were taught. The schools were:

Cameron State School of Agriculture	Lawton
Connell State School of Agriculture	Helena
Murray State School of Agriculture	Tishomingo
Haskell State School of Agriculture	Broken Arrow
Connors State School of Agriculture	Warner
Panhandle State School of Agriculture	Goodwell

Most of these schools have been changed to junior colleges. However, the Connell School and the Haskell School were abolished when the Governor vetoed the appropriation for them in 1917.¹⁵

World War I halted the expansion of manual training programs. Many shops that were equipped and in operation were left without teachers as these teachers either were called into service or went into war

¹⁵ Ibid., pp. 30-35.

production work. Some shops were kept open by the school janitor or another member of the school.¹⁶

The manual training program expanded rapidly in the high schools in 1917. Enrollment decreased in industrial departments in state colleges and other state schools from 1916 to 1918. Oklahoma Agricultural and Mechanical College maintained its status of industrial education by offering special classes to meet the needs of war conditions and was able to provide training for disabled veterans at the close of the year.

Educational programs were expanded. Northeastern Oklahoma School of Mines was established at Miami by the legislature in 1919. In the same year the six two-year normal schools were expanded to four-year colleges and their names changed to State Teachers Colleges. The University Preparatory School at Tonkawa and the secondary agricultural school at Goodwell were raised to the rank of junior colleges. College work was authorized at Oklahoma Military Academy, Claremore, and at Murray State School of Agriculture, Tishomingo, during 1923 and 1924. During the period from 1917 to 1925 all the state secondary schools became junior colleges.

With the advancement in rank of the schools, the industrial departments were enlarged, and the senior colleges expanded teacher training facilities. Most of the staff members did not have college degrees in the early part of this period. However, by the end of ten years, this status had changed almost completely.¹⁷

¹⁶Ibid., p. 45.

¹⁷Ibid., pp. 46-48.

Among national leaders in industrial education, there was a tendency to change the program of work and to call the work "manual arts" or "industrial arts." In Oklahoma the term "manual arts" became widely used. By 1926 there was a general trend to use the term "industrial arts" to indicate the program of shop work and drafting in the public schools for general educational purposes.¹⁸ Educational programs in industrial arts continued to expand.

In 1934 the State Advisory Committee for Industrial Arts in Oklahoma had its first meeting. This committee has from the first worked toward a plan of supervision for industrial arts in Oklahoma's public schools. Various industrial arts associations were also formed shortly thereafter.¹⁹

Industrial arts' status reached a low ebb at the end of World War II. Shops deteriorated and often equipment was lost. The war effort consumed most of the raw materials and finished products, with little remaining in the way of supplies, materials, and equipment for activities other than those vital to national defense. As a laboratory course, industrial arts was especially handicapped. The content of industrial arts was altered somewhat during the first half of the 1940's since most of the material used in the industrial arts laboratory was from secondhand sources. Repair operations were stressed at this time. Wood and sheet metal were perhaps the most readily available materials so concentration was definitely on the wood and sheet metal areas.²⁰

¹⁸Ibid., pp. 51-52.

¹⁹Ibid., p. 61.

²⁰Henry J. Sredl, "Years of Famine, Years of Growth," The Journal of Industrial Arts Education (November-December, 1966), p. 50.

Due to the war, there was a shortage of industrial arts teachers. Some retired craftsmen were employed. The war did not change industrial arts radically.

Fundamental goals of industrial arts remained constant and prominent throughout the war effort, even though it was important for industrial arts educators to develop the practical relationship of their area to war.²¹

The post-war period was characterized by increased attention to the expansion of the industrial arts program and realignment of industrial arts to the general education program. New materials and techniques were introduced.²²

A survey for the school year 1947-48 showed that 345 accredited high schools out of 825 had some type of industrial education in Oklahoma. In 1950 there were 700 industrial arts teachers in Oklahoma, which was well above the national average in the number of industrial arts teachers employed.²³

The space age challenges the right of industrial arts to exist. Presently industrial arts is being challenged to expand and clarify its function. "A re-evaluation of current emphases in industrial arts, together with the identification of curricular functions which best reflect current technological trends is essential."²⁴

²¹Melvin L. Barlow, History of Industrial Education in the United States (Peoria, Illinois, 1967), p. 276.

²²Ibid., pp. 280-281.

²³Oklahoma State Department of Education, Industrial Arts in Oklahoma, p. 17.

²⁴Oklahoma State Department of Education, A Guide to Improvement of Industrial Arts in Oklahoma Schools, p. iv.

CHAPTER III

THE DEVELOPMENT OF JUNIOR COLLEGES IN OKLAHOMA

Education beyond the high school level is becoming essential for all students. The two-year college (junior college) is an educational resource that in recent years has begun to show its potential. Today these institutions make up a strong and important link in the educational chain. The junior college is bringing educational opportunities within the financial and geographic reach of many.

Lewis Institute of Chicago, which opened around the turn of the century, is probably the first private two-year college. The first public two-year college was located at Joliet, Illinois, and opened at about the same time. Michigan and Indiana added two years of post-graduate work in the high schools which was equivalent to the first two years of college. In 1907 the California Legislature enacted the first law containing provisions for the formation of public two-year colleges.

The junior college has expanded rapidly. There were eight two-year colleges in the early 1900's. Today there are 701 junior colleges, 277 private two-year colleges and 424 public two-year colleges. The public two-year colleges have nearly 90 per cent of all the two-year enrollment. One student in four enrolling in college for the first time enrolls in a two-year college. These institutions now serve over

800,000 students.¹

Junior colleges in Oklahoma provide a diversity of educational experience beyond the high school level. This chapter traces the development of junior colleges in Oklahoma in order to allow the individual to better appreciate these institutions.

Bacone College

"Bacone College is the oldest institution of higher education in the state of Oklahoma."² Almon C. Bacone founded the college in 1880. The school opened at the Cherokee Baptist Mission near Tahlequah with three students. By the end of the first term there were twelve students.

During the first year of the school's existence, the American Baptist Home Mission Society assumed responsibility for the work. The Creek Tribal Council deeded the school 160 acres of land near Muskogee, and the first building was completed in 1885.³

In 1910 the name was changed to Bacone College in honor of the founder. At first the college granted masters' degrees as a four-year college, but in 1927 it became a junior college.⁴

Through the years the college has increased its facilities and broadened its scope. Bacone serves both Indian and non-Indian students,

¹The Prudential Insurance Company of America, Facing Facts About the Two-year College (Newark, New Jersey, 1964), pp. 1-5.

²Bacone College Annual Bulletin, 1967-1968 (Muskogee, 1967), p. 5.

³Ibid.

⁴Marion Edmund Franklin, p. 130.

and is accredited by the North Central Association of Secondary Schools and Colleges.

