A STUDY OF THE POSSIBILITIES OF INCLUDING INDUSTRIAL ARTS IN THE WHITNEY ELEMENTARY SCHOOL, GRADES THREE THROUGH EIGHT, BASED UPON THE NEEDS AND DESIRES OF THE PARENTS AND STUDENTS IN THE SCHOOL AREA

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THESIS

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CHAPTER I

INTRODUCTION

This study was conducted in order to determine the community need and desire for an Industrial Arts program in the elementary school at Whitney, Texas. The writer felt that a better understanding could be obtained through consultations with parents and elementary school students. Information required to portray the interests of the parents and to give a clearer insight into the problem was attained through questionnaires designed for this purpose. Much information concerning the environment and home conditions was obtained in this manner. The amount of training in Industrial Arts that had been completed by the parents and students was an important question. However, the most important factor contributing to the study was the community's expressed opinions and recommendations. A further definition of this statement would be to consider the types of courses that the people of the community thought would have helped them most in their vocation, and the different subjects in Industrial Arts that they considered would be of most benefit to their children. The opinions of the students will be brought under close observation in Chapter IV.

In Chapter V, a summary of the opinions and recommendations of authors in the educational fields, the opinions and recommendations of parents, and the opinions and recommendations of students in the elementary school, will be given. Using this information as a basis, the writer will make recommendations regarding the addition of Industrial Arts to the elementary school curriculum in the Whitney Independent and Consolidated School.

Because the writer taught in the community considered in this study and is therefore acquainted with the conditions contributing much toward the progress of the locality, he is of the opinion that the problem can be understood better if a history of the situations that have prevailed and are prevailing at the present time is presented here. The following summation, taken partly from a history of Johnson and Hill counties, gives some background to the study.

Whitney is a small town located in the center of a good farming district of western Hill County, Texas. This part of the once-open prairie land was named after Charles A. Whitney, a New York stockholder in the Central Railroad. On November 28, 1879, the land was divided into lots and sold to people for homesites and business locations. The first boom days, which were responsible for building the town, were created through the locating of the Central

Railroad at Whitney. Later, the track was extended to Hillsboro, Texas, now the county seat. Upon completion of the railroad, the population declined from 1200 in 1884 to 600 in 1889 but had increased to 750 by 1892.[1]

Many remains of the old days when pioneers fought the Indians still exist to tell the story confirming the age and growth of this community. One historic spot is the "Old Fort," better known as "Fort Graham," once housing brave men who prevented much Indian pilfering. Still another important land mark from the early history of the community is the "Old Mill" where the people took their grain to have it ground. Parts of the "Old Mill" still stand on the east bank of the Brazos River, which supplied the water to run the mill. This industry gradually disappeared, leaving mostly farmers and a small number of business men in this area.

Whitney is crowded again with people from many states. The magnetic power this time is supplied through the location of the Whitney Dam and the construction of a new railroad. For some reason, the holding power of this community seems to be very weak. One logical reason for its lack of holding power appears to be that the only industries of any size in this locality are farming and ranching. Very

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[1]Author unknown, A Memorial and Biographical History of Johnson and Hill Counties, Texas, pp. 319-322.

few of the permanent residents have had industrial training (factory and shop) and do not seem to realize the importance of such trades. The majority of the students who finish school must leave Whitney or depend upon farming for a livelihood. Retail businesses are too small to have enough volume for hiring a number of laborers. There seems to be a need to create some new businesses by bringing in new fields of industry in order to employ more people in the town. It seems that the likely place to start would be in the school, to acquaint the members of the younger generation with new fields in order that they may have a better knowledge of industry and be able to create industries here instead of having to leave home to learn a trade.

Because approximately twenty per cent of the students finishing high school here enter college, and only ten per cent complete their college training, the other ninety per cent must find some means of making a living. In one sense of the word, they are unprepared to meet life's situations when they leave school.

Recreational facilities for the children during the summer vacation appear to be very limited in Whitney, and it is believed that some knowledge of various handicrafts would be of value in helping the youngsters select a profitable recreation. Up to the present time the high school

has not included industrial arts in the curriculum. Home economics for girls and vocational agriculture for boys are about the only subjects offered aside from purely academic work in high school. Vocational agriculture in this school offers very little shop work. The elementary school offers no affiliated shop work and no facilities are present for teaching such courses. The writer is of the opinion that the aforementioned facts justify the problem.

The Problem

The purpose of this study was to poll the interests and needs of the Whitney community through questionnaires submitted to the parents and students concerning the need for Industrial Arts being added to the school curriculum. The study also was made to obtain the opinions of students and parents in the Whitney School area concerning the possibility of Industrial Art courses preparing the students for a more successful living and to be of better value to the community.

Limitations of the Problem

The study was limited to an analysis of the opinions of students and parents in the Whitney Independent School District as to the needs and desires for adding industrial arts to the curriculum of the school from grades three through eight, and the recommendations of authors in the fields of education.

Definition of Terms

The term "industrial arts" is used to mean any course of study that concerns the teaching of any handicraft, as well as the changing of raw materials into something useful to man and to give general knowledge concerning industry.

"Course of study" is implied to mean a course that is affiliated through the State Board of Education in Texas.

The term "hobby" denotes any type of pastime activity concerning collections, crafts, and processing of different materials.

"Students" normally refers to students in grades three through eight.

"Leisure time" designates the time spent for fun and free of binding obligations toward making a living or doing what is commonly referred to as "chores."

The term "parents" refers to parents with children below school age, children in school, and children having left school.

In this study "elementary school" refers to grades three through eight.

"High school" designates the grades nine through twelve.

Sources of Data

Data used in this study were obtained from questionnaires completed by 255 students, grades three through eight, and 102 parents in the community. The questionnaires sought general information concerning hobbies, leisure time, and interests in certain courses; if an industrial arts courses was desired, and, in case they were added to the school curriculum, if they would help the community and the individual.

An analysis was also made of books written by authors in the educational field, and of professional magazines, and of interviews with people in the community.

CHAPTER II

OPINIONS AND RECOMMENDATIONS OF AUTHORS IN THE FIELDS OF EDUCATION CONCERNING THE VALUE OF INDUSTRIAL ARTS IN THE ELEMENTARY SCHOOL

A review was made of literature in the North Texas State College Library to determine the recommendations of educators concerning the teaching of industrial arts in the elementary school, especially handicrafts. Because the sources dealing directly with industrial arts were very limited, it became necessary at times to bring in topics dealing indirectly with the subject. Therefore, short discussions and quotations that apply to industrial arts were presented in this chapter in order to give a better understanding of the opinions that authors have regarding the importance of other information that should be dealt with through studying industrial arts and its surroundings, which will, in turn, be of value to the student and society. In many instances where vocational education and industrial arts were practically inseparable, that information was also used provided it was designating the things commonly thought to be of equal importance to the industrial arts and vocational education fields.

A Joint Committee on Rural Schools in New York State made a rural school survey and gave the following recommendations concerning the purposes of elementary education in the rural areas:

> In making this study two fundamental principles were assumed. In the first place, it is held that the purpose of elementary education is the same for country children as for city children, and that is, to give them such training as will make them acceptable members of society, fitted, in so far as their ages permit to meet the practical demands of daily life, possessing an interest in the future, and so prepared that they will be free to enter upon any line of work or future schooling that they may care to choose. Our rich civilization must be made available to all children.[1]

It is a known fact that many children in the rural areas do not have the opportunity to take any type of industrial arts. According to the report on the Rural School Survey, every child should have the opportunity at least to take some phase of his choice or selection; however, this does not mean to the exclusion of other subjects that the child is recognized to need. However, many subjects could be satisfactorily coordinated or combined with industrial arts. History, geography, and certainly the reading period could be related with industrial arts, as well as the arithmetic applied to the various problems that are faced each day in industrial arts. This process of instruction

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[1]George A. Works, Rural School Survey of New York State, Vol. 1, pp. 74-75.

is not intended to disrupt the learning process, or accept the entire responsibility of teaching the other subjects.

> While it must not be expected that industry will of itself exercise a magic touch by means of which all the burdens of the school will be transformed, it is not too much to expect that it will exercise a potent influence, if introduced into the schools in an organic way, satisfying at the same time the demands of the child and of society. The difficulty in elementary education has not been in the child nor in the demands made by society; it has been in the failure to make use of that by means of which the two may be brought into vital relationship.[2]

The statements made by the committee can be substantiated further by the opinion of A. H. Edgerton, concerning the correlating of industrial arts with other subjects. He is of the opinion that,

> . . . one striking feature observed more and more in the elementary industrial arts classes is the fact that this subject correlates easily and naturally with the rest of the school curricula.[3]

Industrial arts in the curriculum should not have as its main purpose the task of being just a means of teaching the subjects of lesser interest to the students; however, industrial arts should accept part of the responsibility. Dopp states:

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[2]Katharine Dopp, The Place of Industries in Elementary Education, p. 6.

[3]A. H. Edgerton, Industrial Arts in our Elementary Schools, p. 11.

> If these activities are to continue to occupy an important place in the elementary school program, it is believed by many that they will be expected to share the responsibility with other subjects for helping pupils to develop appreciative insight and reasoning ability in terms of significant interests and actual life needs.[4]

The expressed opinions that industrial arts should relate with other subjects is further substantiated by this statement made by Clifford D. Allen: "Learning proceeds more rapidly and tends to be more permanent when it involves activity. . . physical and mental. . . on the part of the learner."[5]

The following paragraph by Dopp presents some of the most recommended projects for the lower four grades in elementary school:

> The construction of models of the ox-carts harnesses, rope ferries, and boats presents opportunities for manual training which should not be neglected. The fact that two-wheeled carts did service in trading and farming until after the War of 1812 should be noticed, together with the fact that for many years iron was so dear that people were not permitted to have iron tires on their cart-wheels.[6]

Many phases of crafts are of interest to children in elementary school. Dopp makes the statement that "the

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[4]Dopp, op. cit., p. 7.

[5]Clifford D. Allen, "A Study to Determine the Sound Administrative Steps in the Organization of a Community School" (Unpublished Master's thesis, Department of Education, North Texas State College, 1949), p. 16.

[6]Dopp, op. cit., p. 185.

child's interest in boats appears early and continues throughout the elementary school period."[7] The study of boats and other similar objects concerned with design and industry was recommended by authors as a related subject to be taught through industrial arts. Most of the recommendations made by authors concerning the teaching of industrial arts often mention the importance of presenting outside materials with the routine course of industrial arts. They also seem to be of the opinion that dealing with the most elementary and widely known facts of human needs and provisions are of striking interest to students in the elementary school.

According to Dopp,

> No course of study is so formal that it does not include such topics as the various kinds of shelter which are used by different peoples, the methods of building, and tools used. To be of any real value to the child, such topics need to be illustrated.[8]

Another author, Ruth Perkins, is also of the opinion that children should have as much real experience with the subjects they are studying as possible. One modern theory of child education is

> . . . that they can best enter into an understanding of the continuity of life by engaging in the processes by which life has been maintained.
>
> It is not alone in the education of children that this theory prevails. Scientists and archeologists are pursuing the same methods in reconstructing

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[7] Ibid., p. 148. [8] Ibid., p. 185.

> the various steps which have led up to present civilizations.[9]

Thomas Diamond, professor of vocational education at the University of Michigan, brings forth the opinion that the teachers and supervisors concerned with industrial arts and vocational education must have a greater foresight than only producing projects.

> It is very important that those responsible for the vocational program in our public schools have clearly in mind the place their subject occupies in the educational experience of their pupils. They should be able to recognize its social and economic significance in national affairs, and they should have a background that will enable them to justify the inclusion of their work as an integral part of public education. This is particularly true in the case of the director of vocational education since he is responsible for directing the thinking of his teachers concerning their field, as well as representing them before different groups in the community.[10]

The writer is of the opinion that the influential elements which constitute a well rounded industrial arts course and give a greater knowledge of a minute part of the field of industrial arts are well portrayed in the outline presented by Bonser and Mossman in their book, Industrial Arts for Elementary Schools, which gives some very good ideas on a small part of this vast field. The

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[9] Ruth Perkins, Handbook on the Use of Crafts, p. 41.

[10] Thomas Diamond, "Vocational Education and Society," Industrial Arts and Vocational Education, XXXVI (January, 1947), 9.

writer believes that a person not familiar with industrial arts could read this book by Bonser and Mossman and understand some of the general purposes for teaching industrial arts.

