A COURSE OF STUDY FOR
SECONDARY SCHOOL
CRAFTS

by
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A COURSE OF STUDY FOR SECONDARY SCHOOL CRAFTS

CHAPTER I

INTRODUCTION

During the last decade, students of education have given increasingly more consideration to the great potential of various crafts as subjects in furthering the aims of education. At present, the writer knows of no studies or recommendations from authoritative sources which indicate the relative merits of the various crafts in regard to general education, nor of any guides or recommendation for teachers and administrators for organizing a crafts program for secondary schools.

The purpose of this study is to present the best thinking of leaders in germane areas of higher education and of secondary schools regarding the relative merits of the various craft subjects; and to present recommendations, based on this thinking, to guide administrators and teachers in developing the most appropriate course of study for their situations.

Life in these United States has changed greatly since the early settlers landed on our shores. Life then was relatively simple. People raised or hunted their food. They manufactured their own clothing, prepared the grains for
food, and built their homes, all within the family. The pioneers of this country came here to be free and to seek a more abundant life. As time progressed, inventions appeared which would lighten the toil of the pioneer family and give them more time to enjoy life — life mostly within the family and the immediate community.

Our present-day community is different. Manufacturing is now done largely in the factory. Sometimes both husband and wife work in gainful employment. Children no longer have the many tasks to perform, processes to learn, and the close family life that their grandparents had. Today, when a new pair of shoes, a dress, a piece of candy, or any of thousands of other items are wanted, people simply go to the appropriate stores and buy them. With all of our inventions have come multiple types of entertainment.

Have all of this leisure, ready-made entertainment, and modern conveniences made us a happier people? The answer may be found in the statistics from the clinics for the treatment of neuroses, failing marriages, divorce rates, juvenile delinquency, and various other social agencies indicating that people have not adjusted to the speed of inventive progress. These and many other problems need solution. Many books have been written as to the purposes of education. From the examination of much of the literature
on the principles and aims of education, it would seem that the purposes of education might be broadly summed up as adjustment of an initially ill-adapted individual to adult life situations. Adjustment brings contentment and happiness. Happiness, in the broader sense, is one of the desired outcomes of being educated. The schools, if they are to fulfill the principles of education, should assist in finding these solutions. It is the hope of the writer that this study will help to prevent some and to solve others of these problems.

In this age of specialization and of machine production, it seems logical that people should know something about production, products, transportation, about the things they have in their homes, and many other things about this technical age. People also need to learn how to use wisely the increasing amount of leisure. They need to know about their neighbors, not as in the olden times, but in the present. Our neighbors are now India, China, the countries of South America, of Europe; in fact, the whole world is now our neighbor.

In an effort to help solve some of the problems and questions concerning the place of crafts subjects in the curriculum of the secondary schools, an information sheet was sent to chairmen of departments of art, departments of industrial arts, and to administrators of secondary schools
in each of the United States. These last were selected by their state directors of education. This information sheet has two basic ideas: (a) the place of the crafts subjects in education and who should participate in them, and (b) a relative ranking of the estimated values of the various crafts for educational purposes. Reasons for the selection or exclusion and high or low ranking were requested in both cases.

In the estimation of the writer, the results are worthy of careful consideration by state directors of education, by chairmen of appropriate departments in schools of higher education, and by administrators of secondary schools.

In order to orient his thinking and to provide a basis for attacking the problem, the writer reviewed the literature regarding the beginning and the progress of crafts up to the present time. A review of the thinking of the past and of the present regarding the subject of crafts in education is presented in the next chapter.
CHAPTER II

GENERAL BACKGROUND OF THE STUDY

EARLY BEGINNINGS From the time man first came upon the earth, he has had to use his hands in many ways. He interlaced sticks and grasses to form a shelter; he tanned the skins of animals and made them into clothing; he fashioned articles from shells and stone and later from metals, to adorn his person. He carved logs to form boats for water transportation. He fashioned the bow, and made arrows to increase the ease and success of the hunt.

After man had lived upon the earth for some time, he discovered the use of fire. He learned to smelt ore to obtain metal. He hammered the metal into many shapes for many uses. Pottery came into being. The weaving of the fibers of plants furnished a new kind of clothing. Similarly, one may trace the various crafts, learned by trial and error and man's ingenuity, to the present age of machine-produced articles. Records of the early beginnings of mankind are found in abundance in the great museums of the world.

In those early days, one may suppose that man was very busy protecting himself and supplying the needs of his body. Skill in the use of the hands goes back far beyond recorded history. Hand-skill was necessary for survival. Primitive man taught his son all of the crafts that he knew. This
crude beginning in education was necessary to the maintenance of life and of the family.

Later in history, man gained control of fire. This was a new era, and brought about a new stage of civilization. Man began to accumulate knowledge and skill in special occupations. Some men became builders, some mined clay or the different ores, others fired pottery; still others learned to smelt the ores to obtain metals, and so on. Groups of men began to work together as a result of their common experience of work. New social groups appeared. People who worked together at one of the specialized crafts began to form guilds. Education required more time and was varied in accordance with the ends sought. In later times, this program has been labeled apprenticeship (2, pp.11-12).

The ancient Jews emphasized the social values of handwork. The traditional law of the Jews, recorded in the Talmud (2, pp.13-15) makes this very clear in the following extracts:

As it is your duty to teach your son the law, teach him a trade... Disobedience to this ordinance exposes one to just contempt, for thereby the social conditions of all are endangered.

Beautiful is the intellectual occupation if combined with some practical work... that study in school and labor at a manual occupation go well together, and are effective in producing useful members of society.
In the times of ancient Greece, the handicrafts were held in respect by all citizens. In later Greek history, and with the beginning of the decline of Greece, only the lower class participated in handwork. The education of the lower classes was a system of apprenticeship (2, p.15). Youths in later Greek history were prepared to be influential in public life. They enjoyed cultured leisure. Secondary education was for the sons of the upper classes only. They were taught mathematics, music, writing, and science. The method of instruction was discussion and analysis with such men as Aristotle and Plato and their lesser fellows. Grouped around these great teachers, they would discuss topics which today would be called psychology, political science, natural science, logic, and philosophy.

In the early Roman period, the youth obtained his education largely from his father. Later in Roman history, Greece became a Roman province and Greek scholars were imported into Rome to train the sons of the upper-class people. Moral training and self-discipline, taught through literature, history, folklore, and biography were given less attention in the later period as compared with the earlier period. Moral training in Rome, as in other countries, gave way to a demand for a new kind of education which we know as vocational education (7, pp.10-11), possibly, at least in part, to promote self-discipline.
SECONDARY EDUCATION IN THE MIDDLE AGES

The early Christian monks made hand labor a cardinal principle. St. Benedict (480-543) believed that if the monks lived by the labor of their own hands, they were following the example of one of the world's greatest teachers, Jesus of Nazareth.

Many useful arts were developed within the monasteries. The Benedictines developed highly the arts of book-making, gardening, and the numerous handicrafts necessary for the self-maintenance of the monasteries (2, pp.17-18).

Theophilus, (24) who according to Robert Hendrie, the translator of the book, was a German or Italian priest and monk whose work may be attributed to the early half of the eleventh century, recorded many of these arts and crafts in a writing entitled "De Diversis Artibus: seu Diversarum Artium Schedula". As one reads through the English translation, he will probably be amazed at the completeness of the knowledge of the crafts at that time.

Theophilus recognized the dangers of idleness. He believed that handwork was the solution to many potential problems. This is evidenced by two quotation from his book:

I, Theophilus, an humble priest, servant of the servants of God, unworthy of the name and profession of a monk, to all wishing to overcome or avoid sloth of the mind or wondering of the soul, by useful manual occupation and the delightful contemplation of novelties, send a recompense of heavenly price (24, p.xlv).
For it is evident; clearer than light; because whoever gives his mind to sloth and levity, also indulges in vain trifles, and slander, curiosity, drinking, orgies, quarrel, fight, homicide, excesses, thefts, sacrileges, perjury, and other things of this kind, which are repugnant in the eyes of God, overlooking the humble and quiet man, working in silence in the name of the Lord, and obedient to the precept of the holy Apostle Paul: 'But rather let him labour, working with his hands the thing which is good, that he may have to give to him that needeth' (24, p.115).

The period, sometimes referred to as the Dark Ages, leaves many gaps in recorded history. We do know that hand labor was practiced at lowered levels of skill and accepted as entitling the worker to respect according to his skill. Abbe' Texier has said about craft in the Middle Ages: "In those days art and manufactures were blended and identified; art gained by this affinity great practical facility, and manufactures much original beauty (1, Int. xiii)".

EARLY MODERN TIMES  Rabelais (1483-1553) was educated in the church schools. He lived as a monk, was trained in and practiced medicine, and wrote two novels: Gargantua, and Pantagruel. In these novels he rebelled against the formalism and the shallowness of the church, school, and state of his time. The novels portrayed his ideas of reform. He saw value in labor as recreation. Knowledge of handicrafts and industries was to be gained through what we today would call field trips. He described such an excursion in these
They went likewise to see the drawing of metals, or the casting of great ordnance: how the lapidaries did work, also the goldsmiths and cutters of precious stones. Nor did they omit to visit the alchemists, money-coiners, upholsterers, weavers, velvet-workers, watchmakers, looking-glass framers, printers, organists, and other such kind of artificers, and, everywhere giving them somewhat to drink, did learn and consider the industry and invention of the trades (2, p.33).

Richard Mulcaster (1531 - 1611), a famous English schoolmaster, believed that: "the hand, the ear, the eye be the greatest instruments whereby the receiving and delivery of our learning is chiefly executed". He has been given credit for being the first to make drawing one of the fundamental studies of the school, although he made no claim to the origin of the idea. He cited a quotation from Aristotle's "Politikes":

"There he sayeth, that as writing and reading do minister much helpe to trafficque, to housholdrie, to learning, and all publicke dealinges: so drawing by penne or pencil is verie requisite to make a man able to judge, what that is which he byeth of artificers and craftes men, for substance, forme, and fashion, durable and handsome or no: and such other necessarie services, besides the delitefull and pleasant (2, pp.35-34).

Comenius (1592 - 1670), sometimes called the father of modern pedagogy, believed that instruction should be useful and agreeable to the learner. He developed a book, "Orbis Pictus", which used pictures to illustrate what was being
taught. Comenius enumerated the things that children
should be taught. He concluded this enumeration with:

They should learn the most important
principles of the mechanical arts, both
that they may not be too ignorant of
what goes on in the world around them,
and that any special inclination to-
wards things of this kind may assert it-
self with greater ease later on (2, p.38).

This philosophy rings as true today as it did in the
seventeenth century.

Locke (1632-1704) was influential in his stand that
education should be for practical life. He believed that
learning a manual trade provided good exercise, a degree of
skill, and an excellent form of recreation (2, p.62).

Rousseau (1712-1778) believed that education should
provide many experiences. He set forth his philosophy of
education in his book "Emilius and Sophia". In this book,
he described the things that should be taught and the way
in which this should be accomplished. He believed that ex-
perience was the best teacher. Although not explicitly
stated, he believed that education should be a form of
guidance. This is shown in the following statement:

By giving a child a successive view of
the various productions of nature and
art, by exciting his curiosity and trac-
ing its tendency, we may be enabled to
study his taste, inclinations and pro-
pensities; to discover the first spark of
his genius, if he have one of any par-
ticular turn (2, p.98).
Rousseau's writings have provoked much thought in many people of his own and the present day. His influence has been considerable. One person influenced by Rousseau was Pestalozzi (1746-1827). Pestalozzi conducted a school in which he carried out experiments in teaching. He attempted to organize his instruction in harmony with the instincts, capacities, and powers of his pupils. Handwork played such an important part in his instruction that he has been called "the father of manual training" (2, pp.106-7).

Augustus Niemeyer (1754-1828), professor of theology at the University of Halle, also saw much value in handicrafts in education. An excerpt from his book on the "Principles of Education" follows:

Aptitude in various handicrafts strengthens the body, and, at the same time, provides a useful form of activity, and serves to occupy the weary idle hours, especially in the monotonous existence of the household. They can be alerted to suit the season... Children for whom otherwise there seemed no hope needed but very little correction as soon as a means of keeping them actively employed was found. To discover an occupation suitable to each stage of development is without doubt the important work of every educational system (2, pp.159-160).

Herbart, (1776-1841) contributed much to progress in education. Within his philosophies, it may be noted that he insisted that children must be occupied or otherwise get into mischief and become unruly (2, p.161).
Froebel, (1783-1852) took Pestalozzi's idea of organic growth and developed it into the doctrine of self-activity. This became the center of his educational theory. Froebel set forth his philosophy of education in an outline for a proposed school. If this philosophy were not labeled as to date, the reader could easily mistake it for the work of a present-day writer. The philosophy is so fundamental to the understanding of educational thinking of this period that it is repeated in the quotation which follows:

The institution will be fundamental, inasmuch as in training and instruction it will rest on the foundation from which proceed all genuine knowledge and all genuine practical attainments; it will rest on life itself and on creative effort, on the union and interdependence of doing and thinking, representation and knowledge, art and science. The institution will base its work on the pupil's personal efforts in work and expression, making these, again, the foundation of all genuine knowledge and culture. Joined with thoughtfulness, these efforts become a direct medium of culture; joined with reasoning they become a direct means of instruction, and thus make of work a true subject of instruction (2, p.164).

During the latter part of the eighteenth century a movement in Europe began to change the major purposes and plans of education. Europe was experiencing an industrial revolution. England and France were competing for industrial supremacy. More technical and scientific knowledge was needed. To supply this demand, many technical schools
were established. Industrial schools were developed under the leadership of such men as Fellenberg, Owen, and others. Other countries, as the need was recognized by them, introduced technical work as a part of general education.

The Imperial Technical School at Moscow in the year 1868, with Victor Della Vos as director, instituted a course of study of the mechanical arts. The course was established for vocational purposes. Processes were analyzed in logical order. Each trade or family of trades had individual shops. Tolls were arranged in a systematic manner for general and individual use. Instruction was presented in a progression of difficulty. The work in this school was extremely important in the development of education in the United States.

The work of this school was shown at the Philadelphia Centennial Exposition in 1876. It gained immediate attention by leading educators of the time. As a result of this exhibit, "manual training" was introduced into the schools of the United States. One of the leaders in this movement was Dr. Ralph Runkle of the Massachusetts Institute of Technology (3, pp.13-51:8, p.770).

SLOYD During the long winter nights in the Scandinavian countries, the family gathered around the stone hearth and worked on such items as were necessary and useful for the home. This type of handwork has long been known as sloyd
(slöjd in Swedish). Some of the articles made in the home were sold for profit.

The introduction of machinery and the keen competition from specialized labor eventually broke down the home sloyd. With the breaking down of the home sloyd came a breaking down of the standards of skill and of character of the young men. They would spend their evenings at public places of questionable influence instead of at home with the family (3, p.55).

The leaders of national policy could see the serious consequences of this change in home-life, and sought a solution by establishing schools in which sloyd was taught.

The early sloyd schools resembled the home sloyd in the work produced and in methods of instruction. The articles made were for sale and, if sold, the pupils were paid for the articles they produced.

Cubberley gives the following account of the beginnings of handwork in the "folk schools" of Finland which was at that time, a part of the Russian empire:

The first country to organize such work as a part of its school instruction was Finland, where as early as 1858, Uno Cygnæus (1810-1888) outlined a course for manual training involving bench and metal work, wood-carving, and basket-weaving. In 1866 Finland made some form of manual work compulsory for boys in all its rural schools, and in its training-colleges for male teachers.
In 1872 the government of Sweden decided to introduce sloyd work into its schools, partly to counteract the bad physical and moral effects of city congestion, and partly to revivify the declining home industries of the people (4, p. 769).

Cygnæus' viewpoint was somewhat different from the early sloyd schools of Sweden. It is best expressed in his own words; "It must be undertaken neither mechanically nor artistically, but must retain its pedagogical aim continually, i.e., the development of the eye, of the sense of form, and the provision of a general manual dexterity, and not of some particularized skill" (3, p. 58).

A sloyd school was established at Naas in Sweden which was destined to become the most outstanding school of its kind. This industrial school was established in 1872 under the direction of Otto Salomon (1849-1907). Naas was a large estate, a former hunting seat of one of the kings of Sweden, where there were forests of oak and birch, pastures with herds of cattle, a castle overlooking a lake, and isolated villas. The great comfort and beauty of the place, together with the hospitality of Otto Salomon drew teachers from many lands. Instruction given was free and in more than one language. The influence of this school was worldwide, particularly throughout Europe and the United States (3, pp. 62-89).
The manual training idea, as it was first developed in France, was merely an attempt to provide a substitute for apprenticeship. This idea soon gave way, in France and other countries of Europe, and in the United States, to the idea of handwork as a part of general education. This is probably best expressed in the words of Dr. John D. Runkle, (1822-1902) and president of the Massachusetts Institute of Technology, as he expressed his ideas of impressions made by the Russian Exhibit at the Centennial Exposition at Philadelphia in 1876.

At Philadelphia, in 1876, almost the first thing I saw was a small case containing three series of models—one of chipping and filing, one of forging, and one of machine-tool work. I saw at once that they were not parts of machines, but simple graded models for teaching the manipulations in those arts. In an instant, the problem I had been seeking to solve was clear to my mind; a plain distinction between a mechanic art and its application in some special trade became apparent.... At the same time I believed that this discipline could be made apart of general education, just as we make the sciences available for the same end through laboratory instruction (3, pp.320-21).

MANUAL ARTS One of the criticisms of manual training, which has continued to the present time in industrial arts, was that no attention was paid to the teaching of design. This criticism gave rise to a new term for the movement. In 1893, the term "manual arts" was used to name a new building at Teachers College, New York City. The new term
(manual arts) gained in popularity, and is used to this day by some institutions.

The need for design was stimulated by the Arts and Crafts Movement. The Society of Arts and Crafts was organized in Boston in 1897 for the purpose of promoting artistic work in all branches of handicraft. This society maintained a permanent exhibit and salesroom, and for four years published a small monthly magazine called "Handicraft". This magazine, with the ideas it presented, had a considerable influence on manual training and art work in the American schools.

INDUSTRIAL ARTS  Influenced by the work of John Dewey, Professor Charles R. Richards, then the director of the department of manual training at Teachers College, Columbia University, addressed the general session of the National Education Association in 1901 on "Handwork in the Elementary School". Regarding handwork in the elementary schools he said:

... Such natural expression through handwork cannot take the form of set courses. It must be a matter of adaptation and relation to the life of each particular school. Both the in-school and out-of-school interests of the particular children dealt with must form the basis for such work. This means infinite variety and flexibility. Handwork of such a kind will take as many forms as there are classes to be taught and teachers to teach them.
In relation to the school interests, or more specifically to the course of study, handwork represents emphatically a method rather than a subject matter of instruction; and it is in this sense that such work finds its most natural place in the lower grades....

On the side of the pupil, handwork is a medium of expression in terms of form, color, and material; in its relation to social life, it is essentially a means of interpreting art and industry.

In 1904 in an editorial in the Manual Training Magazine, Professor Richards suggested that the term "industrial arts" be substituted for manual training. He based this suggestion on the belief that, owing to a change of viewpoint: "We are rapidly leaving behind the purely disciplinary thought of manual training.... Now we are beginning to see that the scope of this work is nothing short of the elements of the industries fundamental to modern civilization" (3, pp.452-53).

CHANGES IN AMERICAN LIFE WHICH HAVE AFFECTED SECONDARY EDUCATION In each succeeding decade, changes in American life have occurred at an increasing pace. Current public education must be adapted to these changes if the program of secondary education is to fulfill its purposes. Douglass quotes H.G. Wells as having once said that present-day civilization was a race between education and catastrophe (7, p.72). Among the many changes affecting secondary education, one of the most important is the change in the
American home. The home is no longer self-sufficient, as it was a few decades ago. The pioneer not only wove materials for clothing, but probably raised the sheep, sheared the animals, washed and carded the wool, spun it into thread, wove the cloth, and manufactured the clothing all within the homes. Today these and many or even most experiences are lacking in the home. If a new article of clothing is desired, it is purchased at a local store with little or no thought of its origin or of the processes involved in producing and transporting it. The stores are full of "gadgets" and often inferior products, sold by high pressure advertising and by financial devices which induce many families to spend their incomes before they are received.

With the increase of urbanization and population, families are living closer together. In 1800, seven out of eight persons lived on farms, whereas, at present, only one in six lives on a farm (7, p.69). With this urbanization and crowded living conditions have arisen many problems not faced by the population a few generations ago. The increased leisure time may be spent in many new commercially sponsored ways. Radio and television are having their effects. The movie, which is produced primarily for the lower levels of intelligence and interest, and with emphasis on the exciting and the superficial, and on sex, is creating
a mental and possibly moral problem. The influence of religion has declined. Too many people have become worshipers of material things and of quick and easy success. A similar observation was made by Douglass when he said:

It should not be overlooked that we have been becoming a nation of materialists. With increased production of material things, we have tended more and more to think in terms of material values rather than human or spiritual values... The moral ideals that gave America and Americans power and character in previous generations have been deflated. One result has been that American people have failed to realize their potentialities for happiness and enjoyment of life but have become obsessed with tensions, worries, and jealousies which are the peculiar outgrowth of a materialistic philosophy of life, to say nothing of the threat of communism, which is the political implementation of Marxist materialism (7, p.70).

The family has been affected by many changes which will affect the prevailing concepts of present-day education. Among these changes are included not only life in the home, but changes in work conditions and experiences, changes in business and industry, opportunities for leisure activity, changes in religion and philosophy of life, and changes in attitude toward the functions of government and international relations (7, pp.63-75).
EDUCATIONAL POLICY

The material foundations of a new civilization, based on the rights of all people to share in the responsibilities of self-government were laid when this country was founded. In order for such a government to continue and advance, it is important and necessary for its people to understand and appreciate the basic philosophical concepts on which our country was built. It seems logical, then, that the responsibility for the continuation of the American concept of life rests considerably and directly on education. It is appropriate that the policies governing so important a task should be examined and re-examined until they are understood. Before changes are made in curricula, it should be determined that they are based on sound reasoning and research. Today we hear cries to "change the curriculum". If it is to be changed, the changes should be justified by basic policy and not on whim or fad. Craft subjects are being introduced into the secondary schools of the nation. In order to get a background for judging the worth of these activities, an examination of the basic reasons for this program is justified.

THE SEVEN CARDINAL PRINCIPLES OF EDUCATION In 1918, a report of the Commission on the Reorganization of Secondary Education, appointed by the National Education Association, was published. The Commission had worked for an
extended period in its consideration of all phases of the American home and national life. The now famous report contained seven basic objectives of education called the "Cardinal Principles of Secondary Education". Listed by name alone they are:

1. Health
2. Command of fundamental processes
3. Worthy home membership
4. Vocation
5. Citizenship
6. Worthy use of leisure
7. Ethical character

The report of the Educational Policies Commission of the National Education Association of the United States and the American Association of School Administrators in 1944 sums up the view of that body in the following statement:

Schools should be dedicated to the proposition that every youth in these United States—regardless of sex, economic status, geographic location, or race—should experience a broad and balanced education which will (1) equip him to enter an occupation suited to his abilities and offering reasonable opportunity for personal growth and social usefulness; (2) prepare him to assume the full responsibilities of American citizenship; (3) give him a fair chance to exercise his right to the pursuit of happiness; (4) stimulate intellectual curiosity, engender satisfaction in intellectual achievement, and cultivate the ability to
think rationally; (5) help him to develop an appreciation of the ethical values which should undergird all life in a democratic society (10, p.21).

**LIFE ADJUSTMENT MOVEMENT IN EDUCATION** Educators have increasingly recognized that the instruction in the secondary schools is not wholly suited to the majority of American youth in present-day life. Since 1946, there has been a national movement toward a program better suited to those (a) who do not go to college or (b) go into occupations for which they can be trained specifically in high school. This group is estimated to consist of sixty percent of high school boys and girls in the nation. More and more people are coming to believe that this type of program would be an excellent program for all American youth.

The Commission on Education for Life Adjustment is sponsored by the United States Office of Education. It was inaugurated at the request of the American Vocational Association.

Education for life adjustment means experiences in all areas of living. The curriculum should be organized so that it contributes to solution of life's problems. Some of the traditional courses may have to be eliminated and others may need to be added. It means a considerable training and preparation for all the principal areas of life. These include the home; vocation; leisure activities; physical
and mental health; citizenship; and the acquisition of interests, skills, and a background necessary for continuing education after leaving high school. Much more attention must be paid to developing ideals, interests, attitudes, understandings, concepts, and habits rather than to centering attention upon the acquisition of information without relating it to these things.

Education for life adjustment will mean increased freedom from subject-matter boundaries and organization. The teacher must take increased responsibility for determining the curriculum (7, pp. 170-173).

This discussion of Education for Life Adjustment is by no means complete, but it will serve to remind the reader that a new movement is underway in our schools at the present time.