Bacone is incorporated under the laws of the State of Oklahoma. It is governed by a self-perpetuating Board of Trustees of 36 members--twenty from the American Baptist constituency and sixteen from Oklahoma. Bacone College has emerged as a church-related college and a liberal arts junior college.⁵ It grants the Associate in Arts Degree and the Associate in Arts in Nursing Degree.⁶

It is difficult to determine when Bacone College first introduced some phase of industrial work on the junior college level. As a part of the arts and crafts work, weaving was introduced at the college in 1936. Shop work and drafting programs began in September of 1946.⁷

Presently Bacone College employs one industrial arts instructor. Courses included in the industrial arts program are general drafting, engineering drawing, descriptive geometry, printing, print shop practice, book binding, general shop, crafts, and welding.⁸

Northern Oklahoma College

On March 1, 1901, the legislative assembly of Oklahoma Territory passed an act appropriating money for the establishment of the University Preparatory School to be located at Tonkawa. The following

⁵Bacone College Annual Bulletin, 1967-1968, p. 5.

⁶Ibid., p. 31.

⁷Franklin, p. 130.

⁸Bacone College Annual Bulletin, 1967-1968, pp. 61-62.

September the doors of the new school were opened with two hundred and twenty-seven men and women enrolled.

As the curriculum expanded and the enrollment increased, new equipment and other facilities became a necessity. An act of Congress on June 2, 1906, donated to the school a section of land adjoining the city of Tonkawa. Additional buildings were secured through proceeds from the sale of this land. Another tract of land for the same purpose was secured through a similar act in 1909.

The College Department was established in 1920, and the institution became a fully accredited junior college. The name was changed to Northern Oklahoma Junior College by an act of the state legislature in 1941.

Further changes were made in 1965 with the passage of the Higher Education Code by the state legislature. This changed the institution's official name to Northern Oklahoma College, as well as expanding its Board of Regents from three to five men.⁹

Northern Oklahoma College is a member of the North Central Association of Colleges and Secondary Schools Council of North Central Junior Colleges. It offers the Associate in Arts Degree, the Associate in Business Degree, the Associate in Science Degree, or the Junior College Certificate.¹⁰

Industrial courses were introduced early in the life of the University Preparatory School. The industrial work of the school received

⁹Northern Oklahoma College Bulletin, 1966-68 (Tonkawa, 1966), pp. 5-6.

¹⁰Ibid., p. 17.

a severe blow in 1917 when an appropriation was vetoed by the governor. Much of the equipment, especially that for metalworking, was taken out of the shops and shipped to McAlester. "After most of this equipment had set out in the open for two years, it was loaded as before and shipped back when the school reopened."¹¹

The metal workshop of the school was reopened in 1921 with a great deal of repair work undertaken to salvage equipment. One of the earlier print shops of the state was established by this school.¹²

Presently Northern Oklahoma College has three industrial arts instructors. It offers courses under the headings of automotive, cabinet-making, machine shop, mechanical drawing, printing, and welding.¹³

The Industrial Arts Building features the latest in shop design and equipment. The cabinetmaking shop, metal shop, print shop, auto mechanics shop, welding shop, and drafting room are housed in this modern building. A new addition at the rear of the building in 1963 permitted expansion of cabinetmaking and auto mechanics area.¹⁴

Connors State Agricultural College

Connors State School of Agriculture was authorized by an act of the first legislature on May 10, 1908. Warner was chosen as its location and 160 acres of land upon which the school is located was given to the school by the citizens of Warner. The school was named for the president of the State Board of Agriculture at that time, J. P. Connors.

¹¹Franklin, pp. 119-120.

¹²Ibid., p. 120.

¹³Northern Oklahoma College Bulletin, 1966-68, pp. 42-44.

¹⁴Ibid., p. 8.

Classes began in February, 1909, in downtown Warner. The first permanent building was completed in 1911, and the school was moved to its present site, one mile west of Warner. Connors was approved as a fully accredited junior college by an act of the eleventh legislature in March, 1927. "An amendment to the Oklahoma Constitution made on July 11, 1944, set up a governing board for the agricultural and mechanical colleges."¹⁵

From the original 160 acres, the college's holdings have increased to include: 360 acres for farming purposes, a 35-acre campus, eight major buildings serving student needs, ten residences, four farm buildings, a modern water plant, a lake, and a building housing a central heating system. Two million dollars worth of new construction was completed during 1963-64.

Connors is accredited by the North Central Association of Colleges and Secondary Schools, the State System of Higher Education, and the State Department of Education. Connors State Agricultural College is also a member of the American Association of Junior Colleges.¹⁶ Connors awards the Associate in Arts Degree or the Associate in Science Degree after completion of requirements.¹⁷ The school is rapidly growing. Present enrollment is approximately 600 students, increasing from 135 students five years ago.¹⁸

¹⁵Connors State Agricultural College Announcements for 1966-1968 (Warner, 1966), p. 8.

¹⁶Ibid., pp. 8-9.

¹⁷Ibid., p. 20.

¹⁸Dr. Melvin Self, President, personal interview, Warner, Oklahoma, May 27, 1967.

A separate shop building is located on the campus. It is a one-story structure of native stone, 114 feet long and 44 feet wide.¹⁹ Farm shop work and maintenance mechanics were the main courses taught at Connors in 1919-22. A "curriculum in Industrial Arts" was initiated in 1950. "This curriculum included five semester hours of drafting and descriptive geometry and nine semester hours of shop courses."²⁰ Currently industrial arts is not offered at Connors State Agricultural College. It was discontinued two years ago.²¹

Cameron State Agricultural College

The state legislature of Oklahoma on May 20, 1908, created six district agricultural schools of a secondary grade for instruction in agriculture and mechanics and allied branches. A group of businessmen, working with the Chamber of Commerce, purchased 160 acres of land west of Lawton. The school was named for E. D. Cameron who was then State Superintendent of Schools.²²

The school was located temporarily in the basement of a Lawton business building. In November, 1909, Cameron opened with a faculty of six members and a student body of one hundred and eight students. The institution moved into a three-story brick building in March, 1911, on the present site of Cameron College.

¹⁹Ibid., p. 10.

²⁰Franklin, p. 122.

²¹Self, personal interview.

²²Cameron State Agricultural College Catalog, 1966-67 (Lawton, 1966), pp. 11-12.

"Junior college work was added by an act of the state legislature passed on March 24, 1927, at which time the name of Cameron State Agricultural College was adopted."²³ The first junior college graduation occurred in 1929. Both high school and junior college courses were offered until 1940 at which time Cameron assumed its present status as a two-year junior college.

