THE TRAINING, EXPERIENCE, AND PROFESSIONAL STATUS OF PERSONNEL RESPONSIBLE FOR INDUSTRIAL ARTS TEACHER EDUCATION IN THE UNITED STATES

by

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CHAPTER I

INTRODUCTION

The industrial arts, as a part of the regular public school curriculum, are occupying more and more a role of great importance as a subject-matter field. In addition, there is a general feeling among industrial arts teachers that the methods employed by many of the members of this profession, though not new, are being recognized as superior ways of educating young people.

The teaching of the industrial arts in our nation's elementary and secondary schools is accomplished by instructors who have had, for the most part, specific as well as comprehensive training for the task and are generally well prepared in their special fields to assume their responsibilities. Most of the special training that these men have had, as well as their academic backgrounds, were obtained from colleges and universities throughout the United States where several hundred educators devote full time to the development and training of industrial-arts teachers.

Throughout the nation there is a growing interest among leading educators and administrators concerning the possible application of the industrial arts in their educational programs. This is also true among students who are seeking institutions in which industrial-arts teacher education is offered. It seems logical and plausible, therefore, to believe that a survey of this field would reveal some important facts and authentic data about it. Such a survey would make it possible for others to compare the testimonies of educators with those of people engaged in other professions or activities. An evaluation or appraisal of the results may prove to be an inspiration for additional study of this same problem or for the undertaking of different related problems.

PURPOSE

The purpose of this thesis is to discover the chief relationships, similarities, and differences of the factors pertaining to the professional status, training, and experience of those individuals who are responsible for the education of our nation's industrial arts teachers, and to produce from this information a word and graphic picture that would enable one to compare the characteristics of this profession with those of his own. This

thesis has been purposely limited to include only those factors regarded as pertinent, and to the information concerning industrial arts teacher educators in colleges and universities of the United States, in which industrial arts teacher education is offered.

METHOD

The data used herein were assembled from 415 responses to the 793 questionnaires sent out. In order to be reasonably sure that all eligible persons would receive questionnaires, a package containing enough for each man in the department was sent to the chairman of the department. Accompanying each package was a letter of transmittal, directed to the attention of the department chairman, requesting him to fill in and return one questionnaire, and to oblige by forwarding one to each member of his teaching staff. He was also asked to make any necessary substitutions where changes had been made in personnel. A sample of the questionnaire and letter of transmittal may be found in the appendix.

In some instances, parts of this study were concerned with fewer than 415 individuals because of the failure of some to complete a particular part of the questionnaire. In all cases, however, the exact number of those considered

was given so that the reader may have a full understanding of the circumstances.

A brief history of industrial arts is given in CHAPTER II to provide a foundation and background for those who may be interested in the early development of this phase of education.

CHAPTER II

THE HISTORY OF INDUSTRIAL ARTS EDUCATION

In order to understand fully the implications of the term, "industrial arts", as it is used at the present time and to realize fully the significance of the contribution that the industrial arts are making to the program of general education, it was believed to be desirable to survey very briefly the history of education, first, to the time rather immediately preceding that at which Rousseau began his work in France as a general background; and second, the development of the industrial arts as it progressed after that time.

Before this time, the earlier general educators who were the forerunners of the industrial arts and industrial arts education, and who concerned themselves with the practical training of youth and adults were more interested in the trade and vocational aspects of learning. They theorized about methods of learning which, in their opinions, would prepare the boy or the girl for skilled occupations and would eventually make him or her economically independent, as well as give enlightenment in some of the phases of general fundamental knowledge. Few of the ideas were ever put into actual practice by these writers themselves, but their influence was strengthened by leaders who were to follow.

Many of their doctrines are in use today; others have not yet been widely accepted. Among the more prominent of these early men were: (a) Martin Luther (1483-1546) who believed that all children, rich or poor, should attend school for two hours a day and spend the rest of the day at home learning a trade; (b) Johann Amos Comenius (1592-1670) who propounded the idea that words and things should be taught together; (c) John Locke (1632-1704), a great believer in trade education and vocational preparation, whose philosophy is described by Bennett, (2, p.61) as follows: "Locke became the chief exponent of the idea that education should fit a boy to practical life, whether it be in a trade or a profession". In 1697, when Locke was commissioner of trade and plantations, he advocated a system of "working school" for all pauper children between three and fourteen years of age, where they were taught "spinning or knitting, or some other part of the woolen manufacture". This useful training, together with church-training was in accordance with all of Locke's pedagogy, which insisted on "individual exercise in habits of practical usefulness, and habits of thinking and forming tested judgments, as well as the 'least part' of education: virtue, wisdom, manners being the three higher aims"; (d) August Hermann Francke (1663-1727), professor of Oriental languages at the University of Halle and pastor of a church in

the suburb of Halle, who had always had for a primary aim the provision of religious education, however, he advocated that several of the manual arts also be included in the curriculum.

JEAN JACQUES ROUSSEAU

The influence that these and other men had upon the industrial education movement, which occupied the minds of a few leaders during the sixteenth and seventeenth centuries, was noteworthy and exceptional but was dwarfed when compared to the influence and vision of Jean Jacques Rousseau (1712-1778). Rousseau, his disciples, and his followers created such changes in the fundamental modes of thought concerning education that many of the historical studies of education are dated from this time. This is especially true of industrial or manual arts. Bennett (2, p.81) made the following remarks concerning the ideals of Rousseau: "These statements concerning the value of the manual arts in education place Rousseau ahead of his predecessors and many of those who come after him. His recognition of the fact that the manual arts may be a means of mental training marked the beginning of a new era in education."

Rousseau's greatness did not come from his scholastic achievement or even his ability to manage himself or his affairs, for he was very poor at most of the things he attempted. He suffered many failures in his efforts to

satisfy a deep feeling of allegiance to poor and neglected children. His great love for the natural and his convictions regarding the order of Nature caused him much grief, but therein lie the reasons for his fame. His book, Emile, had such marked influence upon the minds and thinking of the French people that there is little doubt about its being the cause of the beginning of a new education (5, p.534). Rousseau, through his book Emile, emphasized an education which used freely the natural instincts, impulses, and feelings of the child and a largely unrestricted freedom of expression.

Rousseau emphasized the then startling idea that education was the right of every child and that it was the responsibility of the state to provide it. In the most formal period in Occidental history, he was opposed to formalism in life and in education, and expressed his beliefs in this regard by stating: "Feelings not reasons are elements common to all men". He was a follower of John Locke, whom he frequently quoted. Like Locke, he believed, also, that a period of childhood should be devoted to physical development and to the training of the senses. He emphasized the importance of knowledge of things as contrasted with knowledge of words alone. He believed that the complete person should be developed "in the order of Nature", and that education was derived from three main

sources: Nature, man and things.

Rousseau was an advocate of manual arts or hand-work as a means of training the mind. He believed that working with the hands made certain demands on the intelligence and caused a linkage that made both thinking and working more efficient. He taught his children the arts of weaving, gardening, woodwork, and other forms of handicraft, believing that such skills were necessary parts of general education. Manual work was an essential phase of his scheme to educate the whole boy or girl.

While Rousseau did not put into practice the ideals and doctrines that he stressed, his belief in them and his unyielding determination instilled in his followers the desire to continue his work. Their influence, along with his, lives today in our educational programs.

THE WORK OF JOHANN BERNHARD BASEDOW

Johann Bernhard Basedow (1723-1790), born in Hamburg, Germany, was greatly influenced in his thinking by the writings of Rousseau, and tried to put into practice the theories that Rousseau had propounded (2, p.82). Like Rousseau, he possessed a queer personality and an irresistible enthusiasm for his work. Unlike Rousseau, however, he felt that the children of both the rich and the poor should learn trades or handicrafts to enable them, in

later years, to be at least somewhat independent economically. He was convinced that the rich children should have proper educational opportunities centering around social activities and training for leadership as well as an appreciation of Nature. The poor children, on the other hand, he would have receive the necessary instruction to enable them to become teachers. His major interest involved the improvement of the lower levels of education, as these concerned all of the children, whereas the higher levels concerned relatively the few. For this reason, he spent most of his time in the elementary schools working with small children and experimenting with educational methods and procedures that would allow the teaching of his intuitive methods to others. In 1774, he made his most noteworthy contribution to education by publishing his Elementarwerk. Although his book was filled with ideas taken from Comenius, Rousseau, and Bacon, the experimental modifications and testings in actual situations were his own or those of his immediate disciples. His book and his personal example were responsible for the extensive improvement in education in Germany that was to follow.

Basedow, (8, p.29) contended that the character and the work of the schools could be improved through the preparation of better textbooks and the revision of subject-matter to fit the needs, desires, and interests of the pupils. He advocated that a part of the time generally devoted to

recreation be used for training in manual arts; and recommended that wood-turning, planing, and carpentry work be included as regular parts of the school curriculum. Like Rousseau, he believed that the way to build character and manhood was by putting the boy to work with his hands at some interesting and useful task.

THE INFLUENCE OF PESTALOZZI

Johann Heinrich Pestalozzi (1746-1827), the son of a Swiss physician, had a modest beginning in life; but, through his influence and work with poor and neglected children, became one of the most outstanding educators of his century. Pestalozzi probably did more than any other one man to establish the basic concepts concerning the manual arts and, to a large degree, was responsible for the beginnings of the type of work now included in this important phase of education. He has been called "the father of manual arts".

Pestalozzi's main objectives were the elevation of the lower classes through education and harmonious development of the powers and faculties of their human nature. He devoted his life to the alleviation of the wretchedness of poor children by fitting them for eventual economic independence. Economic independence, he believed, was to be secured through the mastery of one or more

handicrafts and the attainment of skills in agricultural pursuits and domestic management. This combination, he insisted, was so much the more essential for the educational training of the poor, since the individual who was trained in only one of these usually lost the advantages of such training through his ignorance of the other two.

Anderson (1, p.85) found the following note among the writings of Pestalozzi, which explains, somewhat the attitude that Pestalozzi held: "The end which we should hold before ourselves in training the children of the lowest classes is to enable them without capital of any kind, not only to find the means of subsistence where ever their lot may be cast, but also to practice several different kinds of crafts".

This, in a sense, is trade-training and is similar to the concepts and motives subscribed to not only by many of Pestalozzi's predecessors but many educators of the present. There seemed to be nothing new in the thesis that Pestalozzi offered; except his method of approach, the attention that he gave to the analysis of subject-matter, and the integration of hand-work with general education were the foundations upon which his efforts were built and which have caused his name to be revered. He made it possible for a boy to gain practical experience with tools and materials and, at the same time, to pursue abstract subject-matter.

Pestalozzi was the first to make hand-work a required part of the regular school program.

Pestalozzi advanced the ideas of Comenius, who had based his instruction on object lessons. This allowed the pupil to develop interests in a natural way and to gain knowledge through sense perception, thus increasing his learning in proportion to the actual opportunities to perceive the object. He contended that a child gained knowledge and developed mentally through impressions and actual experiencing of real life situations, not through words as had been previously held by Comenius. He agreed with Rousseau that Nature should be allowed, generally, to take its course and that all learning was a result of the study of natural things.

Pestalozzi drew up his curriculum according to what he thought would best fit the needs of the pupil and included those activities from which the child could profit most. Activities included in his curriculum were weaving, gardening, field-work, knitting, cotton-spinning, and housework. Housework was considered by Pestalozzi to be a regular part of the occupations necessary to the welfare of the school and not necessarily a basic part of the curriculum. Drawing was considered by Pestalozzi to be essential to the fully developed individual, and he included it as a main part of his regular school work (2, p.120).

In the beginning, Pestalozzi stressed industrial training for economic reasons but, later, came to believe that it had a greater value as a means of training the mind. This led him to place even greater emphasis on hand-work in his schools.

Pestalozzi's theory that interaction with environment was fundamental to learning had a wide and profound influence upon other schools, especially at the elementary level. His book, Leonard and Gertrude, published in 1781, aptly reveals his methods of teaching and his attitudes in this regard.

EMANUEL VON FELLENBERG

Emanuel von Fellenberg (1771-1844), like Pestalozzi, was born in Switzerland and was a man who possessed a strong desire to aid the poor children of his country to obtain an education. Unlike Pestalozzi, however, he was of noble birth and his childhood training had given him a practical outlook which he applied to his every undertaking. His affairs were managed with greater care than those of Pestalozzi and his strict adherence to the rules caused considerable friction between the two men. They were brought together on several occasions through their efforts to assist the poor children but, due to the difference in their ideas and characters, they found it more and

more difficult to remain in harmony about the valuable work which both were trying to do.

Fellenberg believed that, through education, poor children could be elevated to a higher plane of living and that the rich and poor should be trained together. This, he thought, according to Bennett (2, p.129), would provide an opportunity for greater understanding between the two classes. In an attempt to accomplish his aims, he found himself adopting the ideas that Rousseau and Pestalozzi had set up before him.

In 1799, Fellenberg purchased six-hundred acres of land at Hofwyl, Switzerland, and started his school for the development of training through agricultural practice. By 1807, he had opened an academy for rich children which grew to more than a hundred pupils by 1819 (6, p.235).

Fellenberg opened many schools of various kinds in the short space of a few years. Many of these schools were failures, but one of the more successful ones was a Farm and Trade School. In this school, most of the common trades of the time, such as: brass-work, wood-turning, wheelwrighting, carpentry, cabnet-making, blacksmithing, shoemaking, harness-making, tailoring, lithography, book-binding, and other skills related to these were taught.

Before many years had passed, Fellenberg found his schools in need of more and better trained teachers. These

could not be supplied from any other institution, so he established a normal school which used his methods and followed his ideas for the training of his teachers. He was successful in training his own staff members, as well as providing a surplus who where sought by other institutions.

His death, in 1844, was followed by a gradual decay of his schools but his methods, principles, and teaching techniques constitute a part of our present-day school program.

FRIEDRICH WILHELM AUGUSTUS FROEBEL

Following closely behind Pestalozzi in practice and in time was Friedrich Wilhelm Augustus Froebel (1783-1852). His early childhood was filled with sorrow and disappointments. His mother had died when he was a small child, leaving him to wander from place to place and from one kind of employment to another. Bennett (2, p.162) explains that most of the things that he attempted had ended in failure, but each had made its contribution to his learning and experience. He was a strong advocate of doing things according to Nature and, because of his association with Pestalozzi, this aspect of his thinking was greatly strengthened. He took some of the ideals and philosophy of Pestalozzi and molded them into his own doctrine of "self-activity", which

later became the backbone of our present-day kindergarten. His contribution to the industrial arts was made manifest through his high regard for hand-work as a means of training the mind, and this had its place at the very center of his educational system (4, p.460).

THE RUSSIAN SYSTEM OF TOOL INSTRUCTION

An early attempt to organize the steps and procedures of learning a skill into instructional units was made by Victor Della Vos in Russia. At the Imperial Technical School at Moscow in 1868, (3, p.13), Della Vos devised a method of teaching the technical trades by introducing a system of exercises designed to give the student instruction in the use of hand-tools. The exercises were arranged in order of difficulty, and each student was expected to begin with a simple task and advance as rapidly as he could to a more complex exercise. This method of instruction became very popular as a result of several incidents that occurred during this period. One of these was an elaborate display at the Centennial Exposition at Philadelphia in 1876 of students' work from the Della Vos School (7, p.12). As a direct result of this exhibit, an immediate interest developed in the Della Vos method, and leading educators in the United States began to introduce it into their schools. Dr. John D. Runkle, director of the Massachusetts Institute of Technology, in Boston, opened the School of Mechanic Arts

in connection with his institute; Dr. Calvin Woodward started the St. Louis Manual Training School in connection with Washington University; and several other less well known schools were influenced by the Russian system of training which made it clear that manual arts precedures could be analyzed, organized, and taught like other school subjects or, possibly, better.

THE SLOYD MOVEMENT OF SCANDINAVIA

About the same time that the Russian System of instruction was getting underway in Moscow, Unio Cygnaeus in Finland was developing a plan known as Sloyd or the Sloyd Movement. Cygnaeus was influenced by the work of Pestalozzi and of Froebel; he tried to include their best ideas and principles in his system (2, p.57). The Sloyd Schools were originally and primarily concerned with wood-work and the production of salable articles which the students made. The principal emphasis was placed upon the finished product or project and not necessarily on the tool processes or method of production. In 1872, Otto Solomon in Sweden became interested in the Sloyd Movement; and started a school at Naas, which in a few years became the best known school of manual arts or manual training in the world. Sloyd and manual training schools began to develop in many places, and trained teachers were very much in demand. This prompted

Solomon to open a normal school at Naas and to offer teacher-training work. By 1882, his program for teachers was occupying all of his time, and he was compelled to discontinue his own work with Sloyd. Solomon's influence extended beyond the boundaries of Sweden and to this day, there are schools using his method of teaching the manipulative skills and techniques in actual operation.