> The purposes or outcomes of the general study are realized in the degree in which it helps one to become efficient in the selection, care, and use of the products of industry, and to become intelligent and humane in the regulation or control of industrial production.[11]

The five purposes listed and explained, by Bonser and Mossman, for studying industrial arts are as follows:

> 1. A wealth of purpose
> 2. An economic purpose
> 3. An art or aesthetic purpose
> 4. A social purpose
> 5. A recreational purpose
>
> 1. Problems of heating, lighting, ventilation, and the disposal of waste are health questions related to the study of housing or shelter as a part of industry. Cleanliness in matters of food, clothing, utensils, household furnishings, and tools is a vital health problem.
> 2. The Economic Purpose: Every purchase we make brings up a problem of both the quality of the material and the proper money value of the article secured. . . . How are we to know the real values of pieces of household furniture, of utensils, of table wares, and of the other products of industry? The proper study of the industrial arts gives us the basis of judging for ourselves the economic values of products.
> 3. The Art or Aesthetic Purpose: It is desirable that we be surrounded with things that are beautiful rather than with things that are ugly. . . . One of the large purposes of the study of industrial arts is to cultivate aesthetic taste and discrimination. There are high standards of art as applied to materials which have been established through the work of

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[11] F. G. Bonser and L. C. Mossman, Industrial Arts for Elementary Schools, p. 6.

many generations by those whose taste has been most refined and most highly cultivated. To be able to select and have that which is beautiful and in good taste without spending money in excess of one's income is a need very real among many of our people and one which we should make every reasonable effort to meet. . . . With children, the study of the principles of design will have little practical effect if they are not studied in direct relationship to the objects of everyday life to which they apply.

4. The Social Purpose: With the modern development of machinery, power, and the factory system with its specialization of work, many conditions have arisen which easily lead to injustice to employees, employers, or consumers. In some industries, the proprietors have found child labor profitable to themselves.

To realize this social purpose of the study of the industries, we must have the knowledge of conditions and problems in many specific situations which will make us genuinely aware of their existence and nature. The need is for such an intelligence about industry as we may secure only by following through in considerable detail the step-by-step changes from raw materials to finished products in many important industries.

5. The Recreational Purpose: . . . . Industry has a significance entirely lost to those who know nothing of its processes and detailed achievements. . . . By the study of the industrial arts, however, new problems are continually appearing which stimulate curiosity, challenge inquiry, and reward investigations by the satisfactions of understanding and achievement. . . . A lifelong interest may be developed in the activities of industry so that one will find satisfaction and pleasure throughout the years in noting the discoveries, inventions, and new uses and applications of science in industrial production. Such an interest as will lead one to read with satisfaction from week to week or month to month the current reviews of science, invention, and industrial progress in popular or semi-popular magazines is worth while. This kind of reading habit may easily be stimulated and formed in the elementary school period. To develop an intelligent, permanent interest in the changes and progress of industry is believed to be a worthy purpose in the study of the industrial arts.[12]

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[12] Ibid., pp. 7-13.

The primary purpose of handwork according to Bonser and Mossman is:

> . . . to help to make meanings clear and to give a reality of personal experience. . . . All must know how to read, write, and use the general processes of number; all need to know the more permanently important facts and meanings of geography, history, literature, and science as these enter into daily life and intercourse. There must also be a body of experience and knowledge relative to the industrial arts which is of common value to all, regardless of sex or occupation.[13]

At least four forms of impulses to expression or action are used in the study of the several phases of industrial arts:

> 1. The impulse to manipulative activity, resulting in the handling of materials and tools, and, in time, the using of these in constructive and investigative activities.
> 2. The impulse to investigate, expressing itself in inquiries about constructive methods, kinds and sources of materials, uses of materials and products, the operation and explanation of devices and principles of machines and constructions, and the relationships of practical activities to human purposes.
> 3. The art of aesthetic impulse, which finds satisfaction in the enjoyment of beauty in form and color as observed in materials and products, and in creative production by the designing and constructing of new products.
> 4. The social impulse, leading on to observe what others are doing, to attempt to share with others their activities, and to secure from others their approval and cooperation in furthering one's own activities.
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> While these impulses are the chief sources of the practical activities spontaneously engaged in by children, they become associated with many complex forms of inquiry and many intellectual and

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[13] Ibid., pp. 16, 20.

> social problems stimulated by human purposes and values. To account for all of the stimulating elements that may enter into any given unit of industrial arts work may require a number of factors other than these four impulsive tendencies. Yet, basically, whatever self-expressed, driving force there is in the study will rest primarily upon the operation of one or more of these impulses.[14]

The various stages of the child's development seem to be an outstanding marker presented along with the age of the student. Katharine Dopp recommends that a type of industrial arts in which the child could succeed should be introduced in the curriculum when the child is about eight years of age.

> This is pre-eminently the time for making the transition from play to the more serious activities of childhood. If the emotional attitudes are not transformed during this period there is a serious loss in the vigor of life.[15]

One should consider very carefully the scope of the subject to be presented and the tools necessary to participate in the activity. It would seem to be the proper procedure to attempt to adapt the subject and tools to the child rather than to adapt the child to the tools and the type of teaching aids.

> The plane and saw, if adapted in weight and size to the powers of the child, afford greater freedom of movement than work in clay as ordinarily introduced. There seems to be little doubt that the use of hammer and nails should be postponed

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[14] Ibid., p. 22. [15] Dopp, op. cit., p. 121.

> till the next period, especially since glue serves the purpose so much more readily and is more like the paste that most children are accustomed to use in connection with paper-cutting and cardboard construction.[16]

Although the preceding statements seem to define the scope of industrial arts for the child, there should be values which carry over into adult life. Industrial arts is an occupation of wide range. Few industrial trades can be set apart from all of the phases of industrial arts.

> All of these changes which we make in the forms of materials, that they may be more useful, we call industrial changes. We speak collectively of the occupations devoted to the making of these changes as industries, or industrial arts. The general term manufactures means about the same thing, but industrial arts is preferable as it is more inclusive.[17]

Because this study is deeply concerned with industries as a teaching field, and is seeking to learn the effect they have upon society or the community, the writer is of the opinion that the teaching of handicrafts and other needs of industries to a certain extent, should be substantiated further. The handicraftsman has an advantage over the wage-worker in that he can create on his own.

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[16] Ibid., p. 115.

[17] Carol Bucher, Industrial Evaluation, p. 170.

> The handicraftsman is distinguished from the wage-worker only in the fact that he possesses all the means of production, and sells for a definite price the finished article which is the product of his own raw material and his own incorporated labor, while the wage-worker merely receives a recompense for his labor.[18]

If a child is to become a handicraftsman, it would seem that training started early in life naturally should produce better workmen with a greater knowledge of their work and it should be outstanding in acquiring the necessary skills essential to being successful and happy in one's trade. Not only is this important to the tradesman, but to persons who have hobbies which consist of activities which the skilled worker does in order to make a living.

Conservation is related to the problems faced by many of the people who are concerned with this type of work and play. When conservation of materials is not considered, the person making a project may be careless in his work and have to rework many pieces. The unskilled worker is also inclined to make a multitude of mistakes if he is without proper instruction or experience. If a limited amount of material is available, and the project is to be finished without any parts to be remade, the workman is more prone to seek proper instruction and be more careful in his work. Much time could be well spent

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[18]Bonser and Mossman, op. cit., p. 3.

in acquainting the student with the changing times and importance of conservation of materials and time as suggested in the following statement:

> With this thought in mind, it may be recalled that there was a period in the history of this country that lumber, coal, iron, and copper were obtainable in such vast quantities that they seemed inexhaustable. During this era of plenty, little thought was given to the need for training the men who fashioned or used these materials. More recently, the supply has been seriously restricted, with the result that greater care has to be taken in the training of the workers who must supply our increasing needs from a diminishing supply.[19]

An article written by E. E. Sheldon in The Nations Schools, entitled "What Industry Expects of the Schools," presents his recommendations for a safe-guard against insecurity and a guide for preparation toward an industrial career.

> The first lessons that can and should be learned consist of an appreciation of the value of time and of the cost of materials. . . . Time is valuable and materials cost money; both these facts must be impressed upon the school.[20]

Not only is industrial arts of value in teaching conservation, but it would seem that in the present times when people work on an average of eight hours a day, that industrial arts could contribute greately in offering leisure time activities. Home life could probably be

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[19]Diamond, op. cit., pp. 10-11.

[20]E. E. Sheldon, "What Industry Expects of the Schools," The Nation's Schools, XVI (August, 1935), 31.

enjoyed more through the construction of small "trinkets" for the home, for gifts or even to the extent of building a home. If the day is divided into three portions of eight hours each, the first portion might well be used in earning a living and doing the necessary things toward this goal. The second portion could easily be used in worth while interests or hobbies, whereby an individual could improve the living conditions around his home. Rest could consume part of this second period; however, to think of sitting down for eight hours and doing nothing might present other problems such as becoming bored with life in general. For the third portion, sleep should naturally consume approximately eight hours of the day.

Man has often used leisure time most effectively in imporving the surroundings about him. Leisure time should not always be used in acquiring an actual necessity but many times in gaining luxury. The burdens pressed upon early man were gradually eased through his leisure-time activities.

> Each new difficulty was removed or lessened by the invention of traps, the improvement of weapons and other devices by means of which the warfare upon animals could be maintained, the earth was rendered more habitable by the removal of the more formidable antagonists; man learned to carry on more complicated cooperative activities made necessary by the complexity of the situation; and he made use of his leisure time in developing the industries and arts.[21]

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[21]Dopp, op. cit., p. 29.

Many people are paid to experiment and invent things for the advancement of society, but many times the inventions and discoveries are brought about through leisure time activities and often promoted to consume leisure time.

There is a possibility that at times it is hard for people to realize that their world has been built up through the sweat and strain of honest labor. Early man worked hard and long for the simple things he used to improve his surroundings.

The crude tools at best were very limited in use. The bow and arrow was no match for the early muskets that were used to establish the early American frontier and without question would offer practically no resistance against the weapons of today. However, it appears that this advancement was made again through long periods of hard work and skilled labor. Is it possible that our mental intellect could have prospered as it has without the toils of physical labor? In speaking of early man and his tools, Dopp has the following to say:

> . . . the simplicity of his tools, and the finish of his products; when we consider his insight into the nature of the materials with which he worked, and how he made use of this insight in the various processes of construction in such was as to respect the limitations and the possibilities of each, as well as the use which the object was to serve; and when we consider the amount of labor that was performed by these people, we are convinced that these activities, which were prolonged for so great a

> period, are a sufficient basis for the belief that the workmanship instinct is one of the most deep-seated and permanent possessions of mankind.[22]

Not only has the workmanship instinct been evident since the time of early man but his experiences may be helpful to us in furnishing materials for our work.

> Because the past still lives in the present, because its problems are simpler statements of the most fundamental problems of the present, the history of the industrial activities of the past is especially valuable as subject matter in elementary education. That it is used no more than it is at present is due to the fact that no one has yet given sufficient attention to the subject to organize it with reference to present educational needs.[23]

Industrial arts might be of questionable value if it employed youth only during school days. The values received should carry over into adult life. The fact that children will eventually grow into maturity and have to face the problems of life may justify the inclusion of some problems of reality. Many people never seem to think of safe-guarding their future against poor health or old age. Too often they are inclined to overlook the importance of personal guidance that is necessary to obtain the most from life and the job in which they are employed. Is it not wise thinking to prepare for the problems that are to be faced or very likely to be faced in the future? One important problem which seems to be one of the most common among the working

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[22] Ibid., p. 70.

[23] Ibid., p. 70.

classes of people is security. Since security seems to be so important, it should be dealt with seriously.

The Committee on Economic Security created by the late President Roosevelt made a survey of industries to determine some facts concerning security of the people, and made the following assumptions:

> There is insecurity in every stage of life. For the largest group, the people in the middle years, who carry the burden of current production from which all must live, the hazards with which they are confronted threaten not only their own economic independence but the welfare of their dependents.
>
> Old age comes to everyone who does not die prematurely, but is a misfortune only if there is insufficient income to provide for the remaining years of life.[24]

> Since most people must live by work, the first objective in a program of economic security must be maximum employment.
>
> Education, training, and vocational guidance are of major importance in obtaining economic security for the individual and the nation. At this time it is tragically evident that education and training are not a guaranty against dependency and destitution, that education, to fulfill its purposes, must be related much more than it has been to economic needs of the individuals.[25]

Labor, also, has pointed out pertinent facts. B. P. Brodinsky, upon interviewing labor leaders from two of the larger labor organizations in America, found their interest

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[24]Committee on Economic Security, "Social Security," Monthly Labor Review, XL (February, 1935), 305.

[25]Ibid., pp. 307, 312.

in the schools to be centered around the following topics of discussion.

> Federal aid to education, first and foremost. . . . Then we shall press for a labor education extension service for workers such as is now provided for farmers. We want social security for all those now excluded from this type of protection, which means teachers and other workers in education, public and private. We shall watch closely to see that the federal school lunch program is not scuttled by penny-pinching Congressmen.[26]

Vocational guidance may be thought of as a form of Social Security. The need for vocational guidance is portrayed, in one instance, in the statement set forth by Harold Goldstein and others:

> Jobs in engineering--the Nation's third largest profession, and one of its fastest-growing occupations--may increase by as many as 100,000 in the next ten or twelve years to a total of roughly 450,000. Engineering school enrollments are now so high, however, that many of the estimated 150,000 graduates of the next four years may be unable to find engineering jobs, although their training may help them to get administrative, sales, or other positions in industry.[27]

Surely, if vocational guidance is so important in higher education, for instance engineering, there is no doubt as to the importance of the position vocational guidance should hold in the lives of the common laborers and industrialists.