Cameron College is accredited by the North Central Association of Colleges and Secondary Schools and is a member of the American Association of Junior Colleges.²⁴ It awards the Associate in Arts Degree or a Certificate of Completion.²⁵

The Manual Training Department opened in September, 1910, when the school was a secondary school. Industrial courses were offered but most of the work consisted of hand woodworking, mechanical drawing, and structural work in connection with the farm or of maintenance of the school property.²⁶

When the junior college program was initiated, further interest was developed in industrial courses and a separate shop building was erected. The courses offered at that time were under the heading of engineering and shop work. In 1950 all industrial education courses were in the division of the college entitled Division of Engineering and Industrial Arts.²⁷

²³Ibid., p. 12.

²⁴Ibid.

²⁵Ibid., p. 30.

²⁶Franklin, p. 123.

²⁷Ibid.

Presently Cameron College has an Industrial Arts Department employing two instructors. Courses offered are: general shop, bench woodwork, leather crafts, machine woodworking, care of shop equipment, machine shop practice, arts and crafts, carpentry problems, wood turning, acetylene welding, and manual electric welding.²⁸

Murray State Agricultural College

Murray State Agricultural College was the first one of the agricultural schools of secondary grade to be established by the first state legislature. It was located in Tishomingo and began operating in 1908.

Due to increasing demands for a higher standard and grade of work, the State Board of Agriculture by resolution in the spring of 1922 authorized the school to add a year of college work during the session of 1922-23 and another year during the 1923-24 session, thus raising the institution to the rank of a junior college. By proper enactment the legislature sanctioned the addition of junior college work, approved by the Governor on March 17, 1924.²⁹

Murray State Agricultural College is one of the nine colleges under the control of the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges and under the supervision of the State Regents for Higher Education. The Associate of Science Degree is conferred upon students satisfactorily completing requirements.³⁰

Shop and drafting courses were started in 1912 in two rooms in the high school as the Murray Building was not yet completed. The first courses were largely farm shop work and institutional repair and

²⁸Ibid., pp. 60-61.

²⁹Murray State Agricultural College Catalog, 1966-68 (Tishomingo, 1966), p. 10.

³⁰Ibid., p. 17.

maintenance work. The wood shop was expanded in the second year when classes were held in the Murray Building.³¹

Industrial arts courses presently are held in the Engineering Building which was erected in 1941.

It is a 148x95 foot brick building, consisting of two wings which house the woodworking and machine shops, and the central section containing offices and classrooms, with a second story equipped for the drafting department. Both woodwork and machine shops are equipped with modern power-driven machinery.³²

An industrial arts curriculum is offered under the Department of Engineering and Technology. Three instructors are employed in this department. The industrial arts program includes courses in: care of shop equipment, carpentry, crafts, elementary woodworking, wood turning, advanced hand woodworking, machine shop practice, general welding, and plastics working.³³

Eastern Oklahoma State College

Eastern Oklahoma State College was established by the state in 1909 as the Oklahoma School of Mines and Metallurgy, offering degrees in engineering. The school was closed during World War I, but in 1920 it reopened with mining engineering and trade and industrial education courses for disabled veterans comprising the curriculum.

Mining engineering was discontinued in 1924 with the addition to the college program of teacher training and extension courses for

³¹Franklin, p. 121.

³²Murray State Agricultural College Catalog, 1966-68, p. 10.

³³Ibid., p. 30.

miners.

The state legislature changed the name of the school to Eastern Oklahoma College in 1927, and gave it authority to provide trade and industrial courses on a pre-college level and to issue degrees, diplomas, and certificates.³⁴

Eastern Oklahoma College was authorized by the legislature in 1935 to care for, train, and educate dependent orphan youth of the state who were otherwise unable to secure an education. "A remodeling program in 1937 provided space for the addition of training programs in business, agriculture, home economics, and industrial arts."³⁵

The name of the college was changed by the state legislature again in 1941 to Eastern Oklahoma Agricultural and Mechanical College and was placed under the control of the State Board of Agriculture. In 1967 the legislature changed the name to Eastern Oklahoma State College.³⁶

The Associate Degree is awarded after completion of requirements.³⁷ Eastern is officially accredited by the North Central Association of Colleges and Secondary Schools and all Oklahoma State School Accrediting Agencies. It is a member of the American Association of Junior Colleges, Council of North Central Junior Colleges, and the American Council on Education.³⁸

³⁴Eastern Oklahoma State College Catalog, 1967-1969 (Wilburton, 1967), p. 13.

³⁵Ibid.

³⁶Ibid.

³⁷Ibid., p. 23.

³⁸Ibid., p. 1.

The Industrial Education Building houses industrial education classes and laboratories. In the summer of 1963, an expansion to the building provided space for a new electronics program and welding.³⁹

"As might be expected, the history of the industrial education program of the school has been about as varied as the changes in the school. The first shop work began in the fall of 1911."⁴⁰ The first shop courses offered were woodwork, forge practice, and machine shop. When the school reopened in 1920, only machine shop work was offered. Woodworking was offered again in 1925 and all machine-shop work ceased. In 1934 all shop work instruction was discontinued. The shops were opened in 1938 when an industrial arts instructor was employed.

Industrial arts as such is not offered presently at Eastern. There is an Industrial Education Division in which there are four instructors.⁴¹

Northeastern Oklahoma Agricultural and Mechanical College

Northeastern Oklahoma Agricultural and Mechanical College had its beginning in 1919 when the governor signed a bill creating the Miami School of Mines. "A special Board of Regents, authorized under House Bill 552, at once organized the school so that it offered only college work, largely of a scientific nature."⁴²

³⁹ Ibid., p. 1.

⁴⁰ Franklin, p. 120.

⁴¹ Eastern Oklahoma State College Catalog, 1967-1969, pp. 7-9.

⁴² Northeastern Oklahoma Agricultural and Mechanical College Catalogue, 1966-68 (Miami, 1966), p. 11.

Classes were held in the Mining and Exchange Building in Miami for one year. In 1920 the institution moved into a new building located on forty acres of land donated by citizens of Miami. Here it operated as a school of mines until 1925 at which time the legislature changed the name of the school to Northeastern Oklahoma Junior College and general collegiate courses were added to the curriculum.

Control of the college remained in the hands of the special Board of Regents until 1939 when Northeastern Oklahoma Junior College and the six teachers' colleges were placed under the supervision of the Board of Regents of the State Colleges.⁴³

By an act of the state legislature in April, 1943, the institution's official name was changed to Northeastern Oklahoma Agricultural and Mechanical College. It was placed under the Board of Regents for Agricultural and Mechanical Colleges. A two-hundred acre farm was purchased and equipped, agricultural courses were added, and shop buildings were constructed and equipped.

