

THE STATUS OF INDUSTRIAL EDUCATION IN ARKANSAS

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F. E. C.



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## CHAPTER I.

### SCOPE AND ORGANIZATION OF THE STUDY

The early experiments in school shop by Dr. C. M. Woodward in the early seventies and Dr. J. D. Runkle's interest in the Russian school handwork exhibited at the Centennial Exposition held at Philadelphia in 1876 started the manual training movement. After about thirty years of progress with new ideas and concepts added, the name manual training was changed to industrial arts which lends itself more satisfactorily to the new trend. The underlying principles of trade and industrial education have not changed fundamentally since 1917 when it was introduced into the school system in the United States as a result of the Smith-Hughes Act. The quoted definitions of terms are included as an introduction to this study.

Industrial Education is a generic term including all educational activities concerned with modern industry, its raw materials, products, machines, personnel and problems. It, therefore, includes both industrial arts, the general education forerunner of and introduction to vocational industrial education and the latter. ( 5, page 7 )

Industrial Arts as a school subject, may be defined as a study of the processes, tools, and machines by means of which the forces of nature are utilized and the raw materials of nature are changed by man to make them more valuable and pleasing. It includes an understanding of the natural forces of raw materials and of the native qualities, together with a knowledge of the methods and practices of utilizing and changing these materials and forces. It is also concerned with the social and economic problems incident to these changes. (The State Advisory Committee for Industrial Arts in Oklahoma Schools)



Industrial Arts Education. The professional character of industrial arts education changes became more apparent both in the public schools and teachers colleges. That emphasis is being placed upon the professional side of such work is indicated by the term industrial arts education. ( 23, page 9 )

Manual Training: an earlier type of school shop activity usually restricted to fixed exercises in the woodwork, metalwork, and mechanical drawing; strong emphasis was placed on tool exercises and manual skill; gave way first to manual arts and later to industrial arts.  
( 6, page 428 )

Manual Arts: One of the earlier terms used to identify shopwork involving design and hand concentration in various mediums with the purpose of developing art appreciation and manual skill.  
( 6, page 32 )

Mechanic Arts: (1) A type of school work (predominate during the latter part of the nineteenth century) designed to teach the trades and related science; (2) A substitute for apprenticeship, taken in school while studying mathematics, science, and engineering. ( 6, page 32 )

The Statement of Policies for the Administration of Vocational Education of the Office of Education says:

Vocational Education. To the extent that it is subsidized by the Federal Government under the Vocational Education Acts, vocational education has reference to training for useful employment. It may be given to boys and girls who, having selected a vocation, desire preparation for entering it as trained workers; to youth who, having already entered employment, seek greater efficiency in that employment; and to adult workers established in their trade or occupation, who wish through increase in their efficiency and wage earning capacity to advance to positions of responsibility.  
( 20, page 8 )

Trade and Industrial Education: a phase of vocational education, of less than college grade, suitable to the needs of prospective and actual workers in the fields of manufacturing, industry, and trade. ( 6, page 427 )



Need for the Study: Every field in education needs status surveys if it is to grow and meet the demands of the changing world. These studies furnish information on what has been done in the field and are used as guides for planning and recommending future developments. The writer was unable to find a study of a similar nature that had been compiled for the State of Arkansas. The finding of this study should be conclusive evidence for the present need of this study as well as the need for use in comparison for future studies.

Purpose of the Study. To make available assembled data which will be of value to school board members, superintendents, teachers, educators and the interested public, and to analyze the assembled data to show an accurate picture of the industrial education in Arkansas. This study may be used to answer these questions: (1) How many schools offer industrial arts courses, trade and industrial education subjects, and diversified occupations programs in Arkansas? (2) What size are the schools in which these courses are offered? (3) What are the certification requirements for industrial arts and trade and industrial education teachers? (4) What colleges provide teacher education programs for industrial education in Arkansas? (5) What are the salaries of industrial education teachers in Arkansas? These questions and many others may be asked.

Studies of a Similar Nature. In 1946, Henry C. Tinkle

made a study of the Status of Industrial Arts in Oklahoma High Schools. His survey included a separate study of the junior high schools giving general requirements of the North Central and accredited standards with the status of industrial arts; the accredited high school general requirements with the status of industrial and the general requirements of the North Central schools with the status of industrial arts. The material pertaining to industrial arts was analyzed and tabulated in table form for convenience of obtaining the results of the findings of his study. His study shows that seventy-one junior high schools and eighty-two North Central schools in which industrial arts was offered. It also shows four hundred and nine teachers teaching industrial arts in three hundred and nine schools in Oklahoma. There were fourteen schools in which industrial arts was added in 1945-46.

In 1939, William Ambrose Baldwin submitted to the Oregon State College a survey The Present Status of Industrial Arts in Junior High Schools of California. His survey included state laws, certification for industrial arts teachers, the generally accepted scope of this field in junior high schools, industrial arts programs of study, courses offered and their grade placement in the junior high school, and shop organization in the junior high school. Thirty-nine tables were used in the analysis presentation of the study. State laws do not require the teaching of industrial arts in junior high schools in California, however, it is required in many school systems. This survey also shows about one out of every ten

junior high teachers to be industrial arts teachers.

In 1940, William J. Nee conducted a survey of industrial arts in the public schools of Oregon. This study was limited to the secondary schools. He included in the survey the size and growth of Oregon Public Schools, emphasizing the type, size and classification. An analysis was made of the present industrial arts program in Oregon secondary schools. The survey includes the number of industrial arts teachers employed and the scope of the industrial arts program. The educational, experience, and salary status of teachers which included trade experience, teacher tenure and major and minor fields. Information used in the study was obtained from Oregon School Directory and questionnaires sent to industrial arts teachers.

Methods Used in Collecting the Information. A survey of any kind should proceed upon some definite basic facts. Crawford in his textbook on educational research lists thirteen techniques for collecting data: (1) Experimental, (2) Historical, (3) Psychological, (4) Case Study, (5) Survey, (6) Curriculum Making, (7) Job Analysis, (8) Interview, (9) Questionnaire, (10) Observation, (11) Statistical, (12) Tabular and Graphic, and (13) Library. There are two general sources used in historical technique. The first and most valuable is the original or primary source. It is the actual object remains, records or documents which have survived from the past. The other is the secondary source or hear-say source. There were two distinct research



methods used in collecting this information. First, all available information was collected from the annual reports from the North Central and accredited schools, filed in the office of the State Department of Education, and from college catalogues, list of accredited schools in Arkansas, The Regulations Governing the Certification of Teachers in Arkansas, Arkansas Educational Directory, Arkansas State Plan for Vocational Education, and other state publications devoted in any way with industrial education. Second, questionnaires were sent to all industrial arts and day trade teachers. Six of a total of seven junior high teachers, and 77.3 per cent of the senior high industrial arts teachers returned the questionnaires. About 53.2 per cent of the trade and industrial day trade teachers returned questionnaires.

Description of the Inquiry Form. The inquiry form that was sent to teachers of industrial arts and trade and industrial day trade teachers in Arkansas is included as pages seven and eight of this thesis. The inquiry sent to heads of departments of industrial education in all Arkansas colleges offering any phase of industrial education is included on page nine. The letter of transmittal used with both inquiry forms is included on page ten. No inquiry was sent to the diversified occupations coordinators since no actual shop courses are conducted in these programs.

After the elapse of two weeks a follow-up letter was sent to those whose inquiry forms had not been returned. This follow-up letter increased the returns about seven per cent.



A QUESTIONNAIRE

From Frank E. Cassidy, 528 N. Fortieth St., Fort Smith, Arkansas

Concerning the Status of Industrial Arts and Trade and Industrial Education in Arkansas. An Inquiry Conducted by Frank E. Cassidy, Graduate Student, Oklahoma A. and M. College, Under the direction of Dr. DeWitt Hunt, Advisor and Head, Department of Industrial Arts Education and Engineering Shopwork.

\_\_\_\_\_  
Name of School \_\_\_\_\_ City \_\_\_\_\_

Name of Teacher Answering Questionnaire \_\_\_\_\_

Home Address of Teacher \_\_\_\_\_

EDUCATION:

Colleges or Universities Attended \_\_\_\_\_

Dates, from \_\_\_\_\_ to \_\_\_\_\_ Degrees Earned \_\_\_\_\_

If no degree, total no. semester hrs. \_\_\_\_\_ Hrs. in Ind. Arts

\_\_\_\_\_ Trade and Industrial Education \_\_\_\_\_

Major \_\_\_\_\_ Minor \_\_\_\_\_

Yrs. teaching experience \_\_\_\_\_ Yrs. teaching Ind. Arts \_\_\_\_\_

Yrs. teaching T. & I. \_\_\_\_\_ Yrs. trade experience \_\_\_\_\_

Do you plan further study? ( ) yes, ( ) no.

What professional magazines do you take? \_\_\_\_\_

\_\_\_\_\_  
Do you have a professional library? ( ) yes. ( ) no.

Number of books \_\_\_\_\_ Approximate cost? \_\_\_\_\_

Do you visit other school shops? ( ) yes, ( ) no. Why? \_\_\_\_\_

Present Teaching Situation:

Duties other than teaching, principal ( ), coaching ( ), Other \_\_\_\_\_  
(list) \_\_\_\_\_

Other subjects taught \_\_\_\_\_

Salary \_\_\_\_\_ Length of class period \_\_\_\_\_ Is same shop used

for both Jr. High and Sr. High? \_\_\_\_\_, For Ind. Arts and T. & I? \_\_\_\_\_  
 Area of shop (sq. ft.) \_\_\_\_\_ Drafting room \_\_\_\_\_, Is  
 Ind. Arts a required subject? \_\_\_\_\_ If so, what grades? \_\_\_\_\_  
 Location of shop: Basement \_\_\_\_\_, Ground floor \_\_\_\_\_, Separate  
 Building \_\_\_\_\_. Cost of drawing equipment? \_\_\_\_\_ Shop equip-  
 ment? \_\_\_\_\_ Do you have a separate room for drafting? \_\_\_\_\_  
 Lecture Room? \_\_\_\_\_ Office? \_\_\_\_\_.  
 Indicate the subjects you are now teaching by listing the textbooks in  
 use, the number in class, and the grade.

Course	Textbook	No. in Class	Grade
<u>Elem. Woodwork</u>			
<u>Cabinet Making</u>			
<u>General Shop</u>			
<u>Carpentry</u>			
<u>Mechanical Drawing</u>			
<u>Sheet Metal</u>			
<u>Welding</u>			
<u>Electricity</u>			
<u>Art Metal</u>			
<u>Auto Mechanics</u>			
<u>Machine Shop</u>			
<u>Printing</u>			
<u>Arts &amp; Crafts</u>			
(List others)			



A QUESTIONNAIRE

Concerning the Status of Industrial Arts and Trade and Industrial Education in Arkansas. An Inquiry Conducted by Frank E. Cassidy, Graduate Student, Oklahoma A. and M. College, Under the Direction of Dr. DeWitt Hunt.

Addressed to \_\_\_\_\_

List name and home address of instructors connected with Industrial Arts Education or Trade and Industrial Education in this institution.

Industrial Arts Education:\*

Name

Home Address

Trade and Industrial Education:\*

Name

Home Address

No. 1947-1948 graduates in I.A.E. Major \_\_\_\_\_ Minor \_\_\_\_\_ Ind. Arts  
Teaching Certificates \_\_\_\_\_, T. & I. Ed. Major \_\_\_\_\_ Minor  
\_\_\_\_\_, T. & I. Teaching Certificates \_\_\_\_\_.

Is there a demand for students graduating with the above majors and minors  
in the State of Arkansas? \_\_\_\_\_ Other States? \_\_\_\_\_. Does your insti-  
tution plan an expansion in either Trade and Industrial Education or Ind-  
ustrial Arts Education in the near future? \_\_\_\_\_. In what way? \_\_\_\_\_

\* Include names of persons teaching in both programs in both lists.

Frank E. Cassidy  
Drafting Instructor  
Fort Smith High School  
Fort Smith, Arkansas

Dear Fellow Teacher:

I am making a survey of the status of industrial arts and trade and industrial education in Arkansas. This study is being prepared in partial fulfillment of the requirements for a Masters Degree. It is designed to make available information about industrial arts and trade and industrial education in Arkansas helpful to teachers and school administrators, and possibly to assist in the readjustment of programs in keeping with the interest and preparation of Arkansas teachers.

All information received will be tabulated with a complete mailing list, courses offered and teacher qualifications listed. Salary ranges will be indicated in an appropriately organized table.

A few minutes of your time is all that will be required to complete the enclosed questionnaire. It is hoped that this study is important enough to merit the time and effort required by you to fill out the questionnaire and return it in the stamped, self-addressed envelope which has been enclosed for your convenience.

Thank you very much for your cooperation and prompt response.

Very sincerely yours,

Frank E. Cassidy  
528 N. 40th Street  
Fort Smith, Arkansas

Approved:

---

Dewitt Hunt, Advisor  
and Head, Department of  
Industrial Arts Education  
and Engineering Shopwork  
Oklahoma A. and M. College



## CHAPTER II.

### THE STATE OF ARKANSAS AND ITS EDUCATIONAL PROGRAM

Arkansas was the twenty-fifth of the forty-eight states of the United States to be admitted to the union. The state lies inland in the south-central section of the country. It is bounded on the north by its neighbor state of Missouri; on the east by the Missouri and the Mississippi River, which river forms the lines of boundary between Arkansas and the states of Tennessee and Mississippi; south, by Louisiana and Texas; west, by Texas and Oklahoma. Arkansas was admitted to the Union June 15, 1836.

Arkansas is roughly rectangular in form; it is 250 miles long from north to south and about 225 miles wide from east to west. It has a total surface area of 53,335 square miles, 810 of which are normally under waters of the state's many lakes and rivers. Arkansas has fewer square miles of surface than any other state west of the Mississippi River.

### PART A.

#### HISTORICAL BACKGROUND

De Sota's discovery, in 1541, of the Mississippi River, the tragedy of his death and the burial of his body in its waters, gave Spain a tentative claim of possession, as allowed by the laws of nations, to the vast terrain drained by the "Fathers of Waters" and its many tributaries. For nearly a century and a half after the time of De Sota, Spain made no

move to prove its possession to the discoveries of De Sota which embraced much of the Mississippi Valley.

French Influences. Meanwhile, the French, having established a series of settlements in Canada, which they called "New France" had come to look upon the valley country of the Mississippi as anybody's land having the enterprise to take and hold it. And so, as an agent and by order of Louis XIV, King of France, La Salle, in 1682, explored the Mississippi, took formal possession of the country from the Great Lakes to the Gulf of Mexico, and gave it the name of "Louisiana". These exploits the French followed up four years later, in 1686, as their first steps towards actual possession, with the establishment of the initial settlement in the heart of the New Louisiana. This first settlement, situated in the homeland of the Indian tribe sometimes called the Arkansas, the French called Arkansas Post.

Within the next century the colonization of Louisiana was attempted by France, but these attempts were unsuccessful. Then, in 1763, Spain again took over possession of it for a time. Spain did no better as a colonizer than had France. Finally, in 1803, by the purchase at a fabulous bargain to the buyer, the United States acquired that part of Colonial Louisiana which lay west of the Mississippi, and so did an enormous area of continental North America come into its own as the mother land of states in the United States of America.

The District of Arkansas. Already, when the United States

took possession of Louisiana, the Arkansas country, having been formed by the French into the "District of Arkansas", was a community, a part of which, the village of Arkansas Post, located in the southeastern part of the state on the Arkansas River, was the center of things. The inhabitants of the district, most of whom were people of French origin, counted up to not more than 1,000 people. These few Frenchmen were soon outnumbered, and in time, they lost their identity as aliens in the influx of American settlers who began moving in soon after the transfer of Louisiana to the United States. The population of the District of Arkansas grew tenfold in as many years, and conditions were then in the making which put Arkansas in the process of becoming a state in the traditional American manner. In 1813, the District of Arkansas was made into Arkansas County of Missouri Territory; in 1819, the county, with some land added, was organized as Arkansas Territory.

Arkansas As A State. The new status of territorial rank gave added impetus to immigration, and, as the population of the territory multiplied, Arkansas grew in wealth and solidarity through seventeen years, until 1836, when its people formed a state constitution and were admitted to the union as the State of Arkansas. In the early forties, Arkansas, in common with the rest of the union, was hit by the depression which came as a reaction to the financial panic of 1837. Though the pinch of the depression slowed Arkansas down, the homespun economics which had resulted in successful pioneer-



ing, enabled the Arkansans to manage, in a reasonable manner, the business of living through the hard years. Thousands of enterprising people, overtaken by adversity in the hard times in the older states, moved to Arkansas in search of opportunity to begin life anew. Those who had the will to succeed found there the chance for which they were looking. By 1860, Arkansas was a state of many rich planters and many more well-to-do small farmers, who had amassed the means of good living, having time to cultivate the virtues and vices of southern gentility.

Arkansas and the Civil War. A convention of delegates elected by the people hesitated in 1861 to take the fateful step of secession. The hesitation was due to expediency rather than to lack of belief in the right of secession. In March, the delegates in convention defeated a proposal of immediate secession, the president of the convention being instructed to recall the convention in the event of war. The call of President Lincoln for volunteers to make war on those states which had seceded made the issue which Arkansas took as meaning there could be no alternative to secession. The delegates were re-called and the convention voted May 8, 1861, to secede, with but a single vote in opposition.

The sacrifices which Arkansas made for the success of the Confederacy proved its people as Southern in their sympathies as any. Nearly one-third of all the male population (white) volunteered for service in the armies of the South making an army of 50,000. The states had thirty-three officers

of general rank in the Confederate service. Though Arkansas was promptly invaded by the Armies of the Union, and though Little Rock, the Capitol, fell into the hands of the Federals in September, 1863, the Southern half of the state remained steadfast in its loyalty to the Confederacy until the last Southern Army had surrendered.