INDUSTRIAL ARTS IN THE UNITED STATES

It might be interesting to note what influence these men may have had on the actual development of industrial arts in the public schools of the United States and to obtain an understanding of the significance of three separate sources from which these influences sprang. To trace them back hastily in each case to their beginnings, and in chronological order, makes it desirable to consider, first of all, the ideas of Martin Luther (1483-1546) in Germany. As early as the first quarter of the sixteenth century, he had beliefs and theories about ways of teaching industrial subjects. Luther Proposed that the boys be sent to school for two hours a day and spend the rest of the time at home learning a trade (3, p.61). Approximately a hundred years later, these ideas of Luther's were taken up again by Comenius (1592-1670) who extended them and, by adding his own theories and thinking, developed a plan which was more

concrete and substantial than that of Luther. John Locke (1642-1727), in England, in his turn, felt the stimulating forces of both of these men and added his own ideas to theirs. This caused him to believe that "all education should be practical". Nearly another hundred years later, in France, Rousseau (1712-1778) expanded upon ideas gathered from all three of his predecessors and, to them,added his own convictions about Nature and human behavior to exert a profound influence on the thoughts of the time. Pestalozzi (1746-1827) and Fellenberg (1771-1844) in turn were among those who adopted an extended Rousseau's ideas. The work of these two men grew into a movement that extended itself into educational circles throughout the world. As a result, manual training became a recognized part of the regular school curriculum. The main outgrowth of this phase of influence was manifested in the United States through the Manual Labor Movement between the years 1825 and 1830 (9,p.-5) and the Oswego Training School in New York during and following the year 1861.

The second source or thread of influence to be considered was an outgrowth of the Centennial Exposition in Philadelphia in 1876, where the Russian display of "tool exercises" created much interest. This source, even without the extended history of the former, exerted considerable pressure on the growing program of manual training in the

schools of the United States. Dr. Runkle's program at the School of Mechanic Arts in Boston which was established in 1876 and Professor Calvin M. Woodward's school in connection with Washington University at St. Louis are examples of this influence. An indication of this line of development and its effects on the schools is shown by the enthusiasm with which the leading educators of the time accepted the Russian System (9, p.22).

The third source came to the United States by way of Sweden and Finland through the work of Cygnaeus and Solomon. Their work and influence were felt in the United States for the first time in 1888 when Gustaf Larsson started a school for Sloyd in Boston. Larsson had studied under Solomon in Sweden, and it was his understanding of the basic principles of Sloyd work and the Sloyd System and his ability to apply it to the curriculum in the United States that gave this foreign movement much of the necessary impetus for a successful advent into the United States.

Out of these three movements grew an expanded program of manual training in the American Schools. Courses were offered in hand-work in practically every grade from the kindergarten to the college. Between the years of 1883 and 1893, more than fifty cities introduced manual training into their high schools. A typical program of subjects in this field included: (1) wood-work, (2) wood-turning,

(3) metalwork, (4) painting, (5) brick-laying, (6) blacksmithing, (7) printing, and other related but less important subjects. Bennett (3, p.389) has pointed out that "as soon as the success of the St. Louis Manual Training School was evident, the general high schools in many places began to introduce shopwork courses especially woodworking. In many cases, these were accompanied by work in mechanical drawing".

During the early development of manual training or hand-work in the schools of the United States, there was a growing tendency to regard the term "manual arts" as signifying formalism in manipulative processes and as not expressing the true nature of the work being offered. This feeling was, in part, responsible for changing the name of the work to industrial arts. It was John Dewey in School and Society in 1899 who placed industrial occupations at the very center of the elementary school curriculum. According to Bennett (3, p.451), Dewey accepted the idea that manual training at least in the lower grades of the elementary schools should be regarded as a method of teaching -- as a means of teaching related subject-matter -- but in these grades he would make the industrial occupations so broad and rich in related content that they would very readily and naturally become the basis for instruction in other subjects. Moreover, he would not select occupations

that were typical merely of adults but occupations that were real in school life. They should serve as "instrumentalities through which the school itself shall be made a genuine form of active community life, instead of a place set apart in which to learn lessons".

In October, 1904, Professor Richards of Teachers College, Columbia University, in an editorial in the Manual Training Magazine, suggested that the term "industrial arts" be substituted for the term "manual training". He contended (3, p.453) that, "owing to the change of viewpoint, we are rapidly leaving behind the purely disciplinary thought of manual training . . . . . Now we are beginning to see that the scope of this work is nothing short of the elements of the industries fundamental to modern civilization". In 1913, "Frederick G. Bonser, quoting Bennett, Professor of Education at Teachers College, Columbia University, contributed an article to the School Arts Magazine that expanded the concept of industrial arts in the elementary school. He considered it as both a subject and a method -- an end and a means".

The rapid spread of manual training in the public schools of the nation naturally made demands for teachers trained in this field. As a result of these demands, normal schools in many places began to meet these needs. Many colleges and universities, already in operation, began to

offer work in this new field. Among the first institutions that began special training, at the college level, for teachers in manual arts were: the Oswego Training School in New York (1861); the State Normal School at San Jose, California (1890); the Santa Barbara College of Manual Training and Home Economics (1891); Stout Institute at Menomonie, Wisconsin (1893); and, during the same year, Teachers College, Columbia University in New York City.

Manual training, or manual arts or, as it is more widely referred to today, industrial arts, has continued to expand until at the present time it is considered a necessary part of the educational program and is offered in most of the public schools in the United States as one of the important parts of the regular curricula.

The history of the professional training of teachers, in this field, is much like the history of the industrial arts. In many instances the men with the foresight and ambition to follow through, with the ideals embodied in the development of the industrial arts, were the same men who were attempting to train teachers that were in constant demand. They were endeavoring to provide industrial arts teachers with the necessary professional training to qualify them for the work. At first, a certificate was granted after the applicant had completed about one year of specialized and concentrated work at one of the few special schools. As the time advanced, requirements for

certification became more and more demanding. More emphasis was placed upon formal education, making it necessary for industrial arts teachers to attend college for two or more years, and eventually hold a bacheror's degree to meet the complete requirements for certification.

Colleges and universities throughout the United States began offering industrial arts teacher education to a larger number of individuals and at the present time more than 150 institutions include the work as an important part of their regular program.

Industrial arts teacher education has become a definite profession in its own right and will receive attention in the following chapter where the professional status, the experience and training of the personnel responsible for this training, will be the chief topic for discussion.

CHAPTER III

THE TRAINING, EXPERIENCE, AND PROFESSIONAL STATUS OF PERSONNEL RESPONSIBLE FOR INDUSTRIAL ARTS TEACHER EDUCATION IN THE UNITED STATES FOR THE YEARS 1949 AND 1950

In the foregoing chapter, the history of the industrial arts and industrial arts education was covered briefly for the purpose of acquainting the reader with the salient points concerning the beginnings of this phase of education. The chapter was purposley limited to include only the most significant highlights since several detailed and complete histories of industrial arts and industrial arts education are available to most readers. A more elaborate summary here would therefore, be out of place.

At the time of this study there were 151 colleges and universities in the United States that offered industrial arts teacher education as a part of their regular training program. At each of these institutions there are certain personnel who are engaged in directing, supervising, or administering the program and who are charged with the responsibility of training the students

who are preparing to become industrial arts teachers. CHAPTER III, therefore, will be concerned with the data involved in a study of the professional status, training, and experience of these individuals.

COLLEGES AND UNIVERSITIES OFFERING INDUSTRIAL ARTS TEACHER EDUCATION

Within the continental United States, there are at least 151 colleges and universities that include the training of teachers of industrial arts as a part of their regular teacher-education programs. These institutions are located in all but four of the forty-eight states, but are much more concentrated in the states east of the Rocky Mountains.

The names of the colleges and universities as well as the names of the personnel used in this study and to which the questionnaires used in this thesis were sent were taken from the 1948 Industrial Arts Teacher Education Directory (10, pp.7-22).

Among these schools, eight types of institutions participate in the training of industrial arts teachers. These types and their number are: (a) fifty-three state teachers colleges -- which lead the list as the most numerous type; (b) thirty-four universities; (c) thirty-two colleges, classified as state colleges without any

special connotation of being principally teacher training institutions; (d) eight schools with the term "institute" attached to the name; (e) eight colleges of education; (f) eight agricultural and mechanical colleges; (g) five mechanical arts and technical training schools; and (h) three private schools that train teachers for the field of industrial arts.

An effort was made by the writer to reach every individual in the United States who was classified in the directory as an industrial-arts teacher educator or was thought to be directly responsible for any part of the work. There were 793 who were members of the teaching staffs of the 151 institutions listed as preparing teachers of the industrial arts.

The list of data, TABLE I, and the map, FIGURE A, are presented to assist the reader in visualizing the locations and geographical distribution of the schools used in this study. The responses received are shown in TABLE I.

From an examination of the number of inquiries sent out, the reader may make a fairly accurate estimate of the number of individuals on the industrial arts teaching staffs at each school. The sizes of the departments range from several one-man departments to a department with a teaching staff of twenty-four members.

In TABLE I, which follows, are listed the 151 colleges and universities in alphabetical order according to the state in which they are located and by name of the city or community in which the school is located within the state.

TABLE I

COLLEGES AND UNIVERSITIES IN THE UNITED STATES

OFFERING INDUSTRIAL ARTS TEACHER EDUCATION

Institution	Location	Inquiries	Responses
	ALABAMA		
Alabama Polytechnic Institute	Auburn	6	0
Tuskegee Institute	Tuskegee	3	0
University of Alabama	Tuscaloosa	2	1
	ARIZONA		
Arizona State College	Flagstaff	3	3
Arizona State College	Tempe	6	8
	ARKANSAS		
Agricultural Mechanical and Normal College	Pine Bluff	11	0
	CALIFORNIA		
Chico State College	Chico	4	1
Fresno State College	Fresno	7	6
San Francisco State College	San Francisco	1	1
San Jose State College	San Jose	16	10
University of California Santa Barbara College	Santa Barbara	18	18

	COLORADO		
The Adams State College	Alamosa	3	1
Colorado A. & M. College	Fort Collins	3	3
Colorado State College of Education	Greeley	6	4
	CONNECTICUT		
Teachers College of Connecticut	New Britain	5	3
	FLORIDA		
University of Florida	Gainesville	4	3
Florida Southern College	Lakeland	2	1
	GEORGIA		
University of Georgia	Athens	3	2
Georgia Teachers College	Collegeboro	2	2
Georgia State College	Savannah	15	1
	IDAHO		
Northern Idaho College of Education	Lewiston	1	1
	ILLINOIS		
Southern Illinois University	Carbondale	5	5
Eastern State College	Charleston	6	5
Chicago Teachers College	Chicago	2	1

James Millikin University	Decatur	6	3
Northern Illinois State Teachers College	DeKalb	5	2
Bradley University	Peoria	13	0
Western Illinois State College	Macomb	3	0
Illinois State Normal University	Normal	6	0
University of Illinois	Urbana	5	3
	INDIANA		
Ball State Teachers College	Muncie	7	5
Indiana State Teachers College	Terre Haute	10	8
	IOWA		
Iowa State College	Ames	3	3
Iowa State Teachers College	Cedar Falls	4	0
	KANSAS		
Kansas State Teachers College	Emporia	4	4
Fort Hays State College	Hays	2	2
Kansas State College	Manhattan	9	8
McPherson College	McPherson	1	1
Bethel College	North Newton	2	0
Kansas State Teachers College	Pittsburg	20	13

	KENTUCKY		
West Kentucky State Teachers College	Bowling Green	3	2
Murray State Teachers College	Murray	4	3
East Kentucky State Teachers College	Richmond	5	2
	LOUISIANA		
Louisiana State University	Baton Rouge	7	7
Northwestern State College	Natchitoches	3	2
Southern University	South Baton Rouge	11	3
	MAINE		
Gorahm State Teachers College	Gorahm	4	4
	MARYLAND		
University of Maryland	College Park	5	1
	MASSACHUSETTS		
State Teachers College	Fitchburg	8	5
Training School for Teachers of Manual Arts	South Boston	2	0

MICHIGAN

University of Michigan	Ann Arbor	6	1
Wayne University	Detroit	4	0
Western Michigan College of Education	Kalamazoo	12	5
Northern Michigan College	Marquette	4	2
Central Michigan College of Education	Mount Pleasant	4	4
Michigan State Normal School	Ypsilanti	9	5

MINNESOTA

State Teachers College	Bemidji	3	1
University of Minnesota	Duluth	2	1
State Teachers College	Mankato	4	2
University of Minnesota	Minneapolis	3	2
Moorhead State Teachers College	Moorhead	2	2
State Teachers College	St. Cloud	3	3
State Teachers College	Winona	3	2

MISSISSIPPI

Mississippi Southern College	Hattiesburg	1	0
Mississippi State College	Starkville	2	0

MISSOURI

Southeast Missouri State College	Cape Girardeau	3	0
University of Missouri	Columbia	6	4
Lincoln University	Jefferson City	5	3
Northeast Missouri State Teachers College	Kirksville	3	3
Northwest Missouri State Teachers College	Maryville	4	3
Southwest Missouri State College	Springfield	2	0
Central State Teachers College	Warrensburg	3	2

MONTANA

Northern Montana College	Havre	1	0

NEBRASKA

Nebraska State Teachers College	Chadron	3	3
Nebraska State Teachers College	Kearney	3	3
Nebraska Wesleyan University	Lincoln	1	1
Peru State College	Peru	1	1
State Teachers College	Wayne	2	2

NEW HAMPSHIRE

Keene Teachers College	Keene	3	2

NEW JERSEY

New Jersey State Teachers College	Newark	3	0
New Jersey State Teachers College	Trenton	4	1

NEW MEXICO

University of New Mexico	Albuquerque	3	2
New Mexico Highlands University	East Las Vegas	1	0
New Mexico State Teachers College	Silver City	4	3

NEW YORK

New York State College for Teachers	Buffalo	16	11
Columbia University, Teachers College	New York	3	2
New York University School of Education	New York	19	11
State Teachers College	Oswego	24	18

NORTH CAROLINA

Agricultural and Technical College	Greensboro	3	4
North Carolina State College	Raleigh	2	2

NORTH DAKOTA

State Teachers College	Dickinson	1	1
State Normal and Industrial College	Ellendale	5	2
University of North Dakota	Grand Forks	1	1
State Teachers College	Minot	2	1
State Teachers College	Valley City	1	0

OHIO

Ohio Northern University	Ada	1	1
Ohio University	Athens	5	4
Bowling Green State University	Bowling Green	9	6
Ohio State University	Columbus	9	3
Kent State University	Kent	11	9
Miami University	Oxford	8	5
College of Education and Industrial Arts	Wilberforce	10	0
Wilmington College	Wilmington	2	1

OKLAHOMA

Northwestern State College	Alva	1	0
Central State College	Edmond	2	2
Langston University	Langston	7	3
University of Oklahoma	Norman	9	3
Oklahoma Agricultural and Mechanical College	Stillwater	9	4

Northeastern State College	Tahlequah	3	2
Southwestern Institute of Technology	Weatherford	6	2
	OREGON		
Oregon State College	Corvallis	7	7
	PENNSYLVANIA		
State Teachers College	California	10	6
Cheyney Training School For Teachers	Cheyney	3	2
State Teachers College	Millersville	6	4
Pennsylvania State College	State College	5	2
	SOUTH CAROLINA		
Clemson Agricultural College	Clemson	1	0
State Agricultural and Mechanical College	Orangeburg	13	2
	SOUTH DAKOTA		
Northern State Teachers College	Aberdeen	2	1
South Dakota State College of Agricultural and Mechanic Arts	Brookings	4	0
General Beadle State Teachers College	Madison	1	1
Black Hills Teachers College	Spearfish	1	0

Southern State Teachers College	Springfield	1	2
	TENNESSEE		
Austin Peay State College	Clarksville	1	1
University of Tennessee	Knoxville	1	0
	TEXAS		
Sul Ross State Teachers College	Alpine	5	1
Agricultural and Mechanical College of Texas	College Station	4	4
West Texas State College	Canyon	2	2
East Texas State Teachers College	Commerce	8	6
North Texas State Teachers College	Denton	12	9
University of Houston	Houston	4	0
Sam Houston State Teachers College	Huntsville	7	1
Texas College of Arts and Industry	Kingsville	2	0
Stephen F. Austin State Teachers College	Prairie View	28	6
Southwest Texas State Teachers College	San Marcos	5	3
	UTAH		
Utah State Agricultural College	Logan	4	0

	VERMONT		
University of Vermont	Burlington	3	1
	VIRGINIA		
Hampton Institute	Hampton	2	0
St. Paul's Polytechnic Institute	Lawrenceville	11	0
Virginia Polytechnic Institute	Blacksburg	1	1
	WASHINGTON		
Western Washington College of Education	Bellingham	3	2
Eastern Washington College of Education	Cheney	3	3
Central Washington College of Education	Ellensburg	3	2
State College of Washington	Pullman	2	3
	WEST VIRGINIA		
Fairmont State College	Fairmont	3	0
West Virginia Institute of Technology	Montgomery	3	0
West Virginia University	Morgantown	11	2
West Virginia State College	Institute	11	3

WISCONSIN

The Stout Institute		Menomonie	21	13
State Teachers College		Platteville	4	3
State Teachers College		Stevens Point	1	0
Superior State College		Superior	2	0
Total	151		793	415

The map, FIGURE A page 42, shows the states in which colleges and universities with industrial arts teacher education programs are located. Each dot represents one school. The states crosshatched are those apparently without industrial arts teacher education programs. These same states are marked with asterisks in the list above the map.