GRAFT SUBJECTS AS PART OF EDUCATION

The inclusion of any course or activity in the curriculum of the public schools should be justified by the aims and objectives of that school seen against the background of the seven cardinal principles of education or a similar universal background. With this idea in mind, can inclusion of the crafts subjects in the curriculum of the public schools be justified on the basis of their value as an educational tool or method?
History shows that people came to the United States to experience a new life, a free life, and a happy life. The term "happiness" is well defined in a publication by the Educational Policies Commission in the publication, "The Purposes of Education in a Democracy". The definition follows:

The term 'happiness' as used here, and undoubtedly conceived by the authors of the Declaration of Independence, does not refer merely, or even primarily, to the effervescent and transitory joy that comes from the exuberance of living, or to the careless excitement frequently generated by the artificialities of life. Happiness is the abiding contentment that comes from a complete and abundant life, even though such a life includes, as all lives must, both successes and failure, prosperity and adversity, sunshine and shadow, cradle songs and funeral hymns. To be happy we must know the realities of life, whatever they may be.... Only those are educated who succeed in the great task of happiness (9, p.32).

If "only those are educated who succeed in the great task of happiness", the school is charged with the responsibility of leading the way. A happy person, according to the definition quoted, is a well adjusted individual, he is economically competent; he knows values; appreciates the finer things of life; and has more time to enjoy them.

Douglass indicates that the schools of this country are adjusting toward this responsibility when he says:
Among the nationwide trends in high school curricula in recent years have been the shifting of emphasis from the objective of technical education to such objectives as education for leisure, for home living, for mental health, and for social life (7, p.275).

How to achieve the goal of producing well adjusted individuals is a question which is continually before people in education. Many methods and subjects have been tried with varying degrees of success. Since the society in which we live is ever-changing, it is only logical that things that were taught in schools a century ago may not be adequate for the present day. Things that were once taught in the home may now be necessarily taught in the school.

One of the areas formerly taught in the home, and at present gaining popularity in the schools, is the teaching of crafts. This increased popularity was observed by Douglass when he wrote:

> It is particularly noticeable that in modern buildings and curricula much more provision is made for training young people in arts and crafts than formerly. In addition, the opportunities for contributing to fundamental interests, emotional balance, self-control, character traits, and abilities to work with others are great in the field of arts and crafts (7, p.324).

It has been stated before that subjects should not be added to a curriculum unless they help to fulfill the objectives of education. The area of crafts needs to be examined to determine whether it is a suitable area to help produce the
well adjusted person. Mr. Frank Staples, Director of the League of Arts and Crafts, Concord, New Hampshire in a summary of a group meeting at the twenty-first Recreation Congress in Chicago, put the challenge in this way:

There are some things outstanding in the arts and crafts discussion group which pointed very directly to a tremendous increase in the interest in the arts, a tremendous growth, a tremendous spread, which means, whether you like it or not, you are going to have to think about the arts and crafts in your own programs and your own cities. You are going to have to do something about it, and the question is, are you going to think it through so that you will give something that will be worthwhile to the individuals participating, or are you going to just let it pass and do a poor job (22, p. 410).

Some educators of the present day have not fully awakened to the renewed interest in the crafts. It is this writer's personal observation that crafts subjects are being added to the curriculum of many of the public schools of the United States. Viva Whitney makes this observation regarding the increased interest in crafts:

If we needed proof of interest in the field of crafts, the bookstores would supply it. Six years ago, one had to search for a book on handicrafts. Today, the bookstore shelves display many fine ones. Library records show craft books called for frequently, and often there are waiting lists for new ones. This is a trend of the times — old as time itself — but with new approaches, new reasons and new applications (27, p. 28).
CRAFTS IN EDUCATION

CRAFTS AS A TEACHING AID  Much is being written and discussed today about visual aids to teaching. While it is not the purpose of this thesis to discuss audio-visual aids to teaching, it might be said here that selected crafts can greatly aid a teacher in accomplishing the objectives or aims of many lessons. The latest edition of the World Book Encyclopedia has this to say about crafts:

> Probably the most important use of handicraft is in the field of Education. Teachers find that their most important aims can be gained through craft activities because making things is as natural to children as is play (29, Vol.8, p.3265).

CRAFTS FOR CONSUMER KNOWLEDGE  There are so many products on the market today that a prospective buyer is puzzled as to which will best serve his needs. With the radio, television, and the press making exorbitant claims about many products, one is still further puzzled. Trial and error in the matter of selecting products of industry is often disheartening and expensive. Any person who has studied one or more of the crafts should have an appreciation and better consumer knowledge of the machine-made product of which the craft was a basis.

The Educational Policies Commission recognizes the need for, and the responsibility of, schools for consumer education in the following statement:
Consumer education is a universal need; it should be provided for all through the schools and not left to accidental learning (9, p.106).

CRAFTS AND INDUSTRY  Knowledge of the handicrafts is a very essential part of all industries because the original plans, designs, patterns, models, and trial products are made by hand by a designer or an artisan before they are produced by machines. A machine can give us only the results of a process. It can not create in itself. In regard to machines taking over hand work, Wolfe wrote:

In this connection it is interesting to note that Henry Ford has found that mass production methods have increased the demand for skilled craftsmen who can make the machinery for making machines (28, pp.579-80).

A knowledge of a craft should give a basis for understanding industry. Many of the industries are patterned after the crafts. The casting of jewelry in the school laboratory is very similar to the way it is done in the factory. Lapidary in the school is similar to industrial methods. The casting of pottery is similar or the same in the school as it is in industry. The great weaving industry uses many identical operations to that of hand weaving in the secondary school, and so on. Thus, the study of crafts subjects should give one an insight into industry. This could be very important to some pupils in the way of vocational guidance.
RELATED INFORMATION

Teaching of the crafts presents an excellent means of presenting related information in other fields of learning. Taken in small sections and directly related to the activity subject, it can be made very interesting. Some related information about the subject of weaving may be used as an example. It is true that the same technique may be applied to "academic" subjects, but an interesting activity usually gives the related information added meaning and interest.

Weaving began before recorded history. Articles have been found in the ancient tombs that were woven as well as any product that can be made today. The wide-awake teacher will at once see the possibility of teaching history, not by name, but history just the same. There are fascinating stories to be told of these early peoples. The alert teacher will also seize the opportunity to make a very interesting geography lesson. Where does silk come from, or wool, or linen, or any one of the many fibers used in weaving? How do the fibers get to be thread and cloth? These are golden opportunities to study the peoples of other lands — now our neighbors — and industrial processes, the principles of design and color, plus a certain satisfaction which comes with accomplishment and one's ability to create.
CULTURAL VALUES OF CRAFTS

Making things with the hands is one of the most satisfying experiences of the human race because it helps the individual to put into concrete form his own feelings (19, p. 7).

An important value of crafts in education is the great satisfaction one gets from creating something. This indeed is an opportunity to teach the principles of art, especially of design and color. Regarding art and creative work in handicraft, Eaton has written:

He who does creative work, whether he dwell in a palace or in a hut, has in his house a window through which he may look out upon some of life's finest scenes. If his work be a handicraft he will be especially happy, for it will help him not only to perceive much of the beauty of the world about him but, what is man's greatest privilege, to identify himself with it... It becomes clear to him that it is not what one does that determines a work of art but the manner in which it is done. An object of art may be a painting on canvas; a cathedral in stone; but it may also be a well painted and beautifully bound book, a loaf of bread, or a kitchen garden. To restate it, he realizes that art is just the best way of doing a thing that needs to be done — the expression of beauty within limitations. The limitations are the use it is to serve, the materials of which it is made, the place it is to occupy (8, preface, p. 26-27).

In an article "The Cultural Values of Handicraft", Harms reflects:

As we look backward, we see that, in every one of the great cultural periods of
history, handicrafts, folklore, and folkart flourished together. Today the highest mission of handicraft education is to reintroduce the joy of creative endeavor into the work of every day and bring back harmony of all round development into the life of everyone (14, pp.65-66).

CRAFTS FOR MENTAL HEALTH Still another field of value in education is the contribution of crafts to good mental and physical health. Crafts are being used as therapy in mental hospitals and veterans hospitals. Regarding the arts and crafts in schools, Douglass wrote:

What has been said relative to the contribution of music to mental health, and indirectly therefore to physical health, may also be said in regard to training in arts, crafts, and industrial arts. Without a doubt the happy, or at least satisfying, participation of an individual in the construction of something with his hands results in the peace and adjustment which are conductive to good mental health and indirectly to good physical health. Likewise the preoccupation of the individual with materials and activities disassociated from the rest of his life, with its worries, frustrations, and in many instances monotony, is a valuable health asset (7, p.303).

CRAFT SUBJECTS FOR RECREATION AND LEISURE Many years ago Locke, the great educational philosopher, wrote:

He that will make a good use of any part of his life, must allow a large portion of it to recreation (16, p.16).

People are created such that they just can not sit still and do nothing for very long periods of time. Morris
states the same idea in a little different way:

I can not suppose that there is anybody here who would think it either a good life or an amusing one, to sit with one's hands before one doing nothing — to live like a gentleman, as fools call it (17, pp.4-5).

With labor conditions as they are today, workers seldom work more than eight hours each day and, usually, only five days a week. That makes a total of forty hours. There is some indication that this may be reduced to six hours a day. Allowing eight hours each day for sleep and four hours for toilet and meals, that leaves about forty-four hours each week to do as one pleases. How will this time be spent?

If a person has plenty of money, he may choose to "buy" amusements of various kinds. To this writer and many other people, a lifetime of "bought" amusements would be almost as bad as nothing to do. Leisure time should be spent in some form of recreation. This, in part, may be physical. Some choose to entertain or be entertained with good music, others enjoy reading, many people have gardens, others make various things. Increased leisure has come upon our population so suddenly that people are at a loss to know what to do with so much spare time. Home life does not at present offer adequate, wholesome entertainment as it once did a few decades ago. People will find something to do to
occupy their leisure, whether it be good or bad. Too many times, the activity is directed into cheap entertainment and "excitement" and into delinquency. In the following statement Jacks suggests a reason:

The reason so many people are at a loss with what to do with themselves in their leisure time, and make a stupid use of it in consequence, is that their creative facilities were never awakened when they were young (15, p.102).

Ericson suggests a similar idea, and intimates that the school is the place to begin such a program that will probably have to be continued for some decades at least:

If youth are to know how to use their leisure time as workers in the future, obviously they should not only be told how to use such leisure when it comes, but should be given leisure time now, and practice in using it (12, p.101).

Leisure does not mean idleness. It is a golden opportunity to work at the job called "happiness". Worthy use of leisure time is the sixth cardinal principle. It has been terribly neglected by our schools. It is time educators do something about it. Indications are that something is being done, and that this will be stepped-up in the future.

The Commission that formulated the seven cardinal principles had this to say regarding leisure-time activities:

This leisure, if worthily used, will re-create his powers and enlarge and enrich
life, thereby making him better able to meet his responsibilities. The unworthy use of leisure impairs health, disrupts home life, lessens vocational efficiency, and destroys civic-mindedness.

In view of these considerations, education for the worthy use of leisure is of increasing importance as an objective (5, p.10).

One of the surest ways in which to prepare pupils worthily to utilize leisure in adult life is by guiding and directing their use of leisure in youth (5, p.15).

One of the important areas of leisure is in the pursuit of a hobby. Crafts lend themselves admirably for this purpose. The hobby period is the play period, and it makes little difference what the person's age or station in life may be, there is a hobby that will bring relaxation and joy for any and all who will seek it.

Hobbies gain increased importance as one grows older. The retirement age is now about sixty-five years, with the possibility of becoming still lower. The writer knows of individuals who are afraid to retire because they do not know what to do with themselves. If people are taught hobbies while they are young, this fear of retirement will disappear. Hobby interests should be developed that can be pursued throughout life. Rule suggests the following:

Handicraft hobbies provide leisure occupations that may be carried on from childhood throughout life. A frequent criticism of hobbies, especially those
of a strenuously physical nature is that however appropriate they may be for youth, they offer little for maturity and old age. Among constructive and manipulative hobbies are many that appeal to persons of all ages (21, p. 82).

Failure to use leisure time wisely may result in many of the unwholesome news headlines in the daily papers. Douglass makes this observation in the following quotation:

A very large part of the crimes and misdemeanors and the moral faults of old and young alike may be attributed to the failure of individuals to experience attractive and satisfying leisure activities. There is a saying among musicians and educators that a boy who learns to blow a horn will never blow a safe (7, p. 215).

Education has been charged with the responsibility of teaching people how to use their increased leisure time. This is quite in evidence in a statement by the Committee on Recent Economic Changes.

In the judgement of the Committee on Recent Economic Changes in the United States 'few of our current economic developments have made such widespread changes in our national life or promise so much for the future as the utilization of our increasing leisure'.... It takes time for people to learn to play wisely and well, as it does to learn to be efficient workers or to engage in any other important areas of civilized activity....Education should consciously and vigorously set out to see that the American people get higher and more enduring satisfactions from their large expenditures for recreation (11, pp. 64-66).
It is evident that crafts have played a part in the thinking of men and women in high places in education. If crafts subjects are to be offered in the public schools of the United States, serious thinking should be done as to their value, which are of the greatest value, and which are not in keeping with present educational policy. Many minor questions arise which need solution. In an effort to help solve some of the many questions which arise concerning a craft program in the public schools of the United States, a sampling of expert opinions has been made. The results of this study are described in detail in Chapter III.
CHAPTER III

THE ORIGINAL STUDY

Before beginning a study of the crafts and their places in the public school curriculum, one should define the terms used in order to promote better mutual understanding.

As one reads through the literature of the past and the present, he encounters some or all of the following terms in the different writings:

- Arts and crafts
- Craft
- Handcraft
- Handicraft
- Handiwork

ARTS-and-CRAFTS The term is defined in Webster’s New International Dictionary (25, p.158) as:

The arts of decorative design and handi-craft, as bookbinding, weaving, and needlework, which are concerned with objects of use; — from the "Arts and Crafts" Exhibition Society founded in London in 1888.

CRAFT Craft is defined in A New English Dictionary on Historical Principles (18, vol.2, p.1128) as:

To make or devise skillfully. The original meaning which is preserved in other languages is 'strength', 'force', 'power', 'virtue'. The transference to 'skill', 'art', 'skilled occupation', appears to be exclusively English. The earlier form of this word was the Anglo-Saxon "Craeft" meaning — skill, art, strength, courage.
The Encyclopedia of Modern Education (20, 1943, p.199) gives the following definition:

Craft refers to creative and productive activities accomplished by hand sometimes with the aid of simple tools and machines. Handcraft is also used to refer to crafts and is generally preferred to handicraft.

HANDCRAFT A new English Dictionary on Historical Principles (16, Vol.2, p.1128) says about the word handcraft:

This word, now obsolete, dates back before the year 975. It can be found in Edgar's Cannons II Vol. 2. (handcraft) but was used as late as 1853. The meaning of the term as it was then used was manual skill, power, or work.

The Dictionary of Education (13, 1945, p.197) gives the meaning of "handcraft" as:

Productive creative work done by hand, with the aid of simple tools and machines. (The term 'handcraft' is now coming into general use by art educators and is regarded as an improvement over the term 'handicraft'.) Syn. craft; handicraft.

The Encyclopedia of Modern Education (20, 1943, p.199) says about the word "handcraft":

Handcraft is also used to refer to crafts and is generally preferred to handicraft, which is now thought to convey an irrelevant implication.

Webster's New World Dictionary of American Language (26, 1951) does not list the word "handcraft".
HANDICRAFT  A New English Dictionary on Historical Principles (18, Vol.2, p.1128) gives the following definition:

Handicraft — (also handycraft, and as two words with a hyphen, handy-craft). This word is a development of the earlier 'handcraft', after the original pair handwork, handiwork. The present meaning is 'manual skill with the hands'.

HANDIWORK  According to the Webster International Dictionary (25) this term means:

Work done by the hands; hence, any work done personally.

To this writer, none of the preceding terms adequately describes the crafts work now being done in the schools of this country. The term "arts-and-crafts" is a divided term which tends to separate art from the crafts. Art should be included within the crafts because the success of a crafts project depends, to a large measure, on its artistic qualities; but crafts do not include all of art. The writer does not intend to subordinate art to the crafts, nor does he attempt to engulf all of art in the crafts. Each has its own sphere large enough to occupy the best efforts of many people for many years to come. The people in each should seek to understand and appreciate the work of the others so that each may support the other. To this writer, the word "craft" includes the arts, or the fine arts, only
in part, but a necessary part, and should be used alone instead of as part of a divided word.

In order to establish a basis for mutual understanding, this writer formulated his own definition of the word "craft" as he thinks it best applies to the related work of art and crafts being offered in public school systems at the present time.

"Secondary school crafts" may be defined as:

One of the creative, practical activity courses, usually done by hand aided by simple tools and machines, requiring imagination, dexterity, and an appreciation of the aesthetic and historical values of the more common tools, and materials now available in our society.

SECONDARY SCHOOLS The secondary schools, as used in this study, are those grades which make up the junior and senior high schools, grades seven through twelve; or the four-year high school. Grades thirteen and fourteen are not included.

GENERAL EDUCATION The Dictionary of Education (13, p.183) gives the following definition:

A broad type of education aimed at developing attitudes, abilities, and behavior considered desirable by society but not necessarily preparing the learner for specific types of vocational or avocational pursuit.

PURPOSE OF THE STUDY Many of the schools of this nation are, in various degrees, beginning programs including
crafts. Some of these crafts courses are offered without much thought as to their value in producing educated persons. Some are offered because a teacher can do manipulative work in one or more areas; others are offered because a neighboring school is doing so.

In order that the position of crafts in present-day education can be better understood and evaluated, this study was conducted to sample the opinion of people, qualified by their preparation and position, regarding:

a. The value of crafts in present-day education.

b. The contents of such courses.

More specifically, the study sought to answer the following major questions:

1. Do crafts offer sufficient value in general education to be included in the secondary school program?

2. If they do, what department of the school's organization should offer the crafts program?

3. If crafts are taught, should the crafts courses be offered to both boys and girls?

4. If crafts are taught, what are the most important crafts that should be included in a secondary school program?

Minor questions that the study sought to answer were:

1. Should a crafts program, if it is found to be of value, be required or elective?

2. Should boys and girls be taught together or in separate classes, if they are to be taught crafts?
Recommendations to be used as a guide for developing a course of a study for the secondary schools, formulated from the ideas presented in this study, is presented in CHAPTER IV of this thesis.

LIMITATIONS OF THE STUDY This study is subject to the following limitations:

1. The data have not been segregated according to kinds of institutions from which they were obtained.

2. The size of the institution to which the information sheet was sent was not made a qualifying factor in the treatment of the data.

3. The investigation was limited to the United States, with the following exceptions:
   a. One reply from the University of Hawaii.
   b. One reply from the University of Alberta Summer School of Fine Arts, Banff, Alberta, Canada.
   c. One reply from the University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

4. It may be assumed that those reporting had some skill in and were interested in crafts or they would not have reported.

5. The data in this study were not entirely segregated by kinds of persons reporting. Some respondents were administrators, others professors, instructors, or teachers and,
in some cases, they were combinations of two or more of these.

PROCEDURE The method used to collect the data was a questionnaire form of information sheet. (A copy of the information sheet is exhibited in Appendix A.) This was mailed to chairmen of art and industrial arts departments and to secondary school administrators.

A list of chairmen of departments of industrial arts in institutions that prepare teachers in this subject was obtained from the 1948 Industrial Arts Teacher Education Directory (23). Because this directory was not of recent date and the revised directory had not been published, the list was checked for accuracy against the latest catalogue from each institution listed. This completed list numbered one hundred and eighty-seven colleges and universities.

It is known that art departments also prepare teachers to teach crafts. As no organized list of institutions that prepare crafts teachers could be found, the writer selected two well-known colleges or universities in each of the forty-eight states, in Hawaii and Puerto Rico, and two universities in Canada that have gained recognition as being outstanding in preparing teachers of art and the crafts. The number of institutions that prepare teachers of art to which the information sheet was sent was one hundred.
The state director of education for each state was requested to nominate four outstanding public secondary schools in his state to receive the information sheet. Some of the directors named only three schools and, in one case, only two. The total number of secondary schools to which the information sheet was sent was one hundred seventy.

Three information sheets were sent to each of four hundred fifty-seven aforementioned institutions. The addressee was asked to complete one information sheet and return it to the writer, keep one sheet as a copy for his file, and pass one to some member of his staff who was to complete it and return it to the writer.

Of the four hundred fifty-seven institutions to which the information sheet was sent, replies were completed and returned from two hundred thirty-one. This was approximately a fifty-one per cent reply according to institutions except that when a reply was received from an art department and an industrial arts department from the same institution, these were counted as separate reporting agencies.

Of the total of three hundred sixty-nine information sheets that were returned, thirty-eight were from chairmen of departments of art, ninety-three from chairmen of industrial arts departments in colleges and universities, nineteen from professors and instructors of art, sixty-seven from professors and instructors of industrial arts,
seventy-eight from secondary school administrators and seventy-four from secondary school teachers.

The program of crafts seems to take a most significant position in the education of people. TABLE I indicates the magnitude of this significance. This table shows a very striking agreement among all categories of respondents to the effect that crafts are important in secondary education.
TABLE I

DO YOU BELIEVE THAT A PROGRAM OF CRAFTS OFFERS SUFFICIENT VALUE IN GENERAL EDUCATION TO BE INCLUDED IN THE SECONDARY SCHOOL PROGRAM?

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>YES</td>
<td>56</td>
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<tr>
<td>NO</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
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</tbody>
</table>

The replies to the question as to whether a crafts program offers sufficient value to be included in the secondary school program, as indicated in the table above, indicate an almost unanimous affirmative. This unanimity of belief in the crafts, coming as it does from teachers of art, from teachers of industrial arts, and from administrators and teachers of secondary schools, scattered throughout each state of the United States, Hawaii, and two provinces of Canada, makes it of major significance to educators.

The reasons given by respondents for answering this question as they did are listed below in the order of their frequency of mention. Following each reason in this and following tables will be found a number which indicates the number of times this exact wording and closely similar wording was given. Some respondents gave no reasons for marking the information sheet as they did. Most, however,
gave one or two reasons.

This and following tabulations of reasons are arranged to give the reasons by art personnel, industrial arts, and high school personnel, in the order listed. The reasons for SHOULD are given first, and the reasons for SHOULD NOT are given second for each of the above categories.

The reasons why crafts subjects should be included in the secondary school curriculum, as listed by art personnel, are shown below. The number of respondents in this group was fifty-six.

**SHOULD BE INCLUDED IN SECONDARY CURRICULUM**

1. Potential future hobby. 5
2. Develops imagination and creative thinking. 5
3. Appreciation of good form and design in practical, utilitarian products. 5
4. Develops pride and satisfaction in accomplishment. 4
5. Establishes coordination of mind and hand, to the mutual benefit of both; develops dexterity. 4
6. Fills a void created by industrialization, offering aesthetic experiences no longer a normal part of American home-life. 3
7. Gives basis for insight and understanding of industrial processes. 2
8. Fills a need for tangible results. 2
9. As a balance against over-emphasis on academic training. 2
10. As an opportunity for creativeness in "common materials". 2

11. Develops feeling for and appreciation of properties of different materials. 2

12. Develops the ability to express an idea, think problem through, and organize and carry it to completion. 2

13. Personal enjoyment and recreation. 1

14. Gives knowledge and appreciation of hand products. 1

15. Discriminating taste. 1

16. Adds to general culture. 1

17. Develops a better balance of personality. 1

18. Gives background for future college work. 1

19. Background for vocational possibilities. 1

20. As a lead into "avocations" as well as vocations. 1

21. Definition of crafts on questionnaire as best reason why they should be offered. 1 (One of the creative, practical activity courses, usually done by hand aided by simple tools and machines, requiring imagination, dexterity, and an appreciation of the aesthetic and historical values of the more common tools and materials now available in our society.)

22. Ability to use tools — to assemble parts toward a whole. 1

23. Crafts training is a supplement to regular course work. 1

24. Something which will enrich daily living is always valuable. 1

25. Because society places ever greater demands upon both individual intellect and skill with the hands. 1
26. There is a constantly growing interest in crafts in every part of the country.

27. It is often the first opportunity many have to experience art.

28. Almost everyone derives pleasure from developing things with his hands.

29. Sensory experiences in handling of many media, to find the one best suited to one's needs.

30. Gives an opportunity for expression to the average student who is not talented in art.

31. Experiences with a great range of materials engenders ingenuity with and keener understanding of environment.

32. Help to make art more meaningful.

33. Aids in life adjustment.

34. Acquaints one with crafts of other peoples.

35. Provides emotional outlets.

36. Means of expression.

37. Motive for learning design.

38. May be used to develop the mind and the spirit.

The reasons why crafts subjects should not be included in the secondary school curriculum, as listed by one art respondent, are shown below.

**SHOULD NOT BE INCLUDED IN SECONDARY CURRICULUM**

1. It is not education; it is recreation.

2. Leathercraft, basketry, and weaving all serve very well as recreational pastimes or as occupational therapy for psychiatric cases; they are indefensible as part of universal public education in tax-supported schools.
3. Crafts are a fads-and-frills fallacy current in American educational non-thinking today.

Reasons why crafts subjects should be included in the secondary school curriculum, as listed by industrial arts personnel, are shown below. The number of respondents here was 158.