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[26]B. P. Brodinsky, "What Industry Expects of the Schools," The Nation's Schools, XVI (August, 1935), 31.

[27]Harold Goldstein and others, "Summaries of Studies and Reports," Monthly Labor Review, LXIX (July, 1949), 14.

Recommendations concerning what should be taught in the school, and the methods used in teaching the particular subjects, according to authors in the fields of education, were treated earlier in this chapter. The writer is of the opinion that the general recommendations concerning the above subjects should be offered also from the field of industry.

The general recommendations of industry can easily be understood through the ten steps in training pupils for business, set forth by an industrialist.

1. Assign lessons properly and train pupils to follow instructions or orders.
2. Evaluate all work and accept none not up to standard and not accomplished within the time limit.
3. Insist upon proper preparation of assigned lessons and discourage tendencies to wander away from the topic.
4. Train pupils in definite accomplishment. They must learn the thorough preparation of essentials.
5. To train in common honesty, accept no work that in any way shows evidence of not being the pupil's own efforts.
6. To emphasize the value of the signature, scrutinize all excuses and papers and compare them with signatures on file in the office, as done in banks with check signatures.
7. Insist upon the proper evaluation of time and materials, since these are principal factors that fix the selling price in industry.
8. Give each pupil some responsibility, for the worker is paid to accept definite responsibility.
9. In mathematics, demand 100 per cent accuracy.
10. Teach pupils to get along with one another, to ignore their likes and dislikes, and to learn to meet conditions as they are and then work to better them.[28]

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[28]Sheldon, op. cit., p. 31.

The following chapter will present the recommendations and opinions of parents concerning industrial arts being added to the Whitney Elementary School curriculum.

CHAPTER III

OPINIONS AND RECOMMENDATIONS OF PARENTS IN THE WHITNEY CONSOLIDATED SCHOOL AREA CONCERNING THE POSSIBILITY OF ADDING INDUSTRIAL ARTS TO THE ELEMENTARY SCHOOL CURRICULUM

The material used in this chapter was obtained in order to enable the writer to understand more clearly the overall opinion of the community as to the possibility of, and the need for adding industrial arts to the elementary school curriculum.

The success of a new course in any school is determined, to a great extent, by the way it meets the needs of the community. The child's interest and opinion is influenced in many instances by the parents' opinion. The actual felt needs can be determined better through obtaining the personal opinions of the parents and children concerning the value that industrial arts has in the community. The type of course that they think will be of the most importance in supplying the felt need should be brought in for close observation. When the parents are invited to assist in getting up a course, and feel that they are contributing something to the

advantage of their children, they are more inclined to help make the undertaking a greater success. The writer is of the opinion that most people will agree that the community working with a teacher can make the teaching profession a pleasure. On the other hand, if the community is opposed to a certain program that is being planned for the school, the program is almost certain to be a failure and could be detrimental to the entire school system.

In order to present the findings obtained in the parents' questionnaire to the best advantage, it will be necessary to use the discussion and table procedure. The writer found the questionnaire means of obtaining data not well understood by many of the parents and they were hesitant to sign their names to the paper. However, after discussing the purpose of the questionnaire and explaining that their names would not appear in the study, a large number did consent to give the following information and signed their names.

Of the 102 families answering the questionnaires, twelve were found to own a home workship, but forty-six families without workshops had enough tools to enable them to repair their own homes successfully. The homes were repaired to a certain extent by seventy-three families, while only fifty-four did their home painting; and only

forty-five of the families did their own roofing. It may be of some value to note that sixty-five families stated that they repair their furniture, but only sixty-three refinished their furniture.

Table 1 further defines the number of families that did their own home repairs, and lists the types of repairs done.

TABLE 1

TYPES OF HOME REPAIRS DONE AND THE NUMBER OF FAMILIES REPRESENTED

Type of Repairs			Number of families and per cent			
Question Number	Topic	No. Ans.	Yes	Per Cent	No	Per Cent
2	Home workshop		12	11.76	90	88.24
3	Have sufficient tools		46	45.10	56	54.90
7	Repair own furniture	2	65	63.73	35	34.31
8	Refinish own furniture	2	63	61.76	37	36.27
9	Paint own home	1	54	52.94	47	46.08
10	Repairs on home	3	73	71.57	26	25.49
11	Do own roofing	2	45	44.12	55	53.92
15	Do electrical repairs	1	29	28.43	72	70.59
16	Kitchen & bath plumbing	3	68	66.67	31	30.39
17	Repair house plumbing	3	38	37.26	61	59.80
19	Own sheetmetal repairs	3	20	19.61	79	77.45

As represented in Table 1, only twenty-nine families did their own electrical repairs. Several of the parents queried made the following observations: "I never fool with the wiring because of the danger of starting a fire or getting electrocuted." Too, many were of the opinion that they were wise to let the electrical appliances alone because they knew very little about them, and they were afraid of the ill affects sometimes caused by so-called "tinkering."

Of the 102 homes represented in the table above, sixty-eight had kitchen and bathroom facilities installed. There is a possibility that more homes would have the modern conveniences if the father or children could have had industrial arts or some means of instruction whereby they could have done the work themselves, or had the work done as a community project. A limited number of schools are trying to give their industrial arts students real life experiences, and the labor is free to the person furnishing the supplies for the project at the home. Of the sixty-eight homes having the plumbing, only thirty-eight of the families did their own plumbing repairs. The facts presented would imply that a plumber should be able to make a good living in this town provided the field was not overcrowded.

Twenty of the people questioned did their own sheet-metal repairs. Many of the persons answering the question remarked that they felt incapable if the task became technical. Also, the average family did not seem to have many sheetmetal repairs confronting them. It is highly probable that had they had sheetmetal experience, they would make more household appliances requiring this skill.

A large number of the people that filled out the questionnaires made mention of the fact that they had no mechanical equipment as listed and therefore answered the question in the negative. There were forty-four families that had equipment and fifteen families did their own repairs. The writer is of the opinion that questions 12 and 13 were not specific enough to be of much value. The question should specify "answer only if you own machinery."

It was noted in the information gathered, that only sixteen people represented in this study made leather repairs of any kind. Seventy-two stated that they did no leather work whatsoever, and fourteen did not answer the question. Many of the farmers have replaced their farm mules and horses with tractors; therefore, they seldom have an occasion to do any leather repairs. However, many said that they had made the repairs for many years before purchasing a tractor.

Soldering something about the home could be handled by forty-two of the families questioned, and most of this

kind of repair was stated to be small undertakings that could be done easily. Some were of the opinion that they had few occasions to do soldering and did not own a soldering iron.

One very interesting point discovered was the fact that over half of the people made most of the repairs on their automobile. The writer is of the opinion that they were referring to minor repairs, or at least non-technical operations. Also, few of the people that are not in the repair business would have reason to own the special tools required for most of the jobs that are to be done to specifications. Forty-four reported that they had adequate tools to do the above repairs, and fifty-two noted that they did not have, while six did not answer the question.

Ninety-five per cent of the parents were of the opinion that they would be more capable in making the above repairs if they had a better knowledge of industrial arts. The facts presented here showed that they feel handicapped to a certain extent and realize the importance of industrial arts in the average home. This information is presented in greater detail in Table 2.

The popularity of hobbies in this community was very low, with only 21.57 per cent of the parents questioned being interested. Woodwork was selected by seven people; while sewing and reading were second, with three participating in each. The following were chosen as a hobby by

one person each: flower gardening, livestock, rabbits, radio experiment, gun collecting, bees, music, painting pictures, gardening, and listening to radio programs.

TABLE 2

TYPES OF REPAIRS DONE AROUND THE HOME AND THE NUMBER OF FAMILIES REPRESENTED

Type of Repairs			Number of Families and Per Cent			
Question Number	Topic	No Ans.	Yes	Per cent	No	Per cent
12	Repair mechanical equipment	9	44	43.14	49	48.04
13	Sharpen your plows	12	15	14.71	75	73.53
14	Repair own harness	14	16	15.69	72	70.59
18	Soldering Repairs	2	42	41.18	58	56.86
20	Automobile repair	1	52	50.98	49	48.04
21	Adequate equipment	6	44	43.14	52	50.98
23	Would repair more if industrial arts had been offered in school then	2	93	91.18	7	6.86

Sixty-nine of the questionnaires showed leisure time and gave some ways in which it was used. As shown in Table 3, industrial arts or other types of skilled training seemed to be very limited. It would be interesting, if it were possible, to teach the parents industrial arts and then make a survey of hobbies and leisure time. It is possible that industrial arts would occupy an important

place in most of the hobbies. The writer is of the opinion that more people would enjoy spending their leisure time doing things that are connected directly with industrial arts.

TABLE 3

HOW PARENTS SPEND THEIR LEISURE TIME

	Activity	Number of Parents
1.	Working in yard	1
2.	Reading	16
3.	Hunting	3
4.	Repairing home	6
5.	Resting	6
6.	Pleasure driving	1
7.	Fishing	4
8.	Music	2
9.	Sports outdoor	1
10.	Playing ball	1
11.	Summer vacation	1
12.	Variable things	1
13.	Visiting	1
14.	Gardening	4
15.	Crocheting	1
16.	Entertaining family Sunday off	3
17.	Bookkeeping	1
18.	Sewing	1
19.	Nothing	1
20.	Sports	1
21.	Working on hobby	9
22.	Pottering (pottery)	1
23.	Do most anything (lady)	1

The amount of leisure time each family has cannot be determined because of the minority of answers to the question. Many people were of the opinion that they had no leisure time and answered the question as, "no leisure time," or, "working." This question probably should have

been discredited and omitted because of the vagueness and lack of answers. Table 3 presents the findings on leisure time.

When asked if they could draw blueprints, eleven answered that they could draw them to specifications and three failed to answer the question, leaving a remainder of eighty-eight people who cannot draw blueprints successfully. Eighty-two stated that they thought they would be capable of holding a better job if they had had training for blueprint drafting. Thirteen failed to answer the question; seven were of the opinion even if they were capable of drawing blueprints to specifications they would have no advantage.

Even though a large number of people answering the questionnaire could not draw blueprints, ninety were of the opinion that a well-equipped school shop would aid them and their families. Only six stated that the school shop would be of no aid to them and their families, while six failed to answer the question. This question was worded to give the writer the expressed opinions of the majority as to the desire for and the value to the community, that a well-equipped school shop would have in the Whitney Independent School area. Seventy-nine questionnaires were accredited toward families who felt they were capable of using to an advantage a well-equipped shop.

An overwhelming majority of the families consulted were definitely in favor of a community shop. Ninety-seven families answered that they were of the opinion that the community would be greatly aided if a school shop were available. There is evidently a need for the shop when so many people are of the same opinion. This information introduces the background to the problem.

Of the parents questioned, 92.16 per cent were of the opinion that it is the duty of the school to help in solving community problems. In addition to the above-mentioned facts, 85.20 per cent of the parents completing the questionnaires stated that if they could have had industrial arts in school they would have been capable of more wisely choosing a vocation.

Table 4 gives a clearer representation of the data believed most important in relation to the value that industrial arts training would have to the community as defined by the parent viewpoint. In this instance, twenty-four different courses of industrial arts were represented, and the parent completing the questionnaire was asked to place a check mark by the courses that would be of the most help and interest to him if industrial arts courses were offered one night each week for adults. The results are shown in Table 4.

TABLE 4

COURSES IN ALL PHASES OF INDUSTRIAL ARTS THAT PARENTS WOULD LIKE TO TAKE

Name of Course	Number Selecting	Rank
Carpentry	39	1
Furniture refinishing	38	2
Upholstery	35	3
Leather work	34	4
Machine shop	34	4
Automobile mechanic	33	5
Cabinet making	30	6
Welding	30	6
Radio repair	27	7
Mechanical drawing	22	8
Tractor mechanics	22	8
Concrete work	21	9
Plastics	21	9
Plumbing	18	10
Farm implement mechanic	16	11
Shop mathematics	16	11
Practical electricity	16	11
Art metal	14	12
Brick laying	14	12
Blacksmithing	13	13
Plastering	12	14
Sheet metal	8	15
Chip carving	7	16
Net Craft	2	17

Table 5, which follows, shows the courses that can be successfully listed under a representative title. A further explanation is given of Table 5 in an attempt to give greater clarification. Crafts include: leather work, chip carving, net craft, and plastics. Woodwork includes carpentry and cabinet-making. Mechanics includes

auto mechanics and farm implement mechanics. The writer is of the opinion that the remaining courses should be listed under separate titles.