Reconstruction Days. With the war at an end, Arkansas was prepared to take its defeat. A liberal constitution and a Union government, established agreeable to the terms prescribed by President Andrew Johnson, won the support of the ex-confederates. In 1866-67, the administration of Governor Isaac Murphy made progress in the restoration of good relations. The radical Congress in 1867, however, would have none of Murphy or his works, and the story of the undoing of Arkansas, as forced by Congressional reconstruction during the years from 1867 until 1874, is a very sordid tale.

In 1873, the despoilers of the state's reputation and resources were removed; a new constitution adopted, and then, was begun in earnest the work of building a new Arkansas on the foundation of the old which had died in the fall of the Confederacy.

The task has not been easy. For, as belonging to a political minority in the Union, Arkansas, with the rest of the South, has had to pay the price of defeat in war. However, despite all the difficulties, it is plain to see that Arkansas has traveled far along the road to economic recovery since 1874, when its people won back their political indepen-

dence.

How Arkansas Got Its Name. Arkansas derived its name from a tribe of Indians who lived in that territory until they were driven out of it by the influx of white settlers. These Indians, the Aborigines, who called themselves Quapaw were known as U-gah-pa by neighboring tribesmen who lived along the Mississippi River. "Ugahpa" was Indian for "People Down Stream". The French explorers, as they pushed down the great river, heard of the people farther south as the "Ugakh-ja" and wrote the word in French as "Arkansas". Tradition gave Arkansas its other name, the "Bear State", as it once was well known. This traditional name of Arkansas Legislature changed to "Wonder State" in 1923.

Arkansas Territory. The land obtained in the Louisiana Purchase in 1803 was divided into two parts for its immediate and temporary government. All that part of it north of the present state of Louisiana was designated as the District of Louisiana. President Jefferson, on March 3, 1805, appointed General James Wilkinson governor of Louisiana Territory. A territorial legislature was convened at St. Louis, and, when in session on June 26, 1806, the legislature created the District of Arkansas. July 4, 1810, was designated by Congress as the day when the new territory should begin its separate existence. The jog at the eastern end of the Arkansas-Missouri border was, according to historians, placed there because a wealthy planter wished his land to be in Missouri. In



1918, because of the wide distribution of settlers, five Arkansas counties existed. Although Arkansas Post, in 1819, was the leading town of the territory it was too inconveniently situated to remain the seat of government. The second session of the Territorial Legislature made Little Rock the Capitol in 1820.

Arkansas and Statehood. Arkansas was born into statehood as the culmination of a train of events and circumstances, each of which was "inspired" or "managed", so as to force the issue of admission. Ben Desha chose it as an issue in the campaign which he made that summer in opposition to Ambrose H. Sevier for the office of Delegate to Congress. Sevier took the position that the time was not opportune for the beginning of such a movement. Desha was defeated and talk of admission was silenced for the time. In December, 1833, Sevier took the initial step of moving in Congress that Congress authorize the taking of a census in Arkansas, in order that the eligibility of the Territory to statehood might be known. Michigan applied for statehood the same year, and Sevier saw an opportunity for Arkansas which was certain not to come again soon. Arkansas with slavery and Michigan without it, applied for statehood at the same time. Some months later, Congress adjourned, leaving the two bills "still pending" as unfinished business.

The census of 1835 showed a total population for Arkansas Territory of 51,809, which, as the ratio for federal representation then fixed, showed Arkansas as qualified for statehood

on the score of population,

On March 22, 1836, James Buchanan reported a bill for the admission of Arkansas into the Union. The bill passed in the Senate on April 4. It then went over to the House of Representatives, where it was debated at intervals through April, May and on into June until its passage on June 13. On June 15, 1836, President Andrew Jackson signed the bill. The twenty-fifth star, in token of Arkansas as a sister state, was formally added to the flag of the Union, July 4, 1836.

Arkansas was admitted to the Union as a slave state. This made it a safe place for the people of the planter class of the older slave states to go in search of fresh land and take their slaves. The slaves served a useful purpose in the economic structure of the new commonwealth, and the presence of the "institution" tied Arkansas definitely with the South socially, economically and politically.

## PART B.

### POPULATION, GEOGRAPHY AND ECONOMIC STATUS

The population, geography and economic status of any state will determine to a great extent the educational problems of that state. This information is included to give the reader a background for this study.

Population. The official census of 1810 recorded 1,062 persons as living within the boundaries of the State of Arkansas. During the following decade, the population increased to 14,273, and by the time Arkansas was admitted into the

Union as a state in 1836, its inhabitants numbered approximately 59,000. By 1930, Arkansas had attained a population of 1,854,482 persons and ranked twenty-fifth among the forty-eight states. Arkansas had a total population in 1940 of 1,949,387. This was an increase of 94,905, which was an increase of 5.1 per cent for the decade after 1930. The average inhabitants to the square mile is thirty-seven persons. There are fifty-three towns in Arkansas counted as "cities", with a total population for the fifty-three towns of 431,910. Those people classified as "Urban" in the official census. The rest of the people, who count up to 1,517,477 or 78 per cent of the whole, live in the open country or in towns and villages of less than 2,500 people and are classified as "Rural". The Negro population of 506,770 is twenty-six per cent of the total for the state. The 1,442,384 "white" are about ninety per cent native Arkansans, of southern descent and Anglo-American origin. The total of those born outside the United States who live in Arkansas is 7,692; which is less than one-half of one per cent of the whole population.

The Geography of Arkansas. In area the state contains 53,102 square miles, and is twenty-sixth in size among the states of the Union. The state is about equally divided between low lands and high lands. The Gulf Coastal Plain and the Mississippi River Delta, representing the low lands, occupy fifty-two per cent of the state's area. The highland area, including the Ozark Mountain Plateau and the Ouachita Mountain Plateau, occupy forty-eight per cent of the state.



The average elevation of the Mississippi River Delta is 150 feet. That of the West Gulf Coastal Plain is 300 feet. The average elevation of the highland areas is 1,440 feet above sea level.

Roughly, the land area of the state is divided as follows: 64 per cent in forests, 33 per cent in farms, 3 per cent in inland water, highways and cities.

Economic Status. Arkansas produces about \$50,000,000 worth of minerals annually. In 1947, the cash farm income amounted to \$618,000,000 and \$125,000,000 worth of timber is produced annually. In recent years Arkansas has had more than a thousand new industries or large expansions bringing wages and salaries from manufacturers to \$600,000,000 in 1946. It is believed by the leaders of Arkansas that an industrial revolution is underway in the state.

Arkansas has a system of 9,500 miles of state owned highways with approximately 45,000 miles of secondary feeder highways. The state has 4,500 miles of railroads and 2,250 miles of navigable waterways. The state has many natural resources and advantages conducive to new industry.

## PART C.

### THE DEVELOPMENT OF A STATE EDUCATIONAL PROGRAM

A public school system for Arkansas was first contemplated in 1819, when Congress, reserved the sixteenth section of land in each township as "an endowment for all public schools of the township". Ten years later the Territorial

legislature empowered the appointment of trustees to leave the reserved land to individuals and use the revenue for schools. This act was followed in 1843 by legislation "to establish a system of common schools" and provided for a board of three trustees in each township.

While the system of public schools was taking form, private seminaries and academies were flourishing throughout the State. These institutions, of which about ninety were chartered between 1836 and 1869, reached their peak in influence and number just before the war between the States.

This war closed virtually all schools in Arkansas. Efforts to re-establish them on a solid financial basis and to make them available to all classes were reflected in the Constitution of 1868, a document which contained the basis of present day popular education in the state. By 1890 the number of public schools had passed 2,500, with an enrollment of some 240,000 children. A long campaign waged by the Arkansas Teacher's Association culminated in 1903 with the passage of legislation outlining standard courses of study and license requirements for teachers.

Arkansas Public Schools. The physical structure of the public school system of Arkansas is essentially that provided by the Constitution of 1874. Practically no modification has been made in this system despite a ninefold growth in school enrollment, with all consequent demands for the extension of school facilities, provisions of additional housing, supervision of instruction, changes in conception of the function

of public education, teacher-training, etc. The Arkansas public school system is based upon a framework designed years ago when communities were more or less isolated and when only a comparatively small percentage of the children attended school several months each year for a relatively few years. Consequently changes in the social structure have not been accompanied by corresponding changes in the basic structure of the public schools.

The educational problems in Arkansas are admittedly most serious. They are due primarily to inadequate revenue and to the antiquated system of administrative units. Many of the schools are too small. One of the causes for the prevalence of these small schools is directly related to the large number of school districts. Approximately 4,300 separate school districts existed during the year 1929. This number decreased by 1936 to 3,121 districts.

Recent Legislation. The interest of the people in Arkansas toward their educational system might be shown by the recent legislation. The November election of 1948 resulted in the passing of two constitutional amendments that should help bring about higher educational standards in the state.

Initiated Act No. 1 may be summarized as follows:

It creates a new school district in each county on June 1, 1949, to be composed of territory now in districts having fewer than 350 children.

The people in any district having fewer than 350 children have until March 1, 1949, to decide whether they wish to annex their district to an existing high school district or become a part of the new county district. In other words, they can



choose the high school attendance center they want to be a part of.

A board of five members will be elected to administer the new district.

The county supervisor of schools will be superintendent of the newly created district.

If the county board of education finds that any part of the territory which is to be merged into the new district can be served more economically or better by another district maintaining a high school it is authorized to make the annexation that is to be made.

Appeals within thirty days to any court of competent jurisdiction is authorized. (1, page 10)

The previous act provided appeal to the State Board of Education regarding annexation of school districts to provide accredited elementary schools for every child as close to his home as possible and to provide access to an accredited high school.

The need for such legislation may best be shown by the following data:

1. 1,081 school districts offer their children only an eighth grade education or less.
2. 65,000 children live in these districts.
3. 128,000 school children do not have an accredited school to go to.
4. As of March 1, 1948, there will be found 1,630 school districts in the state. After the passage of this act there will be approximately 400 school districts.

The primary purpose of the act is to put every child in the school district which:

1. Brings all children to school at age six.
2. Holds 90% of the pupils until high school graduation.
3. Provides adequate, general, and vocational education for all children.
4. Has a competent staff of administrators, teachers, and other workers.
5. Has school properly located with a comprehensive

- program at reasonable cost.
6. Has a sound way of financing and administering its program.

The school districts, prior to Amendment No. 40, were forced to operate schools on eighteen mills local tax plus state support. The districts were not permitted to vote more than eighteen mills.

Amendment No. 40 makes these provisions:

1. It takes the ceiling off the millage which the people in every district can vote to support their own schools.
2. It compels each school board to publish the proposed budget for the local school each year with the tax rate necessary to support this budget.
3. It empowers the people of every school district to vote what they consider necessary to support their own schools after the state has done its part. ( 1, page 11 )

In 1930-31, state support for education amounted to twenty-three per cent of the total cost, local support amounted to seventy-seven per cent. In 1947-1948 state support amounted to sixty-nine per cent and local support thirty-one per cent. In 1947-48 local support for education was almost \$300,000 less than it was eighteen years ago.

Arkansas Colleges and Special Schools. For the information of the reader of this thesis, a classified list of all universities, colleges, and special schools (not public high schools) in Arkansas is included here. ( 17, pages 4,5 )

State Institutions. Arkansas Agricultural and Mechanical College, at Monticello; Arkansas Polytechnic College, at Russellville; Arkansas State College, at Jonesboro; Henderson

State College, at Arkadelphia; Junior Agricultural College of Central Arkansas, at Beebe; State Agricultural and Mechanical College, at Magnolia; The Arkansas State Teachers College, at Conway; The University of Arkansas, at Fayetteville.

Private Institutions. Arkansas College, at Batesville; Draughn School of Business, at Little Rock; Harding College, at Searcy; Hendrix College, at Conway; John Brown University, at Siloam Springs; Ouachita College, at Arkadelphia; Southern Baptist College, at Pocahontas; The College of the Ozarks, at Clarksville.

Municipal Institutions. Fort Smith Junior College, at Fort Smith; Little Rock Junior College, at Little Rock.

State Institutions (Negro). Agricultural, Mechanical and Normal College, at Pine Bluff.

Private Institutions (Negro). Dunbar Baptist College, at Little Rock; Philander Smith College, at Little Rock; Shorter College, at North Little Rock.

Municipal Institutions (Negro). Dunbar Junior College, at Little Rock.

Special Institutions. Arkansas Law School, at Little Rock; St. John's Home Missions Seminary, at Little Rock; Arkansas School for the Blind, at Little Rock; Arkansas School for the Deaf, at Little Rock.



The information contained in this chapter should help the reader to understand better the problems of the schools in Arkansas and what the schools offer its children.

### CHAPTER III.

#### CERTIFICATION OF INDUSTRIAL ARTS TEACHERS

Industrial arts has grown so rapidly in most of the states in recent years and has included so many new subjects it is extremely important that proper attention be given to teacher certification. The economical status of many states has prevented the schools of these states from following the trends of those of the more fortunate states. In spite of economic status of these states many of the schools have included industrial arts. In Arkansas no one has as yet been designated to assume the responsibility of certification of teachers of industrial arts in the State Department of Education.

#### PART A.

##### INDUSTRIAL ARTS TEACHER CERTIFICATION IN OTHER STATES

The study of the certification plan for industrial arts teachers in other states is necessary if successful study and recommendations are to be made for Arkansas. The certification plans for industrial arts of four states have been secured and included in this chapter for comparison. In making this selection two plans from adjoining states and two plans from remote states were decided on to give a more general account of industrial arts certification.

##### Teacher Certification of Industrial Arts in Oklahoma.

According to a survey made by Henry C. Tinkle on The Status

of Industrial Arts in Oklahoma High Schools in 1946, industrial arts was taught by 405 teachers in three hundred and nine schools. Thus, Oklahoma should provide a good source of information for making comparisons and recommendations.

Oklahoma does not have a supervisor of industrial arts on the state educational staff. All curriculum offerings of the public schools are supervised and accredited by the High School Supervision and Inspection Division. The State Advisory Committee on Industrial Arts under the Chairmanship of Dr. DeWitt Hunt, Head, Department of Industrial Arts Education and Engineering Shopwork, Oklahoma A. & M. College, Stillwater, Oklahoma, works closely with the State Department of Public Instruction on matters pertaining to this field.

The following plan for certification of industrial arts teachers was obtained from the Oklahoma State Department of Public Instruction.

#### OKLAHOMA STATE DEPARTMENT OF EDUCATION

#### HIGH SCHOOL CERTIFICATION TO TEACH INDUSTRIAL ARTS

(Valid in Grades 7 to 12, inclusive)

In addition to the general requirements set up in Section 1 of these regulations, the completion of the following courses shall be required, respectively, for one-year and life certificates to teach industrial arts.

(Numbers opposite courses represent semester hours)

Courses in Education, not more than six semester hours of which shall be completed during the first two years of the college course:

	1-Year	Life
Education Courses, including six semester hours of student teaching...	12	18



(Suggested Courses: Adolescent Psychology, Philosophy or History of Education, Educational Psychology, Measurements, Methods) General Methods and Management, including Oklahoma School Law.....			3	3
TOTAL EDUCATION COURSES.....			15	21
Courses in Teaching Field:				
Bench Woodwork.....			4	4
Cabinet Making.....			4	4
Wood & Metal Finishing.....			2	2
Industrial Arts Design.....			0	2
Care of Shop Equipment.....			2	2
Working Drawings.....			2	2
Machine Drawings.....			2	2
Architectural Drawing.....			0	2
Electives in Shop Work.....			0	4
TOTAL.....			16	24
Other Required Courses:				
English.....			6	8
American History and Government.....			6	6
Oklahoma History (or $\frac{1}{2}$ unit in high school or 70% in state examination....			2	2
Agriculture (or $\frac{1}{2}$ unit in high school or 70% in state examination.....			2	2
MINIMUM IN ALL SUBJECTS.....			90	124
MINIMUM DEGREE.....			A. B. or B. S.	

#### Teacher Certification of Industrial Arts in Missouri.

Missouri, another neighbor state of Arkansas, has a remarkable record in the field of industrial arts. It would be well for Arkansas to look on their neighbor state of Missouri as a challenge in the field of industrial arts. Merton Wheeler is Supervisor of Industrial Arts for the State Department of Education, Division of Public Schools. The following industrial arts teacher certification plan was obtained from the State Department of Education in Missouri.

Missouri: State Department of Public Instruction  
Jefferson City, Missouri

High School Certificate to Teach Industrial Arts in the State of Missouri.

COURSES IN TEACHING FIELD:

Full-time teacher in Industrial Arts.....	24 hours
Part-time teacher in Industrial Arts.....	15 hours

PROFESSIONAL COURSES REQUIRED:

Group I		
(a) Educational Psychology		
(b) History or Philosophy of Education		
Group II		18 to
(a) Methods in High School Teaching		30 hours
(b) Special Techniques in Teaching Field		
(c) General Administration		
Group III		
(a) Student Teaching		5 hours

Industrial Arts teachers in the State of Missouri are required to have a Baccalaureate Degree if they are to teach in the first class high school. A further requirement is that they have at least 6 hours of college work in each area taught.

California. Olen D. Davis is the consultant in industrial arts, State Department of Education, Sacramento, California. This position has been filled since March, 1949, which indicates that California is following the trend of many other states in placing a man in the State Department of Education to supervise industrial arts in addition to a supervisory

board.