1. Maine
2. Vermont
3. New Hampshire
4. Massachusetts
* 5. Rhode Island
6. Connecticut
7. New York
8. New Jersey

9. Pennsylvania
*10. Delaware
11. Maryland
12. West Virginia
13. Virginia
14. North Carolina
15. South Carolina
16. Georgia

17. Florida
18. Michigan
19. Ohio
20. Indiana
21. Kentucky
22. Tennessee
23. Alabama
24. Wisconsin

25. Illinois
26. Mississippi
27. Minnesota
28. Iowa
29. Missouri
30. Arkansas
31. Louisiana
32. North Dakota

33. South Dakota
34. Nebraska
35. Kansas
36. Oklahoma
37. Texas
38. Montana
*39. Wyoming
40. Colorado

41. New Mexico
42. Idaho
43. Utah
44. Arizona
45. Washington
46. Oregon
*47. Nevada
48. California

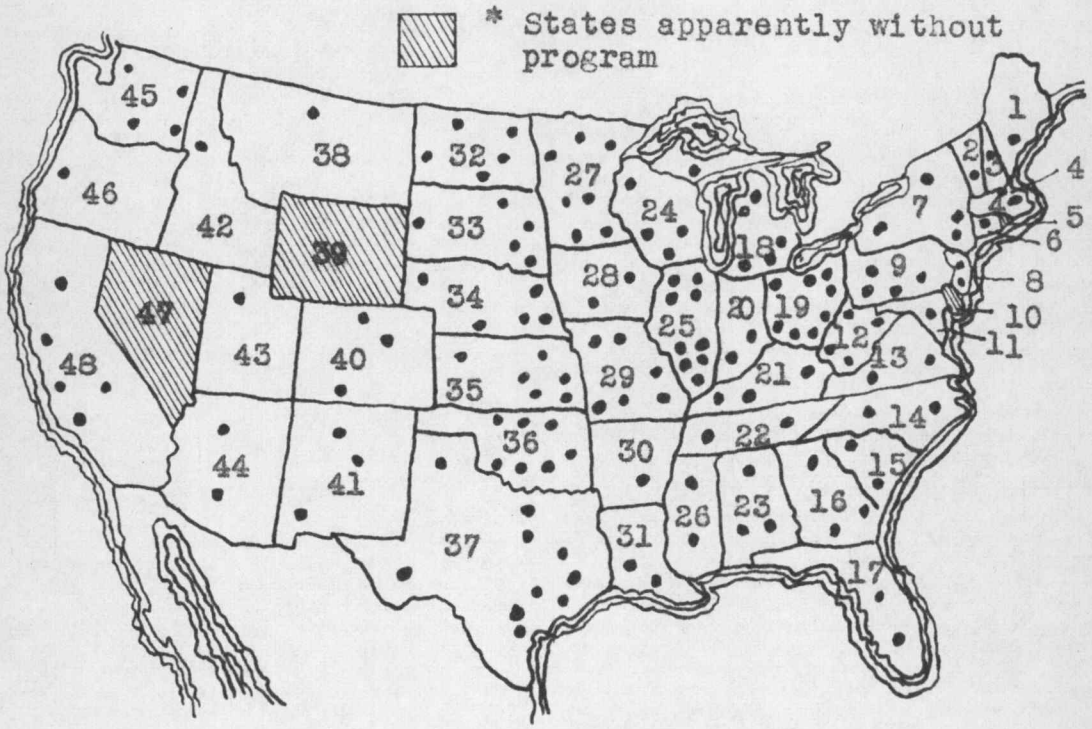

FIGURE A

GEOGRAPHICAL DISTRIBUTION OF COLLEGES AND UNIVERSITIES

OFFERING INDUSTRIAL ARTS TEACHER EDUCATION

Six institutions among the 151 colleges and universities have industrial arts departments that would be rated "large" in comparison with the others. Two of these schools are located in New York State, two in California, and one each in Wisconsin and Kansas. When they are considered from the standpoint of the number of staff members, the six departments would appear in the following order:

1. State Teachers College, Oswego, New York	24
2. The Stout Institute, Menomonie, Wisconsin	21
3. Kansas State Teachers College, Pittsburg, Kansas	20
4. University of California, Santa Barbara College Santa Barbara, California	18
5. San Jose State College, San Jose, California	16
6. New York State College for Teachers, Buffalo	16

THE TRAINING AND PROFESSIONAL BACKGROUND OF THESE 415 INDUSTRIAL ARTS TEACHER EDUCATORS

It may be seen from TABLE I that 415 men, more than fifty-two per cent, replied to the questionnaires sent out. The factors concerning the training, experience, and professional backgrounds of these individuals constitute the major part of this study. It seems fitting, therefore, to consider these factors in some regular order and attempt to determine, from the data assembled, the significance of each.

It is quite evident from an examination of the data that the professional training or schooling of these men was obtained from colleges and universities of many types and in widely scattered places. One hundred-fifteen institutions were mentioned in which at least one man had been in attendance. For the most part, however, these industrial arts teacher-educators had received their early or undergraduate education in schools within the states where they are now teaching. Their graduate work, on the other hand, was from institutions other than the one in which they were teaching and in many cases in a different state as well. Of the 115 institutions named as places in which these educators had received their own training, sixteen were most often mentioned. These sixteen Institutions are listed in TABLE II in alphabetical order according to the state in which they were located.

TABLE II

COLLEGES AND UNIVERSITIES MOST OFTEN MENTIONED AS PLACES IN WHICH TRAINING WAS RECEIVED

College or University	Degrees Granted		
	Bachelor	Master	Doctorate
Colorado College of Education	10	14	
Iowa State College	10	26	1
Kansas State College (Manhattan)	6	5	1
Kansas State College (Pittsburg)	18	12	1
University of Michigan	2	9	
University of Minnesota	8	27	4
University of Missouri	4	13	14
Columbia University	4	18	5
New York University	7	25	9
Oswego State Normal School	8		
Ohio State University	11	35	13
Oklahoma A. & M. College	6	10	
Oregon State College	8	13	1
North Texas State College	10	9	
University of Wisconsin	2	9	
Stout Institute	31	11	

EDUCATORS WITH AND WITHOUT TRADE EXPERIENCE

An important part of the basic training of any industrial-arts teacher-educator is his contact with the trades. This becomes especially important to him if he is engaged in an effort to teach a trade or any phase of a trade to his students. The information and knowledge that he imparts to his charges regarding the trades or about industry in general was obtained primarily through his actual experience in or around the trades. This is significant in-so-far as this study is concerned because, when the facts are disclosed, five out of every six of the men engaged in training industrial-arts teachers have had trade experience. While this experience has come at different stages in the preparation and professional development of these men, and while, the length of time spent in the trades has varied with each individual, nevertheless, the fact remains that eighty-three out of every hundred industrial arts teacher-educators came into the teaching profession with some trade experience.

It must be explained, however, that all of these men have had additional professional training in some college or university and, in some cases, as many as five institutions have been attended by one individual. FIGURE B, page 47, depicts graphically the ratio of men with trade experience to those having had no trade experience.

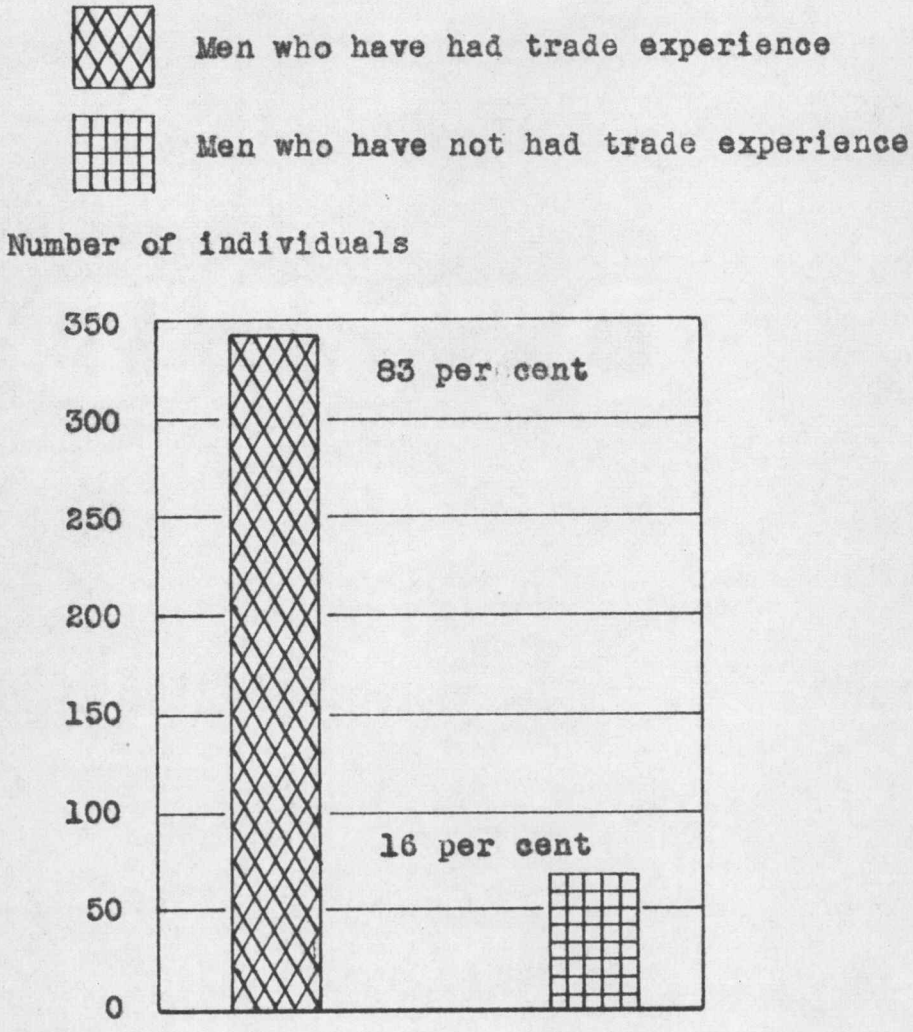

FIGURE B

NUMBER OF THESE TEACHERS

WITH AND WITHOUT TRADE EXPERIENCE

Of the 415 men represented by the graph, FIGURE B, 346 (83 per cent) have spent some time at a trade. The remaining sixty-nine men, as shown by the short column, represent 17 per cent without trade experience.

FIGURE C, page 49, shows by pictorial graph the ratio between the men who entered the teaching profession from a trade and the men who did not. It may be seen that a greater number of men had had trade experience than had not. The ratio between the two was about 5-1. Another evidence of the trade experience factor is shown by the fact that 102 of these men have at one time or another taught under Smith-Hughes Vocational Credentials. By implication, this means that nearly twenty-five per cent of them, besides having had trade experience, have taught courses somewhere along the line that were classified as trade or trade-related courses. Most colleges and universities do not require that their instructors have credentials of a specific nature, but most of these men have or have had from one to five different credentials. TABLE III, page 50, is presented to indicate the various types of credentials held by these 415 industrial arts teacher educators.

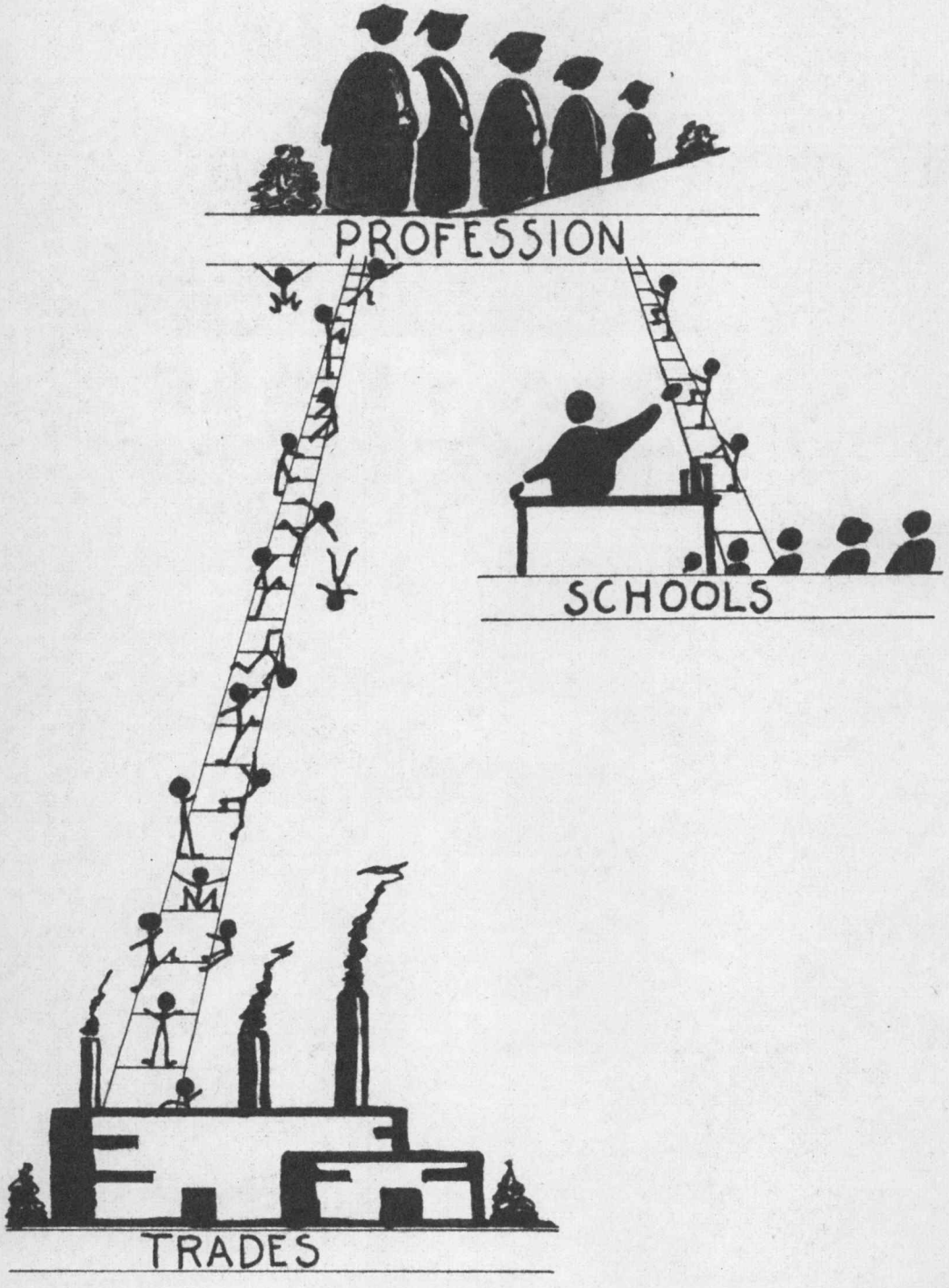

FIGURE C

GRAPHIC REPRESENTATION OF 346 MEN WITH TRADE EXPERIENCE AND 69 MEN WITHOUT

TABLE III

TYPES OF CREDENTIALS HELD BY THESE 415 INDUSTRIAL ARTS TEACHER EDUCATORS

Credentials	Number
Elementary School	56
Junior High School	120
Senior High School	173
General Secondary	141
Special Secondary	90
Smith-Hughes Vocational	102
Life Diploma	50

ACADEMIC DEGREES HELD BY 408 INDUSTRIAL ARTS TEACHER EDUCATORS

Seven of the persons responding to the inquiries did not reply with sufficient information concerning academic degrees. It was assumed, therefore, that either they had no degrees or were unwilling to tell about them. In any case, they were not included in this phase of the study.

Four hundred-eight of these did indicate their academic achievements, and each of them had earned at least one degree. Many of them had three degrees; a few held as many as five. TABLE IV is presented to show the number of persons holding each type of degree, as well as

the percentage represented by each group. Each individual was given credit for his last degree only since this is the most significant one.

TABLE IV

ACADEMIC DEGREES HELD BY 408 INDUSTRIAL ARTS TEACHER EDUCATORS

Degrees	Individuals	Percentages	
B. A.	9	2.20	- 12.25
B. S.	41	10.05	
M. Ed.	26	6.37	- 72.81
M. A.	144	35.29	
M. S.	127	31.15	
Ed. D.	23	5.63	- 14.94
Ph. D.	38	9.31	
	408	100.00	100.00

An examination of TABLE IV will show that fifty of these 408 men had not, as far as academic accomplishment was concerned, gone beyond the bachelor's degree. In reality, this is somewhat misleading because it does not explain that many are engaged in advanced academic work at the present time and will soon be classified as holders of master's degrees. Seven men, however, have been teaching twenty or more years and have not advanced beyond the bachelor's degree status.

TABLE IV also indicates that more than seventy-two per cent of the 408 individuals have received their master's degrees and have also indicated that additional graduate work was either in progress or contemplated. Nearly fifteen per cent have reached the doctorate level, with the numbers fairly evenly divided between those holding the degrees of doctor of philosophy and doctor of education.

FIGURE D, page 53 is a graphic representation of the distribution of the degrees held by these 408 individuals. It may be noted that the greater part of them are possessors of master's degrees, exemplified by the three central columns with pink ribbons. The yellow ribbons show individuals holding bachelor's degrees. The doctor's degree holders are shown by the stacks with blue ribbons.