TABLE 5

COURSES THAT PARENTS WOULD LIKE TO TAKE NOW ORGANIZED UNDER DEPARTMENTAL AND SPECIAL HEADINGS

Name of Course	Number Selecting	Rank
Crafts	78	1
Mechanics	71	2
Woodwork	69	3
Furniture refinishing	38	4
Upholstery	35	5
Machine shop	34	6
Welding	30	7
Radio repair	27	8
Mechanical drawing	22	9
Concrete work	21	10
Plumbing	18	11
Practical electricity	16	12
Shop math	16	12
Brick laying	14	13
Blacksmithing	13	14
Plastering	12	16
Sheet metal	8	16

An extensive survey concerning the children of the parents questioned was conducted. They were asked to state the child's name, age, sex, if in school, graduated, education interrupted, grade completed if not in school, what the child is now doing, and if the child took industrial arts in school. The parents were requested to fill

out parts of the questionnaire that was constructed to further exemplify the typical background of the community.

Parents in this study were people with children of various ages. Special emphasis was placed on different levels of parenthood. All of the families who only had children below school age were grouped together for convenience of checking their opinions against parents who had both children below school age and in school. Another grouping consisted of parents who only had children in school; while another dealt with parents who had children both in school and above school age; lastly, parents who had children who had finished school, or children above school age and who were not in the public school at present.

The writer found that the 102 families were represented by 272 children consisting of 132 girls and 140 boys. Sixty of the girls were in school; while sixty-eight were out of school, accounted for 128 of the 132 listed. It was not indicated whether or not the remaining four were in school at the present time. According to the information obtained in this study, more girls were out of school than in school. Also, as noted, fewer boys were in school than out of school. Of the 140 boys listed, only fifty were in school with eighty-five out of school for some reason. Four of the families failed to indicate whether their sons were in school or out of school.

A further breakdown on the educational training of the boys and girls is as follows: twenty-three girls graduated, and seventy-eight did not graduate. Thirty-one parents failed to indicate whether their girls had graduated or not. Twenty-five boys graduated and eighty-five did not graduate. It was not indicated in the questionnaire whether out of a total number of 140 boys if thirty of them were in school or out of school.

The average age of the children in the various families is indicated in Tables 6, 7, 8, 9, 10, and 11. The average age of the girl in the one-child family is 7.73 years old, whereas the average boy is 8.33 years of age.

Further information concerning these familes and others were presented in table form. The data for these tables were gathered from selected parents in order to obtain an understanding of the ages, number per family, and educational experiences of the children in the Whitney Elementary School community. The writer is of the opinion that the results of the findings are understood more readily if presented in the following tables, with self-explanatory titles.

TABLE 6

FAMILIES WITH ALL CHILDREN BELOW SCHOOL AGE

Children in Family	Number of Families	Girls Age	Boys Age
1	18	2 1 3 20 Mo. 2 2 6 20 Mo. 2½	1½ 4 2 14 Mo. 3 3 3 6 2
2	6*	2 1 Mo. 5 1 3 2 16 Mo. 19 Mo. *	5 3 9 Mo.
3	2	2 3 2	5 3 8 Mo.

*Note: One family noted 2 children but only filled out one blank.

TABLE 7

FAMILIES WITH CHILDREN OF SCHOOL AGE AND BELOW

Children in Family	Age		In School				Grade		Ed. Inter.				Take I. A.			
	Girl	Boy	Girl		Boy		Girl	Boy	Girl		Boy		Girl		Boy	
			Y	N	Y	N			Y	N	Y	N	Y	N	Y	N
2	14	8	*		*		8	3		*		*		*		*
		7			*			2				*				*
		4				*										
	5	9		*	*			4				*				*
	7	4	*			*	1			*				*		
		4				*										
		12			*			6				*				*
	12		*				6			*				*		
	12		*				6			*				*		
	8 mo.			*												
		12			*			6				*				*
		3				*										
		2				*										
	12		*				7			*				*		
3	10		*				5			*				*		
		6				*										
		9			*		3					*				*
		6				*										
	3			*												
		16			*			0			*					*
	12	3	*			*	7			*				*		
	15		*				9			*				*		
	9		*				3			*				*		
	8		*				2			*				*		
		5				*										
	16			*					*					*		
	13		*				7			*				*		
	9		*				3			*				*		
4	5			*												
	12	11	*		*		7	6		*		*		*		*
	9		*				7			*				*		
	4			*												
	15		*				9			*				*		
		12			*			7				*				*
		10			*			4				*				*
		5				*										

TABLE 7--Continued

Children in Family	Age		In School				Grade		Ed. Inter.				Take I. A.			
	Girl	Boy	Girl		Boy		Girl	Boy	Girl		Boy		Girl		Boy	
			Y	N	Y	N			Y	N	Y	N	Y	N	Y	N
4	7		*				1			*				*		
	6		*				1			*				*		
	2			*												
		6				*										
	11	14	*		*		7	8		*		*		*		*
		9			*			3				*				*
		4				*										
		2				*										
5	14		*				7			*				*		
	12	9	*		*		7	2		*		*		*		*
	6	2		*	*											
		18				*					*					*
		16			*							*				*
	13		*				7			*				*		
	11		*				5			*				*		
		5				*										

TABLE 8

FAMILIES WITH ALL CHILDREN IN SCHOOL

Children in Family	Age		Grade		Take I. A.			
	Girl	Boy	Girl	Boy	Girl		Boy	
					Y	N	Y	N
1	8	7	2	1		*		*
		13		7			*	
		15		9			*	
		6		1				*
	13		7			*		
		10		4				*
	12		7			*		
	14		7			*		
	12		6			*		
2		7		3				*
		8		1				*
		11		5				*
		8		3				*
	12	8	7	2		*		*
	12	13	7	7		*		*
3	9	11	4	5		*		*
	8		2			*		
	12		7			*		
	9		4			*		
	6		1			*		
	11		6			*		
	9		3			*		
	9		2			*		
	14	12	9	7	*		*	
	7		1			*		
	12	14	7	7		*	*	
	11		5			*		

TABLE 9

FAMILIES WITH CHILDREN IN SCHOOL AND ABOVE

Children in Family	Age		In School				Grade		Ed. Inter.				Take I.A.				Occupation if left School	Grade	Graduate	
	Girl	Boy	Girl		Boy		Girl	Boy	Girl		Boy		Girl		Boy				Girl	Boy
			Y	N	Y	N			Y	N	Y	N	Y	N	Y	N				
		18				*										*	Farm	12		*
		12			*			6								*				
	25			*										*			House Wife			
	16		*				11							*						
2	18			*										*			College	12	*	
	16		*				11							*						
	20			*										*			Payroll C.	Col.	*	
		14			*			8							*					
	17			*									*				College	12	*	
	15		*				11						*							
		22				*									*			12		
	8	7	*		*		2	1						*		*				
3		16				*					*					*		10		
		15			*			9								*				
		13			*			7								*				
	20			*													Married			
	18			*													College	12	*	
	13	15	*		*		7	8						*		*				
4		23				*										*	Farming	12		*
		21				*										*	Farming	12		*
	12	19	*			*	7							*		*	Farming	12		*

TABLE 9--Continued

Children in Family	Age		In School				Grade		Ed.Inter.		Take I.A.				Occupation if left School	Grade Comp.	Graduate	
	Girl	Boy	Girl		Boy		Girl	Boy	Girl	Boy	Girl		Boy				Girl	Boy
			Y	N	Y	N					Y	N	Y	N				
4		23				*				*				*	Garage	7		
		17				*				*				*		6		
		14			*			2		*				*				
		13			*			4		*				*				
		19				*				*				*				
		16			*			10						*				
	13		*				7					*						
	10		*				5					*						
5		26				*				*				*		11		
		23				*				*				*		10		
		20				*								*		12		
	15	14		*	*			7	*			*				11		
	33	37		*		*			*	*		*		*	Oil Field	9		
	31	25		*		*			*			*	*		House W.	8		
															" & Col.	12	*	*
		13			*			6						*				
6		21												*	Air Corp.	12		*
	20			*								*			Married	12	*	
	18			*								*			Married	12	*	
	17		*				12					*						
	15	13	*		*		10	7				*		*				
8	44			*					*			*			House W.	9		
	38			*					*			*			House W.	7		
		36				*				*				*	Labor	6		
		33				*				*				*	Labor	6		
		26				*				*		*		*	Labor	9		
	28			*					*			*			House W.	9		
		21				*				*				*	Labor			
	6		*				1											

TABLE 9--Continued

Children in Family	Age		In School				Grade		Ed. Inter.		Take I.A.				Occupation if left School	Grade Comp.	Graduate	
	Girl	Boy	Girl		Boy		Girl	Boy	Girl	Boy	Girl		Boy				Girl	Boy
			Y	N	Y	N					Y	N	Y	N				
10	31			*		*						*		*	House W.	12		
		29				*								*	Farmer	12		
		26				*								*	Shoe Co.	12		
		24				*				*				*	Farmer	7		
	22			*								*			House W.	12		
	20			*								*			House W.	12		
		17			*									*				
		15			*								*					
		15			*								*					
		12			*								*					

TABLE 10

FAMILIES WITH ALL CHILDREN ABOVE SCHOOL AGE

Children in Family	Age		Take I. A.				Graduated				Ed. Inter.				Grade Comp.	Occupation now
	Girl	Boy	Girl		Boy		Girl		Boy		Girl		Boy			
			Y	N	Y	N	Y	N	Y	N	Y	N	Y	N		
1		22			*				*					*	11	Const. work
	20			*			*					*			Yes	------
		19				*			*						Yes	Const. work
		21			*				*				*		0	------
	22			*			*					*			12	Teaching
	23			*			*								0	House wife
2		26				*			*					*	Col.	Teacher
		21				*			*					*	Col.	Teacher
4	40	38		*		*	*			*		*	*		9	Housewife
						*				*			*		12	Superintendent
						*				*			*		9	Worker
															9	Worker
	40			*			*					*			Col.	Teacher
	36			*			*					*			Col.	Housewife
	30			*			*					*			Col.	Store mgr.
	36			*			*					*			Col.	Housewife
		38				*				*				*	9	Bank clerk
	37			*			*				*				11	Housewife
		30				*			*						11	Preacher
		25				*			*						12	Preacher
		29				*			*					*	Col.	Acturary
		24				*			*					*	Col.	0
		22				*			*					*	12	Railroad
		19				*			*					*	1 yr.C.	construction

TABLE 10--Continued

Children in Family	Age		Take I. A.				Graduated				Ed. Inter.				Grade Comp.	Occupation now
	Girl	Boy	Girl		Boy		Girl		Boy		Girl		Boy			
			Y	N	Y	N	Y	N	Y	N	Y	N	Y	N		
5	45			*		*	*			*		*			11	Teacher
		42				*				*			*		8	Garage
		39				*				*			*		10	Farming
		33				*				*			*		11	Farming
		30				*			*					*	Col.	Teacher
8	32			*				*		*		*			6	Housewife
		30				*				*				*	6	Oil field
		28				*				*				*	6	Garage
	26			*				*				*			5	Housewife
	25			*				*				*			5	Housewife
		22				*				*					6	
		29				*				*				*	0	
	18			*				*				*			7	
9[a]		43				*				*			*		Yes	Contractor
		43				*				*			*		Yes	Carpenter
		41				*				*			*		Yes	Carpenter
	33			*				*			*				Yes	Housewife
	35			*				*			*				Yes	Housewife
		26				*				*			*		---	0
		20				*				*			*		---	0

[a]Two children deceased.

TABLE 11

FAMILIES WITH CHILDREN BELOW, OF SCHOOL AGE, AND ABOVE SCHOOL AGE

Children in Family	Sex		Age		In School				Grade		Graduated				Ed. Int.				Take IA.				Occu.	Grade Comp.
	Girl	Boy	Girl	Boy	Girl		Boy		Girl	Boy	Girl		Boy		Girl		Boy		Girl		Boy			
					Y	N	Y	N			Y	N	Y	N	Y	N	Y	N	Y	N	Y	N		
8	1		18			*						*			*					*				9
		1		17			*			12				*				*				*		
		1		15				0		0				*				*				*		
	1		14		*				7			*				*				*				
	1		12		*				6			*				*				*				
		1		10			*			4				*				*				*		
	1		5			*			0															
	1		1mo.			*																		
9		1		25				*						*				*				*	Farm	9
	1	1	20	23		*		*				*		*		*		*		*		*	Const.	9
	1		18			*					*			*		*		*		*			House	12
		1		15			*			8				*				*			*		"	
		1		12			*			7				*				*			*			
		1		6				*																
	1		10		*				5			*				*								
	1		3			*																		

As indicated by the preceding tables, the writer has made an attempt to gain as much information as possible in order to better portray the felt needs of the community and to give a substantial amount of information concerning the locality. Not only have the parents with young children been questioned, but also those with children who have gone out into the various walks of life seeking a means of making a living and supporting their own families. In other words, seeking information relating to the problem considered in this study has been of major importance. The parents were requested to give information stating whether their children had an opportunity to take industrial arts. If not, they were asked to express an opinion as to what extent they thought industrial arts might have helped them. Parents who had children in school at that time were also asked to state their opinions regarding the possibility of industrial arts helping their children then and in later life. Parents who had children not yet in school were asked to present their opinions and desires as to their children taking industrial arts. A general opinion as to the value industrial arts would have for the community as a whole was also solicited from all of the parents completing the questionnaires.