California: State Department of Education  
Sacramento 14, California

High School Certificate to Teach Industrial Arts in the State of California

Forty semester hours of special technical training suited to the needs of teachers of junior high and senior high school Industrial Arts distribution approximated as follows:

COURSES IN TEACHING FIELD:

Automobile Mechanics.....	3 hours
Woodwork.....	3 hours
Electricity and Radio.....	3 hours
Drawing.....	3 hours
Metal Work.....	<u>3 hours</u>
Total	15 hours

Twenty-five hours of shop electives shall be made up of additional courses in the subjects listed in the above required group, or selected from the following subjects:

1. Battery Construction
2. Vulcanizing and Tire Repair
3. Home Mechanics and General Shop
4. Forging and Welding
5. Wood Finishing and Painting
6. Leather Work
7. Upholstery
8. Art Metal
9. Foundry
10. General Shop
11. Printing

PROFESSIONAL COURSES IN ADDITION TO THE ABOVE ARE AS FOLLOWS:

Directed Teaching in Industrial Arts	)	
Method Courses in Industrial Arts	)	
Courses dealing with Aims, Scope, and	)	15 hours
Outcomes of Secondary Education	)	
Organization and Administration	)	

The State Department of Education in California issues a special secondary certificate for Industrial Arts



authorizing the holder to teach the subject named on the face of the certificate.

Ohio. Phillips S. Waldeck is supervisor of industrial arts in the State Department of Education, Division of Public Instruction, Columbus 15, Ohio. Industrial Arts has grown so rapidly in most states that a state supervisor is necessary to see that the industrial arts program is meeting the demand of the state and protect the public by standard certification requirements for teachers.

OHIO: Division of Teacher Education and  
Certification, Columbus 15, Ohio

High School Certificate to Teach Industrial Arts in the State of Ohio

Upon meeting the following requirements the State of Ohio will issue a special provisional certificate to candidates who wish to teach Industrial Arts.

COURSES IN TEACHING FIELD:

1. Graphic Arts,  
including drawing, planning, printing, photography,  
and duplication
2. Woods,  
including furniture construction, carpentry, and  
wood finishing
3. Metals,  
including sheet metal, art metal, foundry, and  
machine metal work
4. Applied Electricity  
including communication, transportation, and power
5. Methods and Organization

There should be a distribution of the above courses to  
make up.....45 hours

PROFESSIONAL COURSES OFFERED AND REQUIRED:

Educational Psychology.....	2 to 3 hours
Principles of Teaching.....	2 to 3 hours
School Administration.....	2 to 3 hours
Methods of Teaching.....	2 to 6 hours
Student Teaching.....	3 to 5 hours

Total                      11 to 20 hours

Electives to make a minimum of 17 hours from the following related courses:

History of Education  
Tests and Measurements  
Educational Sociology  
Introduction to Teaching  
Philosophy of Education

The State of Ohio issues a Special Provisional Certificate but the requirements are very general.

In checking the certification plan for these states it is seen that from twenty-four to thirty hours in the industrial arts teaching field is required. Certification standards are to be considered as minimum standards for teacher preparation and it is expected that colleges and universities that prepare teachers will develop and emphasize much higher standards in their teacher education programs.

## PART B.

### INDUSTRIAL ARTS CERTIFICATION IN ARKANSAS

No one is specifically designated to supervise industrial arts in Arkansas. The Regulations Governing The Certification of Teachers in Arkansas in listing the requirements for the Certification of High School Teachers lists industrial arts, but refers to it as one of the Vocational Subjects. The list of Vocational Subjects included Industrial Education which in turn includes Industrial Arts, thus the

teaching field requirements for industrial arts are the same as those for federally subsidized teachers under industrial education.

The following plan of Certification for Vocational Teachers is quoted from The Regulations Governing The Certification of Teachers in Arkansas. Industrial Arts Certification according to the regulations is included in this plan.

ARKANSAS: REGULATIONS GOVERNING THE CERTIFICATION OF TEACHERS

Requirements for the High School Vocational Certificate:  
(Valid for a period of six years)

Graduates from a four-year institution approved by the State Board of Vocational Education for training teachers in the vocational field indicated on the certificate.

General Requirements:

	Minimum Sem. Hrs. Required
English (this may include 6 hours of speech and/or journalism)	12
Social Studies	12
Science (this may include 6 hours of mathematics)	12
Physical Education, Health or Safety	6
Art or Music	3
General Psychology	3

Professional Requirements: 18

Trade and Industrial Certificate  
Professional Orientation  
Principles of Learning  
Methods of Teaching  
Curriculum Construction  
Direct Teaching  
History and Principles of Vocational Education  
Occupational and Job Analysis  
Shop Analysis and Management  
Special Course in Conservation of Natural Resources

Experience:



Three years of experience in a recognized occupation.

**Specialization Requirements: Industrial Education**

Economics and Sociology (Including subject matter in principles of economics, industrial development, labor problems, social control, and public opinion and propaganda)	16
Mechanical Trades (Including subject matter in mechanical drawing and selected shop courses in the approved mechanical trades)	12

Proposed Plan for Oklahoma. The requirements for the certification of industrial arts in Oklahoma are in line with the requirements of the majority of the states issuing special certificates for industrial arts teachers. The plan is revised from time to time to meet the trends in the field. The following are the proposed requirements for industrial arts teachers as approved recently by the State Advisory Committee for Industrial Arts Teachers in Oklahoma.

**A PLAN FOR THE CERTIFICATION  
OF INDUSTRIAL ARTS TEACHERS**

As Approved by

**THE STATE ADVISORY COMMITTEE FOR INDUSTRIAL ARTS IN OKLAHOMA  
SCHOOLS**

**HIGH SCHOOL CERTIFICATES TO TEACH INDUSTRIAL ARTS  
(To be required in grades 7 to 12, inclusive)**

In addition to the general requirements included in the regulations for securing certificates to teach, the completion of the following courses shall be required, respectively, for one-year and life certificates to teach Industrial Arts.  
(Numbers below indicate semester hours of credit)

	1-year	Life
COURSES IN EDUCATION AND PSYCHOLOGY, not more than six semester hours of which shall be completed during the first two years of the college course: (Four hours of this to be practice teaching in Industrial Arts and two hours in occupational guidance)	15	21

## OTHER REQUIRED COURSES:

English.....	6	8
American History and Government...	6	6
Oklahoma History (or $\frac{1}{2}$ unit in high school).....	2	2
Agriculture (or $\frac{1}{2}$ unit in high school).....	<u>2</u>	<u>2</u>
Total	16	18

## COURSES IN INDUSTRIAL ARTS FIELD:

Basic Woodworking.....	4	4
Basic Industrial Drawing.....	4	8
Methods of Teaching Industrial Arts	2	2
Organization and Administration of Industrial Arts.....		2
Industrial Arts Design.....		2
Care of Shop Equipment.....		2
A "Major" in one of the Industrial Arts Fields indicated below (in addition to required work above)	<u>8</u>	<u>12</u>
Total	18	32

## MINIMUM REQUIRED IN ALL SUBJECTS

The Industrial Arts field from which a "Major" may be selected are as follows:

1. AUTOMOBILE MECHANICS
2. CRAFTS OR HANDICRAFTS
3. ELECTRICAL WORK
4. GENERAL SHOP (shall include two or more semester hours of work in each of four shop areas in addition to woodwork and drawing)
5. GENERAL METAL WORK (shall include two or more semester hours of work in each of four areas using metal work tools and processes)
6. INDUSTRIAL DRAWING
7. MACHINE SHOP PRACTICE

- 8. PRINTING
- 9. WOODWORKING

A Proposed Plan For The Certification of Industrial Arts Teachers in Arkansas.

Industrial Arts is a non-subsidized program of instruction in shopwork or mechanical drawing in which less time is devoted to the course than vocational courses in Trades and Industries. Its chief purpose is broadening and general educational, however, the work may become increasingly vocational in advanced classes. It is the opinion of the writer if Arkansas is to meet the challenge of a growing industrial state it will have to offer opportunities to children in school to learn about and explore basic industrial activities in industrial arts classes. These classes will also serve as a screening process for the trade and industrial classes. Many programs are unsuccessful because of teacher qualifications. These qualifications differ in many respects from the trade and industrial teachers. Again it is the opinion of the writer that a separate set of teacher qualification requirements be included for industrial arts.

The following plan for the certification of the industrial arts teachers is proposed by the writer.

A PROPOSED PLAN FOR THE CERTIFICATION OF  
INDUSTRIAL ARTS TEACHERS IN ARKANSAS

Minimum  
Sem. Hrs.  
Required

Graduation from an approved four-year  
college



# General Requirements: 48

English (This may include 3 hrs. of Speech) ..	12
Social Studies.....	12
Science (This may include 6 hrs. of Math)....	12
Art or Music.....	3
Physical Education, Health and Safety.....	6
General Psychology.....	3

# Professional Requirements: 18

Basic Professional Course.....	9
Introduction and Orientation (3)	
Psychology (Educational or Adolescence) (3)	
General Methods and Observation (3)	
Techniques of Teaching Course.....	9
Curriculum Construction and/or Evaluative Procedures (2)	
Special Methods, including Principles of Guidance (2)	
Directed Teaching (5)	

# Industrial Arts Teaching Basic Requirements: 30

Basic Woodwork (4)	
Basic Industrial Drawing (8)	
Methods in Teaching Industrial Arts (2)	
Organization and Administration of Industrial Arts (2)	
Industrial Arts Design (2)	
Care of Shop Equipment (2)	

An Industrial Arts Major of at least ten hours should be selected from one of the following fields. These hours will be in addition to the "Industrial Arts Teaching, Basic Requirements" just listed.

Industrial Drawing	
Woodworking	
Machine Shop Practice	
Printing	
Electrical Work	
Automobile Mechanics	
Crafts and Handicrafts	
General Shop (shall include two or more semester hours of work in each of four shop areas in addition to woodwork and drawing)	
General Metal Work (shall include two or more semester hours of work in each of four areas using metal work tools and processes)	

A careful study of the included plans from other states

with that of Arkansas shows Arkansas out of line in the certification of industrial arts teachers. The adoption of a plan similar in nature to that proposed by the writer should help to correct many misconceptions as to the purpose of industrial arts. It is felt that this will be necessary before industrial arts is to take the place it should in the educational system of Arkansas.

## CHAPTER IV.

### INDUSTRIAL EDUCATION IN STATE COLLEGES IN ARKANSAS

Only the colleges in Arkansas that offer work in industrial education will be included in this chapter. Industrial education in this chapter will refer to courses offered in the institutions of higher learning for the purpose of qualifying teachers in the field of industrial arts or vocational trade and industrial education. All the courses in or directly related to a teaching field in industrial education will be listed directly from the college bulletins along with other pertinent information about the department. Other information obtained from the questionnaire sent to the heads of departments of industrial education will be included to give a more complete picture of the status of industrial education in the state. Schools for the colored will not be included.

### PART A.

#### THE UNIVERSITY OF ARKANSAS

The University located at Fayetteville, Arkansas, is state supported and is the only institution of higher learning in Arkansas in which five years of college work are offered. Dr. Roy W. Roberts is head of the vocational education department. According to the returned questionnaire four students graduated in 1947-48 with majors in trade and industrial education. There were no graduates with majors or minors in industrial arts. The questionnaire indicated there



was a demand for graduates with majors in the above named fields. There are no plans to expand the department but the intention is to furnish teachers as needed.

The following information was taken from the College of Education Bulletin, 1947-48, of the University of Arkansas.

Vocational Teacher Training. The University of Arkansas has been designated by the Board for Vocational Education as an institution approved for the education of vocational teachers. The curriculum outlined below is designated to prepare teachers, supervisors, and administrators in the vocational education, educational fields of agriculture, distributive occupations, home economics, guidance, and trades and industry provided for in the federal vocational acts and in commercial subjects and industrial arts. (Only the courses for trades and industries, diversified occupations, and industrial arts will be listed)\*

Industrial Education. The curriculum in vocational industrial education is designed to prepare persons who have the proper technical and industrial background to qualify as teachers of trades and industries, and industrial arts; coordinators of cooperative part time programs, and supervisors and administrators in subjects by completing the teacher training curriculum leading to the degree of Bachelor of Science in Education.

Only the courses related directly to teacher certification in industrial education will be listed here instead of the complete curriculum leading to a Degree of Bachelor of Science in industrial education.

The course titles listed below were taken from the University of Arkansas bulletin for the session 1946-47.

<u>Titles of Courses</u>	<u>Hours</u>
Materials and Methods in Industrial Education	2
Organization of Industrial Arts Programs	2

\*Inserted by writer

Shop Organization and Management	2
Administration and Supervision of Vocational Education	2
History and Principles of Vocational Education	2
Problems in Vocational Education	3
Curriculum Construction in Vocational Education	2
Public School Organization for Vocational Teachers	2
Planning and Organizing Local Programs in Vocational Education	2
Research in Vocational Education	3
Seminar, Each Semester, Required of all Vocational Education Majors	1
Mechanical Drawing	2
Descriptive Geometry	2
Mechanical Engineering- Shop	1
Mechanical Engineering- Shop	1
Mechanical Engineering- Shop	1
Conservation of Natural Resources	3
Mechanical Engineering- Pattern Shop	1
Vocational Education, History and Principles of Vocational Education	2

Courses listed for graduate credit leading to a Master of Science Degree in industrial education were listed in the Graduate School Bulletin, 1946-47, (page 13).

<u>Titles of Courses</u>	<u>Hours</u>
Administration and Supervision of Vocational Education	2
History and Principles of Vocational Education	2
Problems in Vocational Education	2
Curriculum Construction in Vocational Education	2
Public School Organization for Vocational Teachers	2
Planning and Organizing Problems in Vocational Education	2
Research in Vocational Education	3

Only one course in the University of Arkansas bulletin deals with industrial arts. It seems that there is a great opportunity for the training of industrial arts teachers in Arkansas, and the University is overlooking the opportunity.

## PART B.

## FOUR-YEAR STATE COLLEGES

Industrial education courses are offered in only two of the four-year colleges in Arkansas. The term Industrial Education has been used in the catalogues of the following colleges as the title of the industrial arts department.

Industrial Arts Education. The professional character of industrial arts education changes became more apparent both in the public schools and teachers colleges. That emphasis is being placed upon the professional side of such work is indicated by the term industrial arts education. ( 23, page 9 )

According to the requirement of trade and industrial education courses and the curriculum of the industrial education department it is assumed by the writer that no trade and industrial education courses are offered. Some of the work taken in these departments may be transferred to a college or university offering trade and industrial education.

The Arkansas State Teachers College is located at Conway, Arkansas, and is a four year college belonging to the North Central Association. Prof. Eugene W. Packard is head of the industrial arts department. According to the returned questionnaire five students with majors and two with minors in industrial arts graduated in 1947-48. There has been a demand for graduates with majors in industrial arts in the schools of Arkansas and from other states. The questionnaire shows there has been a recent expansion in the department.

The following information was taken from the Arkansas



## Industrial Education

### Major Requirements:

Thirty semester hours in industrial education approved by the head of the department are required for a major in industrial education.

### Minor Requirements:

Eighteen semester hours in industrial education approved by the head of the department are required.

### Courses Offered in Industrial Education:

	<u>Hours</u>
Woodwork	3
Mechanical Drawing	3
Introductory Metal Work	3
Industrial Education for Elementary Grades	2
Furniture and Cabinet Making	3
Pattern Making	3
Sheet Metal Work	3
Oxy-Acetylene Welding	3
Advanced Industrial Education for Elementary Grades	2
Materials and Techniques in Industrial Arts	3
Metallurgy	3
Advanced Furniture and Cabinet Making	3
Carpentry	3
Architectural Drawing	3
Machine Drafting	3
Home Mechanics	3

### Arkansas Agricultural and Mechanical College, Monticello,

Arkansas belongs to the North Central Association. Mr. E. R. Glazener is head of the industrial arts department. According to the returned questionnaire there is a demand in Arkansas and other states for graduates with a major in industrial arts education. No students graduated in 1947-48 with majors or minors in industrial arts education or trade and industrial education. The department is planning an expansion to help meet the demand for trained teachers in Industrial Arts.

The following information was taken from the Arkansas Agricultural College Bulletin, 1948-49, (pages 72-73).

<u>Industrial Education Courses:</u>	<u>Hours</u>
Mechanical Drawing	2
Forging and Elementary Machine Shop	1
Hand Wood Craft	3
Descriptive Geometry	2
Elementary Woodwork, Pattern and Foundry	1
Crafts, Leather, Bookbinding, Plastics, etc.	3
Mechanical Drawing (Advanced)	2
Ornamental Iron and General Metals	3
Development and Practices in Industrial Education	3
Bench Woodwork and Cabinet Making	3
Machine Shop	1

## PART C.

### PRIVATE INSTITUTIONS

There are six four-year private institutions in Arkansas, two of which offers work in industrial education. All but one of these institutions are controlled by churches of various denominations. John Brown University is privately owned.

John Brown University, Siloam Springs, is a four year institution of vocational specialization. According to the returned questionnaire Mr. Roger Weathers is head of the Vocational Teacher Training Department. One student graduated with a major in Trade and Industrial Education in 1947-48. The questionnaire also indicated a demand for graduates with the above major both for the State of Arkansas and other states. They plan to expand the department by increasing facilities and staff.

The following information was taken from the John Brown catalog for the school year 1948-49, (pages 63-71).

Vocational Teacher Training: The Vocational Teacher Training Program was inaugurated to meet the demand constantly made upon us. Educators from many schools in the nation have written, wired, or appeared in person asking us to send them vocational trained teachers. Our staff, shop equipment, and general set-up as well as the type of students that come to us, particularly fit us for this teacher training program, and it is with pleasure that we accept this new responsibility. The John Brown University has the approval of the State Department of Vocational Education for the training of teachers for Federally-aided classes in Distributive Education and Trades and Industry. (pages 63-69)

The following course titles are included in the catalog under the description of courses, pages 67-71.