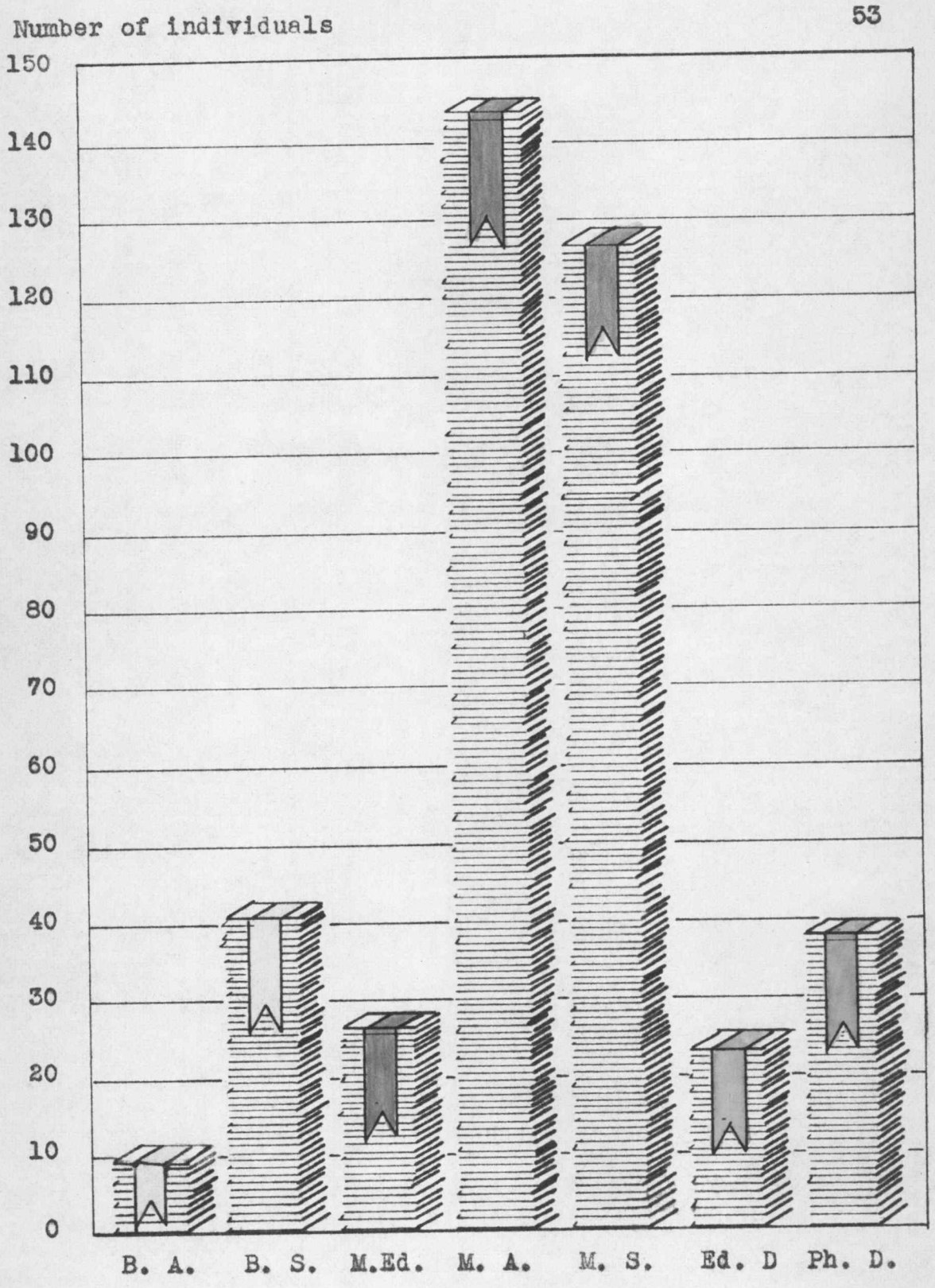

FIGURE D

FREQUENCY DISTRIBUTION OF DEGREES HELD BY 408
INDUSTRIAL ARTS TEACHER EDUCATORS

FIGURE E, page 55, is presented to illustrate, by percentages, the degrees held by these 408 men. It is very clearly indicated that 12.25 per cent have bachelor's degrees, 72.81 per cent hold master's degrees and, 14.94 per cent are possessors of the doctorate degree. The cross-hatching on the parts of the chart that represent doctor's and bachelor's degree holders provide a means of making a comparison between the areas represented by these two types and the holders of master's degrees. The main purpose is to show the greater proportion of master's degree holders.

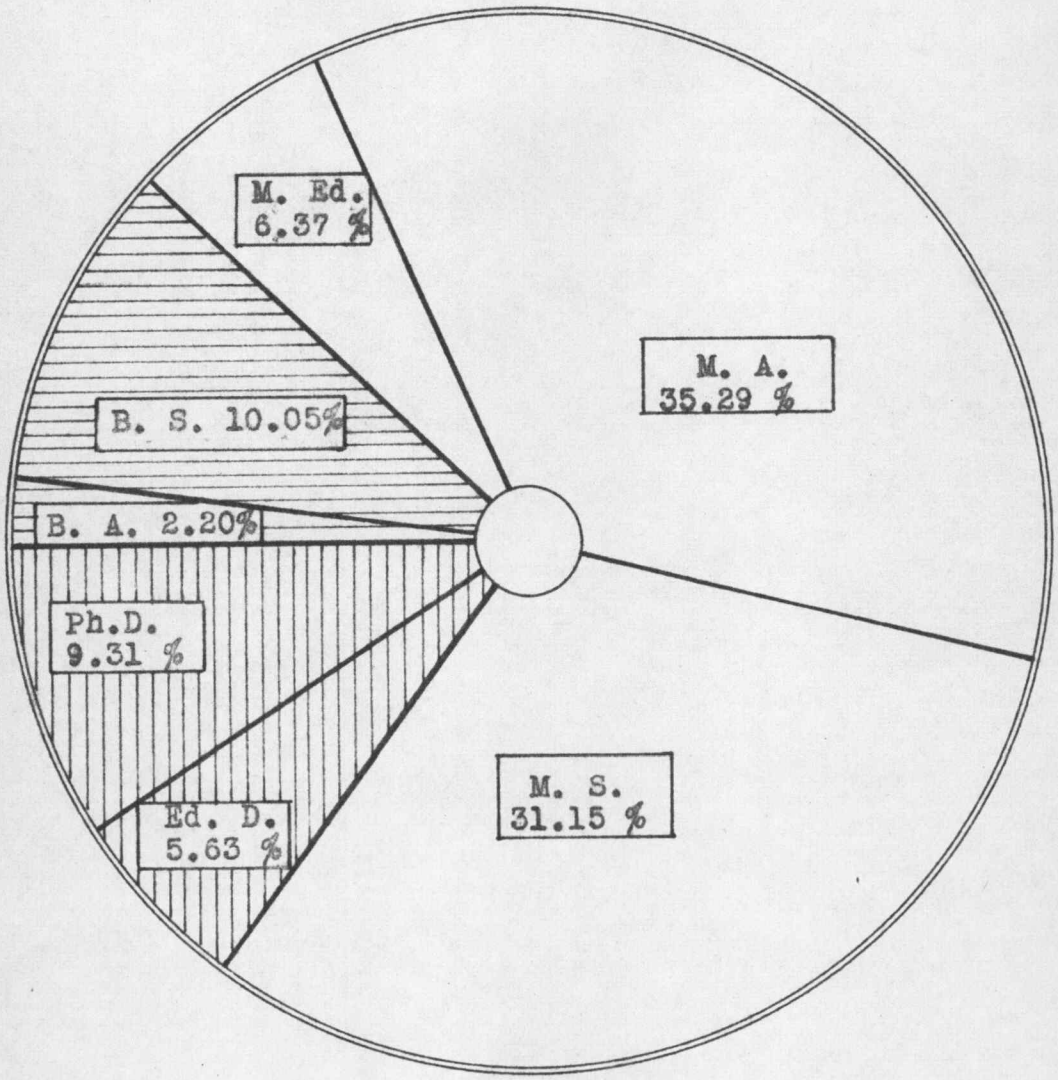

FIGURE E

DISTRIBUTION OF ACADEMIC DEGREES HELD BY 408 MEN
BY PERCENTAGES

Twenty-seven of the 408 men did not respond with information concerning the year in which their degrees were awarded. The data recorded in TABLE V are the results of responses from the remaining 381 men.

By recording the data on degrees according to the year in which they had been granted, as shown in TABLE V, it is apparent that more men are holding master's degrees than both the other two types combined. There is considerable increase, as the years pass, in the number of education degrees, at the master's and doctor's levels. The seven individuals shown in 1950 is not a true picture due to the fact that the data were collected too early in the year to show complete returns.

TABLE V

TYPES OF DEGREES HELD BY 381 INDIVIDUALS AND,

THE YEARS IN WHICH THEY WERE GRANTED

Year	Degrees							Totals
	B.A.	B.S.	M.Ed.	M.A.	M.S.	Ed.D.	Ph.D.	
1921		1		1	1			3
1922		1			1			2
1923				1				1
1924		1						1
1925								0
1926				1				1
1927	2			1	1		1	5
1928				3	2		2	7
1929		1		3	1		1	6
1930				2	3		3	8
1931		2		6	3		1	12
1932	1		1	2	1			5
1933		1		6	3		1	11
1934					5		1	6
1935	1			5	5		2	13
1936			1	3	7	1		12
1937		1	1	3	6		1	12
1938				6	3		1	10
1939	1	3	1	5	1	1	3	15
1940		2		5	6	3	1	17
1941	1	1	2	7	7	2	5	25
1942		1	1	2	7	1		12
1943	1	1	1	3	2	1		9
1944			2	4	2	1	2	11
1945			1	7	3	1		12
1946		3	4	12	7		1	27
1947	1	3	5	18	17	3		47
1948	1	8	1	11	14	2	3	40
1949		6	2	12	15	5	4	44
1950			2		2	2	1	7
	9	36	25	129	125	23	34	381

It will be noticed from FIGURE F, page 59, that during the depression of the early thirties, and likewise during World War II, there was a decided decrease in the number of degrees granted. On the other hand, during the years immediately following each period, there was a marked increase in the number of degrees earned. This phenomenon is most noticeable for the period between 1945 and the present time. The largest number of degrees received in any one year by these men was in 1947, where a peak seemed to have been reached. During that year, forty-seven of the 381 men (12.36 per cent) received college degrees. Contrasted to this highest year, none was received in 1925.

The over-all figures indicate a steady climb from the year 1925 to the present time with occasional declines. This information seems to imply that there are more educators with degrees in the field at the present time or that the modern educators are better prepared, scholastically at least, to perform their duties as teachers.

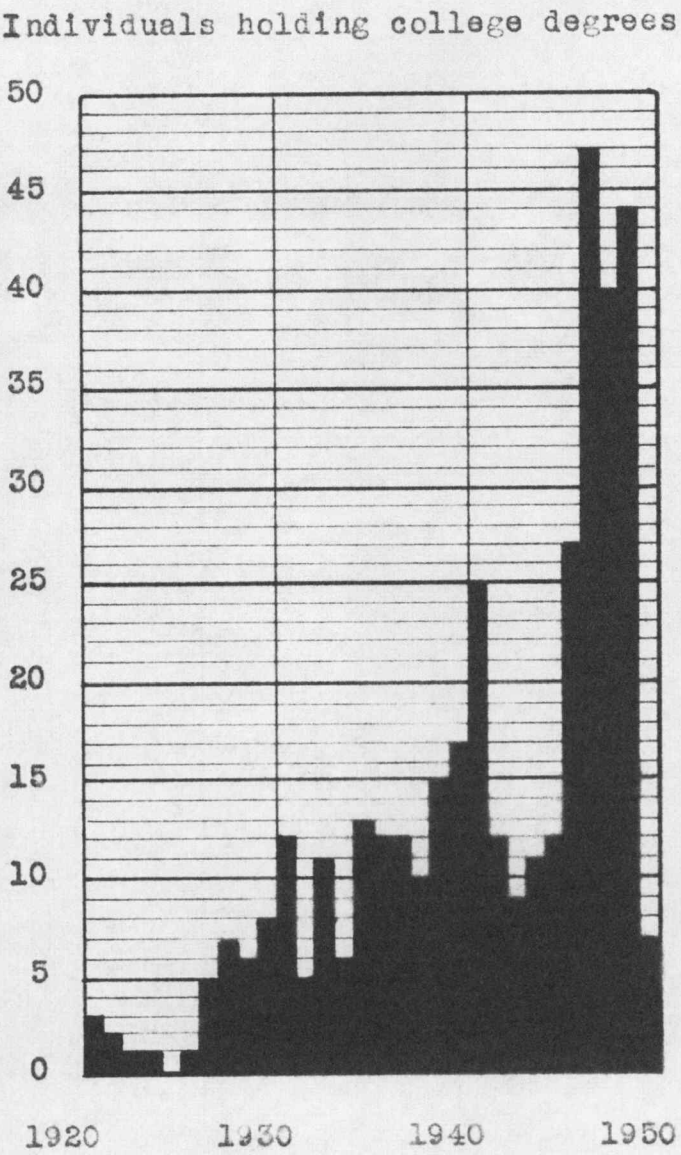

FIGURE F

FREQUENCY DISTRIBUTION OF DEGREES GRANTED TO 381 INDIVIDUALS DURING A PERIOD OF 30 YEARS

PROFESSIONAL RANK

Of the 415 men responding to the inquiries, only 376 chose to state the academic rank to which they belonged. The data were examined to determine if, perhaps, there were variations from state to state in the number or ratio of men in each of the four common ranks. In general, throughout the United States, the ratio of full professors to that of associate professors, assistant professors, and instructors was one professor to four of the other three combined. It was believed that perhaps some states or some institutions would rate higher in the percentage of full professors, but little was found to substantiate this supposition except in the following five cases. In Illinois, New York, Ohio, Oklahoma, and Texas, the ratio indicated was about one to two; in other words, these five states had half as many full professors in their industrial arts teacher-training staffs as there were instructors, assistant professors, and associate professors combined.

California rated lowest among the states in this regard, having a ratio of one professor to six of the lesser ranks. TABLE VI, page 61, is offered to show this ratio from the whole United States as well as the number of persons in each rank. Percentages for each rank are also given. These figures, though accurate as far as

this study is concerned, could be unfair to any of the states due to incomplete responses.

TABLE VI

DISTRIBUTION OF ACADEMIC RANKS FOR 376 INDIVIDUALS, WITH PERCENTAGES

Rank	Individuals	Percentages
Assistants	5	1.33
Instructors	112	29.80
Assistant Professors	110	29.25
Associate Professors	70	18.62
Professors	79	21.00
	376	100.00

PART-TIME AND FULL-TIME PERSONNEL

Of the 415 educators who replied to the inquiries, four did not state whether they were teaching full-time or part-time. Of the 411 who did report, 382 were employed as full-time industrial-arts educators; twenty-nine were sharing their time with other work and had labeled themselves as part-time teachers in industrial arts. There was no indication of the nature of the work that occupied the remainder of their time.

Segregating the twenty-nine individuals into groups by rank and title, there were six groups arranged as follows: two assistants, eight instructors, six assistant professors, three associate professors, two professors -- one of whom was also a department chairman. Four others of lesser rank were also department chairmen, and five who were unclassified in this regard.

When these figures are expressed in percentages, 92.75% fall in the category of full-time teachers and 7.25% are part-time employees in the field of industrial arts teacher-training. FIGURE G, page 63, illustrates these proportions graphically.

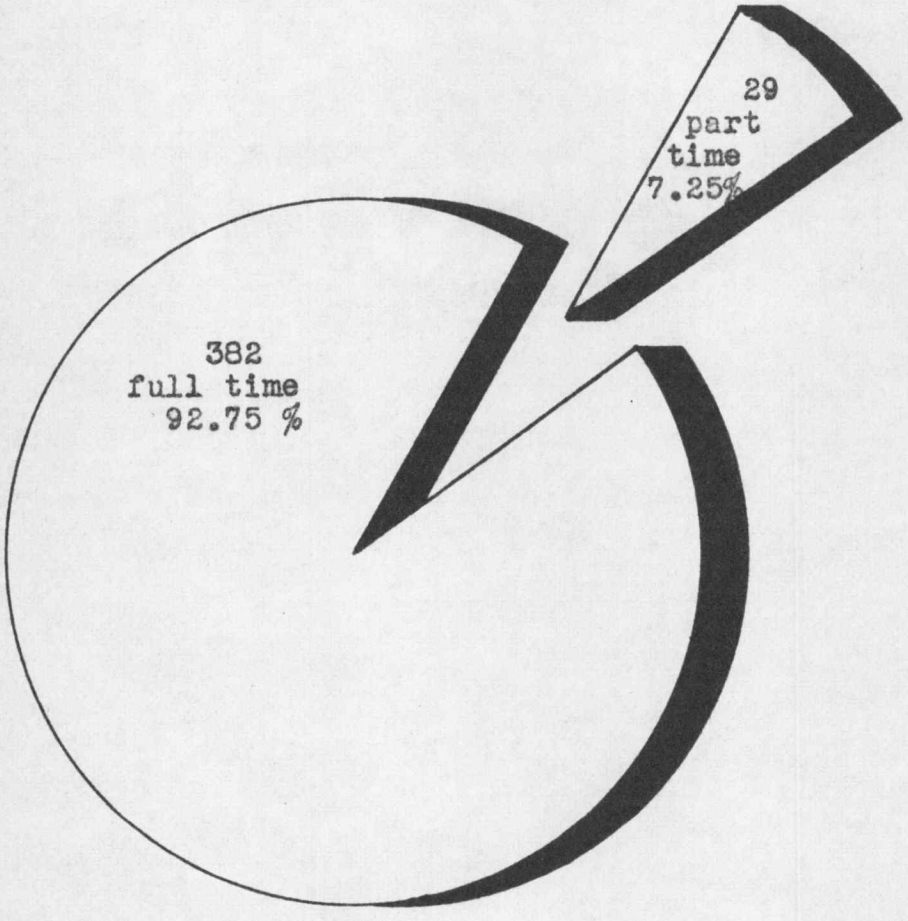

FIGURE G

PART-TIME AND FULL-TIME PERSONNEL

SALARIES

Forty-two of the 415 persons who responded have been excluded from salary comparisons, because thirteen failed to report their salaries and twenty-nine reported part-time services without indicating the proportion of time alloted to industrial arts.