Northeastern Oklahoma A&M College is fully accredited by our state institutions and by the North Central Association of Colleges and Secondary Schools. It offers the Associate in Arts Degree for graduation when students satisfactorily complete requirements.⁴⁴

An industrial arts education curriculum is offered in the Industrial Education Division, Department of Industrial Technology. This curriculum is offered for the benefit of the student who has not had an opportunity to take work of this nature in high school, as well as preparing the student who wishes to become an industrial arts teacher.⁴⁵

⁴³Ibid.

⁴⁴Ibid.

⁴⁵Ibid., p. 34.

CHAPTER IV

INTERPRETATION OF CATALOGUE FINDINGS

An increasingly technological society has focused attention on industrial arts as a curriculum area. Industrial arts is being challenged to expand and clarify its function. An analysis of each catalogue of seven Oklahoma junior colleges is given in this chapter to reveal the many-faceted character of industrial arts. The findings will be presented in the form of tables with limited interpretations to show the variation of course offerings at the Oklahoma junior colleges in which industrial arts is taught.

Departmental titles present an insight into the educational programs offered. Table I includes the titles of the departments. Out of seven Oklahoma junior colleges, only three have departments entitled "industrial arts." In two cases industrial arts is offered as a division or sub-division of a department. One junior college, Connors, has discontinued its industrial arts program entirely. Although the Connors catalogue presents a curriculum for industrial arts, no industrial arts courses have been taught for two years.¹ With only three departments entitled "industrial arts," it appears that emphasis is being placed on curriculum areas other than industrial arts.

¹Self, personal interview.

TABLE I

TITLES OF INDUSTRIAL EDUCATION DEPARTMENTS IN SEVEN OKLAHOMA JUNIOR COLLEGES

Junior College	Department	Division	Sub-Division
Bacone College	Industrial Arts		
Cameron State Agricultural College	Industrial Arts		
Connors State School of Agriculture	Technical Education		
Eastern Oklahoma State College	Industrial Education Division		
Murray State Agricultural College	Engineering and Technology	Industrial Arts	
Northeastern Oklahoma A&M College	Industrial Education Division	Industrial Technology	Industrial Arts Education
Northern Oklahoma College	Industrial Arts		

Industrial arts instructors are few in number in comparison to the number of other industrial education instructors. As shown in Table II, there are twenty-eight industrial education instructors in Oklahoma's junior colleges, six of which are classified under the curriculum area of industrial arts. This comprises 21.4 per cent of the total industrial education instructor population. Four instructors, 14.2 per cent, are involved in teaching both industrial arts and technical courses. The greatest number of instructors is in the technical area with fourteen instructors, or 50.0 per cent. Five instructors, 17.2 per cent are classified under industrial education.

This data might suggest that industrial arts needs to expand its program. Since industrial arts and technical education have different objectives, it would appear that those instructors teaching both industrial arts and technical education would have a conflict of interest.

There is a diversity of courses offered in industrial arts in Oklahoma junior colleges. Table III includes courses offered in industrial arts and the number of semester hours of credit offered in each subject. The course is recorded by the title which best describes the content of the course. The course listed as I or II is a course in which a sequence of courses is offered, with the II designating more advanced work. Connors State School of Agriculture and Eastern Oklahoma State College are not included in this table as they do not have programs entitled "industrial arts."

Table III illustrates that many of the seven areas identified by the Oklahoma State Department of Education as industrial arts are not receiving major emphasis in an industrial arts program. These seven

TABLE II
CURRICULUM AREAS AND NUMBER OF INDUSTRIAL EDUCATION INSTRUCTORS
IN SEVEN OKLAHOMA JUNIOR COLLEGES

Junior College	Industrial Arts	Industrial Arts and Technical	Technical	Industrial Education
Bacone College	1			
Cameron State Agricultural College	1	1	2	
Connors State School of Agriculture			1	
Eastern Oklahoma State College				4
Murray State Agricultural College		3		
Northeastern Oklahoma A&M College	1		10	1
Northern Oklahoma College	3			
Total	6	4	13	5

TABLE III
COURSES AND CREDIT HOURS OFFERED IN INDUSTRIAL ARTS
IN FIVE OKLAHOMA JUNIOR COLLEGES

Course	Bacone	Cameron	Murray	Northeastern	Northern
Arts and Crafts		2			
Automotive - Combustion Engines					5
Automotive - Service and Repair					2-8
Book Binding	2				
Cabinetmaking I				3	3
Cabinetmaking II				3	2
Care of Shop Equipment		2	2		1
Carpentry			2		
Carpentry I				3	
Carpentry II				3	
Carpentry and Mill Work I					3
Carpentry and Mill Work II					2
Carpentry Problems		2			

TABLE III (Continued)

Course	Bacone	Cameron	Murray	Northeastern	Northern
Crafts	3				
Crafts - Leather		1	1		
Crafts - Plastics			1		
Descriptive Geometry	3				
Drawing - Engineering	3				
Drawing - General	3				
Drawing - House					2
Drawing - Machine I					2
Drawing - Machine II					2
Drawing - Technical					2
General Shop	2	2			
Machine Shop I				2	
Machine Shop II				3	

TABLE III (Continued)

Course	Bacone	Cameron	Murray	Northeastern	Northern
Machine Shop - Practice		2	2		
Machine Shop - Tool Making					2-5
Machine Shop - Tool Processes					2-5
Maintenance Machines				3	
Metals - General					2-5
Metals - Sheet				2	
Printing	3				
Printing - Advanced					3-4
Printing - Advanced Composition					5
Printing - Advanced General					5
Printing - Linotype					5
Printing - Care of Linotype					5
Printing - Elementary Composition					5

TABLE III (Continued)

Course	Bacone	Cameron	Murray	Northeastern	Northern
Printing - General					3-4
Printing - Graphic Arts					2
Printing - Intermediate Linotype					5
Printing - Linotype Keyboard					5
Printing - Machine Principles					5
Printing - Maintenance					5
Printing - Newspaper Makeup					5
Printing - Operation					4
Printing - Press Operation					5
Printing - Related Processes					7
Print Shop Practice	3				
Welding	3				
Welding - Acetylene		2		2	

TABLE III (Continued)

Course	Bacone	Cameron	Murray	Northeastern	Northern
Welding - Acetylene and Arc					2
Welding - Advanced					2
Welding - Arc		2		2	
Welding - Beginning					2
Welding - General			2	2	
Welding - Job Shop				2	
Welding - Special				2	
Wood Finishing I				2	3
Wood Finishing II					2
Wood Turning		2	1	3	3
Woodworking - Bench I		3		3	3
Woodworking - Bench II					2
Woodworking - Elementary			5		

TABLE III (Continued)

Course	Bacone	Cameron	Murray	Northeastern	Northern
Woodworking - Hand		2			
Woodworking - Machine		3	6	3	
Total	25	23	24	43	142

areas in industrial arts are: woodworking, metals, drafting, electricity-electronics, power mechanics, graphic arts, and industrial crafts.