<u>Titles of Courses</u>	<u>Hours</u>
History and Philosophy of Vocational Education	3
Special Methods in Trade and Industrial Education	3
Adult Education	2
Educational Analysis	2
Shop Organization and Job Sheet Construction	2
Practice Teaching in Vocational Subjects	3

Harding College is a Church of Christ college and is located at Searcy, Arkansas. It is a four year institution. A new head of the Industrial Education Department is being sought.

The following information was taken from the Harding College Bulletin, 1948-49.

#### Industrial Education

The department offers at present only aeronautics but as courses can be developed and integrated with the general purpose of the College the basic training will be given in Metals and Woodworking, Photography, Printing, and the Graphic Arts, and Agricultural Skills.

The department of industrial education is a new division



in which an expansion is planned. The catalogue indicates that the purpose of this department will be that of industrial arts.

#### PART D.

#### STATE JUNIOR COLLEGES

There are three State Junior Colleges in Arkansas, two of which offer work in industrial education. Students attending these schools who wish to qualify to teach in the industrial education field will have to transfer to a four-year college.

The Arkansas Polytechnic College is located at Russellville, Arkansas. It is a member of the North Central Association as a Junior College. In 1948, courses were added leading to a degree of bachelor of arts or bachelor of science. The first degree will be granted at the end of the spring semester in 1950. Prof. B. East, Jr. is head of the Division of Vocational Education. According to the returned questionnaire administrators in this school are planning to expand their program to include industrial arts teacher training.

The following information was taken from the Arkansas Polytechnic College Bulletin, 1948-49, (page 7).

The division of Vocational Education offers terminal curricula in woodworking (both carpentry and cabinet making), auto mechanics, machine shop, flight training, and aviation and engine mechanics.

According to officials several students have expressed a desire to qualify for teaching certificates in both Industrial Arts and Vocational Education. There are some

indications the school will include courses to qualify teachers in the near future.

The State Agricultural and Mechanical College is located at Magnolia, Arkansas, and is a member of the North Central Association as a Junior College. Mr. Thomas D. Boles is head of the Industrial Arts Department. According to the returned questionnaire one student graduated in 1947 with a major in industrial education. There is a possibility of an expansion in the department to include general shop, and metal work in addition to the present curriculum. No trade and industrial education is offered at present.

The following information relating to courses in industrial education subjects was taken from the State Agricultural and Mechanical College Bulletin, 1947-48, (pages 53-57).

Industrial Education Courses:	Hours
Woodwork	2
Home Mechanics and Home Planning	2
Farm Shop and Carpentry	2

Industrial Education Electives Listed in  
Engineering Curriculum:

Mechanical Drawing	2
Descriptive Geometry	2
Advanced Drawing	2
Engineering Metal Shop	2
Advanced Drawing	2

PART E.

MUNICIPAL JUNIOR COLLEGES

There are two Municipal Junior Colleges in Arkansas, one of which offers work in industrial arts. One of the junior

colleges offers courses normally included in the industrial arts curriculum of other colleges, but these courses will not be included here since they are listed under engineering and no reference is made to industrial arts. Students who choose industrial arts teaching as a major will have to transfer to a senior college.

Fort Smith Junior College, Fort Smith, Arkansas.

The following information was taken from the Fort Smith Junior College Bulletin, 1947-48, (pages 53-57).

Industrial Arts:	Hours
Auto Mechanics:	
Auto Mechanics	3
Automobile Electrical Equipment	3
Garage Practices	3
Drafting:	
Mechanical Drawing	3
Projection Drawing	3
Architectural Drawing	3
Architectural Drawing	3
Machine Drawing	3
Machine Drawing	3
Printing:	
Printing	3
Linotype Operations	3
Linotype Mechanism	3
Printing	3
Presswork	3
Linotype Operating	3
Woodworking:	
Woodworking	3
Finishing	2
Turning	2
Care and Repair of Shop Equipment	2
Furniture Upholstery	2
Advanced Mill Work	3

There seems to be a growing demand for industrial arts teacher preparation in Arkansas according to the heads of industrial education departments. It is the opinion of the



writer that the college catalogues could be clarified by separating the courses in the industrial education department to pertain to the field of industrial arts or to the fields of trade and industrial education. There is only one college in Arkansas in which a major or minor in industrial arts might be selected and it is misleading in that the term industrial arts is used with education.

## PART F.

### SPECIAL INSTITUTIONS

There are three special institutions in Arkansas, two of which offer industrial education courses. The two including shopwork and drawing courses are for the physically handicapped children and include from the first to the twelfth grade.

Arkansas School for the Blind, Little Rock, Arkansas is controlled by the state. F. M. Connell is head of industrial arts for boys.

The following information was taken from the catalog of the Arkansas School for the Blind, Issue, 1945, (pages 21-25).

#### Boys Industrial Department:

Because of their physical handicap instruction in the Vocational Trades has proven to be most useful to our pupils. The following trades are taught: Leathercraft, Fabrix Mats, Rubber Link Mats, Brush Making, Woodwork, Piano Tuning and Repairing, Vending Stand Operation, Broom Making, Mop-Making, Furniture Weaving, Mattress Making and Rabbit Raising.

#### Requirements for Industrial Shop Certificates (boys):

I. Introduction to Shop Principles, 7th grade,

- 45 minutes daily, two semesters.
- II. Broom and Mop Making, 8th and 9th grades,  
90 minutes daily, four semesters.
- III. Woodworking, 10th grade,  
90 minutes daily, two semesters. Using power tools  
when possible- depending on use of hands and sight.
- IV. General Home Mechanics, Leathercraft, Fabrix Mats,  
Rubber Link Mats, and Brush Making, 11th grade,  
90 minutes daily, two semesters.
- V. General Shop, 12th grade,  
90 minutes daily, two semesters.

Arkansas School for the Deaf, Little Rock, Arkansas is controlled by the state. Kenneth Huff is principal of the Vocational Department.

The following information was taken from the bulletin of the Arkansas School for the Deaf, 1948, (page 21).

#### Vocational Training:

Our school day is divided into thirds. Two-thirds of the time is spent in the academic and one-third in the vocational departments. The learning of various trades is part of our program in preparing our deaf children for their future. The vocational department offers training in linotyping, printing, cleaning and pressing, shoe repairing, and leather work, cabinet making, carpentry, painting and wood finishing for the boys. The boys vocational classes do some maintenance work for the school.

These special schools for the handicapped students are concerned with the problem of teaching their students to earn a living on completion of school. Many schools in Arkansas seem to overlook these factors in the education of normal children.

## PART G.

DIRECTORY OF TEACHERS AND ADMINISTRATORS OF INDUSTRIAL  
EDUCATION IN ARKANSAS SPECIAL SCHOOLS, COLLEGES,  
AND UNIVERSITIES. SCHOOL SESSION, 1948-49

This is a list of teachers and administrators of courses in shop and industrial drawing which comes under the heading of industrial education in the colleges and universities of Arkansas.

Conway, The Arkansas State Teachers College

Eugene W. Packard....Head, Dept. Industrial Ed.  
Chester B. Ainsworth....Assistant Professor  
Viron N. Hukill....Assistant Professor

Fayetteville, The University of Arkansas

Roy W. Roberts....Head, Dept. of Voc. Teacher Ed.  
John E. Narden....Assistant Professor  
Robert Jeske....Assistant Professor  
Ray Lee Smith....Mach. Shop, Welding, Pattern Making  
and Foundry

Fort Smith, Fort Smith Junior College

James Humphrey....Director, Vocational Education  
Frank E. Cassidy....Drafting  
W. E. Hunzicker....Metal, Machine Shop, Woodwork  
C. H. Tobler....Printing

Little Rock, The Arkansas School for the Blind

F. M. Connell....Head, Industrial Arts for Boys

Little Rock, The Arkansas School for the Deaf

Kenneth Huff....Principal of Vocational Department

Magnolia, The State Agricultural and Mechanical College

Thomas D. Boles, Head, Dept. of Industrial Education

Monticello, Arkansas Agricultural and Mechanical College

Everette R. Glazener....Head, Dept. of Industrial Ed.

Pine Bluff, Agricultural, Mechanical and Normal College (Negro)

Moses A. Blakely....Director, Mechanic Arts  
William H. Blood....Carpentry  
Hammond D. Bryan....Plumbing  
John J. Coleman....Auto Mechanics  
George O. Henderson....Electricity  
Raymond E. Jones....Shoe Repairing  
Fern M. Meadors....Sheet Metal  
Henry C. Powell....Welding  
Doyle P. Russ....Auto Mechanics  
Bendum D. Sumate....Machine Shop  
Lewis W. Waddy....Industrial Arts Ed. Mach. Dr.



Tolbert E. Woods....Farm Shop

Russellville, Arkansas Polytechnic College

B. East, Jr....Head, Division of Vocational Ed.

M. E. Hale....Cabinet Making

Dave Hawkins....Auto Mechanics

Dave Atchison....Machine Shop

Siloam Springs, John Brown University

Roger Weathers....Head, Dept. Voc. Teacher Training

## PART H.

### SUMMARY

The following tables are included to show the number and classification of colleges in the state, the number offering industrial education and the number of students graduating in 1947-48 with majors or minors in industrial education.

TABLE I.

1947-48 GRADUATES WITH MAJORS OR MINORS  
IN I.A.E. OR T. & I.E.

Supported or Owned by	I.A.E.		T. & I.E.		Total
	Major	Minor	Major	Minor	
State	5	2	4	0	11
Private	0	0	1	0	1
Municipal	Junior Colleges				
Total	5	2	5	0	12

Table I shows five students with majors and two with minors in industrial arts education from Arkansas Colleges, 1947-48. It shows five students with majors and none with minors in trade and industrial education. It shows a total of twelve students graduating with majors and minors in industrial arts and trades and industrial education.

TABLE II.

NO. (WHITE) COLLEGES AND NO. YEARS WORK OFFERED

Supported or Owned by	2 year	4 year	5 year	Total
State	3	4	1	8
Private	2	6	0	8
Municipal	2	0	0	2
Total	7	10	1	18

Table II, shows the eight state supported colleges, eight private colleges, and two municipal colleges. Out of the total of eighteen colleges in Arkansas there is one five-year college, ten four-year colleges, and seven two-year colleges.

## CHAPTER V.

## INDUSTRIAL ARTS IN THE SECONDARY SCHOOLS OF ARKANSAS

The secondary schools include junior high schools and high schools belonging to the North Central Association and those accredited by the State Department of Education which meet the requirements of the Policies, Regulations, and Criteria for Accrediting Secondary Schools. There were no schools offering industrial arts or trade and industrial education which did not meet these requirements. This chapter should reveal the lack of and the potential needs for industrial arts in Arkansas. The population of Arkansas is rapidly changing from rural to urban to meet the needs of a fast growing industrial state. It is felt by the writer that more schools should include industrial arts to enrich and broaden the general education provided in the schools of the state.

## PART A.

## INDUSTRIAL ARTS IN THE JUNIOR HIGH SCHOOL

The junior high school is comparatively young in the educational system of this country, yet, it has developed rapidly in most of the schools of any size. The program of study is decidedly greater in scope and in richness of content than that of traditional elementary schools. The pupil has a choice of studies and is promoted by subject rather than by grade. It offers a plan of supervised study giving recognition to the peculiar needs of retarded and supernormal students. It offers departmental teaching and provisions for



testing aptitudes in academic, prevocational, and vocational work. Three definitions of the junior high school are as follows:

Junior High School: The lower part of a divided reorganized secondary school comprising usually grades 7, 8, and 9; less frequently consists of grades 7 and 8 or grades 8 and 9.  
( 6, page 231 )

Junior High School, Segregated: A unit of school organization comprising one or more but not all of the grades beyond grade 6 (or grade 7 in 11-year systems), usually grades 7 to 9, and housed apart from other units of the system in a separate building or wing of a building, with its own principal and staff. ( 6, page 231 )

Rural Junior High Schools: The rural junior high school comprises grades 7-9, organized as a unit in a nine-grade school. In exceptions, the tenth grade may be added, subject to the approval of the State Department of Education, under the following conditions:

- a. The building in the high school center of the junior high school attend is inadequate to accomodate the tenth grade pupils.
- b. It is impossible or impracticable to provide adequate transportation for tenth grade pupils to an accredited high school.
- c. The facilities of the local junior high school are adequate for the tenth grade, or better than those in the high school center attended by graduates of the local junior high school. ( 15, page 18 )

Industrial Arts in Arkansas Junior High Schools. The writer after reading similar studies for other states is aware of the small number of junior high schools in Arkansas. It seems almost like a waste of time compiling data for such few schools, yet, it is imperative that it be done in order for others to see and compare the results of this study with

other states. Table III lists the North Central and approved schools in which industrial arts is offered.

TABLE III.

A LIST OF APPROVED JUNIOR HIGH SCHOOLS  
IN ARKANSAS, SCHOOL YEAR 1948-49

Town or School	Ind. Arts Teacher	Name of Course	Grades Taught
Barrett	None		
*Batesville	None		
Bayou Metro	None		
Boydsville	None		
Columbus	None		
*DeQueen	None		
Dollarway	None		
*Fort Smith	Mrs. C. Clark	Drafting	7-9
	Tom Traw	Woodwork	7-9
	Victor Geisel	Metal Work	7-9
	W. D. Hartwell	Printing	7-9
Green County	None		
*Hot Springs	None		
Jenny Lind	None		
Jonesboro	None		
Lakeside Tech	None		
*Little Rock			
Pulaski Heights	L. C. McGuire	Manual Tr.	7-9
West Side	Sam A. Cox	Manual Arts	7-9
*Malvern	None		
Morris School	None		
Mountain Pine	None		
*No. Little Rock	W. C. Wilson	Manual Arts	7-9
Oppelo	None		
Ozone	None		
*Paris	None		
*Pine Bluff	None		
Pleasant Grove	None		
Rural Special	None		
*Russellville	None		
Springfield	None		
Sylvan Hills	None		
*Texarkana	None		
Walcott	None		
Whitten	None		
Wooster	None		

\*North Central Schools

Table III, shows a list of approved junior high schools

in Arkansas indicating those belonging to the North Central Association, and those schools including industrial arts. Column one, of Table III, shows the name of the town or school, column two, shows the name of the industrial arts teacher, if any, column three, lists the courses offered, and column four, shows the grades taught. There are thirty-three approved junior high schools.

Size and Number of Industrial Arts Classes in Arkansas Junior High Schools. The Junior High Schools of Fort Smith, Little Rock, and North Little Rock were the only junior high schools offering industrial arts. Table IV, shows the per cent of the total number of classes for each class size.

TABLE IV.

## SIZE AND NUMBER OF INDUSTRIAL ARTS CLASSES

Size of Classes	No. of Classes	Per Cent of Total Number of Classes
1 - 9	1	2.4
10 - 14	1	2.4
15 - 19	7	17.
20 - 24	16	39.
25 - 29	9	22.
30 - 34	4	9.7
35 - 39	3	7.3
Over 40	None	None

Column one, of Table IV, indicates the number of pupils enrolled in each of the industrial arts classes. Column two, and column three, show a total of forty-one classes with thirty-nine per cent of the total number of classes as having from twenty to twenty-four pupils per class. Twenty-two per cent of the classes had twenty-five to twenty-nine pupils per



class. There are no classes having over forty students per class.

Teacher Load. In Table III, the names of the seven teachers who teach the forty-one industrial arts classes in junior high are listed. The number of classes taught by these are shown in Table V.

TABLE V.

TEACHER LOAD FOR VARIOUS NUMBERS OF PERIODS OF  
INDUSTRIAL ARTS IN JUNIOR HIGH SCHOOL

No. Classes Per Day in Ind. Arts	No. of Teachers
Less Than Four	None
Four	None
Five	2
Six	4
Seven or Over	1

Column one, of Table V, indicates the number of classes of industrial arts per day and column two, indicates the corresponding number of classes. There are no teachers of industrial arts in junior high who teach less than five classes in industrial arts. There is only one teacher who taught more than six classes and only two teachers teaching less than six classes per day in industrial arts. Fifty-seven per cent teach six classes a day.

General Qualifications of Teachers. The office of the Director of Instruction contained files of the annual report of the accredited schools. These reports showed the general qualifications of the teachers. One report did not show the

college standing and the questionnaire was not returned resulting in one being omitted in Table VI.

TABLE VI.

QUALIFICATION OF INDUSTRIAL ARTS TEACHERS  
IN JUNIOR HIGH SCHOOL

No. of College Hrs. or Degree	No. of Teachers
No College Hrs.	1
60 - 90	1
91 - 123	2
B. S. or A. B.	2
M. S. or M. A.	None
Ph. D.	None

Column one, of Table VI, shows the number of college hours or degree and column two, shows the number of teachers with the corresponding educational qualifications. One teacher has no college work and two have Bachelor of Science degrees.

Special Preparation. The information for Table VII, was taken from the returned questionnaires received from the junior high industrial arts teachers. One questionnaire was not returned. Table VII, gives the training for these teachers. Column one, of Table VII, shows the number of college hours the teacher has completed in industrial arts education, and column two, shows the number of teachers having the corresponding number of hours. Three junior high industrial arts teachers have no training in the field in which they teach. One indicated he had qualified for the vocational permit. Another indicated he had approximately

twenty-five hours in trade and industrial education.

TABLE VII.

THE NUMBER OF COLLEGE HOURS THE TEACHER  
HAS IN INDUSTRIAL ARTS

No. Hrs of College Work In Ind. Arts	No. of Teachers
None	3
1 - 10	0
11 - 20	2
21 - 40	1
Over 40	0

Salaries. The salaries of the junior high industrial arts teachers given in the Annual Report for Accredited Schools on file in the Office of the Director of the Division of Instruction are shown in Table VIII. One of these reports did not show the salary.