Usable reports on earnings were made by 373 men. These ranged from $2,000 to more than $8,000 per year. All reports were made in round numbers of $500 intervals, as shown in TABLE VII below.

TABLE VII

SALARY LEVELS AND PERCENTAGES FOR 373 INDIVIDUALS

Salary	Individuals	Percentages	
$2,000	2	.54	- 20.11
2,500	2	.54	
3,000	21	5.63	
3,500	50	13.40	
4,000	83	22.25	- 74.54
4,500	79	21.18	
5,000	45	12.07	
5,500	38	10.18	
6,000	13	3.49	
6,500	20	5.37	
7,000	7	1.87	- 5.35
7,500	5	1.34	
8,000	8	2.14	
	373	100.00	100.00

In computing the average salaries on a nation-wide basis, only the states were used from which a sufficient number of responses were received. Over the United States in general, the average annual salary amounted to $4,628.71. Maine, North Dakota, South Carolina, South Dakota, and West Virginia ranked lowest among the states paying their industrial-arts teacher educators less than the average salary. On the other hand, Alabama, Connecticut, Florida, Illinois, Maryland, New York, and Virginia exceeded the average in this respect. FIGURE H, page 66, a map of the United States, is presented to furnish information regarding the geographical distribution of the states with the three salary levels indicated. States colored red reported salaries below the average; states colored yellow are those with average salaries; blue indicates states in which the salaries were above the average. The six states left uncolored furnished insufficient information from which to make valid comparisons.

1. Maine
2. Vermont
3. New Hampshire
4. Massachusetts
5. Rhode Island
6. Connecticut
7. New York
8. New Jersey
9. Pennsylvania
10. Delaware
11. Maryland
12. West Virginia
13. Virginia
14. North Carolina
15. South Carolina
16. Georgia
17. Florida
18. Michigan
19. Ohio
20. Indiana
21. Kentucky
22. Tennessee
23. Alabama
24. Wisconsin
25. Illinois
26. Mississippi
27. Minnesota
28. Iowa
29. Missouri
30. Arkansas
31. Louisiana
32. North Dakota
33. South Dakota
34. Nebraska
35. Kansas
36. Oklahoma
37. Texas
38. Montana
39. Wyoming
40. Colorado
41. New Mexico
42. Idaho
43. Utah
44. Arizona
45. Washington
46. Oregon
47. Nevada
48. California

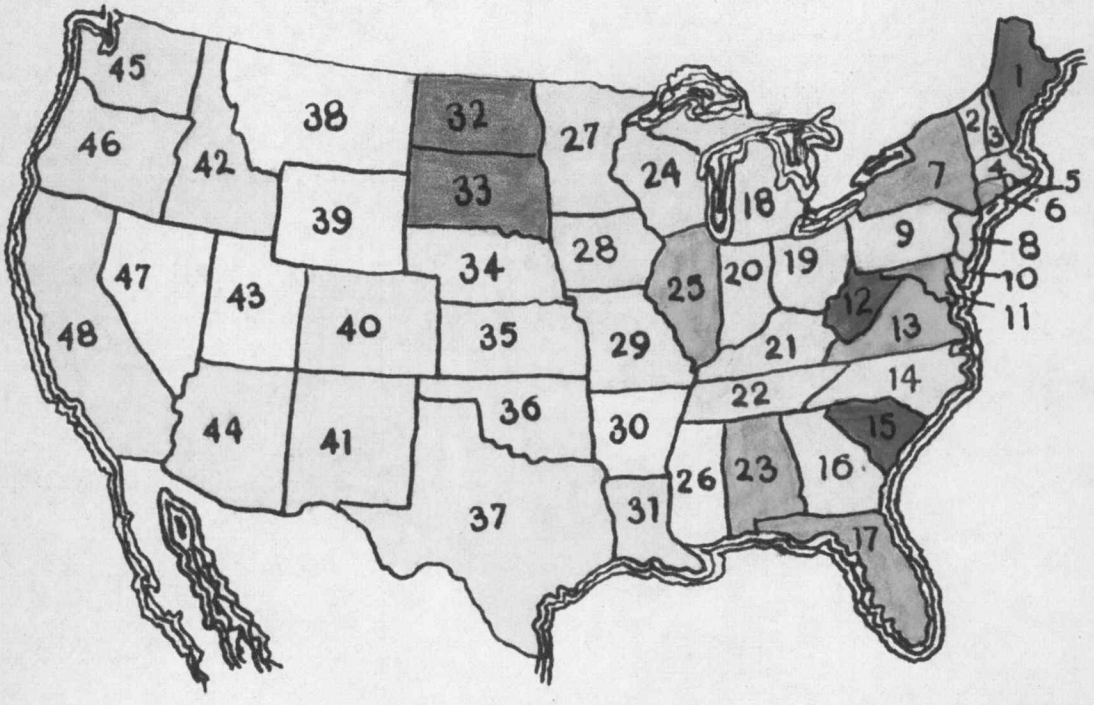

FIGURE H

SALARY RANGES

$3,000 to $3,900

$4,000 to $4,900

$5,000 and up

insufficient data

A CORRELATION OF DEGREES AND SALARIES

By grouping the cases according to the highest degrees earned, one finds that they fall into three classes, bachelors, masters and doctors. In each class, a few individuals failed to report both their salaries and the degrees earned. Of necessity, these cases were excluded from this part of the study. Reported, therefore, were fifty individuals with bachelor's degrees, 275 who had earned the master's degree, and fifty-six with the doctorate degree. This phase of the study will be concerned with these three classes of degree holders and the data about the 381 individuals holding them.

FIGURE I, page 68, indicates the distribution and frequency of fifty individuals holding only the bachelor's degree in comparison with the salaries reported. Most of these people were receiving less than $5,000 a year. The average salary for this group is $3,720 per year. If the two types of degree holders are separated and the average salary for each group computed, it will be found that the nine men with bachelor of education degrees were earning an average yearly salary of $4,166.66, while the forty-one bachelor of science degree holders were being paid slightly less, or an average of $3,623.10 per year. The yellow bars in the graph FIGURE I, page 68, indicate the holders of bachelor of arts degrees, while the red bars designate

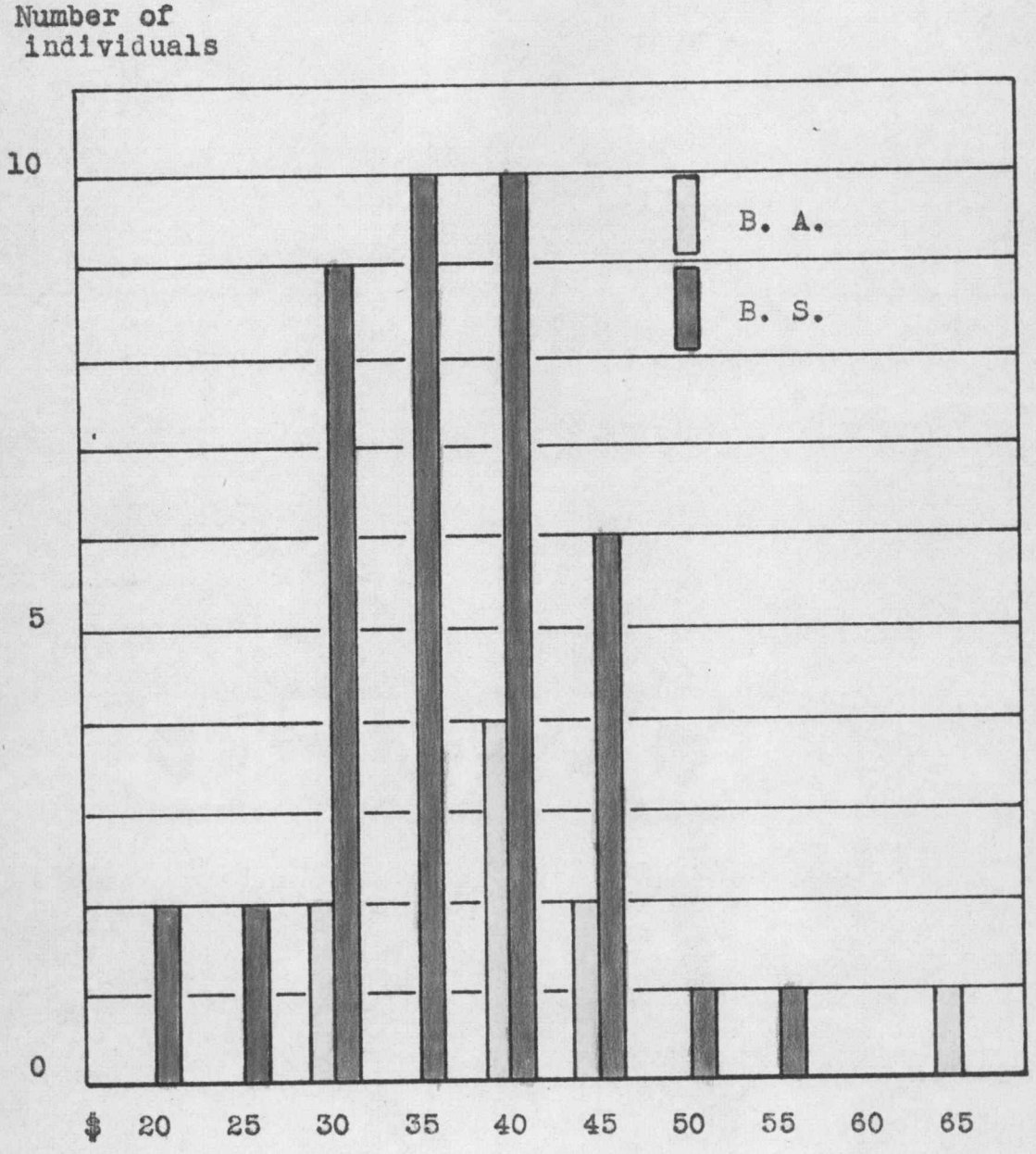

FIGURE I

DISTRIBUTION OF SALARIES FOR 50 MEN HOLDING
ONLY BACHELOR'S DEGREES
IN HUNDREDS OF
DOLLARS

those with bachelor of science degrees.

In the second group were 275 men with master's degrees. Their average annual salary amounted to $4,462.00. The average for each type of master's degree, when segregated into three classes, was nearly the same as that for the whole group combined. The twenty-six men holding the degree master of education received an average yearly salary of $4,480.77, while the 115 men with the master of science degrees received $4,343.48, the smallest average salary for the three classes of degree holders. The 134 men with master of arts degrees received the highest average salary, or $4,485.07.

FIGURE J, page 70, shows these figures in graphic form. Each type of degree is represented by a different color to distinguish it from the other two, and the number of individuals with each type of degree in each salary level is represented by the height of the column. The yellow bars show the individuals with master of education degrees, blue is for master of science, and red represents those holding master of arts degrees.

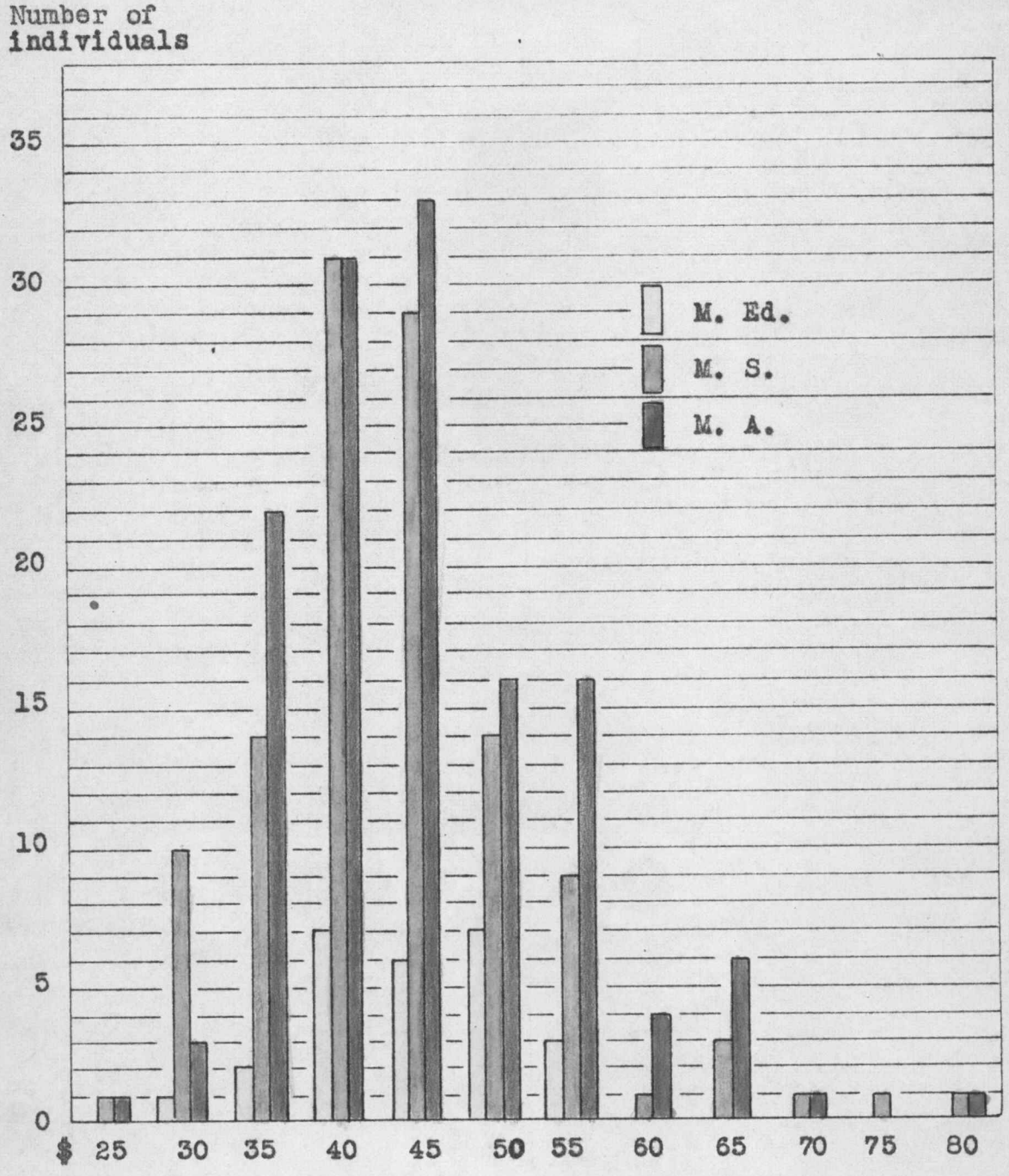

FIGURE J

DISTRIBUTION OF SALARIES IN HUNDREDS OF DOLLARS FOR 275 MEN HOLDING MASTER DEGREES

Men holding doctoral degrees would naturally be expected to receive larger salaries than those of lesser training. This expectation is confirmed by the findings of the study. FIGURE K, page 72, is presented to show the types of degrees held by fifty-six individuals, and the salary levels into which they fall.

It will be seen that there are more men with the doctor of philosophy degree, as indicated by the red bars in the graph, than with the doctor of education degree, as shown by the yellow bars. Men in the former category are earning slightly more per year, on the average, than those in the latter group. The average yearly salary for the two types combined is $6,000. When the two types are separated it is found that the individuals with doctor of education degrees have a yearly salary average of $5,587., while those with the philosophy degree receive $6,288. a year on the average.