General information concerning the children was also obtained. Special emphasis was placed on the questions in the survey pertaining more directly to industrial arts, and were discussed further in order to analyze the community's opinions more completely.

The questionnaire revealed the fact that only thirteen children, 12.74 per cent of the 272 children represented in this study, did have a chance to take industrial arts. In contrast to the number having a chance to take the course, 95.10 per cent of the parents stated that they definitely would like for their child to have the chance of taking industrial arts. The information obtained from the parents bears heavily upon the need for this type of instruction and experience thought to exist in this community.

In reference to the parents with children out of school, they were questioned as to the value they thought industrial arts would have been to their children if the course had been offered. Further inquiry was made as to the opinions that all of the parents represented might have toward offering industrial arts in the elementary school curriculum at that time. It is interesting to note that 92.16 per cent of the parents were in favor of adding this course to the curriculum, with the expressed opinion that it would be an aid to the child and that the child in turn would be of more value to the community.

Because a very limited number of the students finishing high school in Whitney go to college, the writer was interested especially in the parent opinion as to the necessity or desire for teaching industrial arts to these students in elementary school, particularly since so many are not planning to enter college after completing high school.

The felt need for industrial arts was again set forth by the parents with a majority, or 95.10 per cent being of the opinion that the school should provide this course of information and instruction. The parents were also of the opinion that the student in college could certainly profit through a better knowledge of the working trades. One parent's opinion was expressed in this way: "Many times a knowledge of a trade helps a student decide upon a profession and work toward that goal with more dexterity."

In addition to the previous information given in this chapter, 94.12 per cent of the parents stated that they thought the school should offer general courses to beginning high school students in order for them to find out what their interests and abilities are.

The following table gives a list of courses that could be offered in industrial arts and the popularity or interest the parents as a whole showed toward offering them to their children. In other words, if only one course could

be offered, what would be the first choice of the people? If two courses could be offered, what would be the first and second choice?

TABLE 12

COURSES THAT FAMILIES RECOMMENDED FOR THEIR CHILDREN TO TAKE IN SCHOOL

Course	1st Choice	2nd Choice	3rd Choice	4th Choice	Total
Woodwork	27	14	13	4	58
Metalwork	4	11	6	11	32
Leather work	18	14	16	7	55
Plastics	6	12	9	10	37
Wood carving	2	9	15	15	41
Drafting	27	11	9	6	53
Art metal	100	4	5	3	112
Net craft	1	2	1	3	7

The writer thought it would be of interest and pertinent to the problem to ascertain the most outstanding goals, if any, that the parents had set for their children. The question drew many and different answers. A limited number of the families stated that the child would have a chance to decide for himself the things he should do. This answer conforms to the philosophies of many of the leading authors in the field of education. However, the goal being set by the greatest number of parents was the expressed desire for the child to obtain a well-rounded

education. Some of the goals that the parents of this area had set for their children are listed below.

23	Good education
6	Have to decide for themselves
3	Good character
3	Carpenter
3	Be a good citizen and think for themselves
2	Undecided
2	Mechanical drawing
2	Electrical engineering
2	Make a good living
1	Self support
1	To be prepared
1	Chemistry
1	Contractor
1	To be capable and interested in what goes on
1	Auto mechanic
1	Masters degree in supervision
1	If my child grows to be useful, industrious, healthy, and upright I shall be a happy parent.
1	Be able to adjust to situations and have opportunity to learn to live a rich life
1	It is already set (old and married children)
1	Be a good Christian and engineering
1	Too small to determine
1	Nurse
1	To be a good Christian
1	Well-rounded individual
1	Be prepared to make their own way if the need arises
1	Complete grade school at least
1	To become a useful, wholesome, happy citizen
1	To succeed in life
1	Live a useful, happy life in a democratic society
1	Do many things well
1	To help the child toward her own goal
1	That each day of his life he makes use of his potentialities to the extent that every day he becomes a wiser, more successful, more admirable, and happy person.

After the parent had revealed the most outstanding goal set for the child, a question immediately followed seeking the opinions of the parents as to whether industrial

arts would or would not help the child to obtain the goal. Twenty-two families did not answer the question, but 75.49 per cent of them stated that the industrial arts courses would be an aid to the child in reaching the goal that they had set for him. Only three families, or 2.94 per cent of the parents, were of the opinion that industrial arts would offer no help in reaching this goal. If the parent did think industrial arts would be an aid to his child, he was requested to check the courses listed in question 35 in the questionnaire for parents. In this question the parent was asked to place a "1" to the left of the subject of first choice, a "2" by the second choice, a "3" by the third choice, and number "4" by the last choice concerning the courses believed to be of most value to the children. However, the fourth choice will not be recorded because of limited answers. The information showing the courses the parents considered most important to their children are presented in table form with the belief that a better understanding of the data can be reached. Table 13 shows the tabulated data pertaining to the parent's selection of courses to be taught to their children.

TABLE 13

PARENT'S SELECTION OF COURSES TO BE TAUGHT TO THEIR CHILDREN

Course	1st Choice	2nd Choice	3rd Choice	Total
Crafts	23	19	14	56
Drawing	33	11	13	57
Metal work	5	17	13	35
Woodwork	15	20	23	58
No Answer				27

The writer is of the opinion that the problem will have a wider range of contact information if the parent opinion is not the only deciding force represented. The students in school were questioned by means of a student questionnaire. This information was sought in the interest of representing further the desires, interests, and needs of the community. Chapter IV gives data from the student survey in order to determine the felt needs of students in relation to the parent needs and opinions.

CHAPTER IV

OPINIONS OF STUDENTS IN THE WHITNEY INDEPENDENT SCHOOL AREA

The elementary students in the Whitney Independent School were asked to complete questionnaires that were designed to show the students' opinions regarding the value industrial arts would have for them. Likewise, they were asked to fill out questions designed to show the students' interests in things pertaining directly to industrial arts, and to indicate whether or not they desired to take some courses in the field. Both boys and girls participated in the survey, and the information from the two groups is presented separately in order to give a more accurate representation of the choices made by each sex. Some of the questions asked were not of much value to the girls; therefore, these questions were omitted when presenting data from their group. The data furnished by the boys is presented first in the study, and the information supplied by the girls is given next.

Realizing that different capabilities are present at different chronological ages, it is deemed necessary to determine the average age of the students in various grades

of the elementary school. The following table gives this information for each grade, and an average total is given for all of the grades combined.

TABLE 14

AVERAGE AGE OF BOYS AND GIRLS BY GRADE

Students	Grades					
	3	4	5	6	7	8
Boys	9.0	9.818	10.95	11.759	12.842	12.894
Girls	8.682	9.75	10.381	11.857	12.50	13.50
Average	8.841	9.784	10.666	11.808	23.43	13.197

Table 15 gives the number of students in each grade used in the survey.

TABLE 15

NUMBER OF STUDENTS USED IN THE SURVEY

Students	Grades						Total
	3	4	5	6	7	8	
Boys	34	22	20	29	19	19	143
Girls	22	16	21	21	24	8	112
Total	56	38	41	50	43	27	255

Because the Whitney Independent School had never offered industrial arts in the curriculum, and because a great number of the students come to this school from many places, a question was asked the students to determine the number having had industrial arts elsewhere. The information received showed that one boy in the third grade, four boys in the seventh grade, and three boys in the eighth grade had taken industrial arts of some kind. In other words, eight of the 143, or 5.59 per cent of the boys had taken industrial arts, while 94.41 per cent had not had industrial arts.

An earnest effort was made to determine the number of students who had an opportunity to take some shop courses in school, but did not take advantage of the opportunity. One boy in the third grade, five boys in the fifth grade, five boys in the seventh grade, and three boys in the eighth grade, or only 9.79 per cent of all the boys, stated that they had had the opportunity to take industrial arts in other schools. Since 90.21 per cent of the boys had not had the chance to take shop courses, it is evident that the boys in this community were not too familiar with industrial arts.

Further information was obtained to determine the number of students who would like to work with tools and materials used in the shop. An overwhelming majority, or 95.80 per cent of the students expressed the opinion that

their summer months would be more enjoyable if they had a shop in which they could build things of interest to them, while only a limited number of students expressed the belief that the shop would be of no interest to them. This minority was composed of one boy in the third grade, three boys in the fourth grade, and one boy each in the fifth and sixth grades, making a total of six boys from the 143, or 4.126 per cent.

When asked if they would be interested in taking a crafts course consisting of wood carving, plastics, art metal, and leather, four of the boys in the third grade, two in the fourth grade, four in the sixth grade, and two in the eighth grade answered, "No." The majority stated definitely that they wanted to take the crafts course. The felt need for an industrial arts program in the elementary school curriculum was indicated by 91.61 per cent of the boys completing the questionnaires, leaving only 8.39 per cent indifferent to the program.

Having determined that there is a justifiable amount of interest to proceed, one would think it wise to present evidence as to the type of crafts course most of the boys would prefer. Four phases of crafts were listed in one question and the boys were instructed to place 1, 2, 3, or 4 to the left of each subject, thereby indicating their first, second, third, and fourth choices of the crafts subjects. In order to simplify presenting this information,

it was arranged in table form and is presented in the following table.

TABLE 16

BOYS' CHOICES OF CRAFTS COURSES

Grade	Phase of Crafts	1st Choice	2nd Choice	3rd Choice	4th Choice	Total
3	Leather	17	2	7	8	34
	Wood Carving	9	11	9	5	34
	Plastics	6	9	7	12	34
	Art metal	2	12	11	9	34
4	Leather	16	1	2	2	21
	Wood Carving	4	9	5	2	20
	Plastics	0	4	7	10	21
	Art metal	1	6	7	7	21
5	Leather	9	2	3	4	18
	Wood carving	6	2	5	3	16
	Plastics	2	4	8	4	18
	Art metal	1	8	2	7	18
6	Leather	22	4	3	0	29
	Wood carving	4	14	9	2	29
	Plastics	2	6	7	14	29
	Art metal	1	5	11	12	29
7	Leather	7	1	4	7	19
	Wood carving	4	6	5	3	18
	Plastics	3	5	6	4	18
	Art metal	5	7	4	4	20
8	Leather	10	4	4	1	19
	Wood carving	3	5	5	5	18
	Plastics	1	4	5	6	16
	Art metal	2	6	4	6	18

Elementary school students are usually interested in hobbies; therefore, a series of questions were asked the students to determine the type of hobby each now has.

Additional questions were asked to find the interests of the students who do not have hobbies. The same question was also used to gain some information that would indicate whether the students, who already had hobbies, would be interested in other hobbies which might be developed if an industrial arts program were added to the elementary school curriculum. The questions give a better understanding of the type of an industrial arts program the student would be interested in.

Collecting various objects was the most popular hobby, as evidenced by the fact that it was ardently followed by representatives from each grade completing the questionnaires. Only twenty-one of the thirty-four boys in the third grade listed hobbies and they were all collections of some sort. In the fourth grade, only nine of the twenty-one boys had hobbies, all of them taking the form of collections, except one which consisted of small objects built by the boy. Thirteen of the eighteen fifth grade boys had hobbies consisting of collecting things, reading, writing, and riding bicycles. The number of boys in the sixth grade having hobbies was less than half of the class, only thirteen of the twenty-nine, all of whom made collections or raised animals. In the seventh grade only twelve of the nineteen boys had hobbies, which consit of collecting, painting, or firing jewelry. The popularity of hobbies in the eighth grade was rather

low as only ten of the nineteen boys had hobbies, which consist of sewing, gardening, and collecting various things, even to wish-bones.

When asked whether they build model airplanes, boats and automobiles at home, thirteen of the thirty-four third-grade boys stated that they did. However, only four of the twenty-one fourth-grade boys indicated any interest in model-building, whereas eight of the eighteen fifth-grade boys and nine of the twenty-nine sixth-grade boys were interested in this type of hobby. Sixteen of the nineteen seventh-grade boys were especially interested in model-making as a hobby, but only ten of the nineteen eighth-grade boys showed any interest in the activity. According to the statements made by the students participating in the survey, model-making as a course in industrial arts would be of little interest or value to the students in the Whitney Elementary School. This was used as an attempt to find some phases of industrial arts that the majority of boys in the elementary school would be interested in. It might be possible that by offering woodwork the boys could build cases for their collection hobbies.

The students were then asked to indicate the way in which they spent their leisure time while in school. This information is listed in the following table to give

an over-all picture of the leisure time activities carried on by the students.