**SHOULD BE INCLUDED IN SECONDARY CURRICULUM**

1. Effective means in helping to provide hobby interests for leisure time. 34
2. Crafts are a part of general education. 14
3. Crafts has the possibility of aiding in a vocational choice: means of guidance. 11
4. Program will help us to better understand and interpret our industrial society. 11
5. Provides a wealth of information about tools, materials and processes, and develops fine skills. 10
6. Crafts is "a natural" for creative and artistic expression. 9
7. Familiarization with many materials and their common use. 8
8. Essential for general consumer knowledge and values. 7
9. Valuable training for avocational activity. 7
10. Every child needs more experience in creative expression with his hands. 6
11. Cultivates an aesthetic taste. 4
12. Gives manipulative training. 4
13. A program which will aid the (so-called) academic courses. 4
14. Broadens students' viewpoint, training and experience. 4

15. Can be provided at minimum cost, equipment and space. 4

16. Excellent for developing citizenship, cooperation, and character. 4

17. Develops emotional stability. 3

18. Offers opportunity for developing design. 3

19. Contributes to the realization of industrial arts objectives. 2

20. Creates learning situations. 2

21. Stimulating method of teaching various subjects. 2

22. Provides an opportunity for every child to achieve and develop self-confidence. 2

23. Develops imagination and inventiveness. 2

24. Crafts activities should provide opportunities for acquiring interests and knowledges which in later years may become hobbies. 2

25. Outlet for creative talents which they could not otherwise experience in most academic courses. 2

26. Gives an appreciation of our historical heritage. 2

27. Broad, basic foundation for general shop experiences. 1

28. Encourages people to stay in school. 1

29. Gives industrial experiences that once were experienced in the home. 1

30. Crafts may become a good vocation for some. 1

31. Crafts should be offered for boys and girls who cannot enroll in one of the regular industrial arts programs. 1
32. Necessary for intelligent living. 1
33. Human experience is enriched through contributions made by the hands. 1
34. Has economic and socio-economic values. 1
35. The questionnaire definition of crafts is reason enough for offering crafts. 1
36. Almost "a must" for those who intend to become teachers. 1
37. Provides satisfaction of desire to create with the hands. 1
38. Offers many subjects in short units. 1
39. Working in two and three dimensions. 1
40. Offers an introduction to the various media through practical design problems. 1
41. Recreational value. 1
42. Projects are of value. 1
43. Lends itself to variety in design, materials, etc. 1
44. Interesting and valuable to both boys and girls. 1
45. Much craft work is done in schools as an aid in teaching other subjects, for creating interest, developing manipulative skills and coordination. This work is not always recognized as craft work. 1
46. The real outcomes of education can be met just as well by capitalizing on the interests in crafts as in any other shop work. 1
47. Develops eye-and-hand coordination. 1
48. We are born with an urge to make things with our hands. When given an outlet for this creative longing, we are happy, at peace with ourselves, and well physically and mentally. 1
49. Creates a break from the usual grind of academic subjects.  

50. Transfer of skills would be valuable.  

51. Helps students become more useful producers.  

52. Provides for individual differences.  

53. Creative experience that is of intrinsic value.  

54. Gives opportunity for developing fine craftsmanship.  

55. Much of our history and machine development is predicted on the early use of the handicrafts which give general understanding.  

56. Creative activity has been the springboard that has given some of our best minds their original impetus. Crafts offers dominant creative experience.  

57. Many leisure-time evils, credited to high-school-age youngsters, would diminish with the installation of a good crafts program.  

Two industrial arts personnel gave the following reasons why crafts subjects should not be included in secondary school curriculum.  

**SHOULD NOT BE INCLUDED IN SECONDARY CURRICULUM**  

1. The craft approach is part of the indentured or guild idea.  

2. To throw crafts into the picture is only to defeat the efforts and work of leaders of art and industrial arts during the last twenty-five years.  

3. There is no educational value, aside from keeping some lazy hands busy.
One hundred fifty-one administrators, and teachers in public high schools contributed the following reasons crafts should be included in the secondary school curriculum. Since the percentage of response was nearly identical for both administrators and teachers of secondary schools the data were not segregated.

**SHOULD BE INCLUDED IN SECONDARY CURRICULUM**

1. A craft program can further the worthy use of leisure time. 43
2. Exploratory experience and information about basic industries. 10
3. Promotes coordination of hand and mind and eye. 9
4. Crafts offer a creative outlet and a cultivation of aesthetic values for the individual in the same sense as art, music, and drama. 8
5. Provides experience in the use and care of tools, processes, and materials and their implications in the community. 7
6. Gives an opportunity for growth to students not interested in academic work. 7
7. A great carry-over for interests after graduation. 6
8. Excellent as vocational guidance. 6
9. For the joy and satisfaction of doing it. 6
10. Affords an opportunity for self-expression. 5
11. Work that is fun creates a lasting interest. 5
12. Permits the student to explore a wider variety of enterprises so that it is possible to find something to interest more students. 5
13. Provides consumer knowledge and appreciation. 4
14. Modern therapy has revealed the close relationship between manual expression and mental and emotional wholesomeness. Crafts offer some remedial measures. 4

15. Provides an outlet and opportunity to achieve for children who have little other creative ability. 4

16. Many pupils would be more adapted to crafts and be helped more by crafts than the regular art courses. 4

17. Crafts fulfill two of the basic principles of general education:
   (a) Give an opportunity to think through a problem.
   (b) Help to meet individual needs in the basic aspects of living. 3

18. Introduces new skills and vocabulary. 3

19. Provides an emotional release. 3

20. The ability to transform basic raw materials into items of beauty and use will always be, as it has been in the past, at the very root of a complete general education. 3

21. To combine good design and technical skill. 3

22. It offers the best opportunity to teach design and use of art principles through application so that the pupil will make wise choices in situation calling for art judgment. 3

23. Insures the development of improved school morale and discipline. 2

24. All persons naturally want to be creative. Proper instruction given while young can better direct their creative talents in later years. 2

25. Craft problems act as a stimulus to develop observation and imagination. 2

26. The home no longer provides opportunity for manual experiences. This places the problem of child welfare upon the school. 2
27. Gives an opportunity to practice cooperation and assume responsibility.  2
28. A means of insuring a measure of success to all participants.  2
29. Instills appreciation for and awareness of design in the world of nature and industry.  2
30. The value of a crafts program is a well established fact educationally; it is just as essential as any other subject field.  2
31. We learn by experimenting. Each learning experience is of value.  1
32. Many go into positions where they need to use their hands.  1
33. Gives an understanding of environment.  1
34. Provides opportunity to see good design as opposed to the current craze for streamlining everything.  1
35. Crafts form a background for many studies.  1
36. Offers a balance with the academic.  1
37. Information is retained longer if learning is by doing.  1
38. Strengthens the three "R'S" by helping students discover and use their interests.  1
39. Aids in establishing attitudes.  1
40. Crafts are three dimensional, and we live in a three dimensional world.  1
41. Provides cultural opportunities.  1
42. Has utilitarian value.  1
43. Good for restless pupils who hate to sit through study periods.  1
44. A creative activity is a normal response in a well balanced educational program.  1
Craft program has pupil retention possibilities.

Gives a grounding in those characteristics of reasoning, visualizing, work habits, and dozens of others in everyday living.

After thirty-six years of teaching in this field, I believe it offers opportunity for teaching every phase of general education, tailored to the individual student.

Crafts are one phase of art education and as such are an important part of a student’s personal growth and educational background.

Develops latent abilities in boys and girls.

Develops safety habits.

Offers a vital program which will broaden and enrich life.

Practical use of knowledge learned in other areas.

This work replaces what the early settlers experienced in being self-sufficient.

Affords opportunities for personality development through group activity and creative expression.

Aids in abilities to organize and coordinate in the learning process.

Because of increased leisure time, people are in need of material information for hobbies, etc.

Oftentimes the only classes with real meaning for many of our students.

Give an appreciation of what confronts an artisan in those mediums.

Helps in choosing home furnishings.

Crafts have a place in complete living for anyone with artistic ability.
61. Avocational interests, as a part of general education, should be developed in a well-rounded secondary program.

62. One should keep as big a variety of experiences before children as possible.

63. Your definition is a very satisfactory answer.

There was one respondent who believed that crafts subjects should not be included in a secondary school curriculum among high school personnel, but he gave no reasons for his position.

DISCUSSION

The question as to whether crafts subjects offer sufficient value in education to be included in a secondary school program is apparently adequately answered by a more than ninety-eight per cent response in the affirmative by all of the reporting personnel studied in this survey.

The reasons listed in support of the almost unanimous belief of these three hundred sixty-nine respondents that crafts are valuable as a part of the general education program have foundation in the Cardinal Principles of Education. Each of the Seven Cardinal Principles of Education seems to have been most significantly in evidence in the reasons that the respondents gave for including crafts in the secondary school curriculum.

HEALTH Therapy and mental health were mentioned several times by these respondents as reasons for including
crafts subjects in the school curriculum. There seems to be a close relationship between manual expression and mental and emotional wholesomeness. When people are busy doing the things that challenge their ability and from which they derive pleasure and satisfaction, they are more likely to be relaxed and happy. Activities of this kind tend to release tensions. Recreation, freeing from tensions, and enjoyable avocation — all contribute directly or indirectly to good physical and mental health. Crafts offer these remedial measures to a considerable extent.

**COMMAND OF THE FUNDAMENTAL PROCESSES**  
A number of responses from the information sheet indicate that crafts subjects aid in teaching other subjects. Certainly the various crafts are rich in history. Fascinating stories can be read or told that read like fiction yet are, or are based on, historical fact.

Other responses indicate that the crafts are used to give life to the reading and production of Shakespearean plays. It is not difficult to imagine a composition in English dealing with a craft or some part of a craft. The writer has used this method, in conjunction with the English and French classes of an Ohio high school, to excellent advantage. The teacher of French in this high school reported that she had never had such interest in French as she had when the pupils wrote letters to France in French to learn
how to accomplish a task in the writer's craft class.

Planning, measurement, mathematical computation, reading of directions and blueprints, and the exercise of the art principles should all have some part in a well conducted craft program.

The second Cardinal Principle of Education seems to be most significantly in evidence in a well planned craft program.

**WORTHY HOME MEMBERSHIP** Worthy home membership is included in the list of values of crafts training given in the preceding pages. The training in color and design better prepares the learner to select and arrange things for a more attractive home, often at a monetary saving. The making of attractive and interesting things for the home gives the home a personal touch. This often leads to a greater interest in the home.

In this age of "bought" entertainment, exercising the various crafts in the home is worthy of consideration. The influence of the home today seems to be less than in past generations. The many activities which were normally a part of home life a generation ago are disappearing. Crafts may help to fill this void created by the elimination of the former necessary home activities.

A knowledge of the design qualities, principles of sound construction, and relative values of the many things used in the home is a worthy aim of education. Some
knowledge of the items of clothing and other personal items is worthy of mention. Consumer knowledge, then, plays an important part in worthy home membership.

VOCATION The selection of a vocation is a matter of great importance to adolescents. There has been a tendency for young people to concentrate their attentions on comparatively few occupations without much thought as to their ability to meet the requirements for the job. These young people need a great deal of specific information. It is necessary that adolescents understand both the nature of the various types of occupations and their own likes, abilities, and capacities for doing the various types of work. Much of this information might be acquired through properly taught crafts courses. Many of the crafts closely parallel industrial processes. Industry originally grew out of the crafts. In addition to the many other values of crafts, a crafts program should permit the participant to try his hand at the various individual crafts. This activity, plus related information, gives the participant a general acquaintance with the various vocations represented. Vocational guidance may be an important part of the educational programs of many pupils. The selection of a vocation, the fourth of the Cardinal Principles of Education, seems to be an important outcome of the crafts program in education.
CITIZENSHIP In order for a government such as ours to survive and function properly, its citizens must be an informed people. The understanding of the society in which we now find ourselves, with information about the industries which play so important a part in the present economy, consumer knowledge, learning to cooperate with others, and the understanding of people of other nations and their ways of life should certainly be one of the aims of public education for citizenship. Some of these ideas are expressed as reasons for including the crafts in the school curriculum. It is claimed that the crafts provide a better understanding of our industrial society and that by learning to cooperate in the activities and the use of common equipment they are excellent for developing citizenship and character. A number of respondents indicate that crafts give opportunities for growth to pupils who have little interest in academic work and who would otherwise miss the whole opportunity of education. Crafts subjects, then, seem to fulfill in part the objective of education for citizenship.

WORTHY USE OF LEISURE Listings common to all categories of reporting agencies in this study, and repeated many times, as indicated in the preceding tabulation, point to the worthy use of leisure time as one of the expected major outcomes of a crafts program. Leisure time usually
carries the idea of free time one may have when not occupied with the necessities of living. This may take several forms. In general, the leisure activities usually include hobbies, avocations, sports and recreation, reading, music, the arts, crafts, and the entire range of creative work. Some of these activities are "escape" activities or releases from the daily toil; others are "creative". The respondents have indicated that crafts in the curriculum of secondary education fill many of the needs of worthy use of leisure. They have indicated that, although some of them may be classed as "escape", most of the crafts are creative. It is creative activity that affords the most lasting satisfaction. The respondents indicate that crafts go a long way in fulfilling the sixth Cardinal Principle.

ETHICAL CHARACTER A well adjusted individual is characterized by independence. He can say "no" to situations that may provide temporary gain or satisfaction. The criterion for happiness is probably the same as good adjustment. The well-adjusted individual lives with others and enjoys social contacts and interests; he enjoys the company of the opposite sex without feeling ill at ease. As a plant develops and grows to be a superior plant from its environment of rich soil, light, and freedom from parasites; so the individual grows in character from the environment of family, teachers, and friends and by working and associating in a
democratic way with his peers. Crafts classes, with their give-and-take and their informality present a fertile soil and environment for the development of ethical character. To quote again from one of the responses "Excellent for developing citizenship, cooperation, and character".

A few reasons were given for not including crafts in general education. One of these was that crafts were recreation—not education. Perhaps this respondent is not fully aware of the sixth Cardinal Principle of Education. He apparently does not recall that the average person has many more hours of leisure than was true in past decades, and that the retirement age is being lowered. Couple this with the fact that people live longer, and we have a vastly increased problem of recreation for leisure hours. The crafts can offer a partial solution. It is known that people in their old age, after they can no longer engage in strenuous physical recreation, turn to leisure pursuits that are known to them. This probably accounts for the overflowing evening adult classes. It would seem that the secondary school should be the place to introduce these potential recreational possibilities.

One gentleman is afraid that "To throw crafts into the picture is only to defeat the efforts and work of leaders of art and industrial arts during the past twenty-five years". It is this writer's firm belief that any program of
education must be able to "measure up" in the light of the principles which have been set up for many years to guide educational thinking. If crafts do the job better than established courses, the less valuable courses should yield place to the more valuable ones. This is not only good educational philosophy but good common sense.

The values of some courses, both in art and industrial arts, are being questioned by leading educators. A careful examination should be made of the values of each of these, and each retained or abandoned on its individual merits. It is the opinion of this writer that crafts will aid rather than weaken or replace established courses. It is further contended that crafts will "reach" many pupils who will not elect an art or industrial arts program. Many boys and girls drop out of school each year. A large per cent of them drop out because they are not interested in the so-called academic courses that many schools require. It is often possible to retain these people willingly if they can get courses in which they are interested. The crafts courses are popular with pupils. This alone is an indication of value being derived.

Another group that is especially aided by this type of teaching consists of the slower learners. Slow learners benefit relatively more than the gifted pupil by a manipulative, audio-visual type of instruction. Many of these
people are "afraid" of an art course. Most of the girls do not elect the industrial arts courses. The crafts course seems to be a middle ground for many, both boys and girls, who would not benefit from either art or the industrial arts or the homemaking courses.

The findings from the first question of the information sheet show that crafts subjects are held to be valuable in education and should be given careful consideration for inclusion in the secondary school program.

Since the findings of the first question indicate that crafts have value in secondary education, the question naturally arises: "Should the course in crafts be required or elective". In TABLE II are shown the responses to this question. TABLE II shows the respondents' preference for an elective program of crafts, although there are indications that the program might be either or both.
<table>
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<th>ART</th>
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<th>IND. ARTS</th>
<th></th>
<th>HIGH SCHOOLS</th>
<th></th>
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<td>100</td>
<td>160</td>
<td>100</td>
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</tbody>
</table>

The reasons for the belief that crafts subjects should be required, as listed by thirteen art personnel, are shown below.

**REQUIRED**

1. Uncover abilities that would otherwise remain unknown. 1

2. Required crafts courses make students aware of the large field of human activity in which tools and materials are used meaningfully by the creative artist. 1

3. Requisite of general education if handled in a creative manner. 1

4. If an exploratory course, it should be required. 1
The reasons that crafts subjects should be elective, as listed by art personnel, follow. The number of respondents in this group was twenty-six.

**ELECTIVE**

1. The need for creative expression is great, but the student should enter a crafts or any other creative program voluntarily. 1
2. Better motivation if elective. 1
3. Because we should not require students to take something in which there is no aptitude or interest. 1
4. If required, many are interested only in the credit. 1

There was one respondent who believed that crafts subjects should be required in grades 7-8-9 and elective in 10-11-12 from art personnel, but he gave no reasons for his belief.

The reasons why crafts subjects should be required, as listed by industrial arts personnel, are listed below. The number of respondents in this group was forty-seven.

**REQUIRED**

1. Crafts are a part of general education. 2
2. Creative expression is vital to all. 1
3. Required if there is no industrial arts program. 1
4. Basic to exploration and understanding of environment. 1
5. One semester should be required as a basic. 1
The reasons that crafts subjects should be elective, as listed by industrial arts personnel, follow. The number of respondents in this group was seventy-six.

**ELECTIVE**

1. The course has enough interest so that most pupils will want to elect it. 1
2. May not appeal to all pupils. 1
3. It is a leisure-time activity which varies with people. 1
4. May replace an essential course, if required. 1

The one reason for crafts subjects being required in grades 7-8-9 and elective in 10-11-12, as listed by industrial arts personnel, was given by the six respondents who held this belief.

**REQ. 7-8-9 and ELECT. 10-11-12**

1. Required as an exploratory subject in grades 7-8-9. 6

Three of the twenty-seven high school respondents gave the following reasons for their belief that crafts subjects should be required.

**REQUIRED**

1. Exploratory for vocational guidance. 1
2. Stimulates interest in the arts. 1
3. All students would benefit from some craft experience in the lower secondary level. 1
The reasons that crafts subjects should be elective, as listed by high school personnel, appear below. The number of respondents in this group was ninety-nine, however, only four listed reasons for their belief.

**ELECTIVE**

1. If the basic course is required, further courses should be elective on the basis of interests and needs. 2

2. Elective after all other required subjects in industrial arts have been taken. 1

3. It is an attractive elective course. 1

The one reason why crafts subjects should be required in grades 7-8-9 and elective in 10-11-12, as listed by high school personnel, was given by all five respondents in this group.

**REQ. 7-8-9 and ELECT. 10-11-12**

1. Required in grades 7-8-9 as an exploratory course. 5

**DISCUSSION**

A majority of the reporting personnel hold that crafts subjects should be elective subjects. Approximately forty-six per cent of the art personnel, forty-eight per cent of the industrial arts personnel, and sixty-five per cent of the high school personnel would have crafts as electives. Table II shows that approximately twenty-three per cent of the art personnel, twenty-nine per cent of the industrial
arts personnel, and eighteen per cent of the high school personnel would have these subjects required courses. A small group indicated that crafts should be required as a basic introductory course in the junior high school but that all craft courses in the senior high school should be elective.

More than twenty respondents did not register their opinions as to whether crafts should be required or elective. This may indicate an uncertainty as to which is better.

It seems logical, and the response to this question tends to substantiate the belief, that people would hesitate to elect a subject about which they knew nothing and that a required introductory course might be necessary in order to insure that the largest number of pupils might become acquainted with this subject field. Many pupils who could derive much benefit from experiences in crafts would in this way discover their talents along this line, if they possess them, and those not inclined in this direction would make the discovery early in their school careers.

Crafts subjects, after an introductory course, would probably serve best as elective subjects. The crafts, once they are known, are of sufficient interest that many pupils will want to elect them.

It may be seen that the reporting high school personnel, the people who are actually doing the job, have the highest
per cent of response in favor of crafts as an elective program.

The data indicate that the majority of respondents believe that crafts subjects should be elective although there is some indication that one introductory course might be required.

The department or area in which crafts subjects can be most effectively offered in the secondary schools should be an interesting question. The data in TABLE III show the variations among the answers of people engaged in public education to this question.
## TABLE III

The department that, in the opinion of the respondents, should offer a program of crafts.

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<tr>
<td>TOTAL</td>
<td>57</td>
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</tbody>
</table>

* All names of departments listed below this point were written in by respondents.
The reasons that crafts subjects should be offered in art departments, as listed by art personnel, follow. The number of respondents in this group was thirty-nine.

**ART DEPARTMENTS**

1. Art approach emphasizes the creative and expressive. 11

2. Industrial arts teachers use prepared patterns. 7

3. It should be taught from the standpoint of design: most art teachers have better training in basic design. 6

4. Industrial arts emphasizes skill and processes, which alone are not enough to produce a fine crafts product. 5

5. Art teacher has better background in design and art plus a knowledge of crafts. 4

6. Art teachers are better trained to teach the course. 3

7. Usually, industrial arts departments are weak in design and the creative approach, due to lack of training. 2

8. Industrial art teachers lack taste. 1

9. Appreciation of and application of design. 1

10. Industrial arts departments have a tendency to slight the aesthetic and creative angles of crafts in favor of the technical and "busy-work" angles. 1

11. Creative and imaginative elements are more strongly emphasized in the art department. 1

12. The art department can and will expand more on the aesthetic and historical values. 1

13. Should stress aesthetic principles. 1

14. Many industrial arts departments trend toward the vocational and lack sympathy for aesthetics. 1
15. Most industrial arts instructors have not been trained creatively. 1

16. The art department has a good background for creative design in materials. 1

17. In industrial arts, crafts are apt to be imitative and dull. 1

The reasons given by four art respondents that crafts subjects should be offered in industrial arts departments appear below.

**INDUSTRIAL ARTS DEPARTMENTS**

1. If industrial art teachers have had a basic design training equivalent to their training in skills, then crafts should be taught in that department. 1

2. Because care and minor repair skills are more important to the majority of pupils than design. 1

3. Natural and normal place. 1

4. Crafts are usually functional and, as such, belong in the industrial arts department. 1

The reasons that crafts subjects should be offered in either or both art and industrial arts departments, as listed by seven art respondents are given below.

**EITHER OR BOTH ART AND INDUSTRIAL ARTS DEPARTMENTS**

1. Best course can be had by close coordination of both departments. 2

2. Whichever has proper equipment for specific projects. 1

3. Industrial arts can give one kind of training and art another. 1

4. One can not work without the other. 1
5. Some crafts lend themselves to one department and some to another. 1

6. Both departments are closely correlated. 1

The one reason that crafts subjects should be offered in all departments, as listed by the two art teachers, is shown below.

ALL DEPARTMENTS

1. Must be close cooperation of all departments in order to be effective. 2

The reasons that crafts subjects should be offered in art departments, as listed by nine industrial arts personnel, appear below.

ART DEPARTMENTS

1. Crafts take a special type of training that industrial arts instructors usually do not have. 1

2. The art teacher is more capable because "crafts" tend to emphasize design, color, etc. Art teachers excell industrial arts teachers in these phases. 1

The reasons that crafts subjects should be offered in industrial arts departments, as listed by industrial arts personnel, follow. The number of respondents in this group was 113.

INDUSTRIAL ARTS DEPARTMENTS

1. Better facilities. 39

2. Industrial arts personnel are better prepared and equipped to carry on these activities. 7

3. Teachers have a greater variety of abilities and skills. 6
4. Art departments are not versatile enough for this type of instruction. 4

5. Industrial arts instructors have a better understanding of industry and its problems which art instructors usually do not have. 3

6. The better trained industrial arts teachers can offer a better program than art teachers. 3

7. Crafts relate more to industry than to art. 3

8. Art teachers lack broad training necessary to teach crafts. 2

9. Art teachers lack tool skills and practical knowledge of construction. 2

10. Though weak in design, industrial arts teachers are better in teaching skills and practical application. 2

11. Industrial arts personnel are better equipped to offer guidance in group, personal, and vocational needs. 2

12. Art departments base their teaching on aesthetic values only. 1

13. Industrial arts considers and teaches both aesthetic and manipulative skills. 1

14. Integrates well with other industrial arts subjects. 1

15. Has more in common with industrial arts than arts. 1

16. Permits advanced work not generally offered by art. 1

17. Represents basic hand processes. 1

18. Uses basic materials. 1

19. Industrial arts teaches on the analysis basis. 1

20. Art departments may stress design and overlook utility. 1
21. Similar to other shop work. 1

22. Most art people are much more interested in art than in crafts, hence, crafts are neglected. 1

23. Same facilities can be used for both industrial art subjects and crafts. 1

24. Industrial arts has resource, art has only the aesthetic. 1

25. There is a trend toward craft work being offered in the general shop. 1

26. Art is a two dimensional activity; industrial arts a three-dimensional activity. 1

27. A better philosophical approach to the combination of industry and art. 1

The reasons that crafts subjects should be offered in either or both art and industrial arts departments, as listed by industrial arts personnel, are shown below. The number of respondents in this group was thirty-two.