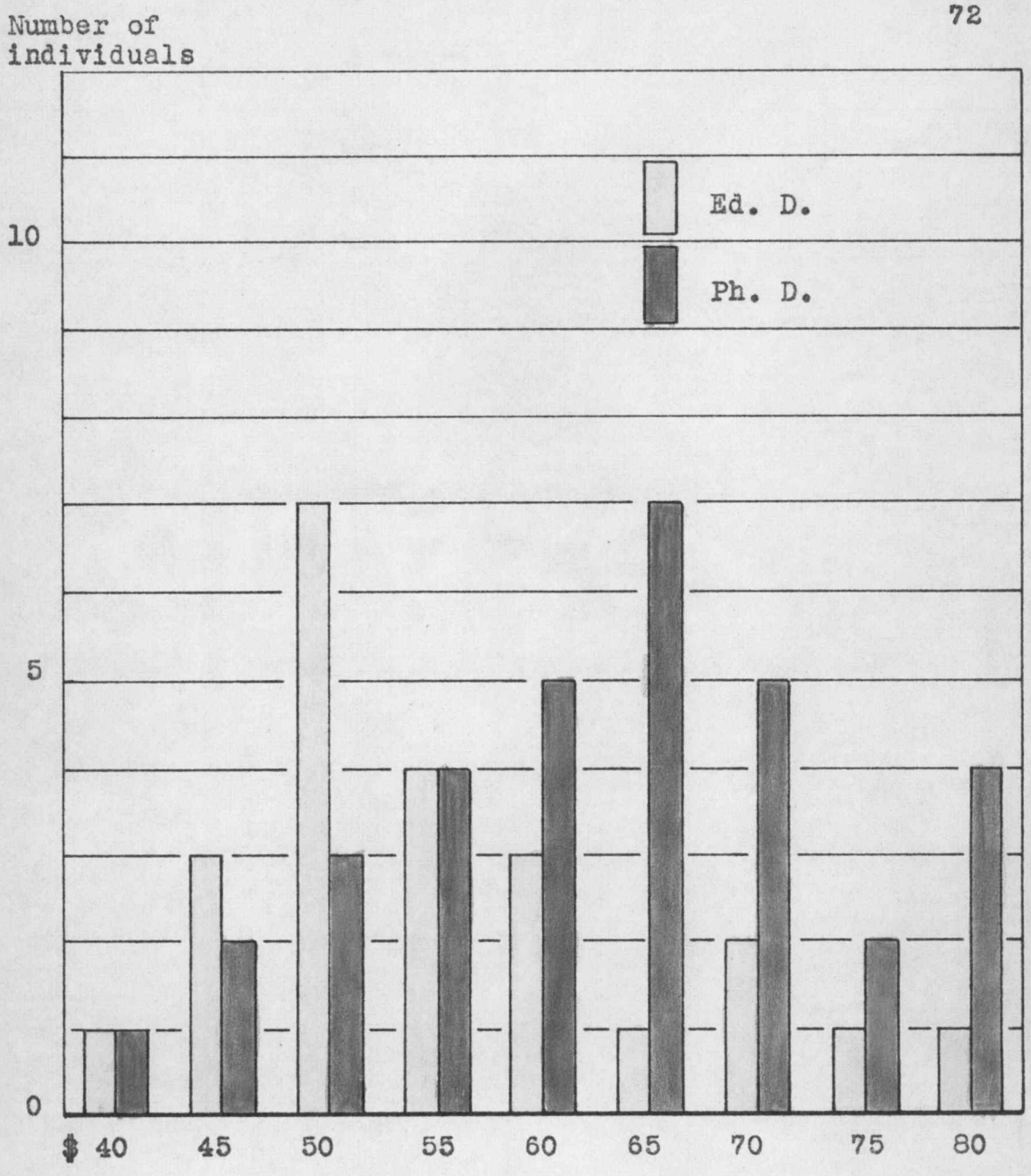

FIGURE K

DISTRIBUTION OF YEARLY SALARIES FOR 56 MEN WITH DOCTORAL DEGREES IN HUNDREDS OF DOLLARS

FIGURE L, page 74, is a superimposition of the data concerning the 381 individuals in all three groups of degree holders. It may be noticed that the people with master's degrees far out-number the others and that the salary range is widest for this group. That portion of the graph with horizontal cross-hatching represents the men with bachelor's degrees, with a range in salaries from $1,500 to $5,100. The master's degree holders (unshaded) range in salaries from $2,000 to more than $8,000, which is within one division of covering the complete range, as shown in FIGURE L. Verticle cross-hatching is used to designate the individuals who hold doctor's degrees, with a salary range from $3,500 to more than $8,000. It should be noted that the largest number of individual salaries, in all three groups, is between $3,500 and $5,000.

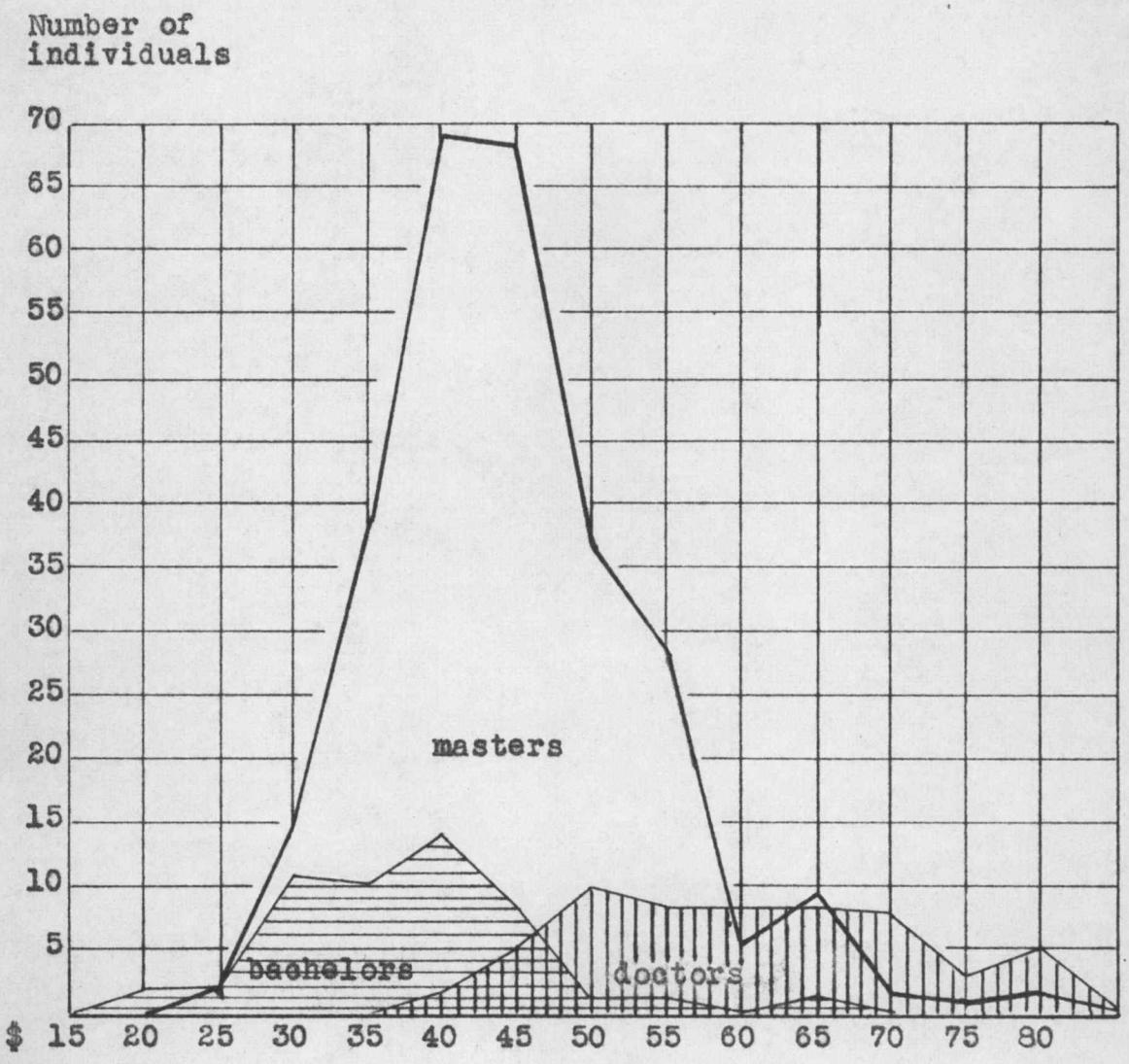

FIGURE L

DISTRIBUTION OF SALARIES AS RELATED TO ACADEMIC DEGREES HELD BY 381 INDIVIDUALS IN HUNDREDS OF DOLLARS

RANK AND SALARIES

Excluding persons who failed to indicate full information on salary and rank, 348 men are compared in this part of the study. When the salaries of these 348 individuals are compared with the academic rank of the persons reporting, there is a positive correlation. As promotions are made from rank to rank, the salaries are likewise increased. Some states have higher rates of pay for given rank than others, and some schools pay more for given assignments than others. Taken as a whole, therefore, there is wide variation in the distribution of salaries as compared with the academic rank. FIGURE M, page 76, is offered to show the relationship of these two basic factors. The number of individuals in a given bracket is represented by dots. The trend from the lower left-hand corner, where the lowest salaries are shown, to the upper right-hand corner, where the highest salaries are shown, makes it possible to assign values to the positions of the dots. It will be noted that the heaviest concentration is at the middle in both ranks and salaries.

The twenty-nine individuals who were employed on a part-time basis were not included in this phase of the study, because of the great variations in the time they

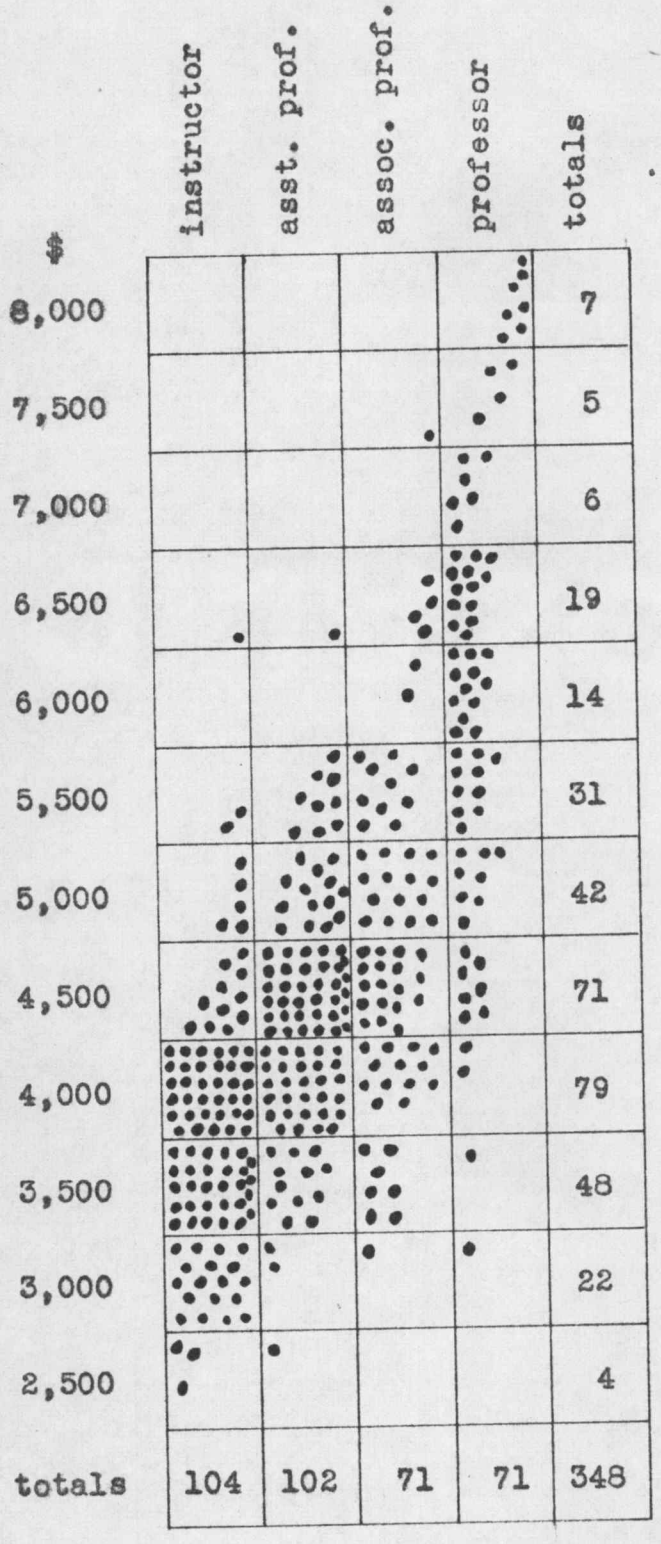

FIGURE M

GRAPHIC CORRELATION OF ACADEMIC RANK
WITH SALARIES

were serving in the industrial arts teacher training program. Department chairmen who were classified in one of the four ranks -- instructors to professors-- were included and treated the same as the others.

PROFESSIONAL SERVICE

All but eight of the 415 men reporting gave information concerning the length of time they had been teaching. The number of years ranged from one to more than forty-four. For the purpose of illustration, the entire range has been divided into groups as shown in FIGURE N, pages 78 and 79.

It may be noted that there tends to be a concentration of individuals, represented by the bars in the graph, at the end of each five-year period. The five-year bar, the 10, 15, 20, 25, 30, 35, and the 40-year bars are longer than others in the same group. This may be caused by the natural tendency for one to round-off his numbers. It is simpler to say "ten" than to say "nine-and-a-half"; or to say "forty" when it would take some work to compute the actual time as "thirty-eight" years.

TABLE VIII, page 80, shows the number of individuals in each service period, by years, from one to forty-four.