Woodworking is the most frequently listed of the seven areas identified as industrial arts. Four out of the five Oklahoma junior colleges include woodworking as a part of the industrial arts program. Bench woodworking and machine woodworking receive major emphasis, with three of the junior colleges offering a course in each.

The metals area is enhanced by the courses offered in welding. All five junior colleges having a program entitled "industrial arts" offer a course in welding. Machine shop practice also may be considered in the metals area. Four junior colleges offer a course of this type.

Although drafting is one of the seven major curriculum areas designated as industrial arts, only two junior colleges list drafting as a part of the industrial arts program. This might suggest one area on which emphasis should be placed, allowing the industrial arts program to expand.

At the present time a course in electricity-electronics is not offered in the industrial arts program at the junior college level. Immediate expansion in this area would broaden the industrial arts program.

As a part of the industrial arts program, power mechanics is being taught only at Northern Oklahoma College. Thirteen hours of credit may be obtained at Northern in the power mechanics area. This indicates an area for further expansion at other junior colleges.

Two junior colleges offer a course in the graphic arts area, Bacone College and Northern Oklahoma College. An extensive program in printing is offered at Northern. Seventy-six hours of printing are

listed in Northern's catalogue. Photography, being a part of graphic arts, presently is not offered in the industrial arts program at the junior college level in the state.

Three Oklahoma junior colleges include some form of industrial crafts within the industrial arts program. Each of the three junior colleges offers one course in this area.

In tabulating the data from the catalogues of those junior colleges having an industrial arts program, Northern Oklahoma College surpasses the others in the scope of industrial arts courses offered in the respective subject-matter areas. Northern's industrial arts curriculum constitutes one of the most significant industrial arts program in the state.

Industrial education courses and total credit hours offered in departments other than industrial arts are grouped together under a general course heading in Table IV. Many of these courses may be considered industrial arts. However, they are not being taught as such. These courses account for 627 credit hours compared to 257 credit hours in industrial arts.

Table V includes total credit hours offered in major areas of industrial arts and other industrial education programs in seven Oklahoma junior colleges. In analyzing the data from the catalogues of seven Oklahoma junior colleges, it seems as though industrial arts is lagging behind in its course offerings. In those cases where the same course is offered by both industrial arts and another industrial education department, industrial education exceeds industrial arts in total number of credit hours offered with the exception of woodworking.

TABLE IV
COURSES AND TOTAL CREDIT HOURS OFFERED IN INDUSTRIAL EDUCATION PROGRAMS OTHER THAN
INDUSTRIAL ARTS IN FIVE OKLAHOMA JUNIOR COLLEGES

Course	Cameron	Connors	Eastern	Murray	Northeastern
Auto Mechanics	24				27
Building & Construction Technology			42		
Drafting & Design	25	29	57	12	32
Electrical & Electronics Technology	61		41		44
Industrial Education					23
Industrial Processes				19	
Mathematics	5			24	
Mechanical Technology			54		
Refrigeration & Air Conditioning					14
Vocational Guidance			1		
Welding	2		30		10
Woodwork			51		
Total	117	29	276	55	150

TABLE V

TOTAL CREDIT HOURS OFFERED IN MAJOR AREAS OF INDUSTRIAL ARTS AND
OTHER INDUSTRIAL EDUCATION PROGRAMS IN SEVEN
OKLAHOMA JUNIOR COLLEGES

Course	Industrial Arts	Other Industrial Education Programs
Auto Mechanics	13	51
Building & Construction Technology		42
Carpentry	15	
Crafts	8	
Drawing	17	155
Electricity-Electronics		146
Machine Shop	22	
Mathematics		29
Mechanical Technology		54
Metals	7	
Printing	- 82	
Refrigeration & Air Conditioning		14
Welding	25	42
Woodworking	67	51

Industrial arts offers many courses that are not duplicated by other industrial education programs. These courses are significant to general education and industrial enlightenment.

CHAPTER V

INTERPRETATION OF QUESTIONNAIRE STUDY

The questionnaire survey was conducted with the intent of describing conditions and practices that exist in industrial arts programs of seven Oklahoma junior colleges and comparing them with recommended objectives. The questionnaire was used to obtain answers to questions concerning the instructional program, the characteristics of instructors, the nature of pupils, the classroom facilities, the objectives emphasized, and the status of the program.

The questionnaire was sent to twenty-eight instructors of seven Oklahoma junior colleges which offer industrial education programs listed in the "Annual Directory of Industrial Arts Teachers, Trade and Industrial Teachers, and Other Teachers of Shopwork Courses in Oklahoma Universities, Colleges, and High Schools for the School Year 66-67." Names and addresses of those instructors to whom the questionnaire was sent may be found in Appendix A. Appendix B includes a copy of the questionnaire, along with a transmittal letter stating the purposes of the study.

After a period of three weeks, a follow-up letter was sent to those instructors not responding to the questionnaire (see Appendix C). Another copy of the questionnaire was included with the letter. Out of the twenty-eight questionnaires mailed, twenty were returned, for a 71.4 per cent return. Two questionnaires were completed only partially.

For purposes of analysis, the questionnaires were divided into two groups. One group consisted of those instructors classifying their program as industrial arts. The other group consisted of those instructors classifying their program as other than industrial arts, generally technical. Responses to the items in the questionnaire were tabulated and analyzed. Tables will be used in presenting the data. All data analyzed will be based on the information received from nine industrial arts instructors and nine technical instructors unless stated otherwise.

Culmination of educational planning and preparation is achieved in the instructional program. As program titles are usually descriptive of course content, the instructors were asked to check what they considered to be the title of their program.

TABLE VI
TITLES OF INDUSTRIAL EDUCATION PROGRAMS
IN SEVEN OKLAHOMA JUNIOR COLLEGES

Title of Program	Number of Instructors
Industrial Arts	8
Manual Arts	0
Manual Training	0
Other	
Division of Technology	1
Technical Education	9
Technical Training Division	1
Shop	1

In tabulating the data, it was noted that 40 per cent, 8, of the instructors responding considered the program as industrial arts. One instructor listed the title as shop. Fifty-five per cent, 11, classified the program as technical in nature.

A unique objective of industrial arts is to provide for the acquisition of knowledge about industrial employment and the requirements for occupational efficiency in various industrial activities. Although industrial arts serves this guideline function, it is not committed to the role of vocational training. It does, however, in advance courses achieve this result to some degree.¹

"Industrial arts deals primarily with those elements which may be characterized as part of general education."² Because objectives play such an important part in the development of an educational program, instructors were asked to express opinions on the objectives of the program.