EITHER OR BOTH ART AND INDUSTRIAL ARTS DEPARTMENTS

1. Both have much to offer, if taught cooperatively. 4

2. Why do not the art and applied arts divisions join forces? Here we have a plan whereby both departments can work together to avoid duplication and to make the best use of equipment. 4

3. Depends upon the ability of the teacher. 3

4. Most industrial arts teachers are weak in design. Art can supply this need. Art teachers are weak in construction and processes. A cooperative effort is best. 3

5. A variety of activities, not overlapping, may be offered by both departments in order to catch the interest of a large number of boys and girls. 3
6. Depends upon facilities. 2

7. An integrated course between the two would be ideal. 2

8. The place in which it is offered makes little difference. 2

9. The department makes no difference. The student is what should be kept in mind. 2

10. Should be where the activity fits best. 2

11. The art department can give industrial arts a lot of help in design. 1

12. Art emphasizes design without emphasis on structural detail; industrial arts gives an understanding of structure and of skills required, with some emphasis on design. The student will get the maximum, if offered by both. 1

13. Credit is given in either art or industrial arts departments for such a course taken in our school. 1

14. Should be offered by a person, not a department. 1

15. I would have checked industrial arts if I were sure that all industrial arts men had proper training in art and especially design. 1

16. Many industrial arts men cannot tell good from bad design in the usual industrial arts subjects. 1

17. No fine line can be drawn. 1

18. A design on paper is not complete unless it is made into a finished article. A combination of departments can fulfill this need. 1

19. The objectives of the two departments are nearly the same. 1
The one reason that crafts subjects should be offered in all departments, as listed by industrial arts personnel, was given by all four of the respondents in this group who have this belief.

ALL DEPARTMENTS

1. All departments should cooperate. 4

Listed below are the reasons that crafts subjects should be offered in art departments, as listed by forty-eight high school personnel.

ART DEPARTMENTS

1. Creativeness needs to be considered in addition to teaching of techniques and copying patterns. 5

2. Art provides a creative experience and an awareness of good design. In another department, it might become merely a "how to" course. 5

3. An art instructor is usually better trained and has a higher sense of the aesthetic. 3

4. Most crafts require more than skills to make them worthwhile. 3

5. The art department is usually better prepared. 3

6. Crafts are fundamentally an expression of art. 3

7. An industrial arts instructor would probably lack the background in design which would be necessary to help a student create an original design. 2

8. Art has the creative approach which I don't find in any industrial arts course that I have had contact with. 1

9. The art department can make a more direct approach. 1

10. Developing a design for a project can be considered as an assignment in art. 1
11. Because crafts should not be a "busy subject". 1
12. Industrial arts has been too stereotyped; they have copied rather than created. 1
13. Familiarity with a wide variety of materials as offered in the crafts is necessary to a well balanced art program. 1
14. Of all the basic elements of culture from historic times on down, only art has been constant. 1
15. Crafts naturally fall into the sphere of art education. 1
16. Minimum equipment required. 1
17. Through an art program, all opportunities are set up for students to design and create for themselves. Through such honest approaches to creative expression, a student can develop greater sensitiveness to design, cultivate a good sense of taste, and be led to appreciate more fully the fine art of craftsmanship. 1
18. Offers a better freedom of expression. 1
19. Offers an interesting, popular approach to art principles. 1
20. To avoid overlapping. 1

Listed below are the reasons that crafts subjects should be offered in industrial arts departments, as listed by thirty-three high school personnel.

**INDUSTRIAL ARTS DEPARTMENTS**

1. Industrial arts laboratories are better equipped. 14
2. Teachers are usually better qualified. 4
3. Industrial arts teachers can offer crafts on more practical levels. 3
4. The skills involved in crafts and industrial arts are related. 2
5. Industrial arts teachers have broader backgrounds.

6. Industrial arts more effectively carries out the structural design using the art principles.

7. Prevents a necessity for duplication of laboratory and tools.

8. Each craft can be connected directly with an industry.

9. More economical in this department.

10. Industrial arts has the proper atmosphere.

11. Fits better into this program.

12. Art teachers are not qualified to teach craft-type subjects.

13. Industrial arts can be housed, equipped, and staffed to meet the needs of this work.

14. The goals and outcomes expected from a program of crafts are expressed completely in the aims and objectives of industrial arts.

15. Industrial arts, if the creative approach and not patterns, is emphasized.

16. It has been our experience over many years, with teachers holding art and industrial arts licenses, that the industrial arts teachers, with some sensitivity for design and artistic talent, make the best craft teachers.

17. Follows more closely the needs of individuals.

18. As a basis for further vocational study.

19. The interpretation of industry by the use of tools, materials, and processes seems to indicate the industrial arts department as a "natural".
The reasons that crafts subjects should be offered in either or both art and industrial arts departments, as listed by fifty-six high school personnel, appear below.

**EITHER OR BOTH ART AND INDUSTRIAL ARTS DEPARTMENTS**

1. Faculty specialties can be more adequately employed by offering in either or both departments. 6

2. Depends upon the nature of the course. 5

3. No reason why this has to be departmentalized one way or another. Equipment, school plan, teacher qualification, community needs, and other items influence how and where it should be taught. 3

4. Those requiring tools in industrial arts, those not requiring heavier tools should be offered in the art department. 2

5. If teachers are qualified, it doesn't matter where crafts are offered. 2

6. Certain types of crafts are more adaptable to one department than another. Both should offer them so that both boys and girls have an opportunity to do craft work. 2

7. Some types of craft work more logically belong to art and some to industrial arts. 1

8. Art teachers have training in design. Industrial arts in structural aspects. 1

9. A controlled offering by both departments would cross areas that a single department could not offer. 1

10. Crafts would be available to a larger number of students, if offered by both departments. 1

11. We offer some crafts in both departments, and find it very satisfactory. 1

12. The subject is closely allied to both departments. 1
13. Crafts is an exploratory course related to general education. Departmentalization defeats the purpose. 1

14. Art teachers carry out joint projects where students work out design problems in the art laboratory and carry them into the I.A. shop for further experimentation and development. 1

15. Some crafts are noisy, and should be done in the industrial arts shop; others may be done in the art rooms. 1

16. If the program is as big as it should be, no one person could excel in all types of craft work. 1

17. The two departments need to be closer together. The industrial arts needs the creative approach and art needs the workmanship and knowledges of the possibilities and limitations of materials. 1

18. The aims of both departments should coincide in planning crafts work. 1

19. Both departments offer challenges. 1

As shown in Table III, other departments in which crafts might be taught were indicated by respondents, but no reasons were given.

DISCUSSION

The question of which department or departments should offer a crafts program needs careful consideration because:

a. there is little agreement among the respondents of the three reporting categories as to which is best prepared to offer crafts.

b. the adequacy of both the art and the industrial arts preparations of possible teachers of the crafts have been questioned.
c. other departments are indicated as having better possible teachers of crafts subjects than either the art or industrial arts departments.

Of the art personnel reporting, sixty-eight per cent indicate that crafts should be offered in the art departments. The industrial arts personnel are even more sure that crafts should be an integral part of the industrial arts department, as indicated by a seventy per cent response in favor of this belief. The high school administrators and teachers are nearly evenly divided in their opinions, with the art department having a slight preference.

As to the cooperation between the two departments, where both or either should offer these subjects, the art personnel included in this study are twelve per cent in favor of the cooperative enterprise, industrial arts approximately twenty per cent, and high school personnel approximately thirty-seven per cent.

There may be several reasons for these differences. It is natural, and rightly so, that a feeling of pride in one's ability and enthusiasm for one's subject should make him think that he can do the best job. The reasons given by respondents do not indicate this as a reason for their beliefs, but professional jealousy may tinge the reasons offered.
In times past, the teacher of "manual training" might have been a carpenter or other person with some knowledge of woodworking. He was often omitted from faculty meetings, not being considered an equal of the other teachers. The artist has for centuries been a respected person. There has been a decided "class" feeling among them, which still exists to some extent. Carracci is indicated by Bennett (2, p. 375) as the person responsible for the separation of the painters from the artisans. We find the great Italian artists during the Italian Renaissance working at the jeweler's trade. This is cited in a doctoral thesis by Dietrich (6, p. 179).

Jewelry is a cultural necessity and the best artists have at times been employed in its design or production. During the great Italian Renaissance, Ghirlandajo, Michelozzo, Ghiberti, Michelangelo, DaVinci, Lucca Della Robbia, and Donatello, known mostly for their painting and sculpture, were goldsmiths. The architect, Brunelleschi, and the painter-historian, Vasari, were skilled jewelers. Of this period, probably the best known name in gold and silversmithing is that of Benvenuto Cellini.

This is quoted to show that the greatest artists of the past were not too proud to work at an artisan trade.

The reasons listed by art personnel that art people, rather than industrial arts people, should teach crafts are that they have a better background in design, teach through the creative approach, and stress aesthetic principles. Art
people condemn the industrial arts people for their lack of training in design, their tendency to slight the aesthetic and creative phases of crafts, for copying most of their designs, and for their general lack of taste. The industrial arts people condemn the art people for their lack of realistic approach, their lack of mechanical ability, and a disregard for utility.

Some art personnel concede that "if industrial arts teachers have had a basic design training equivalent to their training in skills, then crafts should be taught in that department". Some industrial arts people admit that they are weak in design, as shown in the statement: "Though weak in design, industrial arts teachers are better in teaching skills and practical application".

If these accusation were listed only one or two times, they might be overlooked. They were so frequently stated among teachers in all parts of the nation that they can not well be overlooked. It appears that, with the introduction of the crafts subjects into the secondary schools, teacher training institutions have not produced the type of teacher necessary to teach these subjects properly. It appears that a crafts teacher should possess qualities that are, at present, not being given adequate consideration in his professional preparation.
Some special qualities which every good crafts teacher should possess are:

1. A thorough training in the fundamentals of design.
2. Skill in the crafts to be taught.
3. Technical knowledge of industrial and hand processes.

This is a problem for the colleges and universities, and should be given immediate and careful study.

Home economics was listed as a suitable department to offer crafts training. This is most noticeable in the responses from the high schools. This writer does not consider home economics a suitable department to offer all of the crafts even where there is a more thorough preparation than apparently is given at present, but sees no good reason why certain of the crafts could not be offered there to advantage. Those crafts especially suited to girls, weaving, for example, might be more advantageously offered there than in other high school departments — other factors being equal.

There is indication in the data of this study that the crafts program should be a cooperative endeavor. In determining who should teach them, the first consideration should be the welfare of the pupil. The question resolves itself as to who can offer the most to the pupil. The objective of all education is a well educated person. It would seem
logical that, in order to avoid duplication, to make best use of equipment, and to obtain the superior advantages offered by the various departments or areas, the teaching of crafts might be done either by a specialized, well trained crafts teacher or by the cooperation of teachers from all related areas.

TABLE IV, next to be considered, indicates the response to the question "Should the program of crafts be offered to both boys and girls?"
TABLE IV

SHOULD THE PROGRAM OF CRAFTS BE OFFERED TO BOTH BOYS AND GIRLS?

<table>
<thead>
<tr>
<th></th>
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<td>160</td>
<td>100</td>
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</tr>
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</table>

The reasons that crafts should be offered to both boys and girls, as listed by art personnel, follow. The number of respondents in this group was fifty-four.

SHOULD BE OFFERED TO BOTH BOYS AND GIRLS

1. Both have capacity for skillful execution, and are equally fertile in ideas. 4
2. Both should be offered opportunities for creative experience. 2
3. Both boys and girls should have the same training. 2
4. Provides suitable experience for cultural backgrounds for both. 1
5. Both boys and girls respond to the opportunity to develop themselves aesthetically and in skills. 1
6. Develops thinking for themselves. 1
7. Provides an opportunity to explore possibilities for a hobby in later life. 1
No respondents from among the art personnel gave reasons why crafts should not be offered to both boys and girls.

The reasons why crafts should be offered to both boys and girls, as listed by industrial arts personnel, appear below. The number of respondents in this group was 154.

**SHOULD BE OFFERED TO BOTH BOYS AND GIRLS**

1. As a valuable part of general education, craft work is of importance to both boys and girls. 18
2. Both can profit. 10
3. General appeal to boys and girls alike. 7
4. Both men and women all through their lives make use of items that emerge as products of crafts. 6
5. Girls have as much need for this type of training as do boys. 5
6. No good reason for separating them. 5
7. Provides a more defensible social arrangement. 5
8. Both are a part of the same culture. 3
9. Not separated in other subjects. 3
10. Girls as well as boys need some knowledge of the use of tools and the products of industry. 3
11. Valuable to both sexes in developing skill in recreational, avocational, and remunerative skills. 2
12. Both do equally well in this type of work. 2
13. Both enjoy creating things. 2
14. Both sexes have a need for non-strenuous recreation. 2
15. Both need an outlet for creative tendencies. 2
16. Our population needs to learn to work together at an early age. 2
17. On the basis of equal rights. 1
18. The idea that only boys belong in crafts or industrial education in general is wrong. 1
19. Work is usually light and has much design. 1
20. Sex should not be the determiner in a crafts program. 1
21. Secondary schools are mostly co-educational. 1
22. All need some knowledge of machines. 1
23. Both need to develop manipulative skills. 1
24. Education is life; both boys and girls live. 1
25. Girls have same desires and abilities as boys. 1
26. Should not deprive either of experiences vital to their lives. 1
27. Boys and girls need adequate opportunities to make social adjustments. 1
28. Cooperation and understanding can be as important as skills. 1
29. Many of the crafts relate to homemaking and would be valuable to the housewife of the future. 1

There were two respondents believing crafts should not be offered to both boys and girls from among the industrial arts personnel in this study, but they gave no reasons for their belief.
The reasons that crafts should be offered to both boys and girls, as listed by high school personnel, are listed below. The number of respondents in this group was 147.

**SHOULD BE OFFERED TO BOTH BOYS AND GIRLS**

1. The experience is of equal value to both boys and girls. 8
2. Sex has nothing to do with ability in craft courses. 8
3. Both have general interest in this type work. 6
4. Both are consumers of tomorrow. 4
5. Girls will be found to surpass boys in quality of work in many of the crafts. 3
6. Both need similar avocational interests. 3
7. There is no good reason why boys and girls shouldn't profit in equal measure by craft courses. 3
8. Both are future citizens. 2
9. Both should enjoy the experience of working with a variety of materials and should be able to recognize good design. 2
10. A girl or a boy will find joy and satisfaction in making something with their hands. 2
11. Children should learn to work together. 2
12. Girls have as much use for dexterity and coordination as boys. 2
13. Develops acquaintances and helps them get along together better than the usual classroom class. 2
14. Co-education is an accepted procedure in American education. 2
15. Leads to better social development. 2
16. The world doesn't separate the sexes.  

17. Girls as well as boys should know how to fix things. 

18. Both boys and girls profit from creative experiences. 

19. I believe we live in a democracy. 

20. Crafts have value to both sexes. Even our high school boys study cooking, etc. 


22. Potential homemakers should have some knowledge of industry and the products of industry. 

23. Boys and girls are both users of art and, therefore, should be offered the same opportunity to experience what crafts have to offer. 

24. Girls as well as boys have creative and mechanical ability that should be allowed to develop. 

25. If craft work is accepted as a part of total education, it is essential that it be given to all who wish to enroll. 

26. Women's rights were established some time ago. 

27. They both need it for home and family life, for school living, and for leisure-time activity. 

28. A good place for each to learn to respect and accept each others' interests and abilities. 

There was one respondent from among the high school teaching personnel who believed that crafts should not be offered to both boys and girls, but he offered no reasons for his belief.
DISCUSSION

More than ninety-five per cent of all of the respondents in this study have expressed the belief that the crafts program should be offered to both boys and girls. This apparently adequately answers another question to which the study sought an answer.

Of the many reasons given in substantiation of this nearly unanimous opinion, the most frequently given was that crafts teach many of the things that people should know to perform their duties as citizens of the democratic way of life effectively. This nation has adopted co-education in the general subjects of education. Apparently, crafts subjects should be no different from other subjects in this regard.

Education should be an example of life. Crafts subjects in many respects offer opportunities of cooperation and social adjustment not present in other subjects. Both boys and girls are future citizens and future homemakers. They are both consumers, and both are expected to have leisure time, now and in the future. How wisely they make use of their futures depends, in a large measure, on the public schools.

Although a few persons objected to offering crafts to both boys and girls, as indicated in Table IV, they gave no reasons for their objections. An objection without a reason
is, to this writer, a weak objection.

The findings regarding the question as to whether crafts subjects should be offered to both boys and girls show that educators hold that the greatest values are received when both boys and girls are offered these subjects.

TABLE V, which follows, shows the responses regarding boys and girls being taught in classes together.
### TABLE V

**SHOULD CRAFT COURSES BE OFFERED TO BOYS AND GIRLS TOGETHER OR IN SEPARATE CLASSES?**

<table>
<thead>
<tr>
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<th>IND. ARTS</th>
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<th>HIGH SCHOOLS</th>
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<td>100</td>
<td>160</td>
<td>100</td>
<td>152</td>
<td>100</td>
</tr>
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</table>

* Items below this point were added by respondents.

The reasons, as listed by art personnel, that crafts should be offered to boys and girls together in the same classes, are given below. The number of respondents in this group was forty-three.

**TOGETHER**

1. Because we live and work together.  4
2. Why would you separate them?  4
3. Sex does not determine creative ability.  3
4. Women are entering more and more into mechanical fields.  1
5. Need of familiarity with materials of one's environment, psychological need of expression, etc., are not limited to one sex. 1

6. Both boys and girls enjoy the same type of crafts equally well. 1

7. Working cooperatively in a mixed group is excellent experience. 1

8. Have taught mixed classes without any problems. 1

9. They are stimulating to each other. 1

10. No reason to limit the benefits to one sex. 1

11. Projects can be made more varied. 1

12. Learn from each other. 1

13. Other subjects are offered together; crafts are no different. 1

Two of the three respondents in this group of art personnel gave the following reasons why crafts should be offered to boys and girls in separate classes.

SEPARATELY

1. More work can be accomplished, if separate. 1

2. Projects have more personal appeal when individualized. 1

No reasons were given by the respondents from the art personnel who marked the "part together" and "doesn't matter" groups.

The reasons that crafts should be offered to boys and girls together in the same classes, as listed by
industrial arts personnel, appear below. The number of respondents in this group was 125.

TOGETHER

1. Men and women work, play, and associate together. 8
2. No separation is made in academic classes. 8
3. They must live together in later life; why not teach them to get along together. 5
4. Can’t think of any reason for separating them. 4
5. Provides a more natural situation. 3
6. Makes for social adjustment. 3
7. No psychological reason for separation. 2
8. Boys and girls learn to cooperate and to understand each other better if allowed to work together. 2
9. Eventually students will work and live together as man and wife; working together in school can be thought of as one prerequisite to matrimony. 2
10. The individual, whether boy or girl, is our challenge. 1
11. Tempers activities of both boys and girls. 1
12. Separate classes does not contribute to social growth. 1
13. Helps overcome possible shyness and inhibitions of one sex toward the other. 1
14. Education is life; not just preparation for life. 1
15. Ease of scheduling. 1
16. We are doing just this right along, and have been doing it. It works out fine. 1
17. Just commonsense. 1
18. Promotes teamwork. 1
19. Practice in living in a democracy. 1
20. Lots more fun if together. 1
21. They are at the age when association is essential. 1
22. Good place to mix the sexes. 1
23. Instills better cooperation in other fields. 1
24. Boys and girls have equal abilities in this area. 1
25. Girls challenge boys in design; boys challenge girls in skill achievement. 1
26. Students will do better work in mixed classes. 1
27. Both boys and girls need to "find" themselves. 1
28. Stimulation of including both sexes is valuable — with proper supervision. 1
29. Fundamentals of crafts and the mechanics connected with them can provide some personal safety. 1
30. There is nothing about the work that should exclude any person. 1
31. Should imitate home conditions. 1
32. Gives an opportunity to compare each other's work. 1
33. Boys do better craft work when in a mixed group. 1

The reasons that crafts should be offered to boys and girls in separate classes, as listed by industrial arts personnel, are shown below. The number of respondents in this group was ten.

SEPARATELY

1. Easier to administer. 2
2. Some crafts appeal to one sex only. 2
3. More work will be accomplished. 2

4. Needs of boys and girls are different. Separate classes can better fill the needs of each. 1

5. Separate the groups so that the girls do not dress in their best clothes and invite the boys to do their work for them. 1

No reasons were given by the respondents from among the industrial arts personnel who marked the "either or both" and "doesn't matter" groups.

The reasons, as listed by high school personnel, that crafts should be offered to boys and girls together in the same classes, follow. The number of respondents in this group was 100.

TOGETHER

1. No logical reason for separating them. 6

2. Makes a more real-life situation. 6

3. Why should we segregate them? 5

4. Mixed classes in our school work well together. 3

5. The presence of both sexes in a class has a stabilizing effect upon both. 3

6. Public schools are co-educational. 3

7. Boys and girls working together in a craft laboratory have individual problems and solutions that call for no sex differentiation as to ability or interest. 2

8. Through a diversified crafts program, girls are enabled to become acquainted with tools and materials commonly thought of as for boys. By the same token, boys are given the opportunity to explore fields commonly thought of as for girls, such as weaving, textile painting, etc. 2
9. Depends upon facilities and teacher.  

10. People live together. They may as well learn how to do the job in school.

11. Inspiration and enthusiasm are contagious, and it often proves helpful to have both boys and girls in the same classes.

12. Transfer of ideas is too valuable to separate them.

13. We have done craft work for years with mixed classes of about forty pupils each.

14. They need to learn to work together.

15. In all my years of teaching, I have found no trouble in mixed classes.

16. Crafts are not of such a technical nature that both are not capable of being taught together.

17. Better social maturity.

18. If classes are separated, they are likely to do too much of the same thing in each.

The reasons that crafts should be offered to boys and girls in separate classes, as listed by high school personnel, are shown below. The number of respondents in this group was twenty-one.

SEPARATELY

1. Lessens disciplinary problems.  
2. Interest factors differ between the sexes.  
3. Different types of work should be in different classes.  
4. Boys and girls should work in different materials.  
5. Should be separate in industrial arts.
6. Relative advanced maturation of girls seems to point to separate classes. 1

7. Separate classes after 10th grade. 1

8. Girls will allow the boys to do their work for them. 1

9. Girls lean on the boys too much. 1

Respondents marking "part together" from among the high school personnel gave no reasons for their belief.

DISCUSSION

These respondents held the majority opinion that boys and girls should not be separated in crafts classes. There is indication, especially in the responses from the high school personnel, that some of the classes may profitably contain both boys and girls while in other classes they should be separated. A minority group object to combined classes, while still another group did not mark this question. There was no distinguishable difference in the opinions of administrators and teachers.

An examination of the minority reasons for separate classes for boys and for girls should be made to determine whether their reasons appear valid.

One teacher listed as his reason "Easier to administer". From the viewpoint of an educator who tries to think of what is best for the pupil, this seems to be a rather weak reason. In the tabulated reasons for including both
together, some respondents state that they have conducted mixed classes without difficulty.

Other respondents fear that the girls will "invite" boys to do their work for them. This again is a problem in the administration of the class. It is no more likely to happen in a crafts class than in any other class; indeed, it still happens on the college level.

The reason given that more work will be accomplished in separate classes has, in the opinion of this writer, little validity. Here again is an administrative problem for the teacher. The writer has observed, and conducted, mixed classes in which the opposite sex was a challenge to more and better work for the other. As to the projects having more appeal when personalized, the writer sees no valid reason why the projects may not be personalized in mixed classes. It is being done.

The statement that boys' and girls' interests are different and that things that appeal to girls should be given in girls' classes, while things which appeal to boys should be given in a class for boys, may have validity. An example of this might be a sewing craft. Usually, however, the projects have enough variation, especially if designed by the pupil, to hold the interest of both sexes. Thus, a girl may design an underarm bag in a leathercraft unit.
whereas a boy might design a holster for a pistol.

The one valid reason for separation is the relatively advanced maturation of girls. This problem may need careful consideration in the counseling of the young people, but it is believed that a satisfactory solution can be found.

The data indicate that there is little reason to separate the sexes in offering crafts classes.

The data have indicated that crafts subjects are held by educators to be of value in the general plan of education. Some would make them a requirement, but the majority would have crafts as elective. There was little agreement as to the department which should offer the crafts subjects, but there was some indication that a cooperative endeavor might give the best results. Both boys and girls are believed to profit from the experiences of craft classes and few valid reasons were given for segregating boys and girls into separate classes.

The important question now arises: "What crafts will best serve to obtain the expected outcomes of a craft program?" The results of the survey regarding the relative value of the individual crafts are tabulated and discussed in the next section of this chapter.

In addition to the respondent's attitudes toward the inclusion or exclusion of the various crafts in the general
secondary school program, additional information was re-
quested of the respondents regarding the content of each
course. The people who responded to this information,
because of their training and position in public education,
are presumed to have knowledge of and an interest in, the
various crafts. Otherwise, one may assume that they would
not have responded. Some areas of the information sheet
which was mailed out were left blank with a note, "I do
not feel qualified to answer for this craft." The writer
feels that the information sheets were completed by some
of the best qualified people in the United States, and does
not hesitate to consider the information which they
supplied as authoritative.

Leathercraft was held, by those responding, to be the
most important of the crafts in fulfilling the objectives of
a crafts program. An analysis of the returns will be found
in TABLE VI.
TABLE VI

THE IMPORTANCE OF LEATHERCRAFT IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th></th>
<th>IND. ARTS</th>
<th></th>
<th>HIGH SCHOOLS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>IMPORTANT</td>
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<td>91</td>
<td>155</td>
<td>97</td>
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<tr>
<td>MOST IMPORTANT</td>
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<td>39</td>
<td>119</td>
<td>74</td>
<td>92</td>
<td>61</td>
</tr>
<tr>
<td>NO RESPONSE</td>
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<td>9</td>
<td>5</td>
<td>3</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
<td>100</td>
<td>152</td>
<td>100</td>
</tr>
</tbody>
</table>

* Figures for "most important" rating are included within those for "important" rating and are not to be added in computing the totals.