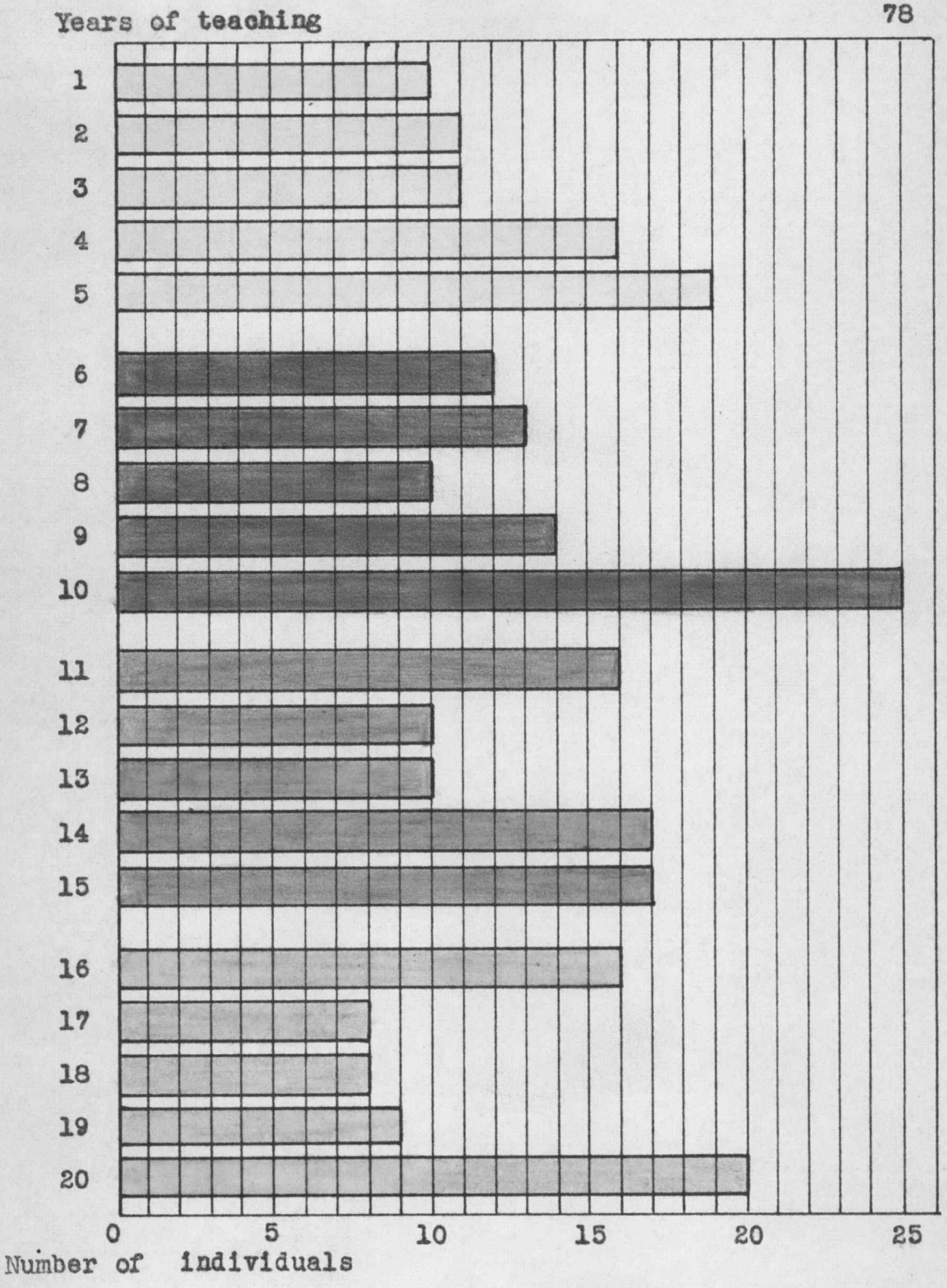

FIGURE N

FREQUENCY DISTRIBUTION OF YEARS OF SERVICE
FOR 407 INDIVIDUALS

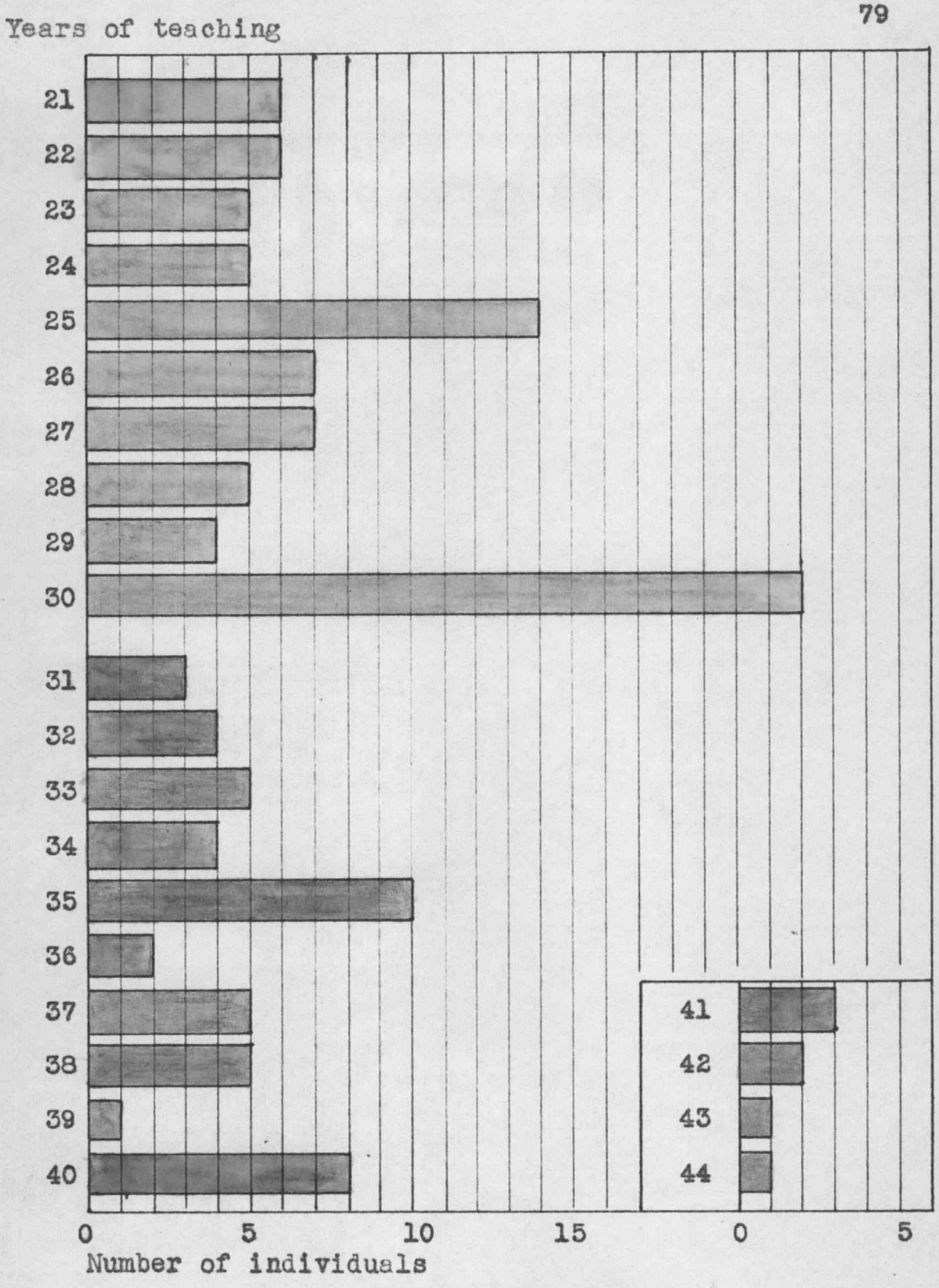

FIGURE N CONTINUED

TABLE VIII

PROFESSIONAL SERVICE

Years of service	Number of individuals	Totals	Years of service	Number of individuals	Totals
1	10		21	6	
2	11		22	6	
3	11		23	5	
4	16		24	5	
5	19		25	14	
			26	7	
		67	27	7	
			28	5	
6	12		29	4	
7	13		30	22	
8	10				
9	14				81
10	25				
			31	3	
		74	32	4	
			33	5	
11	16		34	4	
12	10		35	10	
13	10		36	2	
14	17		37	5	
15	17		38	5	
			39	1	
		70	40	8	
			41	3	
16	16		42	2	
17	8		43	1	
18	8		44	1	
19	9				
20	20				54
		61			135
					272
		272			
					407

FIGURE O, page 82, breaks down the data in FIGURE N and in TABLE VIII to show percentages. It may be noticed that a great number of people still teaching have been in the profession a long time. As shown by the chart, more than 33 per cent had been teaching twenty years or more. More than 65 percent of them had been teaching more than ten years.

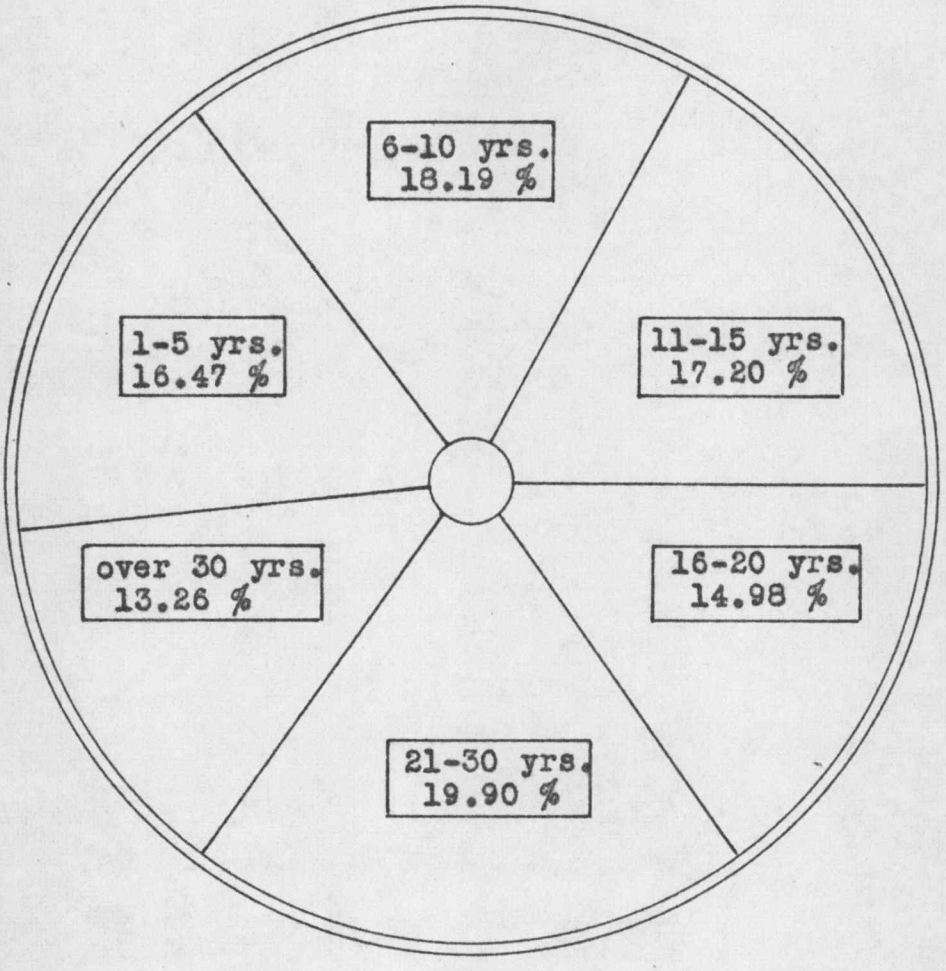

FIGURE O

YEARS OF SERVICE FOR
407 EDUCATORS
BY
PERCENTAGES

SEMESTER AND QUARTER TERMS

Of the 415 men included in this study, three failed to furnish the necessary information regarding the method of dividing the school year under which they were teaching. The remaining 412 men are divided between the two systems in the following proportions: 280, (68%) were working under the semester plan and 132, (32%) were teaching under the quarter plan. Of the 280 who were working by the semester, 39, (14%) preferred the quarter system. On the other hand, among the 132 who were under the quarter plan, 31, (23%) preferred the semester plan. If 39 is subtracted from 280 and 31 is added there are 272, (66%) who were satisfied with the semester plan. This leaves 140, (24%) of the original 412 men in favor of the quarter plan. It can be stated, therefore, that about one-third of the industrial-arts teacher educators throughout the United States are teaching under the quarter system of dividing the school year and two-thirds are teaching under the semester plan. Some in each group would like to change to the other plan, but the total figures would change very little and the same percentages would be acceptable as accurate.

NUMBER OF CLASSES TAUGHT

This chapter division is concerned with the number of classes taught by the three groups of individuals -- the department chairmen, the part-time teachers, and the full-time teachers who apparently had no other duties aside from teaching -- except, perhaps, some supervision or counseling. These three groups together account for 395 of the 415 industrial-arts teacher educators considered in this study. The other twenty failed to furnish sufficient information to be included.

Eighty-four or 21.27% of these 395 men were classified as department chairmen or some similar title with a connotation of administrative duties, and will be considered in more detail in another part of this chapter.

Twenty-one of these 395 men or 5.32% were employed on a part-time basis and were teaching from one to seven classes. TABLE IX shows the distribution of individuals with regard to the number of classes taught as well as the percentages of part-time individuals in each group. As may be seen by the table, most of the part-time teachers were teaching fewer than four classes each. The average number of classes for part-time personnel was exactly three classes each.

TABLE IX

NUMBER OF CLASSES TAUGHT BY

PART-TIME PERSONNEL

Number of classes	Number of teachers	Percentages
1	5	23.81
2	5	23.81
3	5	23.81
4	0	00.00
5	4	19.05
6	1	4.76
7	1	4.76
	21	100.00

The remaining 290 individuals, who compose 73.41% of the 395 men included in this phase of the study, were full-time personnel. They were teaching, on the average, 3.93 classes each. Their classes ranged in numbers from one to eight, and were distributed as shown in TABLE X.

TABLE X

NUMBER OF CLASSES TAUGHT BY REGULAR FULL-TIME PERSONNEL

Number of classes	Number of teachers	Percentages
1	6	2.08
2	31	10.68
3	71	24.46
4	94	32.43
5	57	19.65
6	22	7.58
7	6	2.08
8	3	1.04
	290	100.00

LITERARY CONTRIBUTIONS

The literary contributions made by industrial-arts teacher educators are of three different types: magazine articles, textbooks, and bulletins. One hundred-three individuals, about 23% of the group, have written 1,251 magazine articles. To put it in another way, approximately 77% of the men had not written for professional magazines, or had failed to indicate that they had, in answering the inquiries. Nine-hundred-nineteen of the 1,251 magazine articles had been written by seventeen men, which would indicate that more than 73% of the writing had been done by about four per cent of these men. Several people indicated that they had written more than thirty articles, and one individual claimed to have written as many as 200.

When the writing of textbooks was considered, fewer men were interested and fewer books had been written as compared with the number of magazine articles. Forty-five of these men had written 127 books. Five of these men had written twenty-seven books, but the average number for these forty-five men was 3.8 books each.

Bulletins are less numerous even than textbooks, with twenty-two men writing sixty-three bulletins. In twelve cases, the same individual was responsible for the authorship of bulletins, magazine articles, and textbooks. These twelve men had produced 61% of the articles, 31% of the textbooks, and 78% of the bulletins.

For the entire group, the average number of magazine articles was three, the average number of books was three-tenths, and the average number of bulletins was .15 . It is reasonable to believe that a considerable amount of worthwhile material for publication remains unpublished within this group.

PROFESSIONAL ORGANIZATION MEMBERSHIPS

Twenty-eight different professional organizations were listed in which at least one man held membership. Twenty of these were either state or local organizations not commonly known outside of the particular state or community. The other eight were nationally known professional associations and professional fraternities with which industrial arts teachers affiliate. Of the 415 men included in this study, forty-three indicated that they belonged to no professional organizations of any kind. The remaining 372 hold memberships in from one to nine different organizations. TABLE XI shows the range of the numbers of societies to which industrial arts teachers belong, the numbers of individuals belonging to the various organizations, and the percentages of individuals represented by the numbers.

TABLE XI

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

Memberships	Individuals	Percentages
0	43	10.36
1	62	14.94
2	65	15.66
3	70	16.87
4	75	18.07
5	55	13.25
6	25	6.03
7	12	2.89
8	7	1.69
9	1	.24
	415	100.00

As shown in TABLE XI, there are forty-three men without memberships in any of the professional societies, sixty-two who belong to only one organization, sixty-five who had joined two, seventy-five in four, and on down the list to one individual who was a member of nine different organizations.

Discounting the forty-three men who were not affiliated with any of the organizations, a total of 1,272 separate memberships were held by 373 men, or an average of 3.42 memberships for each man. For the purpose of clarity, these eight societies have been grouped into three types of organizations which are as follows: the first group is composed of the twenty organizations, labeled state and local, to which these teachers belong; the second is the general type of organization to which other educators besides industrial arts people belong; the third is made up of those nationally known organizations with which only industrial arts teachers affiliate.

TABLE XII, page 91, shows these three groups, with the number of memberships in organizations, under each type, as well as the percentages represented. It may be noted that the memberships are fairly evenly divided among the three groups.

TABLE XII

TYPES OF PROFESSIONAL ORGANIZATIONS

JOINED BY INDUSTRIAL ARTS TEACHER EDUCATORS

Organizations	Number of memberships	Totals	Percentages	Totals
Local and state organizations	419		32.91	
		419		32.91
American Association of University Professors	53		4.16	
National Education Association	166		13.05	
Phi Delta Kappa	144		11.35	
		363		28.56
American Industrial Arts Association	137		10.76	
American Vocational Association	186		14.62	
Epsilon Pi Tau	144		11.35	
National Association for Industrial Arts Teacher Trainers	23		1.80	
		490		38.53
		1,272		100.00

DEPARTMENT CHAIRMEN

It has been assumed that all of the schools which include industrial arts teacher education in their programs have someone in charge of the affairs of the industrial arts department. The facts substantiate this assumption -- with three exceptions in which the department of industrial arts was managed by the head of another department of the institution and one in which the management of the department was shared by two men.

The individual at the head of the department is not always referred to as the department chairman, however. From the information received from the eighty-six men who considered themselves to be responsible for the administration of the department of industrial arts, it was apparent that there were three titles used to designate this position, i.e.: department chairman, director, and department head.

The eighty-six individuals who came under these three headings have been grouped, for separate study, as administrators. They have been divided into four classifications, according to their professional rank. FIGURE P, page 93, is offered to indicate the frequency in each rank as well as to show those not included by rank. The unclassified group includes those who did not indicate their ranks on the returned questionnaires. They are department chairmen, however, and must be included here.

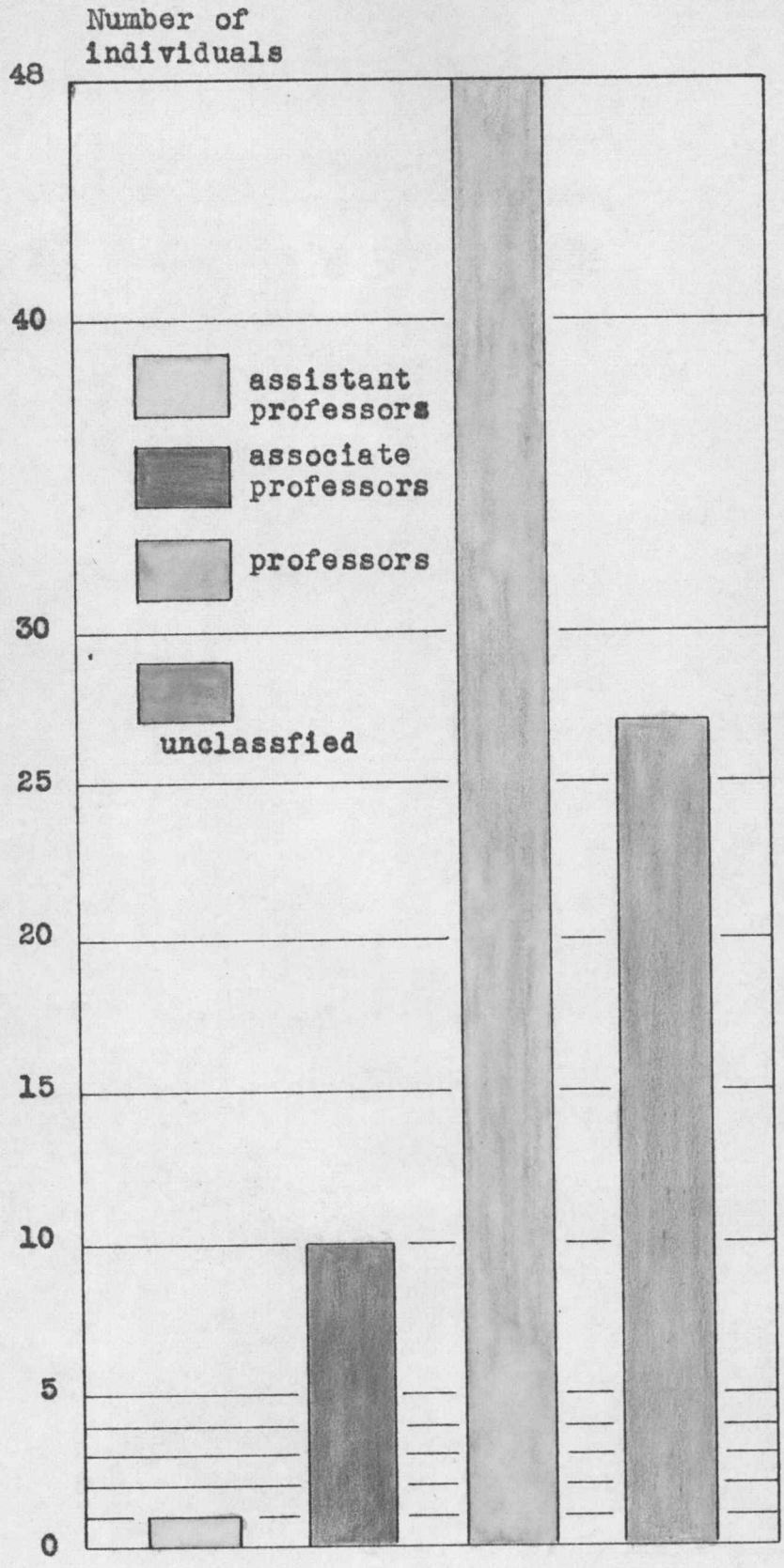

FIGURE P

PROFESSORIAL RANK OF DEPARTMENT CHAIRMEN

As shown in FIGURE P, one chairman ranks as an assistant professor, ten are associate professors, forty-eight are full professors, and twenty-seven were not classified as far as academic rank was concerned. These twenty-seven men may have been professors or any other rank, or they may have been without titles other than department chairmen. They have been listed in TABLE XIII as "unclassified".