TABLE VIII.

SALARIES OF INDUSTRIAL ARTS TEACHERS  
IN JUNIOR HIGH

Salaries Per Year	No. of Teachers
Below \$2000	None
2000 - 2099	2
2100 - 2299	1
2300 - 2499	3
2500 - 2699	1
Over 2700	None

Column one, of Table VIII, shows the salary per year and column two, the number of teachers receiving that specified salary. The table discloses a very small wage range in salaries for the industrial arts teachers in junior high.



The table shows no salaries below \$2000 and none above \$2700.

The Value of Junior High Shop Equipment. The returned questionnaires and personal visits with the shop teachers enabled the writer to obtain the approximate value of the shop equipment in the junior high schools studied in this report. These junior high schools are in the larger cities and have more equipment than would be expected in smaller schools. Two of the seven teachers teach mechanical drawing and the drawing equipment is included in Table IX, as shop equipment.

TABLE IX.  
VALUE OF SHOP EQUIPMENT

Cost of Equipment	No. of Schools
Below \$1000	None
1000 - 1999	1
2000 - 2999	4
3000 - 4999	1
5000 - 6999	0
7000 - 8999	0
9000 - 10,000	1
Over 10,000	None

Column one, of Table IX, shows the value of shop equipment and column two, shows the number of schools having the corresponding amount of equipment. The value of the shop equipment ranges from \$1000 to \$10,000. Fifty-seven per cent of the junior high school shops have between \$2000 and \$3000 worth of equipment. One shop, which is approximately fourteen per cent of all the schools included in this table, has more than \$9000 worth of shop equipment.

Industrial Arts Courses Offered and Textbooks Used in Junior High. The information desired by the writer regarding textbooks was not complete either in the annual report or in the returned questionnaire. The information obtained is shown in Table X.

TABLE X.

INDUSTRIAL ARTS COURSES OFFERED AND TEXTBOOKS USED  
IN JUNIOR HIGH INDUSTRIAL ARTS

Course	No. in Shop	Textbook
Manual Training	2	No Textbook
Manual Arts	1	No Textbook
General Woodwork	1	No Textbook
Mechanical Drawing	1	Mechanical Drawing by French and Severson
Mechanical Drawing	1	Architectural Drawing by Waffle
Mechanical Drawing	1	Mechanical Drawing by French and Severson
Sheet Metal	1	Essentials of Metal-working by Berg and Wing
		Essentials Of Bench Metal Practices by Smith

Table X, shows the textbooks used for various industrial arts courses. Column one, indicates the name of the course, column two, the number of courses by that name, and column three, the textbook, if one is used. Column one, indicates two schools continuing to call woodwork classes as manual training. Four teachers, or approximately fifty-seven per cent of the industrial arts shops, do not use textbooks. Two of the schools indicated plans to adopt textbooks. Two indicated using supplementary material instead of textbooks.

## PART B.

## INDUSTRIAL ARTS IN HIGH SCHOOLS

The secondary schools of Arkansas are accredited according to formal standards. The collegiate schools meet the requirements of the North Central Association of Colleges, and the secondary schools are given the North Central rating. Other schools meeting the requirements of the Policies, Regulations, and Criteria for Accrediting Secondary Schools in Arkansas are accredited annually and given the classification of "A", "B", or "C", for the current school year. The practice of approving schools for credit without a letter classification was discontinued July 1, 1947. In order for a school to be accredited there must be evidence that it will continue for a reasonable period of time.

North Central Schools. The names of schools belonging to the North Central Association were taken from the list of accredited high schools. Three accredited schools not belonging to the North Central Association offered industrial arts last year and are listed along with the North Central schools with markings to indicate accredited standing. The population of the towns where these schools are located was obtained from the 1940 United States Census. Table XI, pages 65, 66, and 67, shows these schools.

Column one, of Table XI, shows the name of the town; column two, lists the population of the town; column three, includes the names of the teachers of industrial arts; column



TABLE XI.

A LIST OF THE NORTH CENTRAL SCHOOLS IN ARKANSAS  
IN THE SCHOOL YEAR, 1948-49

Town or School	Population	Ind. Arts Teacher	Name of Course	Grades in Which Ind. Arts is Taught
Arkadelphia	5078	None	None	None
A.S.C. Training School, Jonesboro	11,729	None	None	None
Ashdown	2332	None	None	None
Atkins	1322	None	None	None
Augusta	2235	None	None	None
Batesville	5267	None	None	None
Benton	3502	None	None	None
Blytheville	10,652	None	None	None
Brinkley	3409	None	None	None
Camden	8975	None	None	None
Clarendon	2551	None	None	None
Crawfordsville	656	None	None	None
Crossett	4891	None	None	None
De Queen	3055	None	None	None
De Witt	2498	None	None	None
Earle	1872	None	None	None
El Dorado	15,858	None	None	None
Eudora	1808	None	None	None
Fayetteville	8212	Bill J. Kelso	Ind. Arts	9 - 10
Fordyce	3429	None	None	None
Forrest City	5699	None	None	None
Fort Smith	36,584	C. H. Tobler	Printing	10 - 12
		F. E. Cassidy	Drafting	10 - 12
Garner ***	634	W. J. Leach	Mech. Arts	8 - 12
Gentry	1826	Ray Cole	W. W. & Mech.	Dr. 8 - 9
Gurdon	2045	None	None	None
Harrison	4238	None	None	None

TABLE XI. (Continued)

Town or School	Population	Ind. Arts Teacher	Name of Course	Grades in Which Ind. Arts is Taught
Helena	8546	None	None	None
Holly Grove	6583	None	None	None
Hope	7475	None	None	None
Horatio	5960	None	None	None
Hughes	1004	None	None	None
Hulbert				
W. Memphis	3369	E. D. Steelman	Ind. Arts	9 - 12
Hot Springs	21,370	H. V. Walker	Printing	9
Keister	2430	None	None	None
Lake Village	2045	None	None	None
Leslie **	779	L. L. Horton	Gen. Shop	9 - 12
Lewisville	1314	None	None	None
Little Rock	88,039	F. M. Dorsey	Mech. Dr.	10 - 12
		M. P. Propst	Woodwork	10 - 12
		J. W. Lane	Printing	10 - 12
		W. I. Wade	Mech. Dr.	10 - 12
Little Rock *				
Tech High		Van Homard	Woodwork	11 - 12
		Mrs. R. G. Beasmore	Mech. Dr.	10 - 12
Lonoke	1715	None	None	None
Magnolia	4326	None	None	None
Malvern	5290	None	None	None
Marianna	4449	None	None	None
Marion	758	W. L. Vickery	Ind. Arts	9 - 10
Mena	3510	None	None	None
Monticello	3650	None	None	None
Mt. St. Mary's Acad.				
Little Rock		None	None	None
Newport	4321	None	None	None
Norphlet		F. E. Love	Shop	9 - 12
No. Little Rock	21,237	J. K. Ross	Mech. Dr.	10 - 12

TABLE XI. (Continued)

Town or School	Population	Ind. Arts Teacher	Name of Course	Grades in Which Ind. Arts is Taught
		W. A. Clark	Ind. Arts	10 - 12
		J. O. Martin	Printing	10 - 12
Osceola	3226	None	None	None
Paragould	779	None	None	None
Paris	3430	None	None	None
Parkin		None	None	None
Pine Bluff	21,290	H. H. Grauman	Woodwork	9 - 12
		J. K. Kraras	Mech. Dr.	9 - 12
Pocahontas	3028	None	None	None
Prescott	3077	W. H. Hall	Ind. Arts	9 - 12
Rogers	3550	None	None	None
Russellville	5927	None	None	None
Searcy	3670	None	None	None
Shawnee H. S. Joiner		None	None	None
Siloam Springs	2764	None	None	None
Smackover	2235	None	None	None
Springdale	3319	None	None	None
St. Anne's Acad. Fort Smith		None	None	None
Stamps		None	None	None
Stuttgart	5628	None	None	None
Texarkana	11,821	None	None	None
Turrell	515	B. R. Wiggins	Manual Tr.	9 - 12
Van Buren	5422	None	None	None
Walnut Ridge	2013	None	None	None
Warren	2516	None	None	None
Wilson		None	None	None
Wynne	3633	None	None	None

\* Class A Accredited    \*\* Class B Accredited    \*\*\* Class C Accredited



four, gives the name of the industrial arts courses offered and column five, the grades in which industrial arts courses are taught. There were seventy-one North Central high schools. Industrial Arts is offered in twelve of these North Central high schools. One Class A, one Class B, one Class C accredited schools offer industrial arts. Levels at which industrial arts is offered range from the eighth grade through the twelfth grade.

Size and Number of Classes. The annual reports from accredited and North Central high schools were used in the collection of the material used in determining the size and number of industrial arts classes. Table XII, indicates the size and number of the classes.

TABLE XII.

## SIZE AND NUMBER OF INDUSTRIAL ARTS CLASSES

Size of Classes	No. of Classes	Per Cent of Total No. Classes
Under 10	3	3.2
10 - 15	23	24.6
16 - 20	32	34.2
21 - 25	17	18.2
26 - 30	10	10.7
31 - 35	9	9.6
Over 35	None	None

Column one, of Table XII, shows the number of pupils per class, column two, shows the number of classes having the corresponding number of students, and column three, shows the per cent of the total number of classes corresponding to the number of classes of the various size classes. It

may be seen that 3.2 per cent of the ninety-four classes have nine or fewer pupils. The median is about eighteen which indicated the classes are not too large for effective teaching.

Teacher Load. The information regarding the number of students per class of the various industrial arts classes was obtained from the annual reports. Table XIII, shows teacher load.

TABLE XIII.

TEACHER LOAD FOR VARIOUS NUMBERS OF PERIODS  
OF INDUSTRIAL ARTS CLASSES IN HIGH SCHOOLS

No. of Classes Per Day in Ind. Arts	No. of Teachers
One	2
Two	3
Three	3
Four	4
Five	4
Six	7
Seven	None

Column one, of Table XIII, shows the number of classes per day in industrial arts, and column two, indicates the number of teachers who teach the corresponding number of classes. There are three teachers who teach one class in industrial arts daily. Seven teach six classes daily.

Other Duties and Subjects Taught. The superintendents annual reports required for accrediting schools show a variety of duties and classes taught by industrial arts teachers in addition to industrial arts. Table XIV, shows

these other classes and duties.

TABLE XIV.

OTHER DUTIES AND SUBJECTS TAUGHT  
BY INDUSTRIAL ARTS TEACHERS

Other Duties and Subjects Taught	No. of Teachers
Maintain School Busses	1
Assistant Coach	1
Trade & Industrial Courses	4
Student (University of Arkansas)	1
Superintendent	1
History	4
Geography	1
Mathematics	2
Band	1
Repairman	1

Column one, of Table XIV, shows other duties performed and subjects taught by the industrial arts teachers. Column two, indicates the number of industrial arts teachers having the corresponding duties or classes. One teacher teaches a class in three teaching fields in addition to industrial arts.

Qualifications of Industrial Arts Teachers. The college hours for five of the industrial arts teachers were not available either in the annual report or in the returned questionnaire. Table XV, page 71, shows the qualifications for eighteen of the twenty-three teachers.

Column one, of Table XV, shows the number of college hours per teacher and column two, shows the number of teachers having the corresponding qualifications. Only two have



less than sixty hours of college work, while eleven have a bachelors degree and two have Masters Degrees. Only two of the eighteen teachers whose qualifications are summarized in Table XV, have Masters Degrees. This suggests that a graduate program in Industrial Arts Education should be organized in some Arkansas State School.

TABLE XV.  
QUALIFICATION OF INDUSTRIAL ARTS TEACHERS  
IN HIGH SCHOOLS

No. of College Hrs. or Degree	No. of Teachers
Below 60 hours	1
61 - 90	1
91 - 123	2
B. S. or B. A.	11
M. S. or M. A.	2

Teacher Qualification in Industrial Arts. Questionnaires were used in collecting information regarding industrial arts teacher preparation. Only seventeen questionnaires were used. Table XVI, shows the teaching field qualifications.

TABLE XVI.  
NUMBER OF COLLEGE HOURS THE TEACHER HAS  
IN INDUSTRIAL ARTS

No. of College Hours	No. of Teachers
None	9
1 - 10	3
11 - 19	0
20 - 29	0
30 - 39	1
40 and Over	1

Column one, of Table XVI, shows the number of college hours the teacher has in industrial arts and column two, indicates the number of teachers having the corresponding hours. Three teachers indicated they had a major in industrial arts, but did not indicate the number of hours. One indicated a major in industrial education, and three indicated majors in trade and industrial education, but did not list the work in industrial arts. The fact that twelve have only ten hours of technical preparation for industrial arts teaching should be sufficient reason to include a teaching field requirement in the Regulations for the Certification of Industrial Arts Teachers in Arkansas. Chapter III includes a discussion of the certification of industrial arts teachers in Arkansas and recommendations for the raising of standards for these teachers.

Length of Class Periods. Both the questionnaires and the annual report were used in determining the length of industrial arts class periods. Table XVII, shows the number of school shops and the amount of time per class.

TABLE XVII.

## LENGTH OF INDUSTRIAL ARTS CLASS PERIODS

Length of Period	No. of School Shops
45 minutes	6
50 - 60	16
90 min. (1½ hrs)	1
Over 90 min.	None

Column one, Table XVII, shows the length of class periods and column two, shows the number of schools using the corresponding amount of time per class period. Twenty-two or approximately 95.7 per cent of the schools use one hour or less for industrial arts classes. It seems that a majority of Arkansas schools are organized on the one-hour-to-each -class basis.

Location of Shop. The information used in Table XVIII, was taken from the seventeen returned questionnaires. The term shop will include mechanical drawing as well as other industrial arts activities.

TABLE XVIII.  
LOCATION OF SHOP

Location of Shop	No. of School Shops
Basement	3 <sup>4</sup>
First Floor	11 <sup>10</sup>
Second Floor	1 <sup>12</sup>
Separate Bldg.	3 <sup>11</sup>

Column one, Table XVIII, shows the location of the shop and column two, indicates the number of shops in the corresponding location. Eleven, or approximately 64.2 per cent, are located on the first floor of the main school building. Three shops are located in the basement and one on the second floor of the main school building. Only three shops were located in a separate building.

Shop Activity. Information about schools from which no



questionnaires were returned was obtained from the annual reports. Many of the reports list manual arts, manual training, etc., rather than naming the specific courses offered. Table XIX, shows the courses offered in industrial arts.

TABLE XIX.  
COURSES OFFERED

Name of Course	No. of Schools Teaching Each Subject
Elem. Woodwork	9
Mechanical Drawing	9
Sheet Metal	1
Printing	4
Architectural Drawing	1
Cabinet Making	4
General Shop	2
Industrial Arts	1
Carpentry	1
Auto Mechanics	1
Machine Shop	1
Manual Training	2
Manual Arts	2

Column one, Table XIX, shows the courses by name and column two, shows the number of schools offering these courses. Woodwork and mechanical drawing are the two most popular courses with printing and cabinet making second in frequency.

Value of Shop Equipment. Only ten of the seventeen persons who returned questionnaires indicated the value of the shop equipment. The information in Table XX, though not complete, shows a wide range in the cost of shop equipment. Some of these shops share class periods between trade and industrial education and industrial arts.

TABLE XX.  
VALUE OF SHOP EQUIPMENT

Cost of Equipment	No. of School Shops
Below \$500	2
500 - 999	1
1000 - 1999	0
2000 - 3999	2
4000 - 5999	0
6000 - 7999	1
8000 - 9999	0
10,000 - 19,000	0
20,000 - 39,999	3
40,000 - and Over	1

Column one, of Table XX, shows the cost of equipment of different school shops, and column two, shows the number of shops having the corresponding value of shop equipment. Two shops have less than \$500 worth of equipment while one has \$40,000 or over.

Value of Mechanical Drawing Equipment. The questionnaire study revealed a wide range in the value of mechanical drawing equipment used in different schools. In one school the students furnish the instruments, but no value was placed on the school equipment. Table XXI, shows the value of school mechanical drawing equipment.

TABLE XXI.  
VALUE OF MECHANICAL DRAWING EQUIPMENT

Cost of Equipment	No. of Schools
Below \$99	1
100 - 299	1

TABLE XXI. (Continued)

Cost of Equipment	No. of Schools
300 - 499	None
500 - 749	None
750 - 999	None
1,000 - 1,499	1
1,500 - 1,999	1
2,000 or Over	2

Column one, of Table XXI, indicates the value of the mechanical drawing equipment, and column two, shows the number of schools having the corresponding cost of equipment. The number of schools indicated in this table is small, but is sufficient to show a range in the value of equipment from below \$99. to more than \$2,000.

#### PART C.

#### THE POTENTIAL NEEDS FOR INDUSTRIAL ARTS IN ARKANSAS

In considering the need for industrial arts in Arkansas high schools it is advisable to refer to what is being done in other states and to recognized leaders in the field of industrial arts. According to Dr. DeWitt Hunt, Head, Department of Industrial Arts Education and Engineering Shopwork, Oklahoma A. & M. College, in a paper prepared on The Professionalization of Industrial Arts Teachers, "It can be demonstrated that an industrial arts teacher can be given a full-time in-the-shop assignment in any high school with an enrollment of 200". A survey report, entitled The Status of Industrial Arts in Oklahoma High Schools, Henry C. Tinkle,



states that industrial arts is required in the accredited junior high schools of Oklahoma. William A. Baldwin, in 1935, made a study on The Present Status of Industrial Arts in Junior High Schools of California and stated that one of every ten junior high teachers was an industrial arts teacher. Table III, page 57, shows twelve North Central junior high schools and twenty-two accredited junior high schools. Only three of the thirty-four approved junior high schools offered industrial arts with a total of seven industrial arts teachers. There is one junior high school in Arkansas in which industrial arts is required. Table XI, pages 65, 66, and 67, lists seventy-one North Central high schools in Arkansas and three accredited schools in which industrial arts is offered. Of the seventy-one North Central schools only nine offer industrial arts with a total of twenty-three industrial arts teachers.