Fifty-two people, or 91 per cent of the art personnel responding, considered leathercraft as one of the important crafts for inclusion in the high school curriculum. This was indicated on the information sheet by a "single check" in compliance with the directions. The respondents' evaluation of a craft as most important was indicated on the information sheet by "double checking" the item.

Of the fifty-two arts department people who checked leatherwork as an important craft, twenty-two or 39 per cent checked the item as being "most important" in their evaluations.
Of the industrial arts personnel replying, one hundred fifty-five, or 97 per cent checked leathercraft as "important" in their opinions. Of these one hundred fifty-five, one hundred nineteen or 74 per cent checked this item as "most important".

One hundred forty-three, or 94 per cent of the high school administrative and teaching personnel replying checked leathercraft as "important". Ninety-two of this number, or 61 per cent, checked the item as "most important".

More than ninety per cent of all respondents marked leathercraft as "important" in a crafts program; and 39 per cent of the art personnel, 74 per cent of the industrial arts personnel, and 61 per cent of the high school personnel replying consider leathercraft as one of the "most important" subjects in a crafts program.

The information sheet requested the respondents to give their reasons for marking the items as they did. The following lists of reasons for including leathercraft are divided according to their being stated by personnel in the fields of college art, college industrial arts, or administrators and teachers representing high schools.
The reasons that leathercraft should be included in a secondary school crafts program, as listed by the art personnel replying, are:

**SHOULD BE INCLUDED**

1. Well within the scope of the average student. 8
2. Relatively inexpensive, requiring few tools and materials. 8
3. Lends itself to creative design. 7
4. Articles of value, useful. 6
5. Important for the understanding and selection of material. 5
6. Opportunity for applied design in planning projects and in treatment of material. 4
7. Students can carry a project from start to finish. 3
8. Nice material to handle — texture, color, smell. 3
9. High in interest value. 3
10. Useful hobby. 2
11. Opportunity to develop the imagination. 2
12. We live in the Southwest where leather is widely used. 1
13. Develops skills. 1
14. Materials are easy to obtain. 1
15. Varied in adaptability. 1
16. Important for training in the selection of manufactured articles. 1
17. Offers aesthetic experiences. 1
18. Fills void created by industrialization. 1
19. Hand dexterity. 1
20. Designing in leather should be added because leather is already "tortured" by tooling, carving, etc., without regard for leather itself. 1

21. Tooling seems to me the simplest and that which gives scope for creative design. 1

The reasons why leathercraft should not be included in a secondary school crafts program, as listed by the art personnel replying, are:

**SHOULD NOT BE INCLUDED**

1. Fashions change. There is no place for tooling except in occupational therapy. 1

2. Uses set floral patterns. 1

The reasons that leathercraft should be included in a secondary school crafts program, as listed by the industrial arts personnel, follow.

**SHOULD BE INCLUDED**

1. An excellent leisure-time activity, providing high avocational and hobby interests. 24

2. Economical, with little equipment required. 18

3. Useful articles. 15

4. Pupil interest is high. 9

5. Acquisition of new skills. 5

6. An excellent medium for creative work. 5

7. Worthwhile for a well-rounded education. 5

8. Presents opportunities for designing. 5

9. Adaptable to many situations. 5

10. Practical. 4
11. Provides consumer knowledge. 4
12. Appeals to both boys and girls. 4
13. Within the abilities of students. 3
14. Lends itself to activity in the home. 3
15. One of the most fascinating crafts. 3
16. Provides for quick success. 3
17. An important industrial material. 3
18. Fine recreational possibilities. 3
19. Learn to understand the use of materials. 3
20. Presents an excellent means for developing dexterity. 3
21. The most popular craft offered, in our experience. 3
22. Work can be done by beginners. 3
23. Gives student insight into some of our industries. 3
24. Adaptable to adult classes. 2
25. A commonly used material. 2
26. Nice to work with. 2
27. Easily worked into attractive articles. 2
28. Common to many nations. 2
29. Gives experiences of the races of past and present civilizations. 2
30. An exploratory course. 1
31. Ideal for making gifts. 1
32. A material used for centuries to answer man's needs for clothing and personal items. 1
33. This craft has therapeutic value. 1
34. A profitable craft. 1
35. Presents an opportunity for self-expression. 1
36. Completed projects provide satisfaction. 1
37. The study of a material which is still of great importance to society. 1
38. A chance to share tools and supplies. 1
39. One of the most useful crafts for schools, camps, clubs, Scouts, etc. 1
40. Satisfies the objectives of industrial arts as outlined in the A.V.A. bulletins. 1

There were no statements that leathercraft was not important from industrial arts personnel.

The reasons that leathercraft should be included in a secondary school crafts program, as listed by high school personnel, are given below.

SHOULD BE INCLUDED

1. Interest factor is high: appeals to most pupils. 11
2. Provides an opportunity to develop artistic ability and skill in designing, and in the use of many tools and materials. 9
3. Equipment is simple and relatively inexpensive. 8
4. Gives a student a very good chance to express his artistic and creative ability in making useful products. 8
5. Gives a pupil a chance to use his own creative designs and to get away from the stereotyped projects on the market today. 6
6. Leathercraft is adaptable to making simple practical objects. 5
7. A popular subject that is fast-moving. 3
8. Adaptable to individual abilities and levels. 3
9. Good for consumer knowledge. 2
10. Develops a feeling of pride in his ability to do useful things. 1
11. Develops a worthy leisure-time activity. 1
12. To develop a skill that can be used in later life as a hobby. 1
13. A good recreational activity. 1
14. Useful in a farm community. 1
15. Requires small storage space. 1
16. Gives an appreciation of leather. 1
17. Has general education significance in the history and uses of leather. 1
18. There are few safety hazards. 1
19. Teaches neatness. 1
20. Teaches thrift. 1
21. Increases power of observation. 1
22. Teaches the history and the manufacture of articles that are used by everyone in everyday life. 1
23. Basic natural raw material. 1
24. Important in the Western and Southwestern states. 1
25. Very practical in teaching measurement of materials. 1
26. Articles can be completed in a minimum of time. 1
27. Can be supplementary to other areas. 1
28. Interesting to both boys and girls. 1
29. Universal use and acceptance. 1
30. Develops essential skills. 1
31. Any material used widely in our present day should be known in terms of what it is, how best used, and what can be done with it. 1

32. A very interesting procedure that gives satisfying results. 1

The reasons why leathercraft should not be included in a secondary school crafts program as listed by high school personnel, are stated below.

**SHOULD NOT BE INCLUDED**

1. Cost of materials relatively high. 3
2. Too expensive for public schools. 1

The information sheet listed several major topics within each craft. The recipients of the information sheet were asked to indicate those topics which they considered important, and were asked to add any others which they believed to be important in the thorough teaching of this craft in the general high school setting. TABLE VII shows the responses to this inquiry as it pertains to leathercraft. Items in the table are listed in the order of their frequency of mention.
TABLE VII
CONTENT OF LEATHERCRAFT UNIT

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>#TOTAL NUMBER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OF REPLIES</td>
<td>57</td>
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<td>160</td>
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<tr>
<td>LACING</td>
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<td></td>
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<tr>
<td></td>
<td>42</td>
<td>74</td>
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<td>TOOLING</td>
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<td></td>
<td>43</td>
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<td>139</td>
</tr>
<tr>
<td>ATTACHING HARDWARE</td>
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</tr>
<tr>
<td></td>
<td>32</td>
<td>56</td>
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<tr>
<td></td>
<td>21</td>
<td>37</td>
<td>110</td>
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<tr>
<td>DYEING AND COLOR</td>
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<td>2</td>
<td>10</td>
</tr>
<tr>
<td>DESIGN</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>STITCHING</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>FINISHING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THONG</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>BRAIDING</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BURNING</td>
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<td></td>
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<tr>
<td>LAYOUT</td>
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<td></td>
</tr>
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<td>FURNITURE</td>
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<td>2</td>
<td></td>
</tr>
<tr>
<td>WEAVING</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# All per cents are given as percentages of the total number of replies.

* All items below this point were added by respondents.
DISCUSSION

In considering the relative value of the topics within leathercraft, one may note that "lacing" and "tooling" are rated as of nearly equal value. It may also be noted that these two items were checked by approximately eighty-two per cent of all respondents. These responses give them high priorities in the teaching of leathercraft.

"Attaching hardware" is rated in third place, with two hundred sixty responses or about seventy per cent of the total possible number of responses. This topic does not present as many nor as varied opportunities to challenge the high school pupil, but is often necessary in the completion of an article. The response indicates that this item should be included in the course.

"Carving" is a skill operation which is accomplished after the design has been applied to the leather. It is a means of embellishment which is useful in many types of leatherwork. The response, approximately sixty-seven per cent of the possible responses, indicates its value in the teaching of leathercraft.

"Embossing" received the smallest response among the topics listed on the information sheet. The response, approximately fifty-nine per cent of the possible responses, indicates that it has value in a leathercraft unit, but not to the extent of those listed above. If time does not permit
the teaching of all topics, embossing could be omitted. This topic might be used as an extra for special students.

When one prepares a questionnaire or information sheet, it is not usually feasible to include all of the related material that one might wish to. In this study, many ideas were thought of about topics that might profitably be used in crafts classes, but these were omitted in order to keep the length of the information sheet within reasonable limits. It was believed that the most important topics would be mentioned by the respondents. In compliance with the request for additional topics that the respondents believed to be of important value, ten additional responses were written in. They are shown in the order of their frequency of mention in TABLE VII, on page 117.

"Dyeing and color", with twenty responses, is a part of finishing, the latter receiving five responses. It is assumed that, before an article is complete, it should have some type of finish to preserve its beauty and add to its usefulness. Although the number of times this combination was written-in is not large, it does indicate a concern regarding its inclusion. No doubt other respondents assumed, as this writer did, that finishes would be included in a part of the related information to be taught in leathercraft. The response to this topic indicates the value of including finishes as they apply to leather.
The problem of "design" was the second to be added by the respondents. In craft classes, design is of great importance. The writer believes that the principles of design should be observed in all crafts. Its presence must be "felt" throughout craft work, and not relegated to a topic of any particular craft.

"Stitching" is valuable on some projects but does not, in the opinion of the writer, warrant group instruction. This writer handles the subject of "stitching" by a simple demonstration to the pupil who has a need for it. This direct and simple technique is also used with those few pupils that wish to use the burning of leather.

"Leather thong" and "braiding" are special phases of leatherwork which may or may not be used in particular classes. This will depend largely on the objectives of the course. Used as a supplement to the teaching of a unit on the American Indian, or perhaps where interest is sufficient, in areas where saddles and other accessories of riding are still used, these might be of value. As information about industrial techniques and applications, their values are questionable at best.

Leather weaving and the making of leather furniture were written in one time each, out of a total return of three hundred sixty-nine replies. This, in the writer's opinion, is not a sufficiently large response to make these
important topics in a course on leathercraft; although they
could, and probably should, be included in classes showing
sufficient interest in them and if time is available.

SUMMARY OF LEATHERCRAFT Among all of the crafts
listed on the information sheet plus all of those added by
the respondents, leathercraft was ranked in first place in
importance. It is considered to be one of the most important
subjects in a crafts program. The major subdivisions of
the subject in the order of their importance, as shown in
this study are: lacing, tooling, attaching hardware, carv-
ing, embossing, and finishing. Although design is thought
to apply to all of the crafts, its special applications to
leather should not be neglected. Additional divisions of
lesser importance which might be included when a need for
them arises are: stitching, burning, thong and braiding.

The craft which was ranked in second place in this
study is a subject which is a basis of communication, the
graphic arts. The results of this writer's investigation
of this topic are contained in TABLE VIII and accompanying
reasons.
### TABLE VIII
THE IMPORTANCE OF GRAPHIC ARTS IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>IMPORTANT</td>
<td>53</td>
<td>93</td>
<td>149</td>
</tr>
<tr>
<td>MOST IMPORTANT</td>
<td>33</td>
<td>58</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
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<td>160</td>
</tr>
</tbody>
</table>

* Figures for the "most important" rating are included with those for the "important" rating and are not to be added in computing the totals.

The graphic arts are considered by all of the reporting agencies responding in this study to be one of the "important" crafts. Ninety-three per cent of the art personnel, 93 per cent of the industrial arts personnel, and 88 per cent of the reporting high school personnel indicated their belief by checking the item as important.

The belief that graphic arts are considered one of the "most important" of the crafts is indicated by 58 per cent of the art, 45 per cent of the industrial arts, and 51 per cent of the high school personnel checking the item as "most important".
The high rating of the graphic arts seems justified when it is realized that they are among the most important means of communication and, without them, civilization could not advance. The graphic arts also represent one of the world's largest industries.

As with leathercraft, the information sheet requested the respondents to give their reasons for rating the graphic arts as they did. The lists of reasons for inclusion or exclusion of the graphic arts in a crafts program, as they were recorded by the responding art, industrial arts, and high school personnel, follow. The various numbers of respondents are shown in TABLE VIII on the preceding page.

The reasons that graphic arts should be included in a secondary school crafts program as listed by art personnel, are:

**SHOULD BE INCLUDED**

1. Lends itself to creative design. 3
2. Gives experiences in methods of reproducing designs. 3
3. Appreciation of commercial problems. 1
4. Any and all efforts to raise appreciation and execution of present-day graphic processes is very valuable. 1
5. One of the best media for useful expression. 1
6. One of the best media for learning the elements of the arts. 1
7. Requires different types of design. 1
8. A good way to integrate with other classes. 1
9. Easy to do. 1
10. Useful for home decoration, cards, posters, etc. 1
11. Ties in with pictorial art. 1
12. Rich field for invention. 1

The reasons that graphic arts should not be included in a secondary school crafts program, as listed by the art personnel, appear immediately below.

**SHOULD NOT BE INCLUDED**

1. Beyond most students having no art background. 1
2. There is very little use for bookbinding as a hobby. 1

The reasons that graphic arts should be included in a secondary school crafts program, as listed by the industrial arts personnel, are listed below.

**SHOULD BE INCLUDED**

1. Has value in teaching design. 8
2. Graphic arts are important in our interpretation of American industry. 8
3. Develops avocational interests. 6
4. Provides for an artistic outlet. 5
5. Appeals to most students. 4
6. Communication plays a most important part in life. 3
7. Requires little equipment; reasonable in cost. 3
8. Affords the student an opportunity to explore the graphic arts. 3
9. Closely connected with consumer education. 2
10. Necessary to a well rounded education. 2
11. Lends itself to the home as well as school. 2
12. Slower students can manipulate duplicating processes efficiently. 1
13. A delightfully different crafts area. 1
14. Develops motor control. 1
15. Book crafts are both interesting and easily taught. 1
16. Within the abilities of secondary school pupils. 1
17. Develops skills. 1
18. Many means of expression. 1
19. One of the broader areas in which appreciation needs development. 1
20. Represents a large field of human endeavor and applies easily to school needs. 1
21. Suitable to any age group. 1
22. Simple attractive articles may be made. 1
23. Rich in historical and related information. 1
24. A new field for youngsters. 1
25. Graphic arts coordinates with all other subjects. 1
26. Printing and related activities constitutes our fourth largest industry. 1
27. Many people enjoy amateur photography. 1
28. Gives an understanding and appreciation of the means of reproduction of ideas through visual aids. 1
29. An appreciation of the care of good books. 1
30. Learn methods of reproduction without elaborate equipment. 1

31. Offers opportunities for profitable vocation. 1

32. A gateway to understanding broader fields. 1

33. Blends well with other units. 1

The reasons that graphic arts should not be included in a secondary school crafts program as listed by industrial arts personnel, are:

**SHOULD NOT BE INCLUDED**

1. Can become too technical. 1

2. These areas can be handled by apprenticeship. 1

The reasons that graphic arts should be included in a secondary school crafts program, as listed by high school personnel, follow.

**SHOULD BE INCLUDED**

1. An excellent way to teach basic design. 7

2. These processes give the basic methods of reproduction and meet a need in school life. 5

3. Inexpensive. 4

4. Has creative value. 3

5. Graphic arts have practical interest to students in reproducing their ideas, as Christmas cards etc. 2

6. Gives an opportunity for artistic expression. 2

7. Interest factor high. 2

8. Has many uses. 2
9. Dexterity and skills are developed. 2
10. Explores a trade; vocational exploration. 2
11. There is need for this (stenciling) as an approach to design. 1
12. The graphic arts are basic to our everyday living. 1
13. Develops an appreciation of good design and workmanship. 1
14. Gives a good background for consumer printed material. 3
15. Help to train future textile designers. 1
16. Can be used as a service to the school and community. 1
17. One of the great industries of the world. 1
18. Useful for developing cooperation between several students. 1
19. Helpful in library work. 1
20. Fine opportunity to integrate other school subjects. 1
21. Seasonal (linoleum block) good at holiday seasons. 1
22. Affords excellent opportunities for growth in an understanding of pattern, texture, dark and light, both with and without color. 1
23. Develops artistic ability and skill in the use of inks, paints, and many printing materials. 1
24. Will help pick out the children with particular skills. 1
25. Projects should show leisure-time value as well as commercial value. 1
26. An opportunity to develop art ability. 1
27. An opportunity for originating personalized useful articles. 1
28. Helps pupils to visualize in a graphic way. 1
29. Need for good composition understood. 1
30. Work may be displayed in the school paper. 1
31. Adaptable to large classes. 1
32. Introduces many materials. 1
33. These procedures are useful in school and club work. 1
34. Meets everyday needs of pupils in life. 1
35. An excellent vocation. 1
36. Important in our way of living, advertising, etc. 1
37. Gives a knowledge of and introduces the proper care and use of tools. 1
38. Integrate with other school activities. 1
39. Simple tools. 1
40. Gives an appreciation of book-binding. 1
41. Helps in the understanding of commercial art methods. 1
42. Opportunity to learn something of advertising. 1

The reasons that graphic arts should not be included in a secondary school crafts program, as listed by high school personnel, are:

SHOULD NOT BE INCLUDED

1. Too difficult. 1
2. Book binding is omitted because it lacks creativeness.  

3. Seasonal.

The information sheet listed three topics in the graphic arts, plus a request that the respondents check those topics that they believed to be important and to add others which they believed to be important in the teaching of the graphic arts. TABLE IX shows the responses to this request.
### TABLE IX

**CONTENT OF GRAPHIC ARTS UNIT**

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
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</thead>
<tbody>
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<td><strong>#TOTAL NUMBER OF</strong></td>
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<td>%</td>
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<tr>
<td><strong>REPLIES</strong></td>
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<tr>
<td><strong>LINOLEUM BLOCK</strong></td>
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<tr>
<td><strong>SILK SCREEN</strong></td>
<td>39</td>
<td>68</td>
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<tr>
<td><strong>BOOK BINDING</strong></td>
<td>22</td>
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<td><strong>ETCHING</strong></td>
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<td>4</td>
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<tr>
<td><strong>STENCILING</strong></td>
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<td><strong>WOOD CUT</strong></td>
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<td><strong>LETTERING</strong></td>
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<td>1</td>
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<tr>
<td><strong>LITHOGRAPHY</strong></td>
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<tr>
<td><strong>AIR BRUSH</strong></td>
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<tr>
<td><strong>DRY POINT</strong></td>
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<td>2</td>
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<td><strong>DRAWING</strong></td>
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<td><strong>SKETCHING</strong></td>
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<tr>
<td><strong>TYPE SETTING</strong></td>
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</tr>
</tbody>
</table>

# All per cents are given as percentages of the total number of replies.

* All items below this line were added by respondents.
DISCUSSION

In considering the topics within the graphic arts, the respondents have indicated that "linoleum block" is of greatest importance. This medium is similar in many ways to those used in the printing industry. Indeed, the printing industry does use linoleum block. It is relatively inexpensive and offers unlimited possibilities to creative hands, either in monochrome or in a number of colors. Approximately 77 per cent of all respondents have chosen this topic as "important" in teaching the graphic arts.

"Silk screen", which was checked by approximately 67 per cent of the respondents, was listed as second in importance in the teaching of the graphic arts. This medium presents many problems of design. It lends itself particularly well to the making of school posters, creative designs, and an unlimited variety of personalized items. Silk screen is well within the ability of secondary school pupils. It is relatively inexpensive, and does not require a large work area.

The topic which was rated in third place by the respondents was that of "book binding". It may be noted in TABLE IX that the art personnel gave this item a relatively lower rating than did the industrial arts and the high school people. The administrators and the instructors in industrial arts gave the most favorable rating of the three
reporting groups, with a 68 per cent response as compared with 46 per cent for the high school personnel, and 39 per cent for the art people. The objection shown are that bookbinding lacks some of the possibilities for creativeness and that it has little usefulness as a hobby.

"Bookbinding" may be combined with other units of the graphic arts such as; the silk screen may be used to decorate the cover, the use of leather and leathercraft techniques for making a leather binding, and the use of linoleum block, stenciling, or other methods of embellishment for the cover, end sheets or illustration and decoration within the pages of the book. This topic is very rich in history and related information about the printing trade.

Bookbinding, although some object, has been rated by the respondents as having value in the teaching of the graphic arts.

Several additional topics were added by the respondents. Of those added, etching, which may include drypoint, has been given some approval. The term "etching" may be used in several ways:

a. It may be used as a process of eating away metal with acid to produce a drawing or other suitable line work. This process is used by artists and engravers to produce a work of art called an etching.

b. Etching may refer to the photo-mechanical method of making master plates in printing.
c. The scribing of lines with a steel tool on a metal or plastic plate is another concept of etching. This is sometimes referred to as dry point.

Etching in various forms plays a large role in the printing trade. Its place is undisputed. The respondents did not amplify their meanings of this term as to the exact places it would have in a high school crafts program. It is assumed that etching as it has been written in would refer to some simple exercises to teach the basic principles.

"Woodcut" is, in many respects, similar to linoleum block. It is more costly and more difficult. The results can be more pleasing, if one has the time and the patience to accomplish it. Special pupils may find this a challenge. Its use as a general field of instruction is questioned, except as it may be used as a demonstration to tie past methods of printing with those of the present.

"Stenciling" is one of the lesser methods of graphic reproduction. It is useful at times, especially if the specialized form of stencil called silk screen is not employed. If time permits, it may be taught to advantage, but it is the writer's opinion that some of the other topics offers far greater rewards.

Some of the reasons for not offering the graphic arts in a secondary school program are that they can easily become too technical and that they can be handled through
Some few respondents have added such topics as "offset", "typesetting", "letterpress", and "lithography". The writer sees here a danger, that other respondents have seen, of the instruction becoming too technical. It should be remembered that the aim here is the education of people about things which they should know to become more useful citizens of the United States as outlined in the "Seven Cardinal Principles of Education". General education has been defined in contrast to specialized or vocational education. The line must be drawn where education for the general good stops and education for a trade begins. In the opinion of this writer, on a crafts basis, these topics are going beyond the line of general education. A small platen hand-press with a font of type might be considered as useful in the craft area, and of considerable value to pupils in the understanding of industrial processes. The use of larger mechanical presses is outside of the craft area.

Other minor topics have been added by the respondents, all of value. The question arises as to which will give the most value for the time, money, and effort spent. The answer to the question must come with the combination of the teacher, the pupils, and the community. It is suggested that those topics of major value be included first and others added according to the interests and abilities of apprenticeship.
the pupils.

TABLE X, immediately following, shows the importance of woodcraft in a crafts program for secondary schools as stated by these respondents from the fields of art, industrial arts, and by administrators and teachers in high schools. TABLE X shows that woodcraft was rated in third place in the estimations of these respondents. The numbers of replies in each category are shown in TABLE X.
TABLE X

THE IMPORTANCE OF WOODCRAFT IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
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<td>IMPORTANT</td>
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<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
</tr>
</tbody>
</table>

*Figures for "most important" are included within those for "important" and are not to be added in computing totals.

Woodcraft, one of man's oldest crafts, was considered, by all reporting agencies responding, to be important in a crafts program for the secondary schools. It was checked as "important" by 86 per cent of the art, 92 per cent of the industrial arts, and 89 per cent of the high school personnel responding.

Approximately forty-three per cent of all respondents rated woodcraft as one of the most important of the crafts. The art personnel, among the three reporting groups, rated it lowest. The reason for this may be that wood lends itself so well to mechanical processes which are usually associated with industrial arts. As a craft, however, it is
considered important by a big majority of those responding.

The reasons that these respondents gave for including this craft among those suitable for the secondary school program are listed below in the order of their frequency of mention. Two reasons were listed for excluding woodcraft from the crafts program.

The reasons that woodcraft should be included in a secondary school crafts program, as listed by art personnel, are:

**SHOULD BE INCLUDED**

1. Teaches creative design. 2
2. Three dimensional experiences not easily taught in other media are valuable to all students. 2
3. A craft for leisure time. 2
4. Materials are readily obtainable. 2
5. Interesting to children. 1
6. No special equipment necessary. 1
7. Principles of construction should be available to all students. 1
8. Understanding of materials. 1
9. Within the ability of children. 1
10. Design experience. 1
11. Teaches appreciation for the natural beauty of wood. 1
12. Everyday uses. 1
13. Application of sculpture. 1
14. Develops hand dexterity and eye precision. 1

There were no reasons listed against woodcraft in a crafts program by these art teachers.