TABLE 17

BOYS USE OF LEISURE TIME WHILE ENROLLED IN SCHOOL

Grade	Activities	Number
3	work	13
	play	14
	read	4
4	play	9
	listen to radio	6
	walk	2
	watch birds	1
	read	1
	feed animals	1
	go to show	1
5	Play	12
	hunt	2
	build	2
	read	1
	wood burning	1
6	play	14
	hunt and fish	5
	read	3
	listen to radio	2
7	enjoy sports	7
	read	4
	play	4
	work	3
	make collections	1
8	play	8
	rest	5
	work	5
	do different things	1

The list presented in Table 18 is used to furnish information about student leisure time activities that is felt to be pertinent in considering the possibility of adding industrial arts in the Whitney school curriculum.

TABLE 18

BOYS' LEISURE TIME ACTIVITIES DURING SUMMER VACATION

Grade	Activities	Number
3	work	8
	swim	7
	vacation	7
	fish	4
	baseball	2
	pick cotton	1
	build things	1
4	play	11
	work	7
	visit	2
	swim	1
5	play	5
	swim	5
	vacation	4
	read	3
	work	1
6	work	24
	play	2
	fish	2
	visit	1
7	work	10
	sports	5
	fool around	3
	travel	2
	mechanic	1
	play	1
	collect things	1
8	work	18
	swim	1

The preceding list of facts pertaining to boys' leisure time activities during summer vacation, presented in Table 18, was compiled to give some knowledge of the activities that most of the students participate in during the summer months while not in school. It is believed that some activities, of more interest and value to the students, might be substituted for some that were in progress as stated by the children answering the questionnaire.

In seeking further information from the boys to determine if they were interested in construction work, a question was asked as to the number who enjoyed watching carpenters, mechanics, and other craftsmen at work. Thirty-three of the thirty-four third-grade boys stated that they enjoyed watching construction work being done, as did seventeen of the twenty-one fourth-grade boys, all of the fifth-grade boys, and twenty-six of the twenty-nine sixth-grade boys. The seventh and eighth grades, each with nineteen boys, had eighteen boys each who enjoyed watching craftsmen at work.

In addition to finding the number of boys that liked to watch people work with their hands, the questionnaire determined the number of boys who enjoyed using their hands to make things of interest to them. In the third

grade thirty-one of the thirty-four boys reported that they enjoyed constructing things with the use of their hands; while of the twenty-one boys in the fourth grade, seventeen stated that such work was of interest to them. From the information obtained, the age of boys in the fifth grade was evidently a time when the desire to build things was very strong. In this study the fifth grade had eighteen boys, and they indicated 100 per cent that they enjoyed building things with their hands.

The sixth grade showed an urge to construct things using their own physical endeavor as represented by twenty-five of the twenty-nine boys questioned from that grade; however, in the seventh grade 100 per cent of the boys responded with the desire to build things that they could make with their own productive labor and skill. In the last grade in elementary school, eighteen of the nineteen boys enrolled were of the opinion that happiness and satisfaction could be better derived through personally constructing things of most interest to the person concerned.

The children's interests were portrayed further in the answers to a question that asked them to list five things that they had made for themselves. A number of the boys could not remember five things they had made for themselves, but listed as many as they could. Making their

toys was the outstanding construction job that the children listed as accomplishments from their own labor. The articles that the elementary school boys constructed for themselves are listed in Table 19 to show the things represented as very important to the different age groups, and individuals, at that time.

TABLE 19

ARTICLES THE ELEMENTARY SCHOOL BOYS CONSTRUCTED FOR THEMSELVES

Grade	Article	Number
3	none	
4	toys	68
	trinkets	4
	nothing	1
5	toys	57
	build	8
	carve	2
6	toys	92
	leather things	17
	build	13
	scrap books	9
	carve	6
	textiles	1
	ball field	1
	food	1
7	crafts	86
	ball courts	4
	sew	1
8	toys	52
	construction	26

Assuming that there was a possibility that the boys would like to take industrial arts in school, the writer presented an extensive list of projects under various phases of industrial arts, to each of the children for them to check as their first, second, and third choices. Listing the phases of which the projects were a part, the most popular phase selected was leather work as first choice, woodwork as second choice, and art metal as third choice, as indicated by the following table showing the choices by grades.

TABLE 20

COURSES IN INDUSTRIAL ARTS THAT BOYS WOULD LIKE TO TAKE

Grade	Type of Industrial Arts	First Choice	Second Choice	Third Choice
3	Art metal	8	15	15
	Carving	3	7	0
	Drawing	12	1	6
	Etching Glass	4	0	2
	Leather	45	23	32
	Net craft	4	1	3
	Textiles	2	0	0
	Weaving, rug	0	0	0
	Woodwork	19	54	36
4	Art metal	5	9	6
	Carving	3	5	8
	Drawing	9	3	6
	Etching glass	0	0	1
	Leather	19	17	17
	Net craft	9	3	2
	Textiles	0	0	1
	Weaving, rug	1	0	1
	Woodwork	18	25	24

TABLE 20--Continued

Grade	Type of Industrial Arts	First Choice	Second Choice	Third Choice
5	Art metal	5	8	8
	Carving	5	2	7
	Drawing	6	0	3
	Etching glass	0	0	1
	Leather	16	12	10
	Net craft	5	4	8
	Textiles	2	0	1
	Weaving, rug	0	1	0
	Woodwork	19	23	13
6	Art metal	7	9	12
	Carving	2	10	6
	Drawing	7	6	6
	Etching glass	2	2	1
	Leather	35	13	25
	Net craft	11	5	4
	Textiles	1	2	2
	Weaving, rug	0	0	3
	Woodwork	18	40	34
7	Art metal	6	8	6
	Carving	3	7	3
	Drawing	6	2	2
	Etching glass	4	0	1
	Leather	20	16	17
	Net craft	5	3	9
	Textiles	0	0	0
	Weaving, rug	1	1	0
	Woodwork	13	18	14
8	Art metal	6	13	10
	Carving	1	2	6
	Drawing	6	1	1
	Etching glass	1	1	3
	Leather	24	20	18
	Net craft	0	0	2
	Textiles	2	0	0
	Weaving, rug	0	1	0
	Woodwork	9	17	17

Many questions were asked to discover if the boys would like to make things at home, and the majority indicated an interest.

The writer is of the opinion that mention should be made as to the equipment available at home with which the student might work. This would indicate further whether there is a need for a school shop in the community. Only six of the thirty-four boys in the third grade indicated that they had a home workshop. However, twenty-four of the boys stated that they had some hand tools at home with which to work, but they said that they would like to have more hand tools and equipment available.

One boy in the fourth grade reported that he had a home workshop. Thirteen of the fourth-grade boys had hand tools to work with, and twenty said they would like to have more tools and equipment at home.

In the fifth grade, only six boys had a home workshop, but fifteen had hand tools with which to work, and fifteen answered that they would like to have more tools and equipment. No home workshop was available to the sixth-grade boys and only twenty reported having hand tools, but twenty-seven boys were of the opinion that they would enjoy more tools and equipment to use in building projects.

Of the nineteen boys in the seventh grade, only four stated that they had a home workshop, and only four reported that they do not have any hand tools; however, one hundred per cent of them said they would like to have more tools and equipment available. By questioning the eighth-grade boys, it was learned that only six of the nineteen had a home workshop, seventeen had hand tools with which to work, and eighteen felt that they were in need of additional tools and equipment. From the information received through questionnaires, it appeared that the greater majority of the boys questioned felt that they are handicapped because of an insufficient number of tools being available to them.

Questions were asked to determine the number of students having part-time jobs. It was found that twelve of the thirty-four boys in the third grade had part-time jobs; eleven, cleaning yards and one, washing dishes. The work mentioned was, more than likely, done at home as chores, in order to earn an allowance. Only five boys in the fourth grade had part-time jobs. Two boys watered the chickens and rabbits, one washed dishes, one mowed the lawn, and one worked in the yard. In the fifth grade, three of the eighteen boys had part-time jobs; two helped their mothers and one delivered newspapers. In the sixth grade, six of the twenty-nine boys held part-time jobs;

three plowed and three listed "just work." Two of the seventh-grade boys worked at the theatre down town, two mowed lawns, two helped on the farm, one had a paper route, and one shined shoes at a barber shop, as part-time jobs to earn more spending money.

Six of the nineteen eighth-grade boys had part-time jobs, five only indicated that they worked; and, one did not state whether he had a part-time job or not. As shown, few of the elementary school boys had part-time jobs, indicating that they had leisure time which could be used by following some type of hobby whereby they could make some spending money, and, at the same time, would help keep them busy and out of trouble.

The boys in each grade were asked to give their father's trade and to indicate whether they intended to follow the same trade in life. The information obtained is listed by grades in order to determine how closely the boys of various ages seemed to pattern their future after their fathers' profession.

TABLE 21

BOYS' FUTURE TRADE AND THEIR FATHERS' PROFESSION

Grade	Occupation	Number	Plan to Follow Fathers' Occupation	
			Yes	No
3	Construction	18	7	11
	Farmers	8	2	6
	Carpenters	4	2	2
	Store clerks	2	1	1

TABLE 21--Continued

Grade	Occupation	Number	Plan to Follow Fathers' Occupation	
			Yes	No
3	Unemployed	1	0	1
4	Dam workers	10	3	7
	Carpenters	5	3	2
	Farmers	3	2	1
	Gym worker	1	0	1
	Moving van operator	1	0	1
	deceased	1		
5	Construction workers	11	4	7
	Farmers	2	1	1
	Bread foreman	1	1	0
	Highway dept. wkr.	1	1	0
	Cafe worker	1	0	1
	County worker	1	1	0
	Post cutter	1	0	1
6	Farmers	16	4	12
	Lumberman	4	0	4
	Carpenters	3	1	2
	Construction wkrs.	2	1	1
	Truck driver	1	0	1
	Office worker	1	0	1
	Janitor	1	1	0
7	Construction wkrs.	9	5	4
	Farmers	4	1	3
	Mechanics	2	1	1
	Telephone linesman	1	0	1
	Ginner	1	0	1
	Fisherman	1	1	0
	Craftsman	1	1	0
8	Construction wkrs.	8	4	4
	Farmers	7	0	7
	Postman	1	0	1
	Station operator	1	0	1
	Train driver	1	1	0

A poll was made to find the number of boys planning to attend college after completing the public schools. Twenty-one of the thirty-four third-grade boys indicated that they planned to go to college and fifteen of the twenty-one fourth-grade boys had plans to attend college. Upon questioning the other grades as to their plans for attending college, it was found that sixteen of the eighteen fifth-grade boys wanted to go to college, and twenty-four of the twenty-nine sixth-grade boys also wanted to go. In the seventh grade, only eleven of the nineteen boys had plans that included going to college, while only twelve of the nineteen eighth-grade boys planned for college training.

Information presented earlier in the study indicated that many of the plans that the boys had for a higher education would be disrupted, since only twenty per cent of all the high school graduates of Whitney start to college, and only ten per cent of them complete their college training. Some of the boys felt that college training was not necessary for the professions they intend to follow.

Being concerned with the value that industrial arts would be to the students, the writer considered it wise to have a listing of the professions or trades that the boys had planned to follow upon completion of school. The information as obtained from the questionnaire is listed

in Table 22 to give a clearer understanding of the general plans for the future that the boys in the community have made.

TABLE 22

BOYS' GENERAL PLANS FOR THE FUTURE

Grade	Occupations	Number
3	Policemen	9
	Mechanics or engineers	6
	Workers	4
	Ranchers and farmers	3
	Carpenters	2
	Doctors	2
	Baseball player	1
	Bus driver	1
	Service station oper.	1
	Lawyer and bookkeeper	1
	Dairyman	1
4	College	4
	Soldiers	4
	Farmers	4
	Baseball player	3
	Doctor	1
	Policeman	1
	Construction wkr.	1
	Traveler	1
	Teacher	1
	Pilot	1
5	Ball players	7
	Pilots	5
	Construction wkr.	2
	Movie actor	1
	Wild-game hunter	1
	Farmer	1
	Artist	1
6	Pilots	5
	Farmers	5
	Ranchers	4

TABLE 22--Continued

Grade	Occupations	Number
6	Lawyers, Forest ranger	3
	College students	2
	Construction wkrs.	2
	Radio announcer	1
	Carpenter	1
	Fireman	1
	Merchant	1
	Office worker	1
	Doctor	1
	Cop	1
	Worker	1
7	Ranchers	3
	Construction wkrs.	3
	Undecided	3
	Dentists & Doctors	2
	Workers	2
	Farmer	1
	Boxer	1
	College student	1
	Office manager	1
	Factory worker	1
8	Undecided	8
	College	3
	Construction wkrs.	2
	Pilots	2
	Doctor	1
	Soldier	1
	Chemist	1
	Rancher	1

Upon questioning the elementary school girls it was found that they had not taken any courses in industrial arts because the subject had never been offered. When asked if their summer months would be more enjoyable and profitable, if a shop were made available in order that

they might make things of interest to them, ten of the twenty-two girls in the third grade, and fourteen of the sixteen fourth-grade girls were of the opinion it would be a great help. Questioning further, it was found that twenty of the twenty-three fifth-grade girls, nineteen of the twenty-one sixth-grade girls, all of the seventh grade girls and five of the eighth-grade girls were of the opinion that a shop in which they could work during the summer months would be helpful and interesting.