It appears that industrial arts is not meeting the general education objective set forth by the Oklahoma State Department of Education. As shown in Table VII, only one industrial arts instructor indicated that the objective of the program was solely general education. The college preparatory objective also may be considered general education. One instructor listed this as his objective. Of the nine instructors classifying programs as industrial arts, 5 instructors, 55 per cent, listed more than one objective for the program. Two instructors, 22 per cent, stated that the objective was college preparatory and terminal. College preparatory, general education, and terminal were listed by 3

¹Oklahoma State Department of Education, A Guide to Improvement of Industrial Arts in Oklahoma Schools, p. 4.

²Ibid., p. 2.

instructors, 33 per cent, as the objective of their programs. One industrial arts instructor did not respond to the question. As a terminal objective is orientated toward employment, those industrial arts instructors with the terminal objective in mind are in conflict with the general education objective of industrial arts set forth by the Oklahoma State Department of Education. Only 22 per cent of the instructors are meeting the general education objective.

TABLE VII
OBJECTIVES OF INDUSTRIAL EDUCATION PROGRAMS
IN SEVEN OKLAHOMA JUNIOR COLLEGES

Objective	Industrial Arts [*]	Technical
College Preparatory	1	1
General Education	1	0
Terminal	1	4
College Preparatory and Terminal	2	2
College Preparatory, General Education, and Terminal	3	1
No Response	1	3

* Shop instructor included

Thirty-six per cent of the instructors classifying the program as technical listed a terminal objective. Three, 27 per cent, of the technical instructors failed to respond to the question.

Adequate facilities are essential in shop programs. Oklahoma junior colleges seem to have adequate facilities in the shops. The facilities mentioned in the questionnaire are listed in Table VIII. Facilities most frequently checked by all instructors were: office,

lavatory, classroom, and restroom. Few Oklahoma junior colleges had a dust collection system in the shop.

TABLE VIII
SHOP FACILITIES IN OKLAHOMA JUNIOR COLLEGES

Facility	Industrial Arts	Technical
Classroom	7	9
Dust Collection System	2	2
Finishing Room	5	2
Lavatory	8	4
Lockers	3	0
Office	8	9
Planning Room	4	2
Project Storage Room	1	4
Restroom	7	6

Adequate tools and equipment are a necessity for the industrial arts shop. They help to create the ideal learning situation. Instructors were asked to reply to the question: "Do you feel there are adequate tools and equipment for your program?" Sixty-seven per cent of the industrial arts instructors stated that there were adequate tools and equipment to implement the program. Twenty-two per cent felt that the tools and equipment were inadequate. Eleven per cent did not respond to the question. Of the other industrial education instructors responding to this question, 67 per cent stated that they had adequate tools and equipment. It was felt by 33 per cent of the industrial education instructors that they did not have adequate tools and

equipment to facilitate the learning process.

It is not uncommon for instructors to be responsible for administrative duties and to teach courses outside of the department. Table IX includes various activities in which the instructors participate and the number of instructors engaged in each activity.

TABLE IX
DUTIES AND ACTIVITIES ENGAGED IN BY INDUSTRIAL EDUCATION
INSTRUCTORS OF SEVEN OKLAHOMA JUNIOR COLLEGES

Duty or Activity	Industrial Arts	Technical
Adult Education	1	0
Committees	4	0
Department Head	2	2
Manpower	1	0
No Outside Duties	2	5
Other Duties	0	1
Sponsors Student Club	1	0
Teaches Other Courses	2	2

Two industrial arts instructors, 22 per cent, had no outside duties. The seven remaining industrial arts instructors participated in various activities. Committee work was the activity mentioned most frequently. Fifty-seven per cent were members of committees. Five instructors, 55 per cent, classifying themselves as technical, stated that they had no outside duties.

A student organization can be an effective addition to administering routine classroom and shop activity. An organization creates opportunities for leadership development and for learning related

information associated with the administration of routine activities. Sixty-seven per cent of the industrial arts instructors related that there was not an Industrial Arts Club at their college. Three instructors, 33 per cent, indicated that they did have an Industrial Arts Club. However, it is significant to note that these three instructors, 33 per cent, were all from the same college.

The industrial arts department may focus attention on the industrial arts program and at the same time on the individual by participating in a scholastic meet or project exhibit. Effectively displaying the products that come from the efforts of students should be an integral phase of the public relations program. As well as the public relations aspect, psychological benefits are derived from such displays. The opportunity for recognition provides incentive, and the knowledge that one's work will be scrutinized encourages the learner to do his best. The goals for industrial arts are different than those in the past. Such displays may be used as part of a public relations program to keep the community apprised on the industrial arts program. Otherwise, citizens may evaluate the offerings in industrial arts against those they remember from their own education. The question asked concerning this topic was: "Has your industrial arts department participated in a scholastic meet or project exhibit in the last two years?" Seventy-eight per cent of the instructors replied negatively. Two instructors, 22 per cent, replied affirmatively. Both individuals were from the same college.

If programs in the educational system are going to continue to grow, internally as well as externally, high status ratings must be maintained. Each instructor was asked to indicate the status of the

program in his college. Sixty-seven per cent of the industrial arts instructors stated that the status of the program within the college was average. Poor status was indicated by 33 per cent. No industrial arts instructor termed the status of the program as good. Sixty-seven per cent of those instructors classifying themselves as technical indicated the status of the program as being good. Thirty-three per cent denoted average status. No technically orientated instructor specified poor status.

A close relationship between counselors, teachers, and administration of the secondary level and the junior college level can be beneficial to the industrial arts program. Information about the curriculum, the facilities, and other aspects of the program should be directed to the public. The industrial arts program can profit by recruiting. In tabulating the data, it seems that recruiting on the secondary level is done by the majority of instructors. Sixty-seven per cent of the industrial arts instructors expressed that they do some form of recruiting.

Follow-up studies may be advantageous in planning a course of study. Instructors were asked a question concerning their graduates entering industry, a four-year college, or other field. The data indicated that the majority of the industrial arts junior college graduates were entering a four-year college. The majority of graduates of a technical program were entering industry.

Further study beyond a bachelor's degree would seem imperative for upgrading our programs. Thus, the instructors were asked to check the degree(s) earned and from which institution(s) obtained. Table X includes the degrees earned and the institutions from which they were obtained.

TABLE X

DEGREES EARNED AT COLLEGES AND UNIVERSITIES BY INDUSTRIAL EDUCATION INSTRUCTORS
OF SEVEN OKLAHOMA JUNIOR COLLEGES

College or University	Industrial Arts			Technical		
	Associate	Bachelor	Master	Associate	Bachelor	Master
East Central State College		1			1	
Northeastern Oklahoma A&M College				1		
Northeastern State College					2	
Oklahoma State University		1	4		2	4
Out-of-State Colleges or Universities		5			2	2
Southeastern State College			2		1	
Southwestern State College		1				
University of Oklahoma			2			

All eight industrial arts instructors responding to this question held both a bachelor's degree and a master's degree. The largest per cent, 63 per cent, of the industrial arts instructors' bachelors' degrees were obtained from out-of-state colleges or universities. Fifty per cent, 4, of the instructors received masters' degrees from Oklahoma State University. The other 50 per cent obtained masters' degrees at an Oklahoma college or university.