The reasons that woodcraft should be included in a secondary school program, as listed by industrial arts personnel, follow.

**SHOULD BE INCLUDED**

1. Wood is still the most used basic structural material which is readily available. 15

2. Inexpensive. 12

3. Presents opportunity for creative self-expression. 11

4. A good activity for leisure-time. 9

5. Requires a minimum of equipment. 5

6. Helps to give a well rounded education. 5

7. Easily adaptable to creative art and design. 4

8. An area common in our everyday living. 3

9. A material with which people are already familiar. 3

10. Offers tool skills. 3

11. Popular and practical home-shop craft. 3

12. Teaches different qualities of woods, and the designs that are appropriate. 3

13. Basic for coordination and dexterity. 3

14. Presents more artistic possibilities for useful articles. 2

15. Can be done outside the classroom with limited equipment. 2

16. Beginners are successful which give satisfaction. 2
17. An excellent avocational interest. 2
18. A good addition to general woodwork. 1
19. Provides exploration of interests. 1
20. Woodworking is a main industry in the U. S. 1
21. Presents a knowledge of related materials. 1
22. Unlimited possibilities for all of the objectives of crafts. 1
23. Gives all a chance to work with common tools and materials. 1
24. Wide application. 1
25. A craft coming back into preference with students. 1
26. Develops a better understanding of one of the oldest crafts. 1
27. Gives experiences of the races of past and present civilizations. 1
28. Teacher can cover certain activities that are not usually included in a woodworking course. 1
29. Experiences can be carried into later life. 1
30. Satisfies the objectives of I.A., as outlined in the A.V.A. bulletin. 1
31. Offers opportunities for development of recreational and avocational interests. 1
32. Minimum number of tools needed. 1
33. Student learns that good results are in direct proportion to care in handling tools. 1

Only one reason why woodcraft should not be included in a secondary school crafts program was listed by a member of the industrial arts personnel that completed the information sheet. This was: "the techniques are difficult for many".
The reasons that woodcraft should be included in a secondary school crafts program, as listed by high school personnel, are stated below.

**SHOULD BE INCLUDED**

1. Woodcraft lends itself to the training in the use of simple handtools which are common to the average home. 9
2. Cost of equipment and materials is low: inexpensive. 7
3. Leads to a good leisure-time activity. 7
4. Materials are readily available. 7
5. Develops creative and artistic skills; promotes dexterity. 5
6. Interest is high. 4
7. A knowledge of wood and wood products is essential in everyday living. 4
8. Working with wood helps pupils visualize in three dimensions and is the next thing to actual stone sculpturing. 3
9. A good creative medium. 3
10. Great skill can be developed in the use of many tools. 3
11. May be combined with other crafts. 2
12. Develops a sense of form design. 2
13. Of most general interest. 1
14. Most boys like to whittle and carve. 1
15. Learns to judge excellence of workmanship, good design, and good materials. 1
16. Long established as a basis for industrial arts teaching. 1
17. Ease of manipulation. 1
18. Has vocational guidance possibilities. 1
19. Wood is a basic material with limitless possibilities. 1
20. Easily adapted to degrees of ability. 1
21. Chip carving is easily learned, and requires few tools. 1
22. A good medium for the physically handicapped. 1
23. Teaches neatness. 1
24. Interesting for Christmas projects. 1
25. A craft that gives quite a bit of freedom of expression. 1
26. Presents problems different from other materials. 1

Only one reason why woodcraft should not be included in a secondary school crafts program was listed by the high school personnel reporting. This was that "the utility, interest, and character development are negligible".

Three topics were listed in the information sheet under woodworking with a request that the respondents check those topics that they believed to be important and to add others which they believed to be important in the teaching of the woodworking crafts. TABLE XI shows the responses to this request.
### TABLE XI

**CONTENTS OF THE WOODGRAFT UNIT**

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
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<tr>
<td><strong>REPLIES</strong></td>
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<tr>
<td></td>
<td>57</td>
<td>100</td>
<td>160</td>
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# All per cents are given as percentages of the total number of replies.

* All items below this point were added by respondents.
DISCUSSION

In considering the topics in woodcraft, the data show that "wood carving" is considered the most important by these respondents. All three groups seem to agree on this item. The art people, with an 86 per cent response in favor of carving, hold it to be of greater importance than do the industrial arts and high school people, but the overall response to this item was approximately 78 per cent. Chip carving is a specialized type of carving which many of the reporters no doubt included when they checked carving. Some, however, listed it separately, as shown in TABLE XI. Chip carving can easily be, and probably should be, included under the heading of carving. There seems to be little doubt that carving is an important part of a woodcraft program.

"Whittling" was rated in second place under woodcraft by those responding to the information sheet, by an approximately 60 per cent response of those replying. There is considerable agreement between all reporting agencies on this item. The industrial arts and the high school groups rate whittling slightly higher than do the art people. The data indicate that whittling should be included in a unit of woodcraft.

"Wood mosaic", or the making of pictures and designs with thin woods, usually veneers, of different colors
and textures, shows some disagreement among the reporting groups. The industrial arts people rated it the highest, with a 39 per cent response. Not greatly different was a 36 per cent response from the high school people. The art people, however, with a 5 per cent response in its favor, indicate that they have little regard for wood mosaic as a craft.

The writer suspects that the reason for this low evaluation on the part of art people is a lack of knowledge regarding the techniques involved. Intarsia, (It. Intarsio), a term which is probably more correct than wood mosaic, was an old Italian art which became nearly extinct. At present, there is little literature regarding this art. Kits of woods and accompanying designs are for sale by some companies. Art people will probably hold that this is copying and therefore not creative. To a limited extent, this may be true, but history will show that artists of the past were required in their training to copy the master's work until it was nearly perfect. This writer does not object to copying when this serves a real and valuable purpose. The true artist will soon discard the ready-made designs. Then this art will really challenge its adherents, and the artist will thrill to his creation.

The response to this item indicates that it has value in a woodcraft unit. The values are indicated to be less
than those of woodcarving and whittling. The equipment is not extensive nor expensive. Wood mosaic might profitably be used in a woodcraft unit.

Several additional topics were listed by the respondents under woodcraft. The list, with the total number responding, is shown in TABLE XI. Some of these are not topics at all, but are tools or projects. The writer considers lathes and coping saws as tools which, if used in woodcraft, would require the necessary instruction for their proper use as is the case with a saw, a plane, or any other tool. Toys and trellises are projects, end-products of the craft and, in the writer's opinion, should not be listed as topics under the title of woodcraft at all.

The making of models should certainly be one of the objectives of woodcraft or a combination of woodcraft with other crafts. It is hardly a topic or a method, as each model presents different technical problems. Models very often require carving, sometimes whittling, occasionally wood mosaic, and many other techniques. Models are very often combined from wood, metal, and plastic. This writer, however, believes them to be projects and not a single topic in woodcraft.

"Finishes", including refinishing, might be a topic for consideration. Finishes may be a broad topic, worthy of separate consideration. Certainly some knowledge of
finishes is required in the completion of a project. Finishes were considered by this writer, and apparently by many respondents, as related information. Although this item was not written in a great number of times, it does indicate some concern that it should be given a place of study in woodcraft.

"Wood burning" is a special technique which does not require more than a simple demonstration for those few who desire to use the technique. It was written in only three times and is, therefore, not considered of sufficient importance for inclusion as a topic under woodcraft.

"Piercing" is the process of working a hole or open design into a piece of wood. This is usually done with a small saw but may be done with other tools, such as carving tools or knives. One person wrote this in as a topic. This is not considered to be a sufficient response for inclusion as an important topic in woodcraft.

"Wood sculpture" refers to the making of figures of persons or things in wood. This may make use of whittling, carving, or more mechanical means; or it may employ all of these techniques. It would seem to this writer that a piece of wood sculpture would be the result of one or several basic processes and would be considered a project rather than a topic.
The craft which was rated in fourth place by those responding was metal art. TABLE XII shows the data regarding the importance of this craft in secondary school education as they were recorded from the information sheets used in this study.
TABLE XII

THE IMPORTANCE OF METAL ART IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
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</thead>
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<td>%</td>
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<td>IMPORTANT</td>
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<tr>
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<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
</tr>
</tbody>
</table>

* Figures for "most important" are included within those for "important" and are not to be added in computing the totals.

Metal art ranks high on the list of crafts that are important in a crafts program. Industrial arts administrators and instructors rate it second in importance among all of the crafts. The art administrators and instructors rate it much lower. The high school administrators and teachers rate it nearly on an equal with the graphic arts and woodcraft. More than 87 per cent of all responding personnel checked this item as "important".

In response to the question as to whether this craft is one of the most important, ten art people or 18 per cent, one hundred four or 65 per cent of the industrial arts personnel, and seventy-two or 47 per cent of the high
school personnel replying rated this craft as one of the "most important" within a high school crafts program.

In compliance with a request, most of the respondents gave reasons for believing that metal art should be included or excluded in the area under study. These reasons, both for including and excluding metal art, are listed below in the order of frequency of their mention.

The reasons that metal art should be included in a secondary school crafts program, as listed by the art personnel, are stated below.

**SHOULD BE INCLUDED**

1. Teaches creative design. 2
2. Within financial reach of most high schools. 1
3. Interesting to children. 1
4. Can be done at home. 1
5. Useful hobby. 1
6. May be enjoyed after it is completed. 1
7. Within the ability of children. 1
8. Materials are readily available. 1
9. Use of scrap materials for common purposes.
10. Does not take great skill. 1
11. Does not take complicated machinery. 1
The reasons why metal art should be excluded in a secondary school crafts program, as listed by the art personnel replying are shown below.

**SHOULD BE EXCLUDED**

1. Casting is probably too far advanced. 1
2. Good results are not probable. 1
3. Other than forming, this craft is too difficult. 1
4. Takes too much equipment for the average school. 1

Perhaps the objections listed to the teaching of metal art in the public secondary schools are due to misunderstandings of what the term implies. Art departments often have a course to which they apply the term "art metal". This term implies the producing of art objects made of metal. This may require a considerable degree of skill, as this writer well knows. The term "metal art" is not so restricted. It implies the skill or knack of adapting natural things to man's use, in this case the various metals. It may range all the way from simple bending and soldering to the more exacting jewelry and art forms.

The reasons that metal art should be included in a secondary school crafts program as listed by the industrial arts personnel reporting, follow.

**SHOULD BE INCLUDED**

1. Gives an appreciation of metals and their properties. 12
2. Leisure-time activity. 9
3. Presents an opportunity for creative design and expression. 9
4. Many of our necessities are made of metal. The student would learn much of industrial processes. 8
5. Finished products give a feeling of satisfaction. 4
6. Can be done with a minimum of equipment and space. 3
7. Possibilities for vocational exploration. 3
8. Good supply of material. 3
9. Worthwhile for a well rounded education. 3
10. Great appeal to many. 3
11. Training in use of metal tools and machines. 3
12. Skills learned are applicable. 2
13. Develops dexterity. 2
14. Practical and economical. 2
15. This is the only opportunity that most people will have to study one of the most important classes of materials in common use. 2
16. Beginners are successful. 2
17. This craft as carried on today is much the same as it has been done by the masters. 1
18. Presents opportunity to reproduce fine metal projects. 1
19. An art which almost became extinct. 1
20. Provides opportunity for self-expression. 1
21. Simple and creative. 1
22. Excellent take-home projects. 1
23. Offers a great variety of experiences. 1
Lends itself well to a crafts class and is relatively easy.  
Can be carried on in home conditions.  
Teaches basic methods of our present industries.  
Knowledge acquired are a carry-over in many other types of work.  
Satisfies the objectives of industrial arts as outlined in A.V.A. Bulletin.  
Has general education value.  
Presents opportunities for becoming acquainted with older art-metal methods as well as the modern.  
Where art metal courses stop this craft can continue.  

One reason why metal art should not be included in a secondary school crafts program, as listed by an industrial arts personnel, was: "I would question spinning of metal as it involves use of special power machines and heavy spinning tools".

The reasons that metal art should be included in a secondary school crafts program, as listed by high school personnel, are given below.

**SHOULD BE INCLUDED**

1. Develops a skill that may be used in later life as a hobby.  
2. An inexpensive, practical, and useful craft.  
3. Teaches appreciation and properties of the various metals.  
4. Helps to develop creative ability.  
5. Student learns what is good design in metal and what is not. 4
6. May give an understanding of and ability to evaluate the products of industry. 3
7. Many useful things are made. 3
8. A good means of vocational exploration. 3
9. One of man's most common materials. 2
10. Within the ability of high school pupils. 2
11. Many of the processes are within the ability of the junior high school pupil. 2
12. Decorative value. 2
13. Metal art lends itself well to the imaginative and aesthetic sense of the pupil. 1
14. Develops a measure of skill in the use and care of common tools. 1
15. Work with copper and aluminum foil furnishes an excellent means of transition from two dimensions to the third dimension. 1
16. Teaches the history of man's use of metals. 1
17. Gives the student experiences in the artistic production of articles not covered in other mediums. 1
18. Skills are transferable to other mediums. 1
19. An age-old craft that is extremely lasting and permanent. 1
20. Native ores should be emphasized by working with them. 1
21. Interest is high. 1
22. A workable basic material. 1
23. Combines well with other crafts. 1
24. Develops the imagination. 1
25. The natures of different metals challenge pupils. 1
26. Universal application. 1
27. Good for problems of design. 1
28. Gives feeling of depth or third dimension. 1
29. Leads to home-workshop activity. 1
30. Important for general information. 1

The reasons why metal art should be excluded in a secondary school crafts program, as listed by high school personnel, are shown below.

SHOULD BE EXCLUDED

1. Too expensive. 2
2. Spinning is too involved. 1
3. Some kinds of metal work are noisy and disturb other classes. 1

TABLE XIII shows the results of the inquiry as to the important topics within the subject of metal art. There is some divergence of opinion. This will be discussed in the paragraphs following the table.
TABLE XIII
CONTENT OF METAL ART UNIT

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>#TOTAL NUMBER OF REPLIES</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>METAL FOIL TOOLING</td>
<td>57</td>
<td>100</td>
<td>160</td>
</tr>
<tr>
<td>CHASING</td>
<td>31</td>
<td>54</td>
<td>124</td>
</tr>
<tr>
<td>SPINNING</td>
<td>23</td>
<td>40</td>
<td>115</td>
</tr>
<tr>
<td>LOST WAX CASTING</td>
<td>15</td>
<td>26</td>
<td>99</td>
</tr>
<tr>
<td>FORMING, RAISING, BEATING DOWN</td>
<td>9</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>ETCHING</td>
<td>4</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>SAWING AND PIERCING</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>ENGRAVING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OVERLAY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLANISHING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENAMELING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEINING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOLDERING</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

# All per cents are given as percentages of the total number of replies.

* All items below this point were added by respondents.
DISCUSSION

It may be noted in TABLE XIII that "metal foil tooling" heads the list of topics under metal art craft. This topic was checked by approximately 70 per cent of all respondents. This popularity may be due to the ease of the manipulation involved and the low cost, both for tools and materials. Although more elaborate tools may be purchased, a piece or two of dowel rod may be sharpened to desired shapes at a cost of about ten cents. No machine tools are needed. The operation may be simple enough for a child, but may also be of sufficient difficulty, in the more elaborate designs, to challenge the better pupils. It is the belief of the majority of those reporting that metal foil tooling is important in metal art.

"Chasing" is a method of embellishment for metal articles. The results, in some respects, resemble metal tooling. Instead of the metal being pressed to the desired shape, it is forced into shape by tapping on small tools with different shaped points. The metal must be backed by pitch or other suitable material, which may be slightly messy. The process is within the ability of the average secondary school pupil, probably in the last three years of the secondary school. "Chasing" was checked by approximately 60 per cent of all respondents. It is considered important in metal art.
"Metal spinning" requires special equipment. Either a special lathe must be made to withstand the high pressures on its bearings or a regular lathe converted for the purpose. The tools used to force the metal are large and require a boy of substantial size to manipulate them. There is a certain amount of danger always present, especially for those who do not pay strict attention to the work at hand. The preceding remarks probably account for the lowered popularity of this topic. It may be noted that the industrial arts people, who are most likely to have and to enjoy this type of equipment, rate spinning the highest with a 62 per cent response; while the art group, which usually does not have this type of equipment, rates it lowest with 26 per cent of their responding personnel checking the item as important. Only 33 per cent of the high school people reporting checked it as "important".

It is believed by the writer that the data here, together with the reasons listed, indicate that "metal spinning" may be important to selected pupils but that caution must be exercised in its use. It is suggested that, in the secondary schools, much of the value of this topic might be attained by a teacher lecture-demonstration. It is further suggested that secondary school pupils be limited to the softer metals, such as pewter and aluminum. With proper instruction and supervision, many beautiful and valuable
articles may be made by this method, however.

"Lost wax casting" is relatively new to the schools. It has been used by jewelers and dentists for many years under another name. Probably one reason for its lack of popularity is its newness. Articles are formed in wax leaving a plaster mold, and then the mold is filled with molten metal, forced in by mild centrifugal force. This might more properly be a part of jewelry making, as has been suggested on the information sheet. It seems to be gaining in popularity, however. It would be well to investigate this topic again a few years hence to be able to determine whether the data here indicate a true picture of the status of this minor craft.

Of the topics that have been written in under metal art, the "forming of metals with hammer or mallet" seems to be important. This was written in by approximately 13 per cent of all of the people responding. While the figure is not large, a spontaneous write-in of that amount does indicate that it is of importance in the metal art unit.

"Metal etching" received an approximate 8 per cent write-in. This write-in indicates some importance in the unit, but not to the extent of the preceding topics.

Several items were added which the writer believes are not proper topics. They appear, instead, to be only parts of topics. These items are "sawing and piercing",
"planishing", "peining", and "soldering".

"Engraving" was written in three times. This, in the opinion of the writer, does not constitute enough authority for saying that engraving is important in a metal art unit.

Overlay was written in two times. This is used in metal art, but is usually not considered as an important topic. It is usually demonstrated to those who have need for it. Again, two write-ins out of 369 respondents is not considered enough authority to call overlay an important topic in metal art.

"Enameling" was written in only one time. Enameling of metal is an old art, but relatively new to the public schools. This one write-in may or may not represent a true picture. It would be well to restudy this at some future time to determine whether thoughts regarding its value have changed. The one return does not, at this time, warrant listing enameling as an important topic in metal art.

A relatively new material representing a new industry is next to be considered. This new medium has been rated as more important than some of the old and well established crafts. TABLE XIV shows the importance of plastics as a craft subject as rated by the groups replying to the information sheet used in this study.
TABLE XIV
THE IMPORTANCE OF PLASTICS IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>IMPORTANT</td>
<td>43</td>
<td>76</td>
<td>146</td>
</tr>
<tr>
<td>#MOST IMPORTANT</td>
<td>4</td>
<td>7</td>
<td>94</td>
</tr>
<tr>
<td>NO RESPONSE</td>
<td>14</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
</tr>
</tbody>
</table>

* Figures for the "most important" rating are included within those for the "important" rating and are not to be added in computing the totals.

That plastics is considered important in a crafts program is evidenced by the approximately 84 per cent of all of those who responded having checked the item. Plastics is relatively new among the crafts. The response indicates a willingness on the parts of educators to examine this new product in the public schools so that the future citizens will better know its merits and faults in manufactured articles which are for sale. Plastics presents new problems of design which have not been handed down. This, in itself, presents a new challenge in design and color. It may be noted, however, that the art people rated it lowest among the group, with 76 per cent, while 91 per cent of the industrial arts people checked it, and 80 per cent of the high
school people checked it as an important craft.

When considering the status of plastics as one of the "most important" items of a craft program, one finds that these respondents show a considerable variation of belief. Only 7 per cent of the art people consider plastics as one of the "most important" crafts, but the data for the industrial arts people show that 54 per cent rate plastics as one of the "most important" crafts in a crafts program. The industrial arts group rates plastics above woodcraft and graphic arts as a "most important" subject. Of the high school personnel reporting, 34 per cent believe plastics to be one of the "most important" crafts.

A considerable number of people to whom the information sheet was sent did not respond to this item. This is, possibly, due to the newness of plastic material and to the consequent lack of training in or knowledge of this subject on the part of some of the older reporters. Considering the total response, plastics is indicated as an important craft in a crafts program. It may be considered as the fifth most important craft investigated in this study.

A number of thought-provoking reasons were listed by respondents for marking plastics as an important craft. A few reasons were given for the belief that plastics should not be included. These reasons, both for and against plastics as an important craft in the program, are recorded
here. They are listed in the order of frequency of appearance. The numeral following each indicates the number of times this exact or similar mention was made.

The reasons why plastics should be included in a secondary school crafts program, as listed by the art personnel replying, follow.

**SHOULD BE INCLUDED**

1. Use of new materials in new ways is always stimulating, and very important. 3
2. Teaches good three-dimensional design. 2
3. Lends itself to creative design. 1
4. Easily done. 1
5. Showy results. 1
6. Serves as an introduction to a new material. 1
7. Excellent, if kept in good taste. 1

The reasons why plastics should not be included in a secondary school crafts program, as listed by these art personnel, are stated below.

**SHOULD NOT BE INCLUDED**

1. Too expensive for ordinary classroom. 1
2. Too many poor uses made of plastic. 1
3. This is a fad. 1
4. Not rosebuds in internal carving.
5. Of limited value. 1
The reasons that plastics should be included in a secondary school crafts program, as listed by these industrial arts personnel, are shown here.

**SHOULD BE INCLUDED**

1. Affords an opportunity to learn about a new material from which so many of our everyday articles are made. 3

2. A unique new material possessing tremendous possibilities. 12

3. Easily within the range of secondary school people. 6

4. Plastics are more important today than ever before. 5

5. Offers opportunity in design. 5

6. A good recreational and avocational activity. 5

7. Presents many creative possibilities. 4

8. Attractive. 3

9. Very interesting for students from beginners to the best advanced students. 3

10. The experiences and skills obtained in working with crafts are many. 2

11. A popular course. 2

12. Introduces techniques of working synthetic materials. 2

13. Necessary to a well-rounded education. 2

14. Simple application and wide use. 2

15. In comparison to other crafts, good results can be achieved easier. 2

16. This is the best of the craft materials. 1

17. Working of plastics require few tools. 1
18. A field not yet fully exploited. 1
19. A clean craft. 1
20. Teacher must be well trained. 1
21. Provides consumer information. 1
22. Plastic materials combine well with other materials. 1
23. A three-dimensional activity. 1
24. Learn industrial practices. 1
25. A great variety of projects. 1
26. Presents a wide range of expression. 1
27. Plastics are becoming a basic medium for fabrication. 1
28. Little loss of interest. 1

The reasons that plastics should not be included in a secondary school crafts program, as listed by the industrial arts personnel replying, are given here.

SHOULD NOT BE INCLUDED

1. Too expensive for school use. 5
2. Casting of plastics is not practical. 1
3. Often over-rated in importance. 1

The reasons that plastics should be included in a secondary school crafts program, as listed by the high school personnel reporting are:

SHOULD BE INCLUDED

1. An opportunity to experiment in a very popular new and unexplored material. 10
2. Has great interest and appeal. 10
3. It is so much a part of our daily lives that we should have some knowledge of it. 5
4. Introduces one of our newest industries. 4
5. Keeps pupils abreast of modern trends. 3
6. May lead to an interesting hobby. 3
7. Rapidly becoming one of our most used materials. 2
8. Inexpensive. 2
9. A modern medium knowledge of which will be of value later on in life. 1
10. Requires only moderate skill. 1
11. A basic industrial activity. 1
12. Combines excellently with other materials. 1
13. Completed projects are useful. 1
14. Beautiful and practical projects can be made with a minimum of effort. 1
15. An opportunity for creative design. 1
16. Requires simple tools. 1
17. The need for a smooth finish carries over to other projects in other crafts. 1
18. Helps students gain the feeling of success. 1

The reasons that plastics should not be included in a secondary school crafts program, as listed by high school personnel responding, are listed below.

SHOULD NOT BE INCLUDED

1. Cost very high. 3
2. More industrial than creative. 1
3. Too "gadgety". 1

4. Special equipment necessary. 1

5. Very little work in plastics compares in value with design in clay, metal, wood, and cloth. 1

The information sheet listed three major topics under the subject of plastics. The respondents were requested to add others which, in their opinions, should be included in the teaching of crafts. Eleven items were added in response to this request. TABLE XV shows the response to the content of the unit on plastics.
<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>#TOTAL NUMBER OF REPLIES</td>
<td>57 100</td>
<td>160 100</td>
<td>152 100</td>
</tr>
<tr>
<td>FORMING FROM FLAT SHEETS</td>
<td>32 56</td>
<td>126 79</td>
<td>89 59</td>
</tr>
<tr>
<td>INTERNAL CARVING</td>
<td>12 21</td>
<td>112 70</td>
<td>60 40</td>
</tr>
<tr>
<td>CASTING *</td>
<td>16 28</td>
<td>93 58</td>
<td>55 36</td>
</tr>
<tr>
<td>CEMENTING AND LAMINATING</td>
<td>4 3</td>
<td>3 2</td>
<td></td>
</tr>
<tr>
<td>CARVING</td>
<td>2 4</td>
<td>3 2</td>
<td></td>
</tr>
<tr>
<td>TURNING</td>
<td>2 1</td>
<td>1 1</td>
<td></td>
</tr>
<tr>
<td>FORMING FROM EXTRUDED SHAPES</td>
<td>3 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOLDING</td>
<td>2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQUID PLASTIC (NOT CASTING)</td>
<td></td>
<td>2 1</td>
<td></td>
</tr>
<tr>
<td>FORMING FROM BLOCK</td>
<td></td>
<td>1 1</td>
<td></td>
</tr>
<tr>
<td>MODELMAKING</td>
<td></td>
<td>1 1</td>
<td></td>
</tr>
<tr>
<td>COLORING</td>
<td>1 1</td>
<td></td>
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</tr>
<tr>
<td>JIG SAW</td>
<td>1 1</td>
<td></td>
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<tr>
<td>INJECTION</td>
<td>1 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# All per cents are given as percentages of the total number of replies.