TABLE XIII

RANKS OF DEPARTMENT CHAIRMEN

Rank	Number of	Percentages
Assistant professors	1	1.16
Associate professors	10	11.62
Professors	48	55.84
Unclassified	27	31.38
	86	100.00

THE NUMBER OF CLASSES TAUGHT BY DEPARTMENT CHAIRMEN

It would be proper to assume that department chairmen have lighter teaching loads than other regular full-time teachers, because of their administrative duties. The data accumulated in this regard show some variation between the teaching loads of these two groups, but not as much as

might be expected. On the average, the department chairmen were teaching 3.53 classes each, while the average teaching load for regular full-time personnel was 3.93 classes each.

TABLE XIV shows the number of classes taught by eighty-four department chairmen and the percentages represented by those numbers. The percentages from TABLE X have been duplicated here so that comparisons between the figures for the chairmen and non chairmen may be made. Two of the department chairmen failed to report the number of classes taught so for that reason have been excluded from this part of the study.

TABLE XIV

TEACHING LOADS FOR EIGHTY-FOUR DEPARTMENT CHAIRMEN

Number of classes	Number of individuals	Percentages chairmen	Percentages*
1	3	3.57	2.08
2	12	14.28	10.68
3	29	34.52	24.46
4	22	26.19	32.43
5	14	16.68	19.65
6	3	3.57	7.58
7	1	1.19	2.08
8	0	0.00	1.04
	84	100.00	100.00

*The percentages column in TABLE XIV marked with an asterisk is taken from TABLE X and used here for reasons of comparisons. The figures are for full-time teachers other than department chairmen.

DEGREES HELD BY DEPARTMENT CHAIRMEN

When a comparison is made between the department chairmen and the other regular faculty members who had no administrative duties little difference is to be noticed except in the cases of salaries and degrees. It appears that the department chairmen, as a group, hold a larger percentage of higher degrees than do the other men. The range, as shown in TABLE XV, is from two chairmen with bachelor's degrees to twenty-eight who have earned doctor's degrees.

TABLE XV also shows a comparison between the department chairmen and the regular teachers or non-chairmen with respect to the numbers of degrees earned as well as the percentages of men holding each of the various types of degrees.

Four of the eighty-six chairmen did not report their degrees, or perhaps had none to report, and for that reason, have been excluded from this part of the study.

TABLE XV

COMPARISON OF THE STATUS OF CHAIRMEN

AND NON-CHAIRMEN

Department chairmen			Not department chairmen	
Number	Percentages	DEGREES	Percentages	Number
2	2.45	BACHELOR'S	14.70	48
52	63.40	MASTER'S	75.10	245
28	34.15	DOCTORATE'S	10.20	33
82	100.00		100.00	326

SALARIES OF DEPARTMENT CHAIRMEN

When the salaries of the eighty-six department chairmen, who reported their salaries, are grouped into ten $500 increments the total salaries and the average salary for these men can be computed. TABLE XVI shows these increments, with the numbers of individuals falling into each group, as well as the total salaries for each group.

TABLE XVI

SALARY RANGES FOR 86 DEPARTMENT CHAIRMEN

Number of individuals	Salary increments	Total salaries by increments	Average salary
1	$ 3,500	$ 3,500	
6	4,000	24,000	
11	4,500	49,500	
7	5,000	35,000	
16	5,500	88,000	
18	6,000	108,000	
12	6,500	78,000	
4	7,000	28,000	
3	7,500	22,500	
8	8,000	64,000	
86		500,500.00	$5,819.76

The average salary was determined by adding the total number of salaries for each increment and dividing by eighty-six. It may be stated then that the average salary for the eighty-six department chairmen was $5,819.76.

FIGURE Q, page 99, is offered to illustrate the frequency distribution of the salaries of the eighty-six department chairmen and to show, by graphic presentation, the range in salaries -- which began at $3,500 and extended beyond the $8,000 level. There appear to be three distinct levels into which the salaries most frequently fall -- the $4,500 level for 12.8% of the cases, the $5,500 to $6,500 level composing the major proportion of the group (53.29%) and, the $8,000 level reached by slightly more than 10% of the men.

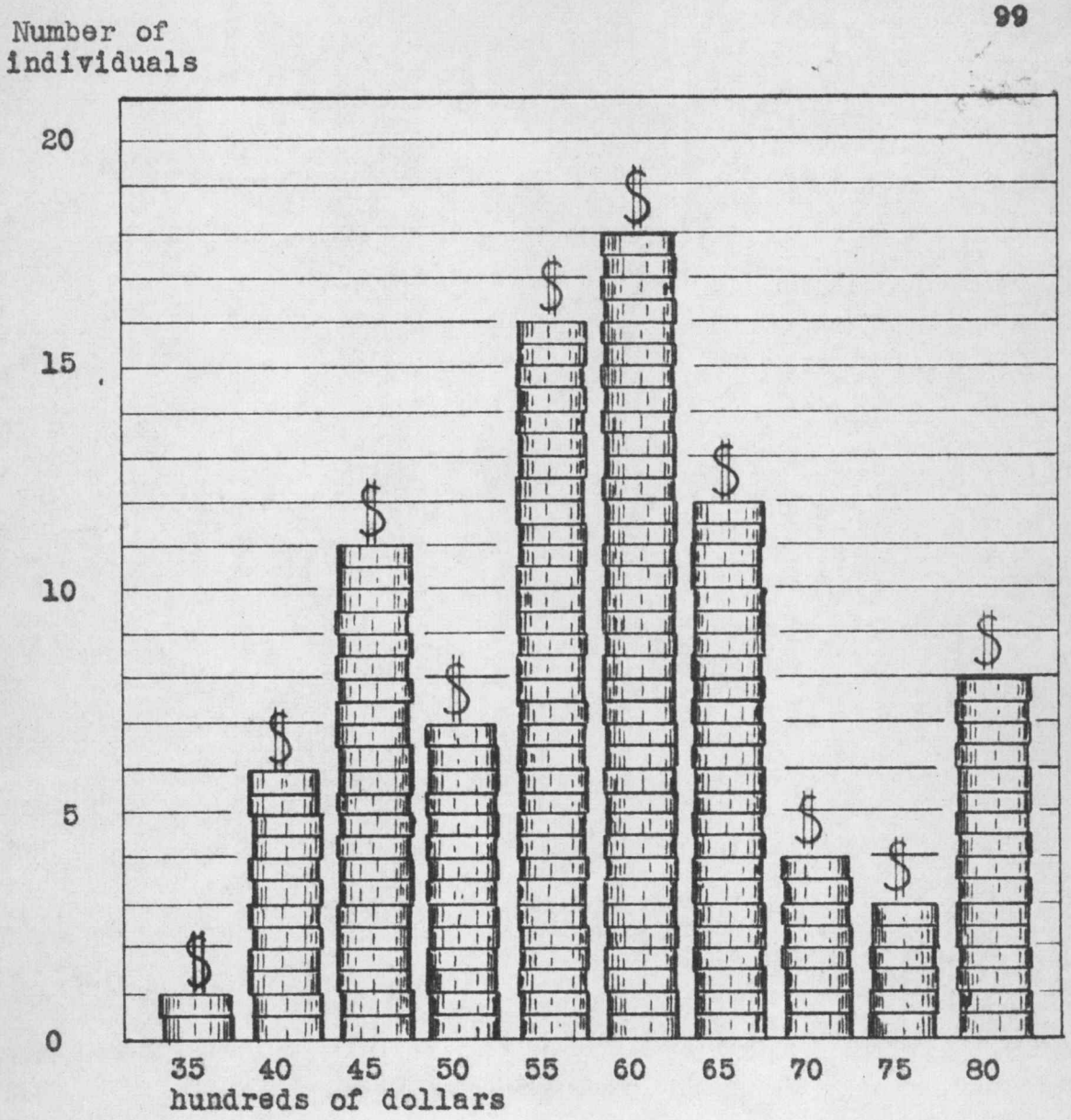

FIGURE Q

YEARLY SALARIES OF 86
DEPARTMENT CHAIRMEN

CHAPTER IV

SUMMARY AND CONCLUSION

In the United States, there are at least 151 colleges and universities that offer, as a regular part of the curricula, courses which lead to the certification of industrial arts teachers. These institutions are located in all except four of the forty-eight states and are considerably more numerous in those states east of the Mississippi River.

It was found that there are eight types of institutions which include industrial-arts teacher education in their programs. They are:

53 State Teachers Colleges
34 Universities
32 State Colleges
8 Institutions
8 Colleges of Education
8 Agricultural and Mechanical Colleges
5 Mechanic Arts and Technical Schools
3 Private Schools.

Six of these schools have departments of industrial arts that would be considered large as compared with the others. According to the data gathered, the largest of these was the State Teachers College at Oswego, New York. This school was credited with having twenty-four members

on the teaching force. Stout Institute, at Menomonie, Wisconsin, was second in size with twenty-one staff members. Kansas State Teachers College, Pittsburg, rated third in size with twenty members. The other three in order were: The University of California (Santa Barbara College) at Santa Barbara, with eighteen faculty members; San Jose State College, San Jose, California, and New York State College for Teachers, Buffalo, each with sixteen members.

A total of 415 usable questionnaires were returned to the writer, permitting an analysis of this number of men on the material in the returned questionnaires. These 415 men had studied at 115 institutions to obtain their preparations for college teaching, but indicated the following sixteen schools as the ones most often attended:

Colorado College of Education
Iowa State College
Kansas State College at Manhattan
Kansas State College at Pittsburg
University of Michigan
University of Minnesota
University of Missouri
Columbia University
New York University
Oswego State Normal School

Ohio State University

Oklahoma A. & M. College

Oregon State College

North Texas State College

University of Wisconsin

Stout Institute.

Eighty-three per cent of these men had spent some time in a trade, which seems to indicate that trade experience is a factor in preparing for a college teaching position in industrial arts.

The master's degree was by far the most prevalent type of degree held by these men with more than 72% of them appearing in this category. A large proportion of all degrees held by these men were received either just before or since World War II. There appears to be more and more emphasis placed upon the value of the higher degrees for college industrial arts teachers. This trend may, in time, lead to an academic standard for men in this profession and away from the necessity of trade experience.

The ratio between the number of full professors and those of the other three ranks was one professor to four of the lesser ranks combined. That was an average over the whole group throughout the United States. When each state was considered separately, Illinois, New York, Ohio, Oklahoma, and Texas show a ratio of one full professor to

two of the lesser ranks. California, on the other hand, rated lowest in this regard -- with one professor to six men in the lower ranks. Perhaps there should be more uniformity among the schools of higher education in this regard, and a system for promotions developed and followed so that one entering this profession could predict his advancements with some degree of certainty.

Less than eight per cent of the men were teaching on a part-time basis, which seems to indicate that industrial-arts teaching in colleges is a full-time occupation in most cases.

The salaries of these men ranged from $2,000 to more than $8,000 per year. The average salary for the entire group was $4,628.17. Most of the states fell within the average range. In most cases, the men with the higher degrees were receiving higher salaries. Bachelor's degree holders were receiving, on the average, $3,623.10, holders of master's degrees were receiving an average of $4,462.00, while those holding doctor's degrees averaged $6,000.00 for a year's teaching.

Teaching industrial arts in a college seems to offer extended career opportunities, as indicated by the fact that more than one-third of the men included in this study had been teaching more than twenty years. Sixty-five per cent had been teaching more than ten years. In this study,

there is no documental evidence upon which to base a valid opinion as to whether it is good or bad practice for an individual to remain in the teaching profession for any given number of years. It does indicate, however, that there must be a degree of satisfaction to the individual who can perform his duties well enough to be re-employed year after year in the same profession.

The distribution of men teaching under the quarter and the semester systems showed that two-thirds were under the semester plan and one-third were using the quarter plan. Some in each group would prefer to change to the other plan, but the remaining number of men under each system, after the change, would be about the same as before the change was made.

There was little difference between the teaching loads of the part-time and full-time educators. The part-time personnel were teaching, on the average, three classes each, while the full-time teachers were conducting 3.93 classes each. It appears from the figures that department chairmen, in addition to their administrative duties, have almost as much classroom responsibility as the non-department chairmen, whose teaching loads on the average, were 3.53 classes each.

Most of the writing in this field has been done by a few individuals. Twelve men were responsible for writing the major part of the textbooks, bulletins, and magazine

articles. It appears from this information that many of these men can not or do not write for publications. There are perhaps many reasons why this is true. Compensations for most professional writing are usually very meager, and offer little inducement to persons of limited writing ability.

Memberships were held in twenty-eight professional organizations. Most of these were local and state organizations -- with a few scattered national fraternities and societies. Each individual, on the average, held 3.42 memberships.

There were 86 men classified as department chairmen who have been given special study, and grouped separately so that a comparison with non-chairmen could be made. Most department chairmen are full professors; they are teaching, on the average, 3.53 classes each; they hold master's degrees for the most part. Their salaries range from $3,500 to more than $8,000 per year. The average salary for these men is $5,819.76 per year.

During the preparation of this thesis the writer became aware of a need for further study that may lead one to explore the relationship of factors pointed out here to those of other phases of the same field. There is need for a more complete compilation of data and information concerning the institutions where industrial arts teachers are educated. Information regarding the geographical

locations, condition of buildings and equipment, shop and laboratory facilities, curricula offerings and their possible transfer values to other institutions, and information about the graduates of these schools could be included.

If such study is undertaken by any one, it is hoped that he receives the same splendid cooperation and finds the same professional attitudes that were displayed by my colleagues when they were asked to contribute to this study.

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APPENDIX

The Training, Experience, and Professional Status of College Personnel Responsible for Industrial Arts Teacher Education

Name _____

Title or Professional Rank _____

Now Teaching At _____

City _____ State _____

Subject You Teach _____
Lower Division

_____
Upper Division

_____
Graduates

Employed Part or Full Time in Industrial Arts _____

Approximate Average Yearly Salary in Industrial Arts
(Circle One)

$2,000
2,500
3,000
3,500
4,000
4,500
5,000
5,500
6,000
6,500
7,000
7,500
8,000
more

DEGREES	COLLEGE	DATE
B.A., B.S.	_____	_____
M.A., M.S., M.Ed.	_____	_____
Ed.D., Ph. D.	_____	_____
Others	_____	_____

Teaching Credentials You Hold;

Elementary _____ Special Secondary _____

Junior High _____ Smith Hughes Voc. _____

Senior High _____ Others _____

General Secondary _____

Approved:
H.R.Laslett, Ph.D.,
Prof. of Education
Psychology.

Approximate Number of Years in the Teaching Field _____

Have You Had Trade Experience? _____

In What Fields and Approximate length of time _____

_____

Do You Teach Summer Session Regularly _____

At Your Own School? _____ Others? _____

Do You Work at Other Things During The Summer? _____

If So What Is Their Nature? _____

In What Professional Organizations Do You Hold Membership?

_____

To What Professional Magazines Do You Subscribe?_____

Titles and Dates of Your Publications _____

_____

Average Yearly Number of Students in Your Classes?_____

Average Size of Classes?_____

Do You Work By Semester or Quarter Periods? _____

If Given Your Choice Which Would You Choose? _____

How Many Classes, On The Average, Do You Teach Each Term?

_____

What Are the Vocational Destinations of the Most of Your

Students? _____

_____

THANK YOU

UNIVERSITY OF CALIFORNIA
SANTA BARBARA COLLEGE

DEPARTMENT OF INDUSTRIAL ARTS
755 CLIFF DRIVE
SANTA BARBARA, CALIFORNIA

In an effort to determine the experience, training and professional status of industrial arts teacher educators in the various institutions in the United States, the enclosed sets of questionnaires are being sent to every individual who comes under this classification.

May I impose upon you, as head of the department of industrial arts in your college, to fill in one set and distribute the rest among your staff members and urge them to complete and return them to me as soon as is reasonably possible? Self-addressed envelopes are furnished for this purpose.

The results of this study will be included in my doctoral thesis and perhaps published at a later date. All information of a personal nature will be kept strictly confidential.

Thank you for taking your time and spending your efforts in assisting me in this study.

Gratefilly yours,

LOUIE S. TAYLOR
Asst. Prof. Ind. Arts.