Schools With An Enrollment of 300 or More. The information on size of enrollment and the number of teachers was secured from the Annual Report of the County Supervisor of Schools for the year ending June 30, 1948. Table XXII, was included for the purpose of showing the potentialities for industrial arts in Arkansas.

Column one and two, Table XXII, shows the county and town of the schools having 300 or more enrollment. Column three shows the name of the school, column four, shows the enrollment of the corresponding school and shown in column five the number of teachers. There are sixty-three senior

TABLE XXII.

SCHOOL ENROLLMENT, NUMBER OF TEACHERS, AND LOCATION  
OF SCHOOLS WITH AN ENROLLMENT OVER 300

County	Town	School	Enrollment	No. Teachers
Arkansas	Stuttgart	Stuttgart	469	19
Ashley	Hamburg	Hamburg	357	13
	Crossett	Crossett	526	20
Baxter	Mountain Home	Mountain Home	345	14
Benton	Bentonville	Bentonville	423	15
	Siloam Springs	Siloam Springs	347	13
	Rogers	Rogers	829	23
Boone	Harrison	Harrison	312	14
Bradeley	Warren	Warren	565	45
Calhoun				
Carroll				
Chicot				
Clark	Arkadelphia	Arkadelphia	427	15
	Gurdon	Gurdon	379	16
Clay	Piggott	Piggott	315	11
	Corning	Corning	362	14
	Rector	Rector	314	9
Clebourne				
Cleveland				
Columbia	Magnolia	Magnolia	666	28
Conway	Morrilton	Morrilton	516	17
Craighead	Caraway	Caraway	356	9
	Bay-Brown	Bay-Brown	349	10
	Jonesboro	Junior High	472	18
	Jonesboro	Senior High	379	17
Crawford	Alma	Alma	415	16
	Van Buren	Van Buren	792	22
Crittenden				
Cross				

TABLE XXII. (Continued)

County	Town	School	Enrollment	No. Teachers
Dallas				
Desha				
Drew	Drew Central	Drew Central	311	11
	Monticello	Monticello	454	17
Franklin				
Fulton	Salem	Salem	313	11
Garland	Mountain Pine	Junior High	1152	29
	Mountain Pine	Senior High	757	30
	Langston	Langston (C)	306	14
Grant	Sheridan	Sheridan	465	16
Greene	Paragould	Paragould	586	18
Hempstead	Hope	Hope High	603	25
	Hope	Yerger (C)	405	10
Hot Springs	Malvern	Malvern	576	51
Howard	Nashville	Nashville	361	12
Independence	Batesville	Batesville	628	21
Jackson	Newport	Newport	721	17
Jefferson	Pine Bluff	Junior High	796	26
	Pine Bluff	Senior High	677	27
	Merrill	Merrill (C)	766	27
Johnson	Clarksville	Clarksville	481	22
Lafayette				
Lawrence	Walnut Ridge	Walnut Ridge	420	11
Lee	Marianna	Marianna	307	12
Lincoln	Star City	Star City	318	16
Little River	Ashdown	Ashdown	316	14
Logan	Paris	Paris	575	20
Lonoke	England	England	337	14
Madison	Huntsville	Huntsville	351	9
Marion				
Miller	Bright Star	Junior High	585	16
	Bright Star	Senior High	392	15
	Washington	Washington (C)	326	8
Mississippi	Wilson	Wilson	304	14



TABLE XXII. (Continued)

County	Town	School	Enrollment	No. Teachers
Monroe	Leachville	Leachville	385	13
	Blythville	Junior High	348	12
	Blythville	Senior High	572	27
	Brinkley	Brinkley	308	13
Montgomery				
Nevada	Prescott	Prescott	376	14
Newton				
Ouachita	Fairview	Fairview	358	15
	Camden	Camden	559	20
	Camden	Camden (C)	391	12
Perry				
Phillips	Helena	Helena	471	20
	Eliza Miller	Miller (C)	398	16
Pike				
Poinsett	Lepanto	Lepanto	300	10
	Marked Tree	Marked Tree	422	16
Polk	Mena	Mena	423	16
Pope	Russellville	Junior High	351	11
	Russellville	Senior High	306	12
Prairie	Des Arc	Des Arc	316	12
Pulaski	Jacksonville	Jacksonville	453	16
	Mabelvale	Mabelvale	424	15
	Little Rock	East Side High	763	32
	Little Rock	Pulaski Hts. Jr.	715	25
	Little Rock	West Side High	951	32
	Little Rock	Senior High	2175	89
	No. Little Rock	Junior High	991	24
	No. Little Rock	Senior High	941	35
	Little Rock	Dunbar (C)	1501	52
	Little Rock	Jones (C)	510	15
Randolph	Pocahontas	Pocahontas	324	12
Saline	Bauxite	Bauxite	315	14

TABLE XXII. (Continued)

County	Town	School	Enrollment	No. Teachers
Scott	Benton	Junior High	404	9
Searcy				
Sebastian	Greenwood	Greenwood	403	13
	Mansfield	Mansfield	374	13
	Fort Smith	Junior High	1540	47
	Fort Smith	Senior High	1083	41
	Fort Smith	Lincoln (C)	313	10
Sevier				
Sharp				
St. Francis	Forrest City	Forrest City	707	28
Stone	Forrest City	Lincoln (C)	354	11
Union	El Dorado	El Dorado	856	36
	Smackover	Smackover	370	17
Van Buren				
Washington	Fayetteville	Fayetteville	525	24
	Springdale	Springdale	471	15
White				
Woodruff	McCrory	McCrory	322	13
Yell	Dardanelle	Dardanelle	319	12

high schools, eight junior high schools for whites and five senior high schools for colored with a school enrollment of over 300. Instead of a total of thirty industrial arts teachers in Arkansas junior and senior high schools as is the condition in 1949, there should be at least 200 teachers of industrial arts in Arkansas schools. This number may be established as a goal towards which teacher education people and industrial arts leaders can work in the future.

## CHAPTER VI.

TRADE AND INDUSTRIAL EDUCATION IN  
SECONDARY SCHOOLS OF ARKANSAS

Trade and industrial education has been more popular in the secondary schools in Arkansas than industrial arts. In addition to the need for vocational training it is felt by the writer and others that the federal and state subsidies have had much to do with its popularity. Trades and industries will be used in this chapter to include both day trades and diversified occupations classes which are a part of the regular school program. The Smith-Hughes and George-Barden Federal Vocational Funds are to be matched dollar for dollar with state funds or local funds, or both, jointly. At least one-third of the sum appropriated to the state from the Smith-Hughes funds for salaries of teachers of trade and industrial classes must be applied to part-time schools or classes for workers of sixteen years of age or older.

## PART A.

ALL DAY TRADE AND INDUSTRIAL CLASSES  
IN THE SECONDARY SCHOOLS

In order for day trade classes to receive reimbursement from state and federal funds fifty per cent of the school day (three consecutive clock hours) must be devoted to shop work on a useful and productive basis. The Arkansas State Plan for Vocational Education ( 18, page 60 ) lists the requirements for the all day trade and industrial classes. These requirements must be fulfilled before receiving reimbursement



for the program. The trade and industrial education program in Arkansas is as follows:

There are two groups of trade and industrial day-school programs. Technically, they are referred to as Type A. and Type B. Under Type A. there are three subgroups: unit trade, general industrial, and vocational technical. Under Type B. is classified general vocational education. ( 20, page 58 )

General Qualifications. There are fifty-seven trade and industrial teachers in twenty-nine centers. The general qualifications of the trade and industrial teacher was secured from the Division of Vocational Education. The general qualifications of trade and industrial teachers are shown in Table XXIII.

TABLE XXIII.

GENERAL QUALIFICATIONS OF TRADE AND INDUSTRIAL TEACHERS

No. of College Hrs. or Degree	No. of Teachers
None	9
Below 20	4
20 - 39	1
40 - 59	3
60 - 79	4
80 - 99	3
100 - 123	3
B. S., B. S. E. or B. S. A.	30
M. A. or M. S.	0

Column one of Table XXIII, shows the number of college hours or the degree earned and column two, shows the number of teachers having the corresponding qualifications. Nine or about 15.7 per cent of the total number of trade and industrial teachers have no college hours. Thirty or about 31.5

per cent have college degrees, and 82.2 per cent of the teachers have twenty or more college hours.

Teaching Experience. The information regarding the number of years teaching experience of the trade and industrial teacher was obtained from the Educational Office, Division of Vocational Education.

TABLE XXIV.  
YEARS TEACHING EXPERIENCE

No. Years Experience	No. of Teachers
1 - 3	20
4 - 5	14
6 - 7	10
8 - 9	4
10 - 15	7
16 - 20	1
Over 20	1

Column one of Table XXIV, shows the number of years teaching experience of the trade and industrial teachers. Column two, lists the number of teachers having the corresponding number of years teaching experience. Twenty teachers have three years or less teaching experience, one teacher has twenty or more years teaching experience.

Salaries. The salaries of the trade and industrial teachers were obtained from the Office of the Division of Vocational Education. These salaries are shown in Table XXV. Column one, of Table XXV, shows the salaries of the trade and industrial teachers and column two, lists the number receiving

the corresponding salary. Eighteen or thirty-one per cent of the total number of teachers received a salary of \$3000 or over. Nine or about 15.7 per cent received less than \$2000. There are only nine of the trade and industrial teachers who teach part time in trade and industrial or related courses.

TABLE XXV.

## SALARIES OF TRADE AND INDUSTRIAL TEACHERS

Salary Per Year	No. of Teachers
Below \$2000	9
2000 - 2199	9
2200 - 2399	5
2400 - 2599	7
2600 - 2799	9
2800 - 2999	0
3000 - 3199	15
3200 - 3399	3
Over 3400	0

## PART B.

## DIVERSIFIED OCCUPATIONS

Diversified occupational training provides a program of activities in which the student receives actual trade experience in industry and business establishments. Through this plan, no school shops are required in order to provide a type of vocational training in industrial occupations. However, if the Diversified Occupations industrial course could be preceded by one or more years of good industrial arts instruction in common tool usage, it would be more effective. The diversified occupations classes in Arkansas meeting the

requirements of the Arkansas State Plan for Vocational Education are reimbursed sixty per cent by Federal and State funds. The per cent for 1949-50 will be cut to fifty-five per cent for all the trade and industrial classes in order to include other schools qualifying for the program.

Cooperative Training in Diversified Occupations. To provide vocational training through cooperation of the school and industrial and business establishments for groups of young people whose individual occupational objectives differ and whose cooperative agreement provides for legal employment, systematic training on the job, and supplemental training in the school.

Hours per week- weeks per year. Students in Diversified Occupations will spend at least 20 hours per week in training on the job and at least 10 hours per week in school in subjects related to their training on the job. In no case will the hours in school exceed the hours on the job. The training must be provided 36 weeks per year. Wages received by students in Diversified Occupations will be in conformity with local, State, and Federal employment regulations.  
( 18, page 60 )

Salaries of Coordinators of Diversified Occupations. The salaries of the diversified occupations coordinators of Arkansas were obtained from the State Educational Office, Division of Vocational Education.

TABLE XXVI.

SALARIES OF DIVERSIFIED OCCUPATIONS COORDINATORS

Salaries of D. O. Coordinators	No. of Coordinators
Under \$1000	2
1000 - 1499	8
1500 - 1999	8
2000 - 2299	2
2300 - 2599	1



TABLE XXVI. (Continued)

Salaries of Coordinators	No. of Coordinators
2600 - 2899	2
2900 - 3199	5
3200 or Over	4

There are thirty-two coordinators of diversified occupations, two full time, twelve are part time distributive education coordinators, sixteen are part time. Distributive education coordinators are reimbursed from vocational educational money. Column one, of Table XXVI, shows the salaries of the diversified occupations coordinators. Column two, shows the number of coordinators receiving the corresponding salaries. Two coordinators receive less than \$1000 while four received \$3200 or over. The two receiving less than \$1000 are on part time, and it is assumed by the writer that they have no other school duties.

Size of Classes. The information pertaining to the size of the classes was received from the State Educational Office, Division of Vocational Education. The size of the classes for only twenty-five of the diversified occupations classes was available, however, the writer feels that is sufficient in giving a general idea as to the size of these classes. The size of these classes is shown in Table XXVII.

Column one, of Table XXVII, shows the number of students per class and column two, lists the number of classes having the corresponding number of students. There are two classes having fewer than ten students per class and none having

thirty or more. It would seem that the Diversified Occupations program is expensive to operate.

TABLE XXVII.

## SIZE OF DIVERSIFIED OCCUPATIONS CLASSES

Size of Classes	No. of Classes
Below 10	2
10 - 13	7
14 - 17	6
18 - 21	4
22 - 25	3
26 - 29	3
Over 30	0

## PART C.

DIRECTORY OF TRADE AND INDUSTRIAL AND DIVERSIFIED  
OCCUPATIONS TEACHERS IN ARKANSAS

The following directory includes the names of all the teachers in trade and industrial and diversified occupations classes in the schools of Arkansas along with the names of the centers and the subjects taught. The letters D. O. under subjects taught stands for diversified occupations.

DIRECTORY OF TRADE AND INDUSTRIAL AND DIVERSIFIED  
OCCUPATIONS TEACHERS IN ARKANSAS

Center	Instructor	Subject Taught
Alma	M. L. Cowart	Building Trades
Bauxite	D. L. Phillips	Woodwork
Beebe	Ruth Steuart	D. O.
Benton	Edwin Tester	Woodwork
Bentonville	Mrs. W. B. Boyd	D. O.
Blythville	V. C. Holt	W. W. & Machine Shop
	Kenneth Lewis	D. O.
Camden	Vernon Dobbins	W. W. & Auto Mechanics

DIRECTORY (Continued)

Center	Instructor	Subject Taught
Clarksville Crossett	A. C. Crater (c)	Building Trades
	E. L. Mosley	D. O.
	Mrs. V. Pennington	D. O.
	D. F. Gadberry	Building Trades
	W. E. Evans (c)	Building Trades
Dumas El Dorado	Doyle Burke	D. O.
	Jesse Carrell	Machine Shop
	Frederick Boone (c)	Woodwork
Fayetteville Fordyce Forrest City Fort Smith	W. C. McKinnon	D. O.
	James Jones	Woodwork
	Jack Gresham	D. O.
	M. C. Jeffers (c)	Building Trades
	James Humphrey	Voc. Director
	Frank E. Cassidy	Rel. Machine Shop
	C. H. Tobler	Printing
	W. E. Hunzicker	Mach. Shop & W. W.
	A. H. Miller (c)	Building Trades
	Ora Padgett	D. O.
Harrison Helena- West Helena	George Harton	D. O.
	G. K. Coleman (c)	Building Trades
	Robert Wetzel	Printing
Hope Hot Springs	F. D. Calvin (c)	Building Trades
	H. V. Walker	Printing
	W. L. Hull	Woodwork
	B. G. Stephens	D. O.
	W. F. Branch (c)	Building Trades
Jonesboro	J. C. Wingfield	W. W. & Mach. Shop
	Mrs. R. Braden	D. O.
	Leon Cowan (c)	Building Trades
	Forrest Cherry	D. O.
Lake Village	Mrs. C. Edwards	D. O.
	J. H. Moreau	Voc. Director
Leachville Little Rock	H. B. Winstead (c)	Auto Mechanics
	Gustave Lower	Machine Shop
	J. L. Waller	Radio
	J. W. Lane	Printing
	Naomi Coulter (c)	Trade Sewing
	Stuart Williams	Auto Mechanics
	O. E. Plunkett	Auto Mechanics
	Van Homard	Aircraft Maintenance
	Mrs. L. Beasmore	Rel. Mach. Shop, Auto Mech., Aircraft Main- tenance
	B. F. Shelton (c)	Bricklaying
	Clarence Keeton	Printing
	L. O. Baker	D. O.
	Richard Samuel	D. O.
Magnolia	E. J. Travis	D. O.
Malvern	V. M. Tuberville	Building Trades
McGehee		