* All items below this point were added by respondents.
DISCUSSION

Although a few plastics have been known for more than half a century, most of them have been developed within the last two decades. Research is being conducted daily in private industry and in the Armed Forces to discover new plastics, to improve the ones already known, and to find new uses for those now in existence. One of the best ways to discover the characteristics of a material is to work with it. The respondents, as shown in the above table, indicate that "forming articles from flat sheets" is the most important part of instruction in plastics. This item was checked by 56 per cent of the art, 79 per cent of the industrial arts, and 59 per cent of the high school personnel replying. In this form (flat sheets), many articles can be made by welding the sheets together in many ways. When heated, thermoplastic material can be formed into many interesting curved objects. Sheets of the same or different colors may be welded together, with appropriate cement, to form blocks which may be turned, carved, or sawed.

Listed second in importance, in the teaching of and about plastics, is "internal carving". This consists of drilling into a piece of plastic from the back side while looking into the top side and forming a design by manipulating special drills and burrs which are very similar to the drills used by dentists when preparing teeth for filling.
In the reasons listed, there are cautions about "making rose-buds". A rose seems to be the easiest thing for the beginner to carve. For the purpose of learning how to manipulate the equipment and learning the "feel" of the plastic, the writer sees no objection to a few roses. Many beautiful and interesting designs can be made by internal carving. It seems to this writer that the important contribution of internal carving is in the area of creative design.

The "casting" of plastic is considered by these respondents as of less value than the two previous topics. The usual projects in "casting" are done to preserve specimens of plant and insect life, and minerals. The future of many plastics industries lies in the field of casting plastics, with and without reinforcement. This is a rich field for experiment. It may well serve to foster the spirit of investigation in certain pupils. The Government is spending thousands of dollars each year in research and experiment in the casting of plastics. This writer has seen some of the first results of this research, for example, a small boat twelve feet in length, made of wood requires several days for construction by two carpenters. It needs constant attention and upkeep while in use. At present, a plastic boat of the same dimensions and much stronger requires little or no upkeep such as paint and caulking, costs less for materials, and is made in one day by two men. It is the
belief of this writer that the value of casting plastics in public school craft classes can not yet be adequately evaluated. It is very new, and should be given further study as progress is made in its development.

Eleven items were added as important topics in the teaching of plastics. The first, "cementing and laminating", should be included under "forming from flat sheets".

"Carving" (not internal) was mentioned five times. This seems to be too small a response to indicate a great amount of importance. Carving plastic is, in many respects, similar to carving wood. It may be accomplished with the same tools. Those who desire to carve plastic should be given the opportunity but, probably, on an individual basis. Carving may be done if time permits, but it is not indicated here as of major value.

"Turning" plastic was written in three times. This, obviously, requires larger squares or rounds of plastic and these are quite expensive. The operations of turning resemble those of turning metals. If the purpose is that of familiarizing the pupil with the lathe, then turning on less expensive metals would appear to be a better procedure. If a project requires a turned piece, and if the object is only to secure the turned piece, then the instruction in turning is of much less value. The properties of plastics can be discovered in much simpler ways than turning.
requires a lathe, which is a rather expensive piece of equipment. The topic of turning plastics is of questionable value for crafts instruction by classes, but could be valuable to interested individual pupils.

"Forming from extruded shapes", written in three times, is often accomplished in the upper elementary grades and the junior high school. The making of costume jewelry is usually quite interesting, and reasonable in cost. There is danger here of losing the real values of teaching plastics. The forms have been established, and all the pupil is required to do is to cut and polish. While this is worthwhile, the same operations plus many other ideas about plastics can be had from forming from flat sheets. It is this writer's belief that more values can be received by forming from flat sheets than from using extruded forms.

"Molding", written in two times, and those items written in only once — "forming from block", modelmaking", "coloring", jig saw", and "injection" — were written in too few times to be considered important topics. Coloring may be related information in forming from sheets, internal carving, or both. Jig saw is the name of a tool. It is assumed the respondent referred to the use of the jig saw in working plastics. This too is related information. Injection molding is a commercial method of reproducing many like articles. The injection molds are very expensive.
Aside from a knowledge of the process and the way it is done commercially on a production basis, there is little excuse for the process in the public schools.

Liquid plastics (not casting) was not included in the list of those items in the above paragraph. Although the write-in does not warrant much attention, a few remarks may be in order.

The use of "liquid plastic" as a finish for fine furniture, for preserving metal surfaces, and for use instead of varnish on marine equipment and boats is in its infancy. Liquid plastic is also used as an adhesive for many commercial products such as waterproof plywood. There is much that is not yet known about the use of liquid plastics for uses other than casting. This may well become an important subject at some future time.

Some reasons were given for not including plastics in a crafts program. The foremost of these reasons was in relation to cost and equipment. Plastics is expensive and a very large project made of plastic would probably be too expensive for the average pupil to afford. With careful selection of projects, however, much can be learned about the various plastics and their properties at a cost of about fifty cents.

Other reasons, such as, "this is a fad", "of limited value", "too many poor uses made of plastics", "too
gadgety" and "casting of plastics is not practical" seem to be of little real value in evaluating a plastics unit. The same could be said of metal or wood or clay. It is assumed that a good teacher will not let any course become too gadgety, etc.

The reason, "Very little work in plastics compares in value with design in clay, metal, wood, and cloth", gives a comparison that has some meaning. It should be part of a teacher's job to evaluate and choose those things that have the most value and to eliminate those that do not have sufficient relative value. The things that compare well in value with the others listed must be sought out and retained, and the others abandoned.

Ceramics, an age-old craft, is one of the crafts that was rated as important by the respondents to the information sheet used in this study. TABLE XVI shows the results of the ratings of ceramics in a crafts program as recorded from the information sheet sent out by this writer.
### TABLE XVI
THE IMPORTANCE OF CERAMICS IN A CRAFTS PROGRAM

<table>
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<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
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<tr>
<td><strong>IMPORTANT</strong></td>
<td>49</td>
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<td><strong>MOST IMPORTANT</strong></td>
<td>31</td>
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<tr>
<td><strong>NO RESPONSE</strong></td>
<td>8</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>57</td>
<td>100</td>
<td>160</td>
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</tbody>
</table>

* Figures for "most important" are included within those for "important", and are not to be added in computing the totals.

Of the 369 persons replying to the information sheet used, 302, or approximately 82 per cent, checked ceramics as "important". Approximately 45 per cent of all respondents reporting indicated that they believe ceramics to be one of the "most important" crafts in a crafts program.

Ceramics is one of the oldest of the crafts and industries. Ceramic articles have been found in the tombs of the most ancient people. The subject is rich in history, and possesses unlimited possibilities for design. An examination of the ratings of this craft in the public school seems justified as shown in TABLE XVI. The art people in particular see important values in the craft. A glance
at TABLES X, XII, and XIV show that these art people have rated ceramics above woodcraft, metal art, and plastics in value. Many values were listed by these reporters in the reasons given for including ceramics in a secondary school crafts program. A few reasons were given why the respondents believed the offering of ceramics in the secondary schools to be impractical or undesirable. A tabulation of these responses is given below, listed in the order of frequency of mention. The numeral following a statement indicates the number of times this, or a very similar statement, was made.

The reasons that ceramics should be included in a secondary school crafts program, as listed by the art personnel replying, follows.

**SHOULD BE INCLUDED**

1. Good for teaching three-dimensional design. 2
2. Basic opportunity for design in plastic materials. 1
3. Lends itself to creative design. 1
4. Develops an appreciation of good design in commercial products. 1
5. Appreciation of shapes combined with use is valuable. 1
6. Presents opportunities for problem-solving. 1
7. A fine home work where clay is available. 1
8. A valuable outlet for creative ability. 1
9. Within the ability of secondary school people. 1
10. A craft giving great satisfaction. 1
11. Inexpensive. 1
12. Exciting. 1
13. Excellent expression. 1
14. Manipulation unparalleled. 1
15. Personal contact with the medium in making things of clay. 1
16. Good, if school can afford the equipment. 1

The four reasons why ceramics should not be included in a secondary school crafts program, as listed by these people in art are:

**SHOULD NOT BE INCLUDED**

1. Requires expensive special equipment. 1
2. Requires technical skill. 1
3. Requires more time than is usually available. 1
4. Eliminate slip casting as it does not require creative work. 1

The reasons that ceramics should be included in a secondary school crafts program, as listed by the industrial arts personnel reporting, are stated below.

**SHOULD BE INCLUDED**

1. Unusually good medium for developing good design and self-expression. 9
2. This is the most creative material to work with. 8
3. An excellent leisure-time activity. 5
4. Popular, requires few tools, inexpensive. 5
5. Universal interest. 3
6. A basic material and a basic industry. 3
7. The study of a useful material. 3
8. Necessary to a well-rounded education. 2
9. Provides experiences for design and hand manipulation which are different in nature from those of other crafts. 1
10. Creates a sense of proportion and beauty not inherent in other areas. 1
11. Develops motor control. 1
12. An age-old and still active craft. 1
13. Appeals to the innate tendency to fashion with the hands with a minimum of tools. 1
14. Gives the opportunity to reproduce clay models, art pieces, etc. 1
15. Has value in expression of one's individuality. 1
16. Provides consumer values. 1
17. One of the best materials for developing three-dimensional appreciation. 1
18. As important as other phases industrially. 1
19. Rich in historical and informational topics. 1
20. Exploratory to a vocation. 1
21. Very good therapeutic value. 1
22. Develops artistic ability. 1
23. Little equipment is needed. 1
24. Provides a great opportunity for experimentation. 1
25. Offers exploration in a popular area and much used industrial products. 1
26. A "must" in a crafts area. 1
27. Materials are readily available. 1
28. Pottery has been one of man's chief products by which he expressed his sense of beauty and utility since the beginning of recorded history. 1
29. Can be pursued at home without too great outlay of money. 1

The three reasons why ceramics should not be offered in a secondary school crafts program, as listed by the industrial arts people replying, are shown below.

**SHOULD NOT BE INCLUDED**

1. A very messy craft. 1
2. Requires too many special tools. 1
3. Has some limitations in that kilns are usually not available for recreational purposes for most people. 1

The reasons that ceramics should be included in a secondary school crafts program, as listed by these high school personnel, are given below.

**SHOULD BE INCLUDED**

1. Results in useful and decorative pieces for the home or for gifts. 5
2. Affords many opportunities for creativeness. 5
3. A popular, practical craft. 4
4. Quite inexpensive; economical. 4
5. Promotes coordination of eye, hand, and mind. 3
6. Develops originality and creative ability. 3
7. This is a basic industrial material. 2
8. Helps one to understand color and design. 2
9. Develops many skills. 2
10. There is no better medium to promote self-expression, the aesthetics, work habits, etc. 2
11. A reasonable amount of skill and effort produces a piece of work of much beauty and utility. 2
12. Opportunities for art expression. 2
13. The challenge exceeds any talent. 2
14. Interesting and useful. 2
15. Is a good hobby. 2
16. High percentage of successful projects. 1
17. Gives an opportunity to experiment with form. 1
18. Combines artistic taste with good workmanship. 1
19. A very good three-dimensional medium. 1
20. Ceramics is a craft that has been and continues to be both artistic and practical. 1
21. It is a craft that reaches all groups of people. 1
22. Good for individual expression. 1
23. Vocational exploratory possibilities. 1
24. Usually every child likes clay work. 1
25. It is always a thrill to know what comes out of the kiln. 1
26. Opportunities for original and varied organization are unlimited. 1
27. An appreciation of one of our more important industries. 1
28. Causes an appreciation for products. 1
29. Many practical applications to the home. 1
30. Offers an opportunity to think in three dimensions. 1
31. A good historical medium. 1
32. Taught to raise the discrimination level of our people. 1
33. To release tensions and to build appreciations needed in better home living. 1
34. Historical significance of the part played by ceramics in the lives of ancient peoples. 1
35. An appreciation of the material, its uses, and limitations. 1
36. An old art. 1
37. Clay is an easy-working plastic material that provides many opportunities for the child. 1

The six reasons why ceramics should not be included in a secondary school crafts program, as listed by these high school personnel, are stated below.

**SHOULD NOT BE INCLUDED**

1. Too expensive. 2
2. Should not be included in the junior high school. Pupils' sense of proportion is not fully developed. 1
3. Takes special costly equipment. 1
4. Limited interest. 1
5. It takes too long to fire the clay. 1
Several processes are involved in producing ceramic articles. The importance of these topics within the subject of ceramics, as listed by respondents to the information sheet, will be found in TABLE XVII.
### TABLE XVII

**CONTENT OF CERAMIC UNIT**

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<thead>
<tr>
<th></th>
<th>ART N</th>
<th>%</th>
<th>IND. ARTS N</th>
<th>%</th>
<th>HIGH SCHOOLS N</th>
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</tr>
</tbody>
</table>

# All per cents are given as percentages of the total number of replies.

* All items below this point were added by respondents.
DISCUSSION

Many methods are available to the potter in the construction of a ceramic product. He may shape it in his hands, cut slabs of clay and weld them together, roll the clay into a long cylinder and coil it to shape, cast the clay in molds, or use any of a number of other methods. It is important to know, in the limited time available in a craft class which of these methods will bring the greatest returns in terms of the educational objectives for the time and effort expended. Accordingly, three common topics pertaining to techniques were listed on the information sheet, with a request for others to be added by the respondents.

Little difference in the relative value of "slab" and "coil" methods may be noted in the replies. Both are rated as "important" topics.

"Slip casting", one of the most used commercial methods, is rated, as a whole, as somewhat less in importance. The art people objected that this method takes away the creative element. The industrial arts group rated it as of nearly equal value to the slab and coil methods. Slip casting, with an approximate 53 per cent of all respondents concurring, may be considered an "important" division of ceramics.

A number of respondents have written in the word "wheel". This refers to the use of the potter's wheel in
shaping the clay into useful and interesting articles. The art people, with a 16 per cent write-in, show the most interest in this form. The potter’s wheel is a very old method of producing pottery. The art people are probably more enthusiastic about this method because it leaves the potter more on his own resources. The shaping is done mostly with the hands. Thirteen industrial arts personnel, or 8 per cent of this group added this item; but only two, or 1 per cent of the high school people, wrote it in. This may indicate that the secondary school administrators and teachers consider this method too difficult for the maturity and dexterity of secondary school pupils. When the need of the pupil indicates the use of the potter’s wheel, the necessary instruction might be given, of course. For those who do not choose to use the wheel or could not use it with benefit to themselves, a demonstration by the teacher might well be the best method of presentation of this idea.

"Modeling" was added by a total of seventeen people or approximately 5 per cent of the total respondents. This is a small number to cause one to attach great significance to this possible topic. There certainly is nothing wrong with teaching modeling if it fills a need. The teacher in immediate charge must decide whether modeling, in his situation, will bring greater return in accordance with the aims and objectives than some of the more common methods employed
in ceramics. Communities differ, for example, should the same material be taught in East Liverpool, Ohio, the center of one of the nations leading potteries, as might be taught in Flagstaff, Arizona, near which the Hopi Indian pottery is made? Any program must be flexible enough to be adaptable to the needs of the individual, to fit in with community interests, and still to produce the desired outcomes for society as a whole.

"Glaze" and "firing", of nearly equal frequency of mention, were added as important topics for consideration in the ceramics crafts for secondary schools. A piece of pottery should be fired to make it of value. Glazing, both under glaze in colors and overglaze, either clear or in colors, are also important in the finished product. Some of the objections listed against including ceramics were that firing takes too long and that the equipment, mostly the kiln, was too expensive. Firing takes someone's attention for a continuous period of at least six hours, and usually more. This is more time than pupils normally can spend. This writer, when he taught ceramics as a craft, assumed the responsibility of the kiln. It is believed that the responsibility of firing must be assumed by someone other than pupils. Pupils may stack the kiln and learn its value and operation. The glaze may be applied by the pupils, and is a part of the plans for decoration. Although
decoration was not listed on the information sheet, and was written in one time only, it is assumed that the decoration, if any, would be a part of the related information in glazing. Although decoration is not listed here as "important", it should not be neglected.

Two items were added that, in the opinion of the writer, are out of place. "Sculpture" is the result of one or more methods or processes. It has some special considerations not always present in other types of ceramic articles but is believed not to return as much value as some of the topics already discussed. "Figurines", like sculpture, are products and are not listed here as valuable topics.

"Free form", "pinch pots", and "carving" were written in five, four, and one time respectively. Although each may be important at times, the number of responses does not indicate values comparable with the other topics.

Along with ceramics, one of man's first endeavors was the weaving of sticks and grasses and later threads into useful articles for shelter, clothing, and decoration. Weaving is still one of man's leading endeavors. Weaving was rated by respondents as next in importance after ceramics. TABLE XVIII shows the importance of weaving in a crafts program, as found in this study.
TABLE XVIII

THE IMPORTANCE OF WEAVING IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
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<tbody>
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<td>N</td>
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<td>N</td>
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<tr>
<td>IMPORTANT</td>
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<td>MOST IMPORTANT</td>
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<tr>
<td>NO RESPONSE</td>
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<td>34</td>
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<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
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</table>

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The importance of weaving in a secondary school crafts program is indicated by the approximately 76 per cent of the total respondents checking it as "important". The rating given it by the art people is higher than those of the other crafts discussed except graphic arts, which has the same percentage of response, and leathercraft. This indicates that the art people place more emphasis on this craft than either the industrial arts people or the secondary school people. Traditionally, weaving has not been an important subject in the preparation of industrial arts teachers, yet it is one of the world's largest industries. This may account for the difference in emphasis shown by the
industrial arts people and the high school people.

Weaving is adaptable to almost any level of intelligence and dexterity to be found in the secondary schools. The principles may be taught and exercises given very inexpensively. Some of the reasons listed for excluding this craft were that "materials are too expensive", "not enough opportunity for creativeness", and "too short periods and lack of space". These are hardly borne out by those respondents who see important values in this craft. Modern looms are splendid, if they can be had; but much teaching of weaving can be done without them. Even a modern four-harness loom may be had for much less cost than an average woodworking machine or a metal-working lathe, or a shaper, or a milling machine. The relative values received by the largest number of people must be considered when deciding whether to buy a tool for woodworking, for metal-working, for weaving, or for any other activity.

Of those who checked weaving as "important", eighteen or 32 per cent of the art people, thirty six or 23 per cent of the industrial arts group, and thirty-seven or 24 per cent of the high school personnel checked it as being one of the "most important" in a crafts program.

These respondents gave many reasons for their belief that weaving is an important craft. These reasons, together with the four reasons listed by high school persons
for not offering the craft, are tabulated below. They are listed in the order of their frequency of response among the three different groups.

The reasons why weaving should be included in a secondary school crafts program, as listed by these art personnel, are:

**SHOULD BE INCLUDED**

1. Good for teaching color, design, patience, and accuracy. 4
2. Interest developed leads to consideration of fabrics. 3
3. Develops ability to select textiles intelligently. 2
4. Great interest in weaving now. 2
5. One of the finest introductions to a basic need of human-kind. 1
6. Introduces many materials for use. 1
7. Children can make things they like for themselves and for gifts. 1
8. Gives variety in program. 1
9. Usable as well as opportunity for suitable design. 1
10. The discipline of designing and executing weaving problems is excellent for secondary level — plus the practical use angle. 1
11. Creative expression. 1
12. Makes useful hobby. 1
13. Gives structural design. 1
14. Especially for girls, but also for boys. Cloth next to food, is man's greatest product. 1

15. Make their own looms; learn processes of weaving and its history. 1

16. Excellent teaching method stressing texture as an artistic medium. 1

There were no statements that weaving was not important from the art personnel in this study.

The reasons why weaving should be included in a secondary school crafts program, as listed by the industrial arts personnel, follow.

**SHOULD BE INCLUDED**

1. High avocational and recreational values. 8

2. Opportunity to create. 6

3. Gives a foundation for the understanding of the processes involved in making textiles. 5

4. Consumer-knowledge values. 4

5. Practical, simple and inexpensive. 4

6. Requires little in the way of tools, equipment and space. 4

7. Useful homemaking craft. 3

8. Gives experience in working out designs. 3

9. Comprehension of materials, wearing quality, value, etc. 2

10. Vocational exploration. 2

11. Provides a chance to see good design at work, even in textiles. 2

12. Worthwhile for a well-rounded education. 2
There were no statements that weaving was not important from among these industrial arts personnel.

The reasons why weaving should be included in a secondary school crafts program as listed by the high school personnel in this study, are given below.

**SHOULD BE INCLUDED**

1. A wonderful hobby and worthy use of leisure time. 13

2. Interesting and adaptable to abilities. 4
3. Basic industrial process. 3
4. Vocational guidance. 3
5. Teaches quality, patience, and neatness. 3
6. Useful articles are made. 3
7. Offers a much needed training in design in textiles. 2
8. Presents opportunities for exploring in color and texture. 2
9. Fine for slow-moving groups and handicapped children; inexpensive. 2
10. Easily done; good activity for children. 2
11. Knowledge of weaving enables college students to become counselors at summer camps. 1
12. Requires less manipulative and creative ability than many crafts, yet produces excellent projects. 1
13. An opportunity for the child to create his own design into a fabric woven with his own hands. 1
14. Teaches color harmony and a good understanding of fabrics.
15. All original patterns made commercially are first made and tried on hand looms. 1
16. Useful in special education. 1
17. Uses many and varied materials. 1
18. Helps to make an intelligent consumer, sane knowledge of materials, etc. 1
19. Profitable if developed into a career. 1
20. Creativity; color combinations; design. 1
21. Hand looms make this available to more students. 1
22. Inexpensive, by using scrap materials. 1
23. Wonderful way to teach color blending. 1  
24. Provides an emotional release. 1  
25. Builds appreciation needed in better homemaking. 1  
26. Presents new materials and problems. 1  

The four reasons why weaving should not be included in a secondary school crafts program, as listed by these high school personnel, are stated below.

**SHOULD NOT BE INCLUDED**

1. Should be offered at the elementary grade level. 1  
2. Materials too expensive. 1  
3. Not enough opportunity for creativeness. 1  
4. Too short periods and lack of space. 1  

Several methods of weaving are in use now as they were in times past. TABLE XIX shows the results of this survey regarding the relative importance of the various types of weaving as they best serve the purposes and the aims of the public secondary schools.
TABLE XIX

CONTENT OF THE WEAVING UNIT

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
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<td>#TOTAL NUMBER OF REPLIES</td>
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<td>80 50</td>
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</table>

# All per cents are given as percentages of the total number of replies.

* All items below this point were added by the respondents.

The "simple loom" is indicated in TABLE XIX as being the "most important" topic in weaving, the response to this item being made by approximately 58 per cent of all of these respondents. It may be noted that the art people rate this
item much higher than do the industrial arts or the high schools people.

The "card loom" was rated second in value in the teaching of weaving. Both the card and the simple loom are very inexpensive, and employ the basic principles of weaving. The space occupied by them is small, and the products can be very attractive. As an introduction to weaving, either or both may be used.

Four-harness loom weaving, rated third in importance by these respondents, is necessary for a full understanding of weaving. Hundreds of designs and patterns may be made on this loom. Small bench-type looms of this kind are relatively inexpensive, and occupy a small space. The larger looms are capable of producing fine fabrics. In industry, a new pattern is made first by hand on one of these looms and, if found satisfactory, is then manufactured on power looms. On the jack-type four-harness looms, two harnesses may be removed and the loom used as a two-harness loom.

TABLE XIX shows other items that were added by these respondents. The frequency of the response about these items is so small that their importance, in comparison with the others already discussed, may be considered as relatively small.
Personal adornment has been and continues to be important in the affairs of mankind. Interest in jewelry seems to be increasing as a craft in the secondary schools. TABLE XX shows the results of this study regarding jewelry as a craft in the secondary schools.
### TABLE XX

THE IMPORTANCE OF JEWELRY AND LAPIDARY IN A CRAFTS PROGRAM

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</table>

* Figures for "most important" are included within those for "important" and are not to be added in computing totals.

Some importance is attached to jewelry and lapidary work as a part of a crafts program for secondary schools. It may be observed that this craft does not compare in importance, as estimated by these respondents and recorded in this and previous tables, with the crafts previously discussed in this thesis. The percentage of the total respondents checking jewelry and lapidary work as "important" was approximately 42 per cent while that of leathercraft, for example, was 95 per cent. This seems to indicate that jewelry and lapidary work, though important, may not be considered one of the "most important" parts of a crafts program. This conclusion is confirmed by the fact that only
26 per cent of the respondents checked this item as a "most important" craft.

In studying over the reasons why these people believed that jewelry and lapidary work should not be offered in the secondary schools, it may be noted that they believe the craft to be too expensive for the returns, much special equipment is needed, the dexterity of the pupils is not sufficiently developed, and well prepared teachers are not available. It has been suggested that jewelry and lapidary work might be a part of metal art and that those whose interests and abilities lie in this field might profit by experience here. There is more than an indication that the relative value of this craft is being questioned.