Questions were then asked to find the number of girls that would like to take a crafts course consisting of leather-work, wood-carving, art metal, and plastics. Thirteen girls each in the third and fourth grades, twenty-two girls in the fifth grade, twenty in the sixth grade, twenty-three in the seventh grade, and five in the eighth grade were of the opinion that they would appreciate very much the opportunity to take such a course.

In order to present a clearer representation of the number of girls' interests in the different phases of crafts, the following table is given with data taken directly from the questionnaires. The data tabulated in Table 23 show the first, second, third, and fourth choice of crafts of the girls in grades three through eight in the Whitney school system.

TABLE 23

GIRLS' CHOICE OF CRAFT COURSES

Grade	Phase	First Choice	Second Choice	Third Choice	Fourth Choice	Total
3	Leather	10	5	6	1	22
	Woodcarving	1	7	5	9	22
	Plastics	5	4	4	9	22
	Art metal	6	6	7	3	22
4	Leather	7	7	3	0	17
	Woodcarving	3	1	4	8	16
	Plastics	1	5	6	4	16
	Art metal	6	3	3	4	16
5	Leather	13	3	4	3	23
	Woodcarving	4	12	5	2	23
	Plastics	3	5	9	5	22
	Art metal	3	2	4	13	22
6	Leather	15	4	0	2	21
	Woodcarving	4	5	0	2	21
	Plastics	0	0	0	0	0
	Art metal	0	6	7	8	21
7	Leather	14	4	5	1	24
	Woodcarving	4	2	6	12	24
	Plastics	1	2	7	4	14
	Art metal	5	6	6	7	24
8	Leather	5	2	1	0	8
	Woodcarving	0	2	3	3	8
	Plastics	3	3	1	1	8
	Art metal	0	1	3	4	8

To find if industrial arts would aid the girls in their hobbies, it was necessary to determine the number of girls having hobbies, and what type of hobbies. Girls having hobbies were fourteen in the third grade, eleven in the fourth grade, thirteen in the fifth grade, seventeen

in the sixth grade, sixteen in the seventh grade, and one in the eighth grade. The hobbies consisted mostly of collections of various kinds, reading, sewing and listening to the radio.

The girls were asked if they built model boats, planes, and automobiles at home; the answers varied in each grade. It was found that only one girl in the third grade, three girls in the fourth grade, two girls in the fifth grade, none in the sixth grade, seven in the seventh grade, and none in the eighth grade constructed any of the three models mentioned. It is evident that the girls showed very limited interest in this type of shop work and would not be interested in taking a course consisting of model-making.

In order to determine to what extent the girls' leisure time activities were related to industrial arts, it was necessary to obtain a listing of these activities. Only a few of the girls showed any interest, through leisure time activities, that seemed to be influenced by industrial arts. As shown in Table 24 the majority of the girls' leisure time activities while enrolled in school consisted of reading, listening to the radio, playing, sewing, going to shows, writing letters, and various other activities.

TABLE 24

GIRLS' LEISURE TIME ACTIVITIES WHILE ENROLLED IN SCHOOL

Grade	Activities	Number
3	read	9
	play	9
	work	4
4	listen to radio	8
	play	6
	work	2
5	play	14
	help mother	3
	study	2
	read	2
	wood burning	1
	listen to radio	1
6	play	10
	read	6
	sew	1
	paint	1
	visit	1
	go to show	1
	listen to radio	1
7	read	9
	play	5
	work	4
	sew	1
	draw	1
	write letters	1
8	baby set	2
	sew	2
	garden	2
	play	1
	read	1

Another important question was asked the girls concerning their means of using the additional spare time created by the summer vacation. It was found that the girls played most of the time, and some of the girls went on vacation trips, worked, read, and sewed, as listed in Table 25.

TABLE 25

GIRLS' LEISURE TIME ACTIVITIES DURING SUMMER VACATION

Grade	Activities	Number
3	vacationing	10
	swimming	4
	playing	3
	reading	1
4	playing	8
	working	5
	vacationing	2
5	reading	9
	vacationing	6
	playing	5
	swimming	3
6	visiting	8
	working	8
	playing	3
	hoeing	1
	baby sitting	1
7	working	12
	visiting	4
	playing the piano	3
	staying home	3
	sewing	1
	reading	1
8	working	7
	reading	1

To find further interests that the girls might show toward taking an industrial arts course in school, they were asked if they enjoyed watching carpenters, mechanics, and other craftsmen at work. Girls enjoying this type of experience were nineteen in the third grade, twelve in the fourth grade, twenty-one in the fifth grade, ten in the sixth grade, twenty-three in the seventh grade, and five in the eighth grade.

It was further determined that eighteen girls in the third grade, fourteen in the fourth grade, twenty-three in the fifth grade, twenty-one in the sixth grade, twenty-four in the seventh grade, and all of the girls in the eighth grade expressed a strong desire to construct things by the use of their own hands.

The girls were then asked to list five things that they had made for themselves. Toys and clothing were the two most outstanding projects that the girls enjoyed making, as shown in the following table.

TABLE 26

ARTICLES THAT THE GIRLS MADE FOR THEMSELVES

Grade	Articles	Number
3	clothes	35
	toys	18
	foods	18
	gardens	14
	trinkets	5
	paint pictures	1

TABLE 26--Continued

Grade	Articles	Number
4	toys	38
	sews	16
	constructs various things	12
	trinkets	5
	books	2
	pot flowers	2
	foods	1
5	toys	65
	paintings and drawings	12
	Constructs various things	6
	foods	6
	scarves	5
	trinkets	4
	purses	2
	wood burnings	1
6	toys	28
	bill folds	7
	foods	7
	scrapbooks	6
	clothes	5
	paint pictures	3
7	toys	31
	clothes	25
	trinkets	11
	foods	5
	lamp shades	2
	what-not shelf	1
	waste basket	1
	fix hair	1
	baseball	1
8	clothes	23
	toys	9
	jewelry	7

Having had industrial arts, the girls could possibly have broadened the fields pertaining to their hobbies. Sewing cabinets, doll beds, cases for the collections hobbies, and various things that would create more interest in the leisure time activities could be developed through industrial arts training and equipment.

The writer is of the opinion that the elementary school girls and boys many times lose interest in shop activities because they do not have enough project suggestions to choose from. Many times they pick out something in the list to make, that to them, seems to be least boring, but of no particular interest. An extensive list of things that could be made in the industrial arts shop was presented to the girls, and they were requested to place a 1, 2, or 3, by the project of interest to them, designating their first, second, and third choice, if one, two, or three courses could be offered to them in industrial arts. The information received from these suggestions is presented in Table 27, in order to portray the projects as the girls scored them, according to preference. There were nine types of industrial arts listed from which the girls could choose. These included art metal, carving, drawing, etching glass, leather work, net craft, textile, weaving, and woodwork.

TABLE 27

GIRLS' SELECTION OF INDUSTRIAL ARTS COURSES
THEY WOULD LIKE TO TAKE

Grade	Type of Industrial Arts	First Choice	Second Choice	Third Choice
3	Art metal	10	16	9
	Carving	0	2	5
	Drawing	5	1	5
	Etching glass	5	0	0
	Leather	28	13	11
	Net Craft	4	7	1
	Textiles	0	11	1
	Weaving, rug	1	4	3
	Woodwork	13	17	32
4	Art metal	5	6	6
	Carving	2	3	5
	Drawing	4	5	5
	Etching glass	8	0	5
	Leather	16	18	16
	Net craft	0	0	0
	Textiles	2	3	2
	Weaving, rug	1	6	1
	Woodwork	11	5	10
5	Art metal	5	12	8
	Carving	5	5	11
	Drawing	5	3	10
	Etching glass	5	0	0
	Leather	23	25	9
	Net craft	0	25	9
	Textiles	1	4	1
	Weaving, rug	1	3	6
	Woodwork	13	13	13
6	Art metal	10	9	7
	Carving	4	8	6
	Drawing	1	3	1
	Etching glass	7	4	2
	Leather	28	24	21
	Net craft	0	0	0
	Textiles	2	6	1
	Weaving, rug	0	2	7
	Woodwork	9	7	17

TABLE 27--Continued

Grade	Type of Industrial Arts	First Choice	Second Choice	Third Choice
7	Art metal	23	9	11
	Carving	8	12	13
	Drawing	3	7	2
	Etching glass	1	0	0
	Leather	17	21	19
	Net craft	1	2	0
	Textiles	4	3	2
	Weaving, rug	0	0	0
	Woodwork	10	14	10
8	Art metal	3	4	3
	Carving	0	2	2
	Drawing	1	2	0
	Etching glass	1	2	0
	Leather	12	7	7
	Net craft	0	0	1
	Textiles	0	0	1
	Weaving, rug	0	1	0
	Woodwork	3	7	5

The number of girls having part-time jobs was not large. Upon further questioning, it was found that housework in the home was represented by most girls as a part-time job. A list of the part-time jobs done by the girls in the different grades is given in the following table with the number participating in the various jobs. Such jobs as mowing the lawn, cleaning the yard, gathering eggs, picking cotton, and helping parents were listed by the girls as well as working at the show, baby sitting and working at a cafe.

TABLE 28

PART-TIME JOBS THAT GIRLS LISTED

Grade	Part-Time Job	Number
3	dry dishes	1
	clean house	2
	wash dishes	2
4	clean yard	3
	dry dishes	2
	clean house	2
	gather eggs	1
5	clean house	2
6	mows the lawn	1
	baby sits	1
	works at the show	1
7	help parents	6
	baby sits	3
	works at the cafe	1
	feeds and cares for animals	1
8	baby sits	2
	sews	1
	picks cotton	1

Before drawing conclusions, notation should be made as to the number of girls whose plans for the future include college training. Respectively, nineteen in the third grade, fourteen in the fourth grade, twenty in the fifth grade, fifteen in the sixth grade, fifteen in the seventh grade, and seven in the eighth grade felt that they would attend college.

In addition to the educational training desired by the girls, it is believed that a list of the plans the girls have made for the future is important in this survey in order to give some guides for setting up an adequate industrial arts program for the girls in the Whitney Elementary school. The plans that the girls had made for the future are listed in Table 29.

TABLE 29

GIRLS' PLANS FOR THE FUTURE

Grade	Occupation	Number
3	Nurse	8
	Housewife	7
	Air hostess	2
	School teacher	2
	Store clerk	2
	Beautician	1
4	Teacher	7
	Secretary	3
	Clerk	2
	College student	1
	Musician	1
	Nurse	1
	Wac	1
5	Nurse	6
	Teacher	6
	Secretary	2
	College student	1
	Ball player	1
	Worker	1
	Air hostess	1
	Visitor	1
	Skating artist	1
	Clerk	1
	Swimmer	1
	Farmer	1

TABLE 29--Continued

Grade	Occupation	Number
6	Secretary	6
	Nurse	5
	Housewife	3
	Beautician	2
	Fashion designer	2
	Teacher	2
	Interior decorator	1
7	Nurse	5
	Secretary	3
	Worker	3
	Teacher	3
	Stenographer	2
	Marry	2
	Find a job	2
	College student	1
	Housewife	1
	Waitress	1
	Journalist	1
8	Air hostess	3
	Nurse	3
	Secretary	1
	Undecided	1

The important information recorded previous to this statement is summarized in Chapter V, which gives a summary of the problem, presents conclusions, and gives recommendations as derived from the survey. All of this work was done in an earnest attempt to make the Whitney School system of more value to the students and the community.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was made to determine the possibilities of adding industrial arts to the elementary school curriculum in the Whitney Independent School. The means by which the information was obtained consisted of reviewing literature, giving the opinions and recommendations of authors in the field of education, sending questionnaires to the parents designed to register their opinions, experiences, and felt needs of the community, and sending questionnaires to the students from grades three through eight, in search of their interests and needs for taking industrial arts in school.

It was learned that only twenty per cent of the high school graduates of Whitney entered college, and only ten per cent finished their college training. Most of the students leaving school either had to farm or leave the community in order to get a job. There are no permanent industries in the town that hire specially-trained personnel; therefore, few people in Whitney seemed to be skilled in the types of trades required for manufacturing on a

volume basis. Recreational facilities are also limited in Whitney.

The authors represented in this study were of the opinion that rural children as well as city children should have the same educational opportunities. The authors were of the opinion that no course of study is so formal that industrial arts cannot be added to the curriculum. Further emphasis was placed on the correlation of industrial arts with other subjects in the school. These writers stated definitely that children learn faster through courses that require both physical and mental activity.