# DIRECTORY (Continued)

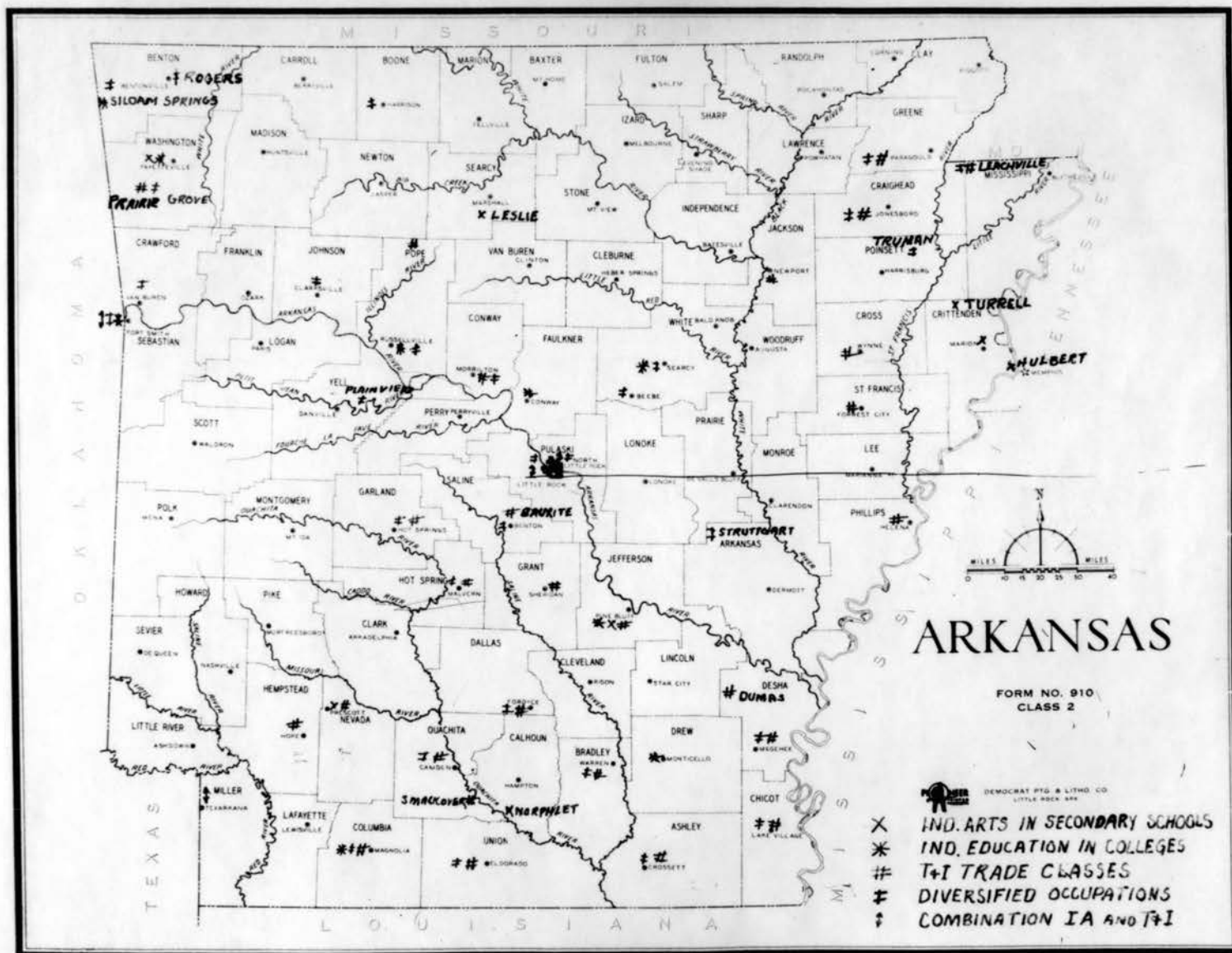
Center	Instructor	Subjects Taught
Morrilton	Vernon Ford	D. O.
	Charles Williams	Building Trades
	Harold Brinkley	Auto Mechanics
Newport	Mrs. M. Coates	D. O.
	C. B. Craft (c)	Building Trades
	Virgil Tyler	Voc. Director
No. Little Rock	W. A. Clark	Carpentry
	Mrs. Reba Taylor	Rel. Auto Mech., Machine Shop
	John K. Ross	Rel. W. W., Auto Mech., Machine Shop
	J. O. Taylor	Auto Mechanics
	A. B. Chichester	Machine Shop
	K. C. Byrd (c)	Building Trades
	W. D. Wilson (c)	Rel. Bldg. Trades
	Leon Reid	D. O.
Paragould (Greene Co. Training)	Mrs. C. Morrison	Cosmetology
	W. H. Duncan	Auto Mechanics
	Mrs. R. Haynes	D. O.
Pine Bluff (Watson Chapel)	W. H. Hill (c)	Building Trades
Plainview	Hoyle Houser, Jr.	D. O.
Prairie Grove	Curtis Crouch	D. O.
Prescott	R. C. Caesar (c)	Building Trades
Rogers	Wilbur Mosier	D. O.
Russellville	Robert Black	D. O.
Searcy	Mildred Brading	D. O.
Sheridan	Vernon Hope	Auto Mechanics
Smackover	L. C. Davenport	Carpentry, Gen. Metal
	Joe Davenport	Electricity, Gen. Metal
Stuttgart	Norvel Kelly	D. O.
Texarkana (No. Heights)	Mark Moore	Auto Mechanics
	Curlee Epperson (c)	Building Trades
	A. P. Miller	D. O.
Trumann	Paul Kimbrough	D. O.
Van Buren	James Geurin	D. O.
Warren	N. E. Smith	Building Trades
	R. E. Green	D. O.
Wynne	Hurthle Currie (c)	Building Trades

The directory of Trade and Industrial and Diversified Occupations Teachers in Arkansas includes three Vocational Directors. These directors are located in the larger centers in which several trade and industrial teachers are employed.



The interest in trade and industrial education in Arkansas has increased to the point where the per cent of reimbursement to schools will be decreased from sixty per cent to fifty-five per cent in 1949-50. The Regulations for Approving these centers are fast returning to pre-war standards.

Arkansas State Map. The map on page 93 shows the location of the schools in which industrial education is offered. The legend in the lower right hand corner of the map indicates the type of industrial education offered in these schools.



## CHAPTER VII.

PHILOSOPHY OF INDUSTRIAL ARTS AND TRADE AND INDUSTRIAL  
EDUCATION IN ARKANSAS

Industrial Arts and Vocational Education have existed in one form or another for many thousand years. Whenever there has been work to do, problems to solve, difficulties to overcome, frontiers to subdue, there has been industrial education. It was the original project method. It has been real education, involving seeing, hearing, doing, and thinking.

The highly organized society of today is dependent more than ever on the skilled workmen to provide the products and services essential to every day living.

The public schools, the home and other social agencies today are, as in primitive times, faced with the problems of preparing youth to meet the problems of adult life of the age in which they live. The problem of education has to change as the world changes and problems of earning a living changes. Changes are brought about in the individual as a result of learning. Learning is an active process and the trend in modern education is to stress activity as a major approach to learning of all kinds. This type of learning stimulates initiative, self-direction, creative thinking and problem solving. Through the application of theory and practice, such intellectual powers as attention, concentration, and assimilation are actively stimulated.

Industrial Arts and Vocational Education courses provide opportunity for students to use a wide variety of tools and

machines and to work with materials not otherwise available to them. The student thus learns to appreciate better the environment in which he lives. Many aptitudes are discovered and consumer information provided for more intellectual living.

In order to establish a common basis of understanding the definitions in Chapter I will be included here except from a different source. The following quoted definitions are those proposed by Dr. DeWitt Hunt in a paper prepared on The Professionalization of Industrial Arts Teachers.

Manual Training is a term which was applied to all forms of shopwork taught for both vocational and general values from 1880 to about 1915. It has been replaced by the two terms Vocational Industrial Education and Industrial Art which refer respectively to vocational shopwork and to shopwork taught for general educational purposes.

Industrial Arts as a phase of public education is a field of studies. It includes working with many materials such as wood, metals, plastics, etc. It involves a great variety of processes as for example, printing, industrial drawing, molding (in the foundry) etc., and it includes a study of power in general and electricity in particular. In its earliest stages industrial arts is non-vocational and includes learning units of value to all students. In more advanced courses it becomes increasingly vocational in its aims.

Industrial Education in its broader sense refers to all forms of shopwork and industrial drawing taught for any purpose whatsoever. In this meaning it is the all-inclusive term which should be given to a department which includes both industrial arts and trade and industrial education.

Trade and Industrial Education is the name given to courses and problems of shopwork instruction in the text of the Smith-Hughes Act and the George-Barden Act. Specifically "trade and industrial" is used in speaking or writing about shopwork courses subsidized by federal vocational education funds.



## PART A.

## INDUSTRIAL ARTS

There are several factors that seem to point to the cause for the retarded condition of industrial arts in Arkansas. First, there is no federal or state subsidy. Second, the financial condition of the Arkansas educational system is low. Third, there is no state supervisor or advisory board for industrial arts to work with the state department of education. Fourth, there is no state course of study or adopted textbook for any of the industrial arts courses. Fifth, there is no state plan for certification of industrial arts teachers in Arkansas other than that as provided for in trade and industrial education.

It is the opinion of the writer that if federal aid to education should pass Congress along with the new state legislation for education, Arkansas will overcome the other factors causing the retarded condition of industrial arts.

For the school year 1947-48, 54.9 per cent of all teachers in Arkansas received less than \$1500. Low salaries make necessary low requirements for teaching certificates. Teachers who are qualified to teach industrial arts find higher salaries in other states or go into industry.

According to the figures of the Bureau of Census, the population of school-age children to total population range from 16.6 per cent in New Jersey to a high of 28.3 per cent in New Mexico. Arkansas ranks eighth with a population of 26.1 per cent, a figure very near the top. Thus the potential

educational load in Arkansas is approximately 57 per cent greater than it is in New Jersey and New York, and approximately 23 per cent greater than the median for all the states.

The average per capita wealth of Arkansas in 1917, was \$710 as compared with eight states which had a corresponding figure of over \$1,600. A comparison made on the basis of income per child of school age will give a better picture of the inadequate school support. In New York, the income per child between the ages of five to seventeen, inclusive, is nearly four times that of Arkansas. The income per child of school age is over \$8,000 in five states, but is only \$2,404 in Arkansas.

This information is included in this chapter to show the possible reason for the lack of the development of industrial arts in Arkansas. The philosophy of industrial arts in most parts of the state seems to be that of manual training or mechanic arts. Several colleges have included or plan to include industrial arts in their curriculums which indicates a growing interest and need for industrial arts in Arkansas.

Industrial Arts in Junior High School. The industrial arts in the junior high provides opportunity for early adolescent boys to learn by doing in a course in which they are interested and a field that is exploratory in nature. The natural desire of the junior high boy for mechanical expression provides unlimited opportunities for teaching. Industrial arts provides opportunities for boys to work together in building social habits and attitudes as well as shop projects.

Industrial arts has a broadening educational value in all grades. It is for the school to search for and develop whatever the potentialities the boy or girl might possess. The students should not only be trained in abstract thinking but also to meet the practical demands or conditions in the world in which they will live. Many of the students in junior high are more capable of thinking in practical and mechanical problems than in abstractions.

During the past several years the schools have done much toward liberalization of the educational program by introducing more practical subjects. This movement in the schools is still behind the needs of the educational system.

Industrial Arts in High Schools. The purpose of Industrial Arts in the high schools is essentially the same as it is in junior high school except with different emphasis. It is broadening and general education. Industrial Arts in high schools is exploratory in nature becoming increasingly vocational in nature in advanced classes. The industrial arts courses in the high school provide an excellent screening process for trade and industrial education courses in high schools having both programs. The average high school boy has little or no opportunities to work along side his father in learning the arts of industry as the boy before the machine age. The vocational trade and industrial education courses are able to reach only a small portion of the high school students and provides little opportunities for exploring.

The general shop provides an excellent program for smaller

schools and for early courses in industrial arts. As aptitudes and interest are developed along specific lines the student can enroll in a unit shop of his choice in schools large enough to make this possible.

Objectives of Industrial Arts. The only objectives for industrial arts in Arkansas that could be found in writing are those listed in a School Shop Handbook compiled by the State Department of Education, Division of Vocational Education and the University of Arkansas. The material was developed through committees and group conferences with the addition of information from the state department. The purpose of this handbook is to provide information that will serve as a guide to school administrators and instructors for planning, organizing and operating shop programs. The following objectives are quoted from this handbook.

#### OBJECTIVES

##### INDUSTRIAL ARTS:

1. Develop skills which can be used for the home and personal property.
2. Develop hobbies of a constructive nature.
3. Develop basic skills and knowledge for students planning to enter engineering and other technical professions.
4. Develop basic skills that can be used in any trade or semi-skilled job in industry.
5. Develop knowledge and interest in industrial processes.
6. Develop knowledge and judgement in buying industrial products.
7. Help the student in his selection of a vocation.
8. Provide a practical medium for teaching science, mathematics, drawing, and other general subjects.

The objectives of industrial arts change as the needs of society changes. The following objectives are of the more



recent trend in which there is a close relationship between industrial arts and of the aims of general education.

1. To explore industry and American industrial civilization in terms of its organization, raw materials, processes, and operations, products, and occupations.
2. To develop recreational and avocational activities in the area of construction work.
3. To increase an appreciation of good craftsmanship and design, both in the products of modern industry and in artifacts from the material cultures of the past.
4. To increase consumer knowledge to a point where students can select, buy, use, and maintain the products of industry intelligently.
5. To provide information about, and in so far as possible-experience in the basic processes of many industries, in order that students may be more competent to choose a future vocation.
6. To encourage creative expression in terms of industrial materials.
7. To develop desirable social relationships, such as cooperation, tolerance, leadership, and fellowship and tact.
8. To develop a certain amount of skill in a number of basic industrial processes. ( 24, pages 42-43 )

## PART B.

### TRADE AND INDUSTRIAL EDUCATION

The primary purpose of trade and industrial education is to prepare a person so that he might earn a living in a gainful trade or an industrial pursuit. The secondary purpose is to give training in subject matter around occupational skills. It is concerned with the development of a pattern of thinking or reasoning in connection with the work in which training is given and with the pupil's cultural education, especially the

social, civic, and healthful aspects. Trade and industrial education is also concerned with youth who have already entered employment and wish greater efficiency in that employment. Trade and industrial education is subsidized by the federal government for the purpose of training persons for useful employment.

Objectives of Trade and Industrial Education. The following objectives are quoted from the School Shop Handbook.

**Type A or Unit Trade Training:**

To prepare students for employment in a specific trade. This type of program is intended only for communities with considerable industry and opportunity for employment in a specific trade.

**Type B or General Industrial Schools:**

To prepare students for employment in a general trade or industry. This type of instruction may be provided in communities with limited opportunities in a specific trade, but sufficient opportunities in several industries or trades.

The following quoted aims of diversified occupations were copied from A Manual For Coordinators in Diversified Training, Arkansas State Board of Education, Bulletin XVII, page 2.

The Aims of the Diversified Cooperative Training Program Includes:

1. The establishment of a program of training which will prepare for, secure and promote advancement in a gainful occupation.
2. Building habits of work, knowledge of working conditions, experience in accepting job responsibilities, experience in getting along with other workers, and skills and related information which boys and girls can rightfully expect to exchange for a wage.
3. Providing, through public education, a training

that gives information, guidance and actual experience to boys and girls before they enter full-time employment.

4. The provisions for public occupational training at a minimum cost to the community.
5. Helping to meet the problems of preventing students dropping out of school.
6. Offering the advantages of training for a job on a real job under real working conditions.
7. Providing a program which will permit students to train more effectively for jobs of their own selection which they would in many cases enter at a handicap after dropping out or graduating from non-specific courses.
8. Providing a program which will permit employers to select employees from a group of trained prospects rather than "picking up employees from the street".
9. Providing a program which, because of its flexibility, can be made to control the present practice continued training in overcrowded fields.
10. Providing a program which keeps many young people on home town jobs.
11. Making provisions for better social and economic adjustment of young people and thus raise the standard of citizenship.
12. Giving the students a specific trade training and at the same time permitting high school graduation and college entrance.
13. Further the worthy purpose of general education.
14. Counsel, guidance, and follow-up to students.

The aims and objectives of trade and industrial education are standardized throughout the United States by the administration staff of Division of Vocational Education in the United States Office of Education. The federal reimbursement has enabled trade and industrial education in Arkansas to

meet the standards of that in other states. For the fiscal year 1947-48, Arkansas was allotted \$17,566.69 from the Smith-Hughes funds for trade and industrial education and vocational home economics. The distributive occupations program was allotted \$20,930.94 from the George-Barden fund. The trade and industrial education program was allotted \$40,000.00 from the George-Barden funds. The grand total allotted to Arkansas vocational education fields in 1948 amounted to \$493,434.94. These figures were taken from Leaflet 79, Federal Security Agency.



## CHAPTER VIII.

## SUMMARY AND RECOMMENDATIONS

In order to facilitate the use of this study a summary of the findings is given here. The two important parts of this chapter are the revealing of the facts that have been assembled in the process of this work and the recommendations for the improvement of industrial education in Arkansas.

## PART A.

## SUMMARY

In summarizing the findings of this study each chapter is considered separately.

Scope and Organization of this Study. This chapter includes definitions of some of the basic terms used in the study. No surveys of a similar nature were found in Arkansas. Three studies of a similar nature for other states are reviewed showing the field covered in their survey. The methods of collecting the information is given along with copies of the inquiries used.

The State of Arkansas and its Educational System. Arkansas was admitted to the Union June 15, 1836. It has 53,335 square miles of surface which is the smallest of any state west of the Mississippi River. This chapter gives a brief history of Arkansas from its discovery to the present status. Roughly the land area of the state is divided as follows: sixty-four per cent forests, thirty-three per cent in farms,

three per cent in inland water, highways and cities. Arkansas had a total population in 1940 of 1,949,387 of which twenty-six per cent were Negroes.

The annual income for Arkansas is approximately as follows: minerals \$50,000,000; farms \$618,000,000; timber \$125,000,000; salaries from manufacturing \$600,000,000.

Until recent legislation the physical structure of the public school system of Arkansas was essentially that provided by the Constitution of 1876.

#### Certification of Industrial Arts Teachers in Arkansas.

The certification plans for industrial arts teachers for four states are included for study and for making recommendations for Arkansas. There is no separate certification plan for industrial arts teachers in Arkansas. The certification of industrial arts teachers is the same as that of vocational industrial education teachers. This chapter includes a certification plan for Oklahoma industrial arts teachers as proposed by the State Advisory Committee on Industrial Arts and a plan proposed by the writer for the certification of industrial arts teachers in Arkansas.