Of the nine instructors classifying themselves as technical, 8, 89 per cent, hold a bachelor's degree. One instructor held only an associate degree. Sixty-seven per cent, 6, of the technical instructors have obtained a master's degree. Four, 67 per cent, of these masters' degrees were obtained from Oklahoma State University.

A question asked instructors was whether or not they had an industrial arts major or minor. Of the eight respondents teaching industrial arts, all had an industrial arts major. Forty-five per cent of the technical instructors had an industrial arts major.

Membership in a professional organization provides opportunities for leadership and the sharing of responsibilities for upgrading all aspects of education. Through professional organizations, the members can collectively promote new educational programs. Four professional organizations to which an industrial arts instructor may belong are: (1) Oklahoma Industrial Arts Association, (2) American Industrial Arts Association, (3) Oklahoma Vocational Association, and (4) American Vocational Association. The number of instructors belonging to these organizations is shown in Table XI.

Writing is often limited to a small number of individuals. A question in the survey was used to ascertain the extent of publications

authored. Thirty-four per cent of the industrial arts instructors are responsible for formal writing. Of the nine respondents, three were responsible for four magazine articles and one bulletin. Forty-four per cent of the technical instructors authored publications. Four of the nine technical instructors authored eight magazine articles. Successful instructors should make an effort to contribute to the literature of the profession.

TABLE XI
NUMBER OF INDUSTRIAL EDUCATION INSTRUCTORS OF SEVEN OKLAHOMA
JUNIOR COLLEGES BELONGING TO PROFESSIONAL ORGANIZATIONS

Organization	Industrial Arts	Technical
Oklahoma Industrial Arts Association	8	0
American Industrial Arts Association	5	0
Oklahoma Vocational Association	4	4
American Vocational Association	3	3

Instructors are responsible for the learning and future of the students in their classes. Years of teaching experience is indicative of satisfaction or dissatisfaction on the part of an individual. Included in Table XII is the average number of years of teaching experience and the average number of years of industrial experience.

In computing the average number of years' experience at the present junior colleges, nine industrial arts instructors had taught an average of 15.1 years. Full-time industrial experience accounts for an average of 5.6 years for the industrial arts instructors. The technical instructors have spent an average of 8 years teaching at the present junior college and have an average of 9 years' full-time industrial experience.

TABLE XII

AVERAGE NUMBER OF YEARS OF TEACHING EXPERIENCE AND INDUSTRIAL
EXPERIENCE OF INDUSTRIAL EDUCATION INSTRUCTORS IN
SEVEN OKLAHOMA JUNIOR COLLEGES

Experience	Industrial Arts	Technical
Teaching Experience		
Junior High School	1.1	.6
Senior High School	2.6	2.3
Junior College	15.1	7.8
Senior College	0.0	1.4
Present Junior College	15.1	7.8
Industrial Experience		
Working Full Time	5.6	9.0
Working Part Time	4.6	4.1

Concluding Statements

The primary purpose of this study, as stated in Chapter I, is to survey course offerings in industrial arts with the intent of describing conditions and practices that exist and compare them with recommended objectives. The survey was conducted with the purposes of trying to establish: (1) if junior colleges in Oklahoma need to improve and expand their program in industrial arts and (2) if junior colleges in Oklahoma are meeting the objectives of the industrial arts program, as defined by the Oklahoma State Department of Education.

After having completed the study, it is felt on the part of the author that if industrial arts is to become a significant influence in the curriculum structure of Oklahoma junior colleges, it will have to improve and expand its present program. The objectives set forth for industrial arts by the Oklahoma State Department of Education are not

being met. Industrial arts needs to devise a new curriculum suggesting new structures which would reorganize the instructional content to reflect new industrial technology.

Listed below are some of the major findings of this study pertaining to industrial arts in Oklahoma's junior colleges. These findings seem to conclude that the hypotheses stated in this study are true.

1. Few departments are entitled "industrial arts."
2. A small number of industrial education instructors are classified as industrial arts.
3. A variety of course offerings is available in industrial arts, but the present curriculum needs to be expanded.
4. Many industrial arts courses are taught in other industrial education departments.
5. The general education objective of industrial arts set forth by the Oklahoma State Department of Education is not being met.
6. Adequate shop facilities are available.
7. Adequate tools and equipment are available.
8. Industrial arts instructors participate in outside duties and activities.
9. There needs to be increased participation in the formation of Industrial Arts Clubs.
10. There needs to be increased participation in scholastic meets and project exhibits.
11. The status of industrial arts is rated as average.
12. Recruiting for industrial arts programs is done.

13. The majority of industrial arts graduates are entering a four-year college.
14. Industrial arts instructors are scholastically well qualified, with the majority of instructors having both a bachelor's degree and a master's degree.
15. Industrial arts instructors participate in professional organizations.
16. A limited number of industrial arts instructors contribute to the literature of their profession.
17. The average number of years of teaching experience for industrial arts instructors is 15.1 years.
18. The average number of years of full-time industrial experience for industrial arts instructors is 5.6 years.

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APPENDIX A

INDUSTRIAL EDUCATION INSTRUCTORS TO WHOM THE QUESTIONNAIRE WAS MAILED

Cameron State Agricultural College, Lawton, Oklahoma

Mr. Malcolm Oswalt
Mr. Roy D. Byrd
Mr. Clay Callaway
Mr. J. D. Duncan

Northeastern Oklahoma Agricultural & Mechanical College,
Miami, Oklahoma

Mr. Joe Ables
Mr. Elmo Benedict
Mr. Merrill Chaney
Mr. Eldon Divine
Mr. Jerry Hollis
Mr. Leland Kordis
Dr. Clark McQuigg
Mr. Walter Moore
Mr. James Reese
Mr. Leonard Smith
Mr. Al Taylor
Mr. J. D. Wilhoit

Bacone College, Muskogee, Oklahoma

Mr. R. L. Thomason

Murray State Agricultural College, Tishomingo,
Oklahoma

Mr. Harold Winburn
Mr. R. B. Brisco
Mr. G. B. Stotts

Northern Oklahoma College, Tonkawa, Oklahoma

Mr. Clyde Williams
Mr. Clifford Jared
Mr. Chester A. Grimm

Connors State School of Agriculture, Warner, Oklahoma

Mr. Orval Bradley

Eastern Oklahoma Agricultural & Mechanical College,
Wilburton, Oklahoma

Mr. Odis Quaid
Mr. Claude Corvin
Mr. Bill Rains
Mr. William Ford

APPENDIX B

**OKLAHOMA STATE UNIVERSITY • STILLWATER**

Department of Industrial Arts Education
FRontier 2-6211, Ext. 7175

April 21, 1967

To: Industrial Arts Instructors
Junior Colleges of Oklahoma

Dear Sir:

In 1965 the Industrial Arts Curriculum Study Committee published its recommendations on curriculum areas, "A Guide to the Improvement of Industrial Arts in Oklahoma Schools," in which the committee defined the objectives of the state industrial arts program. It is desirable to know the present status of industrial arts in junior colleges so an evaluation can be made of the relationship of these objectives to what is being taught, as well as identifying trends and detecting weaknesses in the state industrial arts program.