It was stated that the persons of authority should know enough about the course of study, which the school uses as a guide, that they would be capable of justifying the inclusion of industrial arts in the program of the school.

Five purposes recommended by the authors are: (1) A wealth purpose, (2) an economic purpose, (3) an art or aesthetic purpose, (4) a social purpose, and (5) a recreational purpose.

It was recommended that the most satisfactory time to introduce industrial arts to the students as a subject was near eight years of age, or at the beginning of the third grade. Crafts seemed to be highly recommended as a

course of industrial arts in the elementary school. Related studies were thought to be a very satisfactory, and important part of the industrial arts program. Children can learn about the habits and traits of different animals and people through industrial arts studies and related subjects. They can learn how early man started building simple weapons, and how industrial arts has in some way had influence on the peoples of every land. Their industrial arts experience becomes useful to them in the home to aid in living a successful, happy, and more valuable life.

The authors specifically specified that industrial arts is very important in the use of leisure time. Many objects of interest and value to the students can be made during this period of rest from the academic work. Some very important inventions have been made through leisure-time activities; and hobbies have often led to a highly profitable profession.

The parents were asked if an industrial arts shop would be an aid to them, and their families; and ninety families stated that it would. The parents were alsc of the opinion that the shop would be an aid to the community as represented by ninety-seven of the 102 questionnaires completed. The parents were also of the opinion that the industrial status of Whitney is a community problem, and

92.16 per cent of the families were of the opinion that it is the duty of the school to help in solving community problems.

The parents were asked to indicate the subject they would like to take if the course were made available to them at least one night each week. They selected crafts as first choice, mechanics as second choice, and woodwork as third choice.

The parents were requested to indicate if they were of the opinion that the need for an industrial arts program was great enough in the Whitney community to justify including it in the elementary school curriculum, and 95.10 per cent of the parents were anxious to have industrial arts immediately entered in the school program.

Whitney had never offered industrial arts in the curriculum of the school, but through questioning the boys, it was learned that 5.59 per cent of them had taken industrial arts elsewhere. However, 95.80 per cent of the boys stated that their summer months would be more enjoyable if they had a shop in which to work. When asked if they would like to take a course in crafts, 91.16 per cent of the boys noted that they would. Their selections were leather, woodwork and art metal--in order of preference.

The students were asked to list their hobbies, which consisted mostly of collections of various kinds.

Through questioning the girls, it was found that 100 per cent of them had not had any industrial arts courses. The girls were further questioned as to the number wanting to take industrial arts in school, and ninety-six of the 132 girls though that they would enjoy it. Most of the hobbies selected by the girls were collections of various types, and like the boys, they spent the greater part of their leisure time playing. It was also found that few boys and girls in Whitney have part-time jobs to occupy their time.

Conclusions

As a result of this study, it is concluded that industrial arts should be added to the curriculum of the Whitney Elementary school. The course apparently should be so designed that it will be surrounded by related studies. The summer months should be pre-organized with an opportunity for the students to take industrial arts as a leisure-time activity if they so desire.

It is further concluded that the parents in the Whitney community would like a chance to take some industrial arts courses at night. It is possible that their interest and support could be enlarged, and better school-community relations established if they had the opportunity to take industrial arts.

Recommendations

Based upon the findings in this study, it is recommended that the Whitney Elementary school curriculum be enriched by the addition of industrial arts. The type of course recommended to be offered first would be a crafts course consisting of leather, some woodwork, art metal, and plastics. It is recommended that a more extensive course in woodwork should be offered later as funds and space are available.

It is recommended since the parents desire a course in industrial arts that their desire be fulfilled. The writer, having had success in teaching an adult education course of industrial arts during the previous year, recommends that tools for the crafts courses and other courses be obtained by charging a reasonable tuition fee, and the teacher receiving no additional salary.

As a further recommendation, the writer recommends that the school, business organizations, and civic organizations of other nature make a drive to bring industries into the community in order to provide the students leaving school an additional means of making a living in their home-town. Industry is essential to the growth of a small, and energetic town.

It is recommended that other students make similar studies in the various schools in order to obtain experience

and information for establishing industrial arts in the curriculum of the elementary schools.

Recommendation is made that authors make studies of this type, and present their findings, in order to furnish a greater volume of information and related studies to be used as guides in formulating similar programs.

APPENDIX

Parent Questionnaire

Name_____Address_____
Date_____Occupation_____
Land owner? Yes___No___ Rural___ City_____

1. Number of children_____
   (1). Name_____Age_____Sex_____
   In school?Yes___No___Grade___Graduated Y N
   Education interrupted? Yes__No__Grade completed
   _____

   If not in school, what is the child now doing?
   (6 yrs. old or older)_____
   Did this child take industrial arts in school?
   Yes_____ No_____

   (2) Name_____Age_____Sex_____
   In School? Yes__No__Grade___Graduated Y N
   Education interrupted? Yes__No__Grade completed
   _____

   If not in school, what is the child now doing?
   (6 yrs. old or older)_____
   Did this child take industrial arts in school?
   Yes_____ No_____

   (3) Name_____Age_____Sex_____
   In School? Yes__No__Grade____Graduated?____
   Education interrupted? Yes__No__Grade completed
   _____

   If not in school, what is the child now doing?
   (6 years old or older)_____
   Did this child take industrial arts? Yes__No__

   (4) Name_____Age_____Sex_____
   In school? Yes__No__ Grade____Graduated?____
   Education interrupted? Yes__No__Grade completed
   _____

   If not in school, what is the child now doing?
   (6 yrs old or older)_____
   Did this child take industrial arts in school?
   Yes_____ No_____

(5) Name_____Age____Sex_____
In school? Yes___No___ Grade_____Graduated? Yes__ No__
Education interrupted? Yes___No___Grade Completed _____

If not in school, what is the child now doing? (6 yrs. old or older)_____
Did this child take industrial arts in school? Yes_____ No_____

NOTE: If you have more than five children, please record the same data about them on the back of the questionnaire.

2. Do you have a home workshop? Yes_____No_____

3. Do you have a sufficient number of tools to enable you to repair your home? Yes_____ No_____

4. Do you have a hobby? Yes___ No___ If so, what?_____

5. How do you use your leisure time?_____

6. How much leisure time do you have?_____eachwweek.

7. Do you repair your own furniture? Yes____No_____

8. Do you refinish you own furniture? Yes____ No_____

9. Do you paint your house and other buildings? Yes__No__

10. Do you make repairs on your home? Yes____No____

11. Do you do your own roofing? Yes____ No____

12. Do you repair your mechanical equipment such as plows, mowers, combines, etc. Yes_____ No_____

13. Do you sharpen your plows? Yes____No____

14. Do you make or repair your own harness or any other leather articles? Yes_____ No_____

15. Do you make electrical repairs in you home? Yes__No___

16. Do you have kitchen and bathroom plumbing in your home? Yes____ No____.

17. Do you make repairs on your house plumbing? Yes__No___

18. Do you make your soldering repairs? Yes___No___

19. Do you make your own sheetmetal repairs? Yes___No___

20. Do you make most of the repairs on your automobile? Yes ____No_____

21. Do you have adequate equipment for making the above repairs? Yes___No___

22. Did you take any industrial arts in school? Yes__No__
If so, what?_____

23. Do you think you could make the above repairs more successfully if you had taken more shop courses in school? Yes___No___

24. Do you think you and your children could use your leisure time to a greater advantage if you had a better knowledge of industrial arts? Yes___ No___

25. Would you like for your child to have a chance to take industrial arts? Yes___No___

26. If yes, which of the following would you rather they have? Show your choice by placing 1, 2, 3, ar 4 to the left of the project.

Wood work
Metal work
Leather work
Plastics
Carving (wood)
Drawing (blueprint)
Art metal
Net craft

27. Did your child have a chance to take industrial arts in school? Yes___No___

28. (Answer if child has left school) Do you think industrial arts would have been of value to your child if the subject had been available? Yes___No___

29. Would you like to take some courses in industrial arts now? Yes___No___

30. Would you like for the school to offer industrial arts of some type in elementary school, grades three through eight? Yes___No___

31. Do you draw blueprints to specifications? Yes___No___

32. If not, and you were capable of doing so, do you think it would help you hold a better job? Yes___No___

33. What is the most outstanding goal you have set for your child?_____

34. Do you think industrial arts would be of any benefit to your children in obtaining this goal? Yes___No___

35. If yes, which phase do you think would be of the most importance? Show your choice by placing 1, 2, 3, to the left of the following:

Drawing
Crafts
Metal work
Wood work

36. If a well equipped school shop were made available to you, do you think it would be an aid to you and your family? Yes____No____

37. Would you feel capable of using a well equipped shop if it were made available? Yes___No___

38. Do you think a school shop, if made available to the community, would be of any value to the community? Yes____ No____

39. Do you think it is the duty of the school to help in solving community problems? Yes____No____

40. Do you think boys and girls should be taught a vocation or trade in high school if they do not plan to enter college? Yes____ No____

41. Do you think a school should offer general courses to beginning high school students in order for them to find out what their interests and abilities are? Yes____ No_____

42. If you had had an opportunity to take a large variety of courses while in school, do you think you could have chosen a vocation more wisely? Yes___No___

43. Check the courses which would be of interest and helpful to you if shop courses were offered to community adults one night or more per week. (List on next page).

Machine shop	Sheet metal	Furniture refinishing
Carpentry	Mechanical Drawing	Shop mathematics
Cabinet making	Upholstery	Blacksmithing
Welding	Leather work	Automobile mech.
Tractor mech.	Plastering	Farm implement mech.
Concrete work	Plumbing	Radio repair
Practical Elect.	Net craft	
Chip carving	Brick laying	
Plastics	Art metal	

List any other courses that you are interested in_____

_____

Students Questionnaire

Name_____Address_____Grade___Age___
Boy_____Girl_____

1. Do you repair your bicycle? Yes____No_____

2. Do you make model planes, boats, or automobiles at home? Yes____No____

3. Do you have a part-time job which permits you to earn spending money after school? Yes____No___What?_____

4. Do you have a hobby? Yes___No___What?_____

5. Do you have a home workshop? Yes____No____

6. Do you have any hand tools in your home to work with? Yes____No____

7. Would you like to have more tools and shop facilities at home? Yes____No____

8. Have you ever taken any shop courses? Yes____No____

9. Have you had the opportunity to take shop work? Yes____No____

10. Do you think your out of school months would be more enjoyable and profitable to you if you had a shop in which to build some things of value and interest to you? Yes_____No_____

11. Do you like to watch carpenters, mechanics, and other craftsmen at work? Yes____No_____

12. How do you spend your leisure time?_____

13. What do you do during the summer months when you are not in school?_____

14. Would you like to take a crafts course consisting of carving, plastics, art metal, and leather? Yes___No___

15. Show your preference by placing a 1, 2, 3, or 4 to the left according to your preference.

Leather
Art metal
Wood carving
Plastics

16. What trade or vocation does your father follow?

_____

17. Do you plan to follow your fathers trade? Yes___No___

18. What do you plan to do after completing school?

_____

19. Do you plan to attend college? Yes____No____

20. Do you like to make things with your hands? Yes__No__

21. List five things which you have made for yourself.
1._____ 2._____
3._____ 4._____
5._____

22. Show your first, second, and third choice by placing 1, 2, or 3 to the left of the project.

1. Drawing plans for a chicken feeder
2. Making a fish net
3. Making a dust pan
4. Making a set of book ends
5. Making a tie rack
6. Drawing plans for a steam engine
7. Making a leather belt
8. Making a jewelry box
9. Drawing plans for a magazine rack
10. Making a bird house
11. Making an ash tray
12. Making a watch band
13. Making costume jewelry
14. Making a magazine rack
15. Drawing plans for a jewelry box.

23. Show your first, second, and third choice by placing 1, 2, or 3 to the left of the project.

1. Drawing plans for a bird house
2. Making a chicken feeder
3. Making a leather billfold
4. Making a serving tray of metal
5. Making a bow and arrows
6. Making a pig trough
7. Making a leather picture album
8. Making a minnow seine
9. Making a match holder
10. Making a ladies leather purse

11. Making a bracelet from metal
12. Making a waste basket from a tin can
13. Carving a wooden jewelry box
14. Carving a wooden serving tray
15. Making a pair of leather moccasins

24. Show your first, second, and third choice by placing 1, 2, or 3 to the left of the project.

1. Initialing a set of drinking glasses
2. Making a leather note book
3. Decorating linens with textile dyes
4. Making flower pots from tin cans
5. Making garden sprayers from tin cans
6. Weaving a rug
7. Making toys
8. Carving picture frames
9. Making a cutlery box
10. Carving table lamps
11. Making what-not shelves
12. Refinishing rifle stocks
13. Making a shop work bench
14. Making bridles
15. Making a checker board

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