#### Industrial Education in State Colleges of Arkansas.

Universities, colleges, and special schools of Arkansas in which industrial education courses are offered are listed with the course titles in the field of industrial education. The state supported institutions in which industrial education courses are offered are: The University of Arkansas, at

Fayetteville; Arkansas State Teachers College, at Conway; The Arkansas Polytechnic College, at Russellville; and The State Agricultural College, at Magnolia.

The private institutions in which industrial education courses are offered are: John Brown University, at Siloam Springs, and Harding College, at Searcy.

Fort Smith Junior College is the only municipal institution in which industrial education is offered.

Industrial education is offered in two special schools: Arkansas School for the Blind and Arkansas School for the Deaf.

There are thirty-one industrial education teachers and heads of departments in the colleges of Arkansas. There were twelve students graduating from the colleges of Arkansas during the school year 1947-48 who had earned a major or minor in industrial education.

#### Industrial Arts in the Secondary Schools of Arkansas.

There are thirty-three approved junior high schools in Arkansas of which only three include industrial arts. Only one junior high school requires industrial arts. There are seven industrial arts teachers in the junior high schools of Arkansas. There were forty-one industrial arts classes of which thirty-nine per cent had from twenty to twenty-five students per class. About fifty-seven per cent of the junior high industrial arts teachers taught six classes per day. Three of these teachers had no training in industrial arts. The salaries of these teachers range from \$2000 to \$2400. There

were no junior high school shops having less than \$1000 worth of equipment. Four of the junior high school shops did not use textbooks. There were six different industrial arts courses taught.

There are seventy-one North Central high schools in Arkansas. Industrial arts courses were taught in twelve of these schools. Industrial arts courses were offered in three accredited schools not belonging to the North Central Association. There were twenty-three industrial arts teachers in the North Central high schools of Arkansas. There were ninety-four industrial arts classes of which thirty-four per cent had from sixteen to twenty students per class. Seven teachers teach six industrial arts classes daily. Only one industrial arts teacher had less than sixty college hours while eleven had a Bachelors Degree and two had Masters Degrees. Nine of these teachers had no preparation in industrial arts and only two had more than thirty hours. 9.57 per cent of the industrial arts classes are one hour or less in length. Three industrial arts shops were located in the basement. There were thirteen different industrial arts courses offered in the high schools of Arkansas. The value of the school shop equipment ranged from below \$500 to \$40,000 or over. The value of the mechanical drawing equipment ranged from below \$100 to \$2000 or over. There are sixty-eight senior high schools and eight junior high schools in which the enrollment is 300 or more.

Trade and Industrial Education in Secondary Schools of



Arkansas. There were fifty-seven trade and industrial education teachers and three directors of industrial education in Arkansas high schools in 1948-49. Nine of those teachers have no college training while thirty have Bachelors Degrees. Twenty teachers had three years or less teaching experience while only one had twenty years or more. The salaries of the trade and industrial teachers range from below \$2000 to \$3200 or more. There are thirty-two Coordinators of Diversified Occupations in the high schools of Arkansas. Only two are full time in diversified occupations while twelve have part time distributive education. The salaries of the diversified occupations coordinators range from below \$1000 to \$3200 or more. There were two classes having fewer than ten students and none having more than thirty.

Philosophy of Industrial Arts and Trade and Industrial Education. This chapter deals with the definitions of terms pertaining to industrial education. The purpose and objectives of industrial arts, trade and industrial education and diversified occupations are listed. Included are problems and conditions which are the possible factors which have influenced the progress of industrial education in Arkansas.

## PART B.

### RECOMMENDATIONS

After a careful study of the status of industrial arts in Arkansas and reviews of surveys made in other states the writer has found that the recommendations here are indicated.

for the improvement of the industrial education program in Arkansas. Full recognition of the physical hinderance and limitations to the advancement of the program of industrial arts is acknowledged, and these recommendations are offered with due respect to those in authority over the fine system of education in Arkansas.

Certification. Arkansas has no separate certification plan for industrial arts teachers. Persons qualifying for the vocational permit are permitted to teach industrial arts. There should be a separate certification plan evolved for industrial arts teachers in which no person without first completing at least twenty-four semester hours in industrial arts would be permitted to teach industrial arts. A Bachelor's Degree should also be required. This would eliminate some who are now teaching industrial arts, but would do much in raising the standards of the program in the state.

State Supervision. There should be at least one high school inspector on the state inspection staff who has had training in industrial arts. This inspector should be given the responsibility of the supervision of all high school industrial arts programs and the establishment of new programs.

Industrial Arts Advisory Committee. The system of state advisory committees of Oregon, Oklahoma and other states should be studied and a plan suitable to Arkansas be devised. This committee should be appointed by the state superintendent of public instruction and its duties should be advisory in nature.

The committee should include the following:

1. & 2. Two teachers from small cities.
3. & 4. Two teachers from large cities.
5. A supervisor of vocational education.
6. A teacher of shopwork from state junior colleges.
7. A department head selected from the two state colleges.
8. A representative from the department at State Teachers College, Conway, Arkansas.
9. State supervisor of trade and industrial education.
10. Chief high school inspector.
11. Supervisor of curriculum, State Department of Education.
12. Supervisor of industrial arts in city where meeting is held.

Divisions of Industrial Education. Colleges offering both industrial arts and trade and industrial education should have a separate curriculum for each. The industrial education departments in colleges offering only industrial arts should be changed to industrial arts.

Industrial Arts Education Center. The Arkansas State Teachers College at Conway, Arkansas should be designated as a center for industrial arts teacher education until the demand for this type of training justifies the establishment of departments in other colleges. With the present number of industrial arts majors and minors it would be impractical to have more than one industrial arts education department in Arkansas at present. Properly trained industrial arts teachers should do more to further the industrial arts program than any other one thing.

Industrial Arts in Junior High Schools. Industrial Arts should be included in all approved and North Central Junior High Schools in the State. The general educational and

exploratory nature of industrial arts makes it a challenge to all junior high schools in which this program is not offered.

Industrial Arts in Senior High Schools. Industrial Arts should be available to all boys and girls in every senior high school having an enrollment of 200 or more. This is true regardless of any vocational courses that may or may not be included in the program.

The Community Shop, or general shop as it is commonly called should be established in the smaller schools as well as larger ones. This shop should be equipped and operated to meet the need of the particular community. The smaller schools in particular should take advantage of this type shop since it would be less expensive than the unit shops in taking full advantage of the needs of the school.

State Course of Study. There should be a state course of study for each of the industrial arts courses offered. This should be done in order to assure proper standards.

State Adopted Textbooks. There should be state adopted textbooks for the various courses of industrial arts. The state course of study should be based on these textbooks.

Graduate School. One college in Arkansas should offer graduate work in industrial arts. This would make it possible for industrial arts teachers to earn a masters degree in their own field without having to leave the state.



Size of Classes. Industrial arts classes should not exceed twenty-five students since larger numbers would prevent proper instruction and supervision. The nature of industrial arts makes it imperative that some individual instruction be given.

State Objectives. The objectives of industrial arts should be flexible enough to satisfy the practical demands of pupils in Arkansas. The industrial arts teachers in Arkansas should formulate a statement of controlling philosophy in which specific objectives should be listed.

Terminology. All schools listing manual training, manual arts, etc. should change to industrial arts and revise courses if necessary to meet the modern trend. Terms and practices which are indicative of a retarded program should be discarded.

Future Studies. The following subjects are listed as possible studies needed for the advancement of industrial arts in Arkansas.

The status of industrial arts in Arkansas. This study should be conducted at least every five years.

The formulation of state courses of study.

The potential needs of industrial arts in junior high and senior high schools having an enrollment of 200 or more.

Professionalization of Industrial Arts Teaching in Arkansas. This should include special meetings at the state teachers meeting, Industrial Arts Association, Industrial Arts Clinic, etc.

## APPENDICES

Appendix A - A Selected Bibliography

Appendix B - Directory of Teachers and Administrators of  
Industrial Education in Arkansas Secondary  
Schools, Colleges, and Universities

## APPENDIX A.

## A SELECTED BIBLIOGRAPHY

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## APPENDIX B.

DIRECTORY OF TEACHERS AND ADMINISTRATORS OF INDUSTRIAL  
EDUCATION IN ARKANSAS SECONDARY SCHOOLS, COLLEGES,  
AND UNIVERSITIES

SCHOOL SESSION, 1948-49

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This is a combined list of all teachers and administrators of courses in shopwork and industrial drawing taught in any place in Arkansas for any purpose whatsoever. It includes both industrial arts and vocational industrial education. The detailed information for this directory was secured in the State Department of Education.

Personnel in the Office of the  
State Supervisor of Trade and Industrial Education  
Little Rock, Arkansas

J. Marion Adams.....State Director of Vocational Education  
J. C. Ruppert..State Supervisor, Trade and Industrial Education  
A. W. Ford.....State Supervisor, Distributive Education

Teachers of Shopwork and Industrial Education in  
State Colleges and Universities

Conway, The Arkansas State Teachers College  
Eugene W. Packard..... Head, Dept. Industrial Ed.  
Chester B. Ainsworth..... Assistant Professor  
Viron N. Hukill..... Assistant Professor

Fayetteville, The University of Arkansas  
Roy W. Roberts.....Head, Department of Vocational  
Teacher Education  
John E. Narden.....Assistant Professor  
Robert Jeske.....Assistant Professor, Pattern  
Making & Foundry  
Ray Lee Smith.....Mach. Shop & Welding

Fort Smith, Fort Smith Junior College  
James E. Humphrey.....Director, Vocational Education  
Frank E. Cassidy..... Drafting  
W. E. Hunzicker..... Metal, Mach. Shop, Woodworking  
C. H. Tobler..... Printing

Little Rock, Arkansas School for the Blind  
F. M. Connell..... Head, Industrial Arts for Boys

Little Rock, Arkansas School for the Deaf  
Kenneth Huff..... Principal of Vocational Dept.

Magnolia, The State Agricultural and Mechanical College  
Thomas D. Boles.... Head, Dept. Industrial Education

Monticello, Arkansas Agricultural and Mechanical College  
Everette R. Glazener.....Head, Dept. Industrial Ed.

Pine Bluff, Agricultural, Mechanical and Normal College(Negro)  
 Moses A. Blakely.....Director, Mechanic Arts  
 William H. Blood.....Carpentry  
 Hammond D. Bryson.....Plumbing  
 John J. Coleman.....Auto Mechanics  
 George O. Henderson...Electricity  
 Raymond E. Jones.....Shoe Repairing  
 Fern M. Meadors.....Sheet Metal  
 Henry C. Powell.....Welding  
 Doyle P. Russ.....Auto Mechanics  
 Bendum D. Sumate.....Machine Shop  
 Lewis W. Waddy.....Industrial Arts Ed. Mech. Dr.  
 Tolbert E. Woods.....Farm Shop  
 Russellville, Arkansas Polytechnic College  
 B. East, Jr.....Head, Division of Voc. Ed.  
 M. E. Hale.....Cabinet Making  
 Dave Hawkins.....Auto Mechanics  
 Dave Atchison.....Machine Shop  
 Siloam Springs, John Brown University  
 Roger Weathers.....Head, Dept. Voc. Teacher  
 Training

Teachers of Shopwork and Industrial Education in  
 Public Schools

City and School	Name of Teachers of Industrial Education Subjects	Ind. Arts and Trade Education Subjects Offered
Alma	M. L. Cowart	Building Trades
Bauxite	D. L. Phillips	Woodwork
Beebe	Ruth Steuart	D. O. Coordinator
Benton	Edwin Tester	Woodwork
Bentonville	Mrs. W. B. Boyd	D. O. Coordinator
Blythville	V. C. Holt	W. W. & Mach. Shop
	Kenneth Lewis	D. O. Coordinator
Camden	Vernon Dobbins	W. W. & Auto Mech.
	E. L. Mosley	D. O. Coordinator
	A. S. Carter (c)	Building Trades
Clarksville	Mrs. V. Pennington	D. O. Coordinator
Crossett	D. F. Gadberry	Building Trades
	Doyle Burke	D. O. Coordinator
	W. E. Evans (c)	Building Trades
Dumas	Jess Carrell	Machine Shop
El Dorado	W. C. McKinnon	D. O. Coordinator
East High	Frederick Boone (c)	Woodwork
Fayetteville	James Jones	Woodwork
	B. J. Kelso	Industrial Arts
Fordyce	Jack Gresham	D. O. Coordinator
Forrest City	M. C. Jeffers (c)	Building Trades

## Fort Smith

## Junior High

## Lincoln High

Garner  
GentryOzark Academy  
Harrison  
Helena-W. Helena  
Eliza Miller  
Hope  
Hot SpringsLangston  
HulbertWest Memphis  
JonesboroB. T. Washington  
Lake VillageLeachville  
Leslie  
Little Rock

## Tech High

Pulaski Heights  
Jr. High

## Dunbar High

Magnolia  
Malvern  
MarionJames Humphrey  
Frank E. Cassidy  
C. H. Tobler  
W. E. Hunzicker  
Mrs. C. Clark  
Rom Traw  
Victor Geisel  
W. D. Hartwell  
Ora Padgett  
A. H. Miller (c)  
W. J. LeachRay Cole  
George Harton  
Robert Wetzel  
G. K. Coleman (c)  
F. D. Calvin (c)  
H. V. Walker  
W. L. Hull  
B. G. Stephens  
W. G. Frazier (c)E. D. Steelman  
J. C. Wingfield  
Mrs. R. Braden  
W. F. Branch (c)  
Forrest Cherry  
Leon Cowan (c)  
Mrs. C. Edwards  
L. L. Horton  
J. H. Moreau  
Gustave Lower  
J. L. Walker  
J. W. Lane  
Stewart Williams  
O. E. Plunkett  
Van Homard  
W. I. Wade  
Clarence Keeton  
L. O. Baker  
F. M. Dorsey  
M. P. Propst  
Mrs. L. Beasmore  
Van Homard  
W. I. WadeB. E. McGuire  
Sam A. Cox  
H. B. Winstead (c)  
Naomi Coulter (c)  
B. F. Shelton (c)  
Richard Samuel  
E. J. Travis  
W. L. VickeryVoc. Director  
Drafting  
Printing  
W. W. & Mach. Shop  
Drafting  
Woodwork  
Metal Work  
Printing  
D. O. Coordinator  
Building Trades  
Mechanic ArtsW. W. & Mech. Dr.  
D. O. Coordinator  
Printing  
Building Trades  
Building Trades  
Printing  
Woodwork  
D. O. Coordinator  
Mechanical ArtsIndustrial Arts  
W. W. & Mach. Shop  
D. O. Coordinator  
Building Trades  
D. O. Coordinator  
Building Trades  
D. O. Coordinator  
General Shop  
Voc. Director  
Machine Shop  
Radio  
Printing  
Auto Mechanics  
Auto Mechanics  
Aircraft Maintenance  
Mech. Dr.  
Printing  
D. O. Coordinator  
Mech. Dr.  
Woodwork  
Mech. Dr.  
Woodwork  
Mech. Dr.Manual Training  
Manual Arts  
Auto Mechanics  
Trade Sewing  
Bricklaying  
D. O. Coordinator  
D. O. Coordinator  
Industrial Arts



McGehee	V. M. Tuberville	Building Trades
	Charles Williams	Building Trades
	Vern Ford	D. O. Coordinator
Morrilton	Harold Brinkley	Auto Mechanics
	Mrs. M. Coats	D. O. Coordinator
Newport	C. B. Craft (c)	Building Trades
Norphlet	F. E. Love	Shop
No. Little Rock	Virgil Tyler	Voc. Director
	J. O. Martin	Printing
	W. A. Clark	Carpentry
	Mrs. Reba Taylor	Rel. Auto Mech.
		Mach. Shop
	A. B. Chichester	Mach. Shop
	J. K. Ross	Rel. W. W., Auto
		Mech., Mach. Shop
	J. O. Taylor	Auto Mechanics
	A. B. Chester	Machine Shop
	Leon Reid	D. O. Coordinator
Junior High	W. C. Wilson	Manual Arts
Jones Trade School	W. D. Wilson (c)	Rel. Bldg. Trades
	K. C. Byrd (c)	Building Trades
Scipio A. Jones	E. H. Hunter (c)	Industrial Arts
Paragould (Greene		
Co. Training)	Mrs. C. Morrison	Cosmotology
	W. H. Duncan	Auto Mechanics
	Mrs. R. Haynes	D. O. Coordinator
Pine Bluff	J. K. Kraras	Mech. Dr.
	H. H. Grauman	Woodwork
Watson Chapel	W. H. Hill (c)	Building Trades
Plainview	Hoyle Houser, Jr.	D. O. Coordinator
Prairie Grove	Curtis Couch	D. O. Coordinator
Prescott	R. C. Caesar (c)	Building Trades
	W. H. Hall	Industrial Arts
Rogers	Wilbur Mosler (c)	Building Trades
Russellville	Robert Black	D. O. Coordinator
Searcy	Mildred Braden	D. O. Coordinator
Sheridan	Vernon Hope	Auto Mechanics
Smackover	L. C. Davenport	Carpentry, Gen.
		Metals
	Joe Davenport	Electricity
Stuttgart	Norvel Kelly	D. O. Coordinator
Texarkana	A. P. Miller	D. O. Coordinator
No. Heights	Mark Moore	Auto Mechanics
Washington High	Curlee Epperson (c)	Building Trades
Trumann	Paul Kimbrough	D. O. Coordinator
Turrell	R. B. Wiggins	Manual Training
Van Buren	James Geurin	D. O. Coordinator
Warren	N. E. Smith	Building Trades
	R. E. Green	D. O. Coordinator
Wynne	Hurthle Currie (c)	Building Trades



Typist,

Lucille E. Cassidy