Many of the projects which might be labeled "jewelry" are really quite simple and inexpensive. To make a silver or gold ring and mount a stone in it is quite a different matter. Any small item of personal adornment, whether it be metal, plastic, or wood, might be labeled jewelry.

The reasons given by these reporters why this craft should or should not be included in a secondary school crafts program are listed, in the pages which follow, in the order of their frequency of mention. The numeral following the reason indicates the number of times that it, or a very similar reason, was given.
Reasons that jewelry and lapidary work should be included in a secondary school crafts program, as listed by these art personnel, are stated below.

**SHOULD BE INCLUDED**

1. Lends itself to creative design. 2
2. Students should have some experience with precise, exact work with small pieces. 1
3. Has proven to be of interest to students. 1
4. Practical application of design. 1
5. Appreciation of materials. 1
6. Good, if the instructor is expertly trained. 1
7. Provides an opportunity to create something which can be displayed on the person of its creator. 1
8. A good outlet for creative ability. 1
9. Vocational exploration. 1
10. Application of commercial products. 1
11. May lead to a worthwhile hobby. 1
12. Leads to exploration and invention. 1

Reasons why jewelry and lapidary should not be included in a secondary school crafts program, as listed by these art people, follow.

**SHOULD NOT BE INCLUDED**

1. Better for technical schools. 2
2. Too expensive for most high schools. 2
3. Much special equipment is needed. 1
4. Must have especially trained teachers. 1
5. Scale is too small for students of this age level. 1
6. Some danger with the torches with youngsters operating them. 1

Reasons why jewelry and lapidary work should be included in a secondary school crafts program, as listed by these industrial arts personnel, are given here.

**SHOULD BE INCLUDED**

1. Usually of great interest to all students. 8
2. A good hobby activity for the advanced student and adults. 8
3. Appreciation of the skills required to produce fine jewelry. 3
4. Affords opportunity to see the possibilities in fashioning articles of beauty from natural materials. 3
5. Creative design is necessary with more critical thinking involved. 3
6. Necessary to a well rounded education. 2
7. Good in regions where raw products are plentiful. 2
8. Very popular. 2
9. Projects are of lasting interest. 2
10. A good outlet for those with ability and interest. 2
11. Provides experiences in aesthetic values in areas where many skills that are applicable to other areas, with slight modification, are provided. 1
12. This area is often overlooked as an exploratory guidance area. 1
13. Could develop into a business. 1
14. Creative genius will find this a playground.
15. Completed projects have high monetary value.
17. Good for girls.
18. Within the ability of secondary school pupils.
19. Depends on the training of the teacher.
20. Easy to handle.
21. Provides interest in geological and archeological development of the earth.
22. Presents opportunities for self-expression.
23. Can aid in keeping the silver of the home in good repair.
24. Offers introduction to precision work.
25. Develops finger dexterity.
26. A fine medium for combining two materials, metal and stone.
27. To acquaint the student with tools and materials.
28. To give an appreciation and knowledge of the craft.
29. Teach the uses of expensive materials.
30. Means of exploring a trade.
31. Teaches consumer information.
32. When equipment and instructional personnel are available.
33. Offers background knowledge.
34. This, like many other crafts, could help to uncover a student's latent abilities.
Reasons why jewelry and lapidary should not be included in a secondary school crafts program, as listed by members of this industrial arts group, are:

**SHOULD NOT BE INCLUDED**

1. Should be in metal art. 3
2. Very intricate. 1
3. This item should be a part of metal craft offerings. 1
4. Too expensive for the number of pupils interested. 1
5. A difficult, involved, and tedious study of little intrinsic value. 1
6. This is too slow to hold the interest of the students. 1
7. This seems to be beyond the secondary school level. 1
8. Too much expensive equipment required. 1

Reasons why jewelry and lapidary work should be included in a secondary school crafts program, as listed by the high school personnel included in this study, follow.

**SHOULD BE INCLUDED**

1. Leads to a good hobby. 5
2. Particularly valuable to develop dexterity and manipulative skills. 5
3. Gives an appreciation of our natural resources. 5
4. Opportunity for creative expression. 3
5. Pupil interest is high. 3
6. Explore the jeweler's trade. 3
7. Learn the properties of metal and metal working. 2
8. A medium to which design is well adapted. 2
9. Jewelry has a very personal appeal. 2
10. Increases consumer knowledge. 2
11. A chance to use design in jewelry. 1
12. Those with artistic expression find an outlet in making fine jewelry. 1
13. Students love the magic of lapidary. 1
14. The personal nature of the product offers an incentive for good workmanship. 1
15. A rich field for creative activity. 1
16. Increases aesthetic appreciation. 1
17. An exploratory craft. 1
18. Minimum equipment necessary. 1
19. Many local materials may be used. 1
20. Helps to meet a basic human need—self-adornment. 1
21. A healthful leisure-time activity. 1
22. The results give much satisfaction. 1
23. A very disciplined craft. 1

Reasons why jewelry and lapidary work should not be included in a secondary school crafts program, as listed by these high school personnel, are given below.

**SHOULD NOT BE INCLUDED**

1. Cost of equipment and materials is high. 6
2. Qualified teachers are not available. 1
3. Time element makes it difficult to get and maintain interest. 1

4. Work of this kind is suitable only to the talented students and would be unsuitable and unrewarding to the average student. 1

5. Too complex for schools with limited facilities. 1

6. Probably the most tedious of the crafts. 1

7. A vocational subject. 1

Jewelry may be made and decorated in various ways. TABLE XXI shows the results of this survey regarding the relative importance of the various methods of fabrication and decoration as they best serve the purposes and aims of the public secondary schools.
### TABLE XXI

**CONTENT OF A JEWELRY AND LAPIDARY UNIT**

<table>
<thead>
<tr>
<th>#TOTAL NUMBER OF REPLIES</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIRE</td>
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<td>54</td>
<td>89</td>
<td>56</td>
<td>66</td>
<td>43</td>
</tr>
<tr>
<td>CUTTING &amp; POLISHING STONES &amp; SHELLS</td>
<td>24</td>
<td>42</td>
<td>94</td>
<td>59</td>
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<td>77</td>
<td>48</td>
<td>46</td>
<td>30</td>
</tr>
</tbody>
</table>

* All per cents are given as percentages of the total number of replies.

** All items below this point were added by the respondents.
In considering the content of the jewelry and lapidary unit, it appears that the "making of wire jewelry" is considered "most important" by the respondents. This work is relatively simple to accomplish and is probably within the abilities of secondary school pupils. The question arises, however, will the making of wire jewelry offer as many values, as they are set forth by the aims of education, as some other craft and how long will this kind of jewelry remain in fashion?

Cutting and polishing stones may be done with small expense for equipment. Commercial equipment would make the cost much higher. The topic of "cutting and polishing stones" is indicated as the second topic in importance in this craft. It may or may not be a part of jewelry. There is great interest in this subject in some sections of the country, while in other sections it is nearly unknown in the secondary schools. Few teachers are now prepared to teach this subject adequately and, if it is not properly taught, little value will be derived from it.

The "casting of jewelry" by the centrifugal method is new to the public schools and to the institutions which prepare teachers for these schools. It is not a particularly difficult operation, nor does it require expensive equipment. Dentists have for some time been using this method for making precision inlays and other small castings.
The replies received in this study indicate that "casting" has importance in a jewelry and lapidary unit.

"Soldering", which was written in sixteen times, is necessary in any extended unit of jewelry. It is usually considered as necessary related information, although its special application to the precious metals may warrant extra time for its discussion and demonstration. The technique of soldering jewelry is usually somewhat different from routine soldering operations for larger pieces of tin, zinc, or copper.

Some items were written in which seem to this writer, to be out of place or to have little meaning. The term "flat silver" means very little as it stands; and sawing and peining are operations rather than topics.

Other topics were added by these reporters, but the numbers of responses seem not to warrant their inclusion as major topics in the unit on jewelry and lapidary work.

This unit, jewelry and lapidary work, was named as belonging in the metal art craft by several respondents. This reclassification was made by drawing a circle around the item, with an arrow pointing to the subject of metal art. No verbal responses were made that could be included in this study. Obviously, however, some of these respondents believe that jewelry is not a separate craft but believe it
to be a part of the metal art craft.

Next to be considered is the subject of basketry. This is an old craft, and is still practiced commercially. Some educators question its value in secondary schools, and few rate it as one of the "most important" crafts. A summary of the responses regarding its importance may be found in TABLE XXII.
### TABLE XXII

**THE IMPORTANCE OF BASKETRY IN A CRAFTS PROGRAM**

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
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<th>IND. ARTS</th>
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<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>IMPORTANT</td>
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<td>60</td>
</tr>
<tr>
<td>&quot;MOST IMPORTANT&quot;</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
<td>100</td>
</tr>
</tbody>
</table>

* Figures for "most important" are included within those for "important" and are not to be added in computing totals.

Basketry, according to the data in TABLE XXII, has some value as one of the crafts that might be offered in the secondary schools. This is shown by the approximate 56 percent of all the people reporting having marked it as "important". It is not generally considered as one of the "most important" crafts, however, since less than 9 percent have so marked it.

There is some belief among those replying that basketry belongs in the unit on weaving, perhaps as one of the major topics of weaving. There is also some general belief that it may be used among special pupils where the other crafts might not fill their needs as well. It is possible that
basketry might be a good craft for the mentally retarded and for people needing therapeutic treatment, or that this craft belongs in the elementary school, perhaps as an introduction to weaving.

Those who object to basketry as a secondary school offering believe it to be dull and to offer no challenge to intelligent pupils. Others have no particular objection to the craft itself, but believe that other crafts offer greater values.

It may be noted that approximately 41 per cent of those responding to the information sheet did not mark this item at all.

The reasons that the respondents who did reply gave for marking this craft as they did are listed below in the order of their frequency of mention.

Reasons that basketry should be included in a secondary school crafts program, as listed by the art personnel replying, are stated below.

**SHOULD BE INCLUDED**

1. Uses for native materials — pine needles, vines, etc. 3
2. Teaches color, form, texture. 2
3. Lends itself to creative design. 2
4. Interesting to children. 1
5. Gives variety in program. 1
6. In particular sections of U. S. 1
7. It can be therapeutically functional. 1
8. Very useful craft. 1

Reasons that basketry should not be included in a secondary school program, as listed by these art personnel, follow.

**SHOULD NOT BE INCLUDED**

1. Basketry should be included in weaving. 1
2. Not very usable. 1
3. Develops mainly motor skills and manipulation; not creative growth. 1
4. Occupational therapy or for special children. 1
5. Not enough to think about most of the time; dulling to the senses. 1
6. Mostly it is just busywork. 1
7. Dated. 1
8. Too many useless things are made. 1

Reasons why basketry should be included in a secondary school crafts program, as listed by the members of industrial arts group replying, are stated below.

**SHOULD BE INCLUDED**

1. Common materials are plentiful and inexpensive. 8
2. Interesting leisure-time activity. 4
3. Improves skills and dexterity of hands. 3
4. Requires limited space and equipment. 3
5. Many can work at one time; practical. 3
6. Helps to give an appreciation of the home and its furnishings, and to provide useful articles for the home. 3
7. Develops artistic skill. 2
8. Worthwhile for a well-rounded education. 2
9. Easy to work; interesting. 2
10. Provides foundational values and skills leading into upholstery and with other areas as a combination for producing a finished product. 1
11. Has values in therapy. 1
12. Provides information about industrial processes. 1
13. Presents opportunity to reproduce various woven projects. 1
14. Vocational exploration. 1
15. Teaches patience. 1
16. Good crafts for girls. 1
17. Gives an insight into our historical past. 1
18. Gives opportunities for creative design. 1
19. Beginners are successful. 1
20. Gives an appreciation for this art. 1
21. Basketry will soon again become popular. 1
22. Satisfies the objectives of industrial arts, as outlined in A.V.A. Bulletin. 1
23. Especially adaptable to junior high school pupils. 1

Reasons why basketry should not be included in a secondary school crafts program, as listed by these industrial arts personnel replying, are given here.
SHOULD NOT BE INCLUDED

1. Of little value to secondary school level; excellent in elementary industrial arts. 2

2. There are too many fields of work of tangible value in education. We should not waste time on one that renders little or no information. 1

3. Outmoded. 1

4. Out of date, with permissible exceptions. 1

5. Secondary school pupils are more interested in other crafts. 1

6. Not as vital to the program as other crafts. 1

Reasons why basketry should be included in a secondary school crafts program, as listed by members of the high school personnel replying, appear below.

SHOULD BE INCLUDED

1. Projects of utilitarian value can be made at low cost. 4

2. Students see possible uses of grasses and reeds and other native materials in utilitarian products. 3

3. Fine for slow-learning groups and handicapped children; and inexpensive. 3

4. Can lead to an interesting hobby. 3

5. Develops muscular control. 2

6. Vocational guidance. 2

7. Has carry-over value in making repairs to objects in its field. 1

8. Requires little equipment. 1

9. Necessary where house-furniture construction is offered. 1
10. Interesting and adaptable to abilities. 1
11. Useful for some students on a single project basis. 1
12. Teaches a basic knowledge of weaving. 1
13. Teaches them pattern and design. 1
14. Teaches a useful skill. 1
15. Easily done; good activity for children. 1
16. Desirable for both sexes. 1
17. Home leisure activities. 1

Reasons why basketry should not be included in a secondary school crafts program, as listed by members of this high school group, are given below.

**SHOULD NOT BE INCLUDED**

1. Suitable for special groups; handicapped, therapeutic, etc. 2
2. Should be offered at the elementary grade level. 1
3. Too impractical and elementary for high school pupils. 1
4. Lacks utilitarian value. 1
5. Material seldom seen in the modern home. 1
6. Low present-day appeal. 1
7. Except for simple projects, it is so often quite difficult. 1
8. Materials too expensive. 1
9. Not enough opportunity for creativeness. 1
10. Should be a part of weaving. 1

TABLE XXIII shows the results of the inquiry regarding the "important" topics within the subject of basketry.
TABLE XXIII

CONTENT OF BASKETRY UNIT

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th></th>
<th>IND. ARTS</th>
<th></th>
<th>HIGH SCHOOLS</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>#TOTAL NUMBER OF</td>
<td>57</td>
<td>100</td>
<td>160</td>
<td>100</td>
<td>152</td>
<td>100</td>
</tr>
<tr>
<td>REPLIES</td>
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<tr>
<td>REED</td>
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<td>CANE</td>
<td>15</td>
<td>26</td>
<td>66</td>
<td>41</td>
<td>60</td>
<td>39</td>
</tr>
<tr>
<td>RAFFIA</td>
<td>19</td>
<td>33</td>
<td>61</td>
<td>38</td>
<td>58</td>
<td>38</td>
</tr>
</tbody>
</table>

* All items below this point were added by respondents.

The principal topics under basketry, as they were listed by the respondents, are reed, cane, and raffia, in the order named. Reed is probably the most common basketry material, and its use differs from those of the other materials from which baskets are usually made. Cane is less commonly used, although it produces an excellent product. Cane may be more often used to weave backs and seats in certain types of furniture.
Raffia, used quite extensively by some of the Indian tribes of the United States, incorporates different principles of construction and, therefore, presents different problems. Raffia is most definitely a special topic.

Three items were added by the respondents. These items were "native materials", "yarn", and "splints". Native materials might include quite a number of materials, such as pine needles, willow twigs, suitable grasses, and could include hickory and oak splits. The latter material was written in by two respondents. These items of basketry are important only in specific localities. The teacher must be the judge in these cases, must weigh the expected values, and use or not use these native materials according to his best judgment. Yarn, written in only one time, does not seem to be of any value as a topic under basketry.

A craft which is little known at the present time, and which is generally misunderstood is that of rubber molds. The importance of this craft, as rated by those completing the information sheet used in this study, is shown in TABLE XXIV.
TABLE XXIV

THE IMPORTANCE OF RUBBER MOLDS IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th></th>
<th>IND. ARTS</th>
<th></th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
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<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>IMPORTANT</td>
<td>11</td>
<td>19</td>
<td>66</td>
<td>41</td>
<td>46</td>
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<tr>
<td>MOST IMPORTANT</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>NO RESPONSE</td>
<td>46</td>
<td>81</td>
<td>94</td>
<td>59</td>
<td>106</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
<td>100</td>
<td>152</td>
</tr>
</tbody>
</table>

* Figures for "most important" are included within those for "important" and are not to be added in computing totals.

Rubber molds are useful for reproducing various kinds of art work. Pupils, who spend considerable time modeling objects with modeling clay, often like to preserve their work and, often, to share it with others. A rubber mold may be made and the clay article reproduced in plaster, cement, or plastic. This type of work should not be confused with the cheap commercial molds sold as toys in many of the stores. The rubber mold process probably should not be considered as a craft in itself but as a medium for expanding other crafts, although it does require special techniques not found in the other crafts. Very little instructive literature is available, which may account in part for the lack
of understanding of the craft. TABLE XXIV shows that some educators see values in the teaching of rubber mold craft in the secondary schools. It is not rated as one of the "most important" crafts, however.

The writer's experience with this craft has been quite satisfactory. This is especially true for those pupils who do not possess a great degree of dexterity and for the slower pupils. The slow pupils do not usually possess the ability to fill the mold properly and to remove it when the contents have set. This gives to these slow, or awkward, pupils a project of considerable beauty which they could not produce with their own hands. It is a project which insures success and one which they can be proud to take home.

The writer realizes that this is copying and is not creative, but it does serve purposes which may be valuable. Other pupils of greater intelligence and dexterity find that rubber molds offer a challenge in the production of an accurate mold for an intricate design.

It may be noted in TABLE XXIV that a majority of the respondents did not reply in any way to the section on rubber mold craft. This may indicate that they do not consider it important or it may indicate, as some have stated, that they are unfamiliar with it. Rubber mold craft may, therefore, be considered as having some importance in a secondary school program but not a major significance.
The reasons, as listed by the respondents for marking rubber molds as they did, are listed below in the order of the frequency of mention by the various groups in this study.

Reasons that rubber mold should be included in a secondary school crafts program, as listed by the art personnel in this study, appear below.

**SHOULD BE INCLUDED**

1. Many articles are made available through this medium. 1
2. Valuable as a tool of reproduction. 1
3. If molds are made by students, the procedures are sound. 1
4. Reproductions of pupils' own creative work can be made and preserved, or shared. 1
5. Used in sculpture, puppetry etc. 1

Reasons why rubber mold should not be included in a secondary school crafts program, as listed by the art group in this study, follow.

**SHOULD NOT BE INCLUDED**

1. Rubber mold craft is not creative. 2
2. Just can't like this craft. 1
3. For industrial education along with metal-craft, machine techniques, soldering etc. 1
4. Too mechanical. 1
5. Students are prone to copy others' works. 1
6. Too apt to get side-tracked. 1
Reasons why rubber mold should be included in a secondary school crafts program, as listed by these industrial arts personnel, are given below.

**SHOULD BE INCLUDED**

1. For reasons given in the example, "Rubber mold craft presents an opportunity to reproduce wood carvings, modeled clay work, art pieces, and other similar subjects in plaster or plastic. It is well within the ability of secondary school pupils." 4

2. Useful in reproduction work. 4

3. Hobby craft. 2

4. This is useful as a tool for other crafts. 2

5. A quick simple method of producing exact duplication of some products which in turn provides experiences in terms of media which have many possibilities. 1

6. Great interest in the lower intelligence levels. 1

7. Can be used with plaster or cement. 1

8. Teaches the principles of molding and possibilities of reproducing articles. 1

9. As a part of ceramics. 1

10. Simple. 1

11. Inexpensive. 1

12. Can be utilized in a variety of areas. 1

13. Use where reproduction is required. 1

14. Can make own patterns and molds. 1

Reasons why rubber mold should not be included in a secondary school crafts program, as listed by members of the
industrial arts group in this study, are stated below.

**SHOULD NOT BE INCLUDED**

1. Not much imagination involved. 1
2. Too limited. 1
3. An incidental craft which can be done by anyone trained in hand work. 1
4. Should be part of a unit on ceramics. 1
5. Inappropriate for secondary schools. 1
6. Requires considerable time. 1
7. Not as valuable as other crafts. 1
8. This should be a part of another unit. 1

Reasons why rubber mold should be included in a secondary school crafts program, as listed by the high school personnel in this study, appear below.

**SHOULD BE INCLUDED**

1. Reasons stated in example statement. 5
2. Has great appeal to pupils. 2
3. A very successful summer camp craft. 1
4. Reproduction of intricate objects would create interest and develop an appreciation of good design. 1
5. Well within the ability of the average high school pupil. 1
6. Provides an opportunity to reproduce clay and soap models, etc., that otherwise would be destroyed. 1
7. Opportunity to teach simple molding. 1
8. Fine for slow-moving groups. 1
9. My pupils make models of scenes from history, Shakespeare's theater, and dolls in historic costumes. They also make puppets and give scenes from Shakespeare in English classes — very good. 1

10. Provides some insight into molds and casting. 1

11. Excellent and economical. 1

Reasons why rubber mold should not be included in a secondary school crafts program, as listed by these high school personnel, follow.

**SHOULD NOT BE INCLUDED**

1. Not a creative activity. 4

2. Very expensive for most schools. 1

3. Credit should not be given for copy work of any kind. It simply helps the pupil to accept dishonest methods. 1

4. Encourages dishonest use of materials. 1

5. Takes too much time. 1

6. Very little educational value. 1

7. Not a craft in itself but a part of modeling and sculpture. 1

8. Unnecessary with ceramics. 1

9. Too advanced and expensive. 1

10. Promotes copying. 1

TABLE XXV, which follows, shows the results of the inquiry regarding the use of hooked rugs as a craft in the crafts program of the secondary schools.
TABLE XXV

THE IMPORTANCE OF HOOKED RUGS IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th></th>
<th>IND. ARTS</th>
<th></th>
<th>HIGH SCHOOLS</th>
<th></th>
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</thead>
<tbody>
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<td></td>
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<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>IMPORTANT</td>
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<td>26</td>
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<td>29</td>
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<td>35</td>
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<td>MOST IMPORTANT</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>NO RESPONSE</td>
<td>42</td>
<td>74</td>
<td>113</td>
<td>71</td>
<td>99</td>
<td>65</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
<td>100</td>
<td>152</td>
<td>100</td>
</tr>
</tbody>
</table>

* Figures for "most important" are included within those for "important" and are not to be added in computing totals.

In some sections of the United States, hooked rugs are a home industry of great importance. The craft has been developed to show much skill and high quality. In other sections of the country, hooked rugs are seldom seen. The respondents, as shown in TABLE XXV have indicated that some value is attached to the craft but that it cannot be considered as one of the major crafts. To quote one respondent "The same results can be more easily obtained through other crafts". Too often commercially prepared designs are used, with instructions as to the colors and the materials to be used. The making of the rug then becomes, to a considerable extent, mechanical.
Nearly as many reasons are listed for the belief that this craft should not be a part of a secondary craft program as are listed for its inclusion. All of these reasons as they were written by the respondents are listed below in order of their frequency of mention.

Reasons why hooked rugs should be included in a secondary school program, as listed by art personnel.

1. Good for teaching color, design, patience, and accuracy. 1
2. Very interesting to junior high girls. 1
3. Good, if original in design and well executed. 1

Reasons why hooked rugs should not be offered in a secondary school crafts program, as listed by art personnel.

1. Usually misused. 1
2. Designs are usually standard copy. 1
3. Not needed in schools as it can be easily learned with printed directions anywhere. 1
4. Appeal too limited. 1
5. Not enough to occupy the mind while accomplishing the work. 1
6. Dulling to the senses. 1
7. Not necessary. 1
8. Takes too much time. 1
9. Good, if design qualities are stressed, but can go astray if not watched. 1
10. Damage of copying old patterns. 1
Reasons why hooked rugs should be included in a secondary school crafts program, as listed by the industrial arts personnel.

1. A very profitable leisure-time activity. 4
2. Presents opportunities for creative design. 3
3. For women only. 2
4. If local interests warrant. 2
5. Leisure time activity for adults. 2
6. Should be included only in particular geographical sections. 1
7. Simplicity and appeal make it useful, particularly for girls. 1
8. Should enable girls to reproduce prepared rugs and some artistic work. 1
9. May lead to self-employment. 1
10. Aesthetic values, especially for girls. 1
11. High utility value. 1
12. If there is a need. 1
13. Leads to ladies' homemaking recreational activity. 1
14. Girls would probably like this. 1
15. Develop an awareness of home decoration. 1

Reasons why hooked rugs should not be included in a secondary school crafts program, as listed by the industrial arts personnel.

1. This should be a unit in weaving. 5
2. A part of homemaking study. 2
3. The school can find enough useful work without busy work. 2
4. Not suitable for school instruction. 1
5. Very limited in scope. 1
6. Very time-consuming. 1
7. A rehabilitation craft of limited possibilities in secondary schools. 1
8. Better for adult evening classes. 1
9. Too much like home economics. 1
10. Not practical. 1

Reasons why hooked rugs should be included in a secondary school crafts program as listed by the high school personnel.

1. Teaches thrift by using waste materials. 3
2. Permits freedom in design, color texture, simple techniques. 3
3. A good craft for the handicapped. 2
4. Very practical and interesting, especially for girls. 2
5