I am making a study entitled "A Survey of Course Offerings in Industrial Arts in Oklahoma Junior Colleges During 1966-67" for the purpose of writing a Master's Degree thesis. In connection with this study I am attempting to contact all junior college industrial arts instructors in Oklahoma so that a more detailed description can be given. The enclosed questionnaire is designed to secure this information in the most direct manner possible. I have attempted to keep the questionnaire brief and objective in order to conserve your time.

Your cooperation in completing the questionnaire and returning it to me at your earliest convenience will be greatly appreciated. I am enclosing a self-addressed, stamped envelope for your use.

Sincerely,

Tom A. Taylor

TAT:lt

Enclosures

A SURVEY OF COURSE OFFERINGS IN INDUSTRIAL ARTS
IN OKLAHOMA JUNIOR COLLEGES DURING 1966-67

Tom A. Taylor, Graduate Student
Department of Industrial Arts Education
Oklahoma State University
Spring, 1967

Directions: Please check the correct answer on each of the following questions.

1. Please check the title of your Industrial Arts Program.
 Industrial Arts _____ Manual Arts _____ Other _____
 Manual Training _____ Shop _____
2. Please indicate the objective of your Industrial Arts program.
 College preparatory _____ General education _____
 Terminal _____ Other _____
3. Please check the areas that you teach, and hours per day devoted to each.

Woodwork _____	Drafting _____	Machine Shop _____
Metalwork _____	Printing _____	Power Mechanics _____
Electricity _____	Electronics _____	Graphic Arts _____
Photography _____	Welding _____	Upholstery _____
Arts & Crafts _____	General Shop _____	Auto Mechanics _____
Foundry _____	Home Mechanics _____	Small Engines _____
Other _____		
4. Please check the following items that are available in your shop:

Finishing room _____	Dust collection system _____	Lockers _____
Planning room _____	Project storage room _____	Lavatory _____
Restroom _____	Classroom _____	Office _____
5. Do you feel there are adequate tools and equipment available for your program?

6. How many Industrial Arts teachers are there in your college? _____
7. Please indicate the approximate enrollment in your classes. _____
8. Please list any courses you teach or administrative duties you have outside of your department and hours per day devoted to each.

-2-

9. Is there an Industrial Arts Club at your college? _____
10. Has your Industrial Arts Department participated in a scholastic meet or project exhibit in the last two years? _____
11. Please indicate the status that you feel Industrial Arts has in your college.
 Good _____ Average _____ Poor _____
12. Do you do any recruiting in high schools for your program? _____
13. What is the approximate percentage of your graduates entering:
 Industry 0-25% _____ 26-50% _____ 51-75% _____ 76-100% _____
 4-year college 0-25% _____ 26-50% _____ 51-75% _____ 76-100% _____
 Other 0-25% _____ 26-50% _____ 51-75% _____ 76-100% _____
14. Please check the degree(s) you have earned and from which college(s) obtained.
 Bachelors _____
 Masters _____
 Doctors _____
15. Do you have an Industrial Arts major? _____ minor? _____
16. Do you belong to the Oklahoma Industrial Arts Association? _____
 American Industrial Arts Association? _____ Oklahoma Vocational Association? _____
 American Vocational Association? _____
17. Please indicate number(s) of publications authored.
 Books Yes _____ No _____ Number _____
 Bulletins Yes _____ No _____ Number _____
 Magazine articles Yes _____ No _____ Number _____
18. Please indicate experience and number of years.
 Teaching Industrial Arts
 In Junior High School Yes _____ No _____ Years _____
 In Senior High School Yes _____ No _____ Years _____
 In Junior College Yes _____ No _____ Years _____
 In Senior College Yes _____ No _____ Years _____
 In present college Yes _____ No _____ Years _____
 Industrial Experience
 Working full time Yes _____ No _____ Years _____
 Working part time Yes _____ No _____ Years _____

Signed _____
 Position _____
 College _____

APPENDIX C

**OKLAHOMA STATE UNIVERSITY • STILLWATER**

Department of Industrial Arts Education
Frontier 2-6211, Ext. 7175

May 15, 1967

Dear Sir:

I am writing again to solicit your cooperation in conducting a study entitled "A Survey of Course Offerings in Industrial Arts in Oklahoma Junior Colleges During 1966-67." I do need your response, and am enclosing another form in case you failed to receive or have misplaced the one I sent earlier.

It is important that all schools be represented in this study so a detailed description can be made. I need your reply even though you may not consider your program industrial arts. In completing the questionnaire, please indicate the title of your program.

The response up to now has been good. However, 100 percent participation is needed to make the results more meaningful. Your reply will be kept confidential.

Would you please complete the questionnaire and return it as soon as possible in the self-addressed, stamped envelope which I am enclosing. Thank you for your help.

Sincerely,

Tom A. Taylor

TAT:lt

Enclosures

APPENDIX D

N-35-3 North University Place
Stillwater, Oklahoma 74074
May 15, 1967

Dear Sir:

I am working on a Master's Degree Thesis entitled "A Survey of Course Offerings in Industrial Arts in Oklahoma Junior Colleges During 1966-67."

I would appreciate a copy of the current issue of your catalogue for assistance in this study. This catalogue will be transferred to the Oklahoma State University Library upon completion of the study.

Thank you.

Sincerely,

Tom A. Taylor

VITA

Thomas Alan Taylor

Candidate for the Degree of

Master of Science

Thesis: A SURVEY OF COURSE OFFERINGS IN INDUSTRIAL ARTS IN OKLAHOMA
JUNIOR COLLEGES DURING 1966-67

Major Field: Industrial Arts Education

Biographical:

Personal Data: Born in Tulsa, Oklahoma, October 9, 1940.

Education: Graduated from Central High School, Tulsa, Oklahoma;
received the Bachelor of Science degree from Oklahoma State
University with a major in Trade and Industrial Education
in 1966; completed requirements for the Master of Science
degree in July, 1967.

Professional Organizations: Phi Delta Kappa, Iota Lambda Sigma,
Red Red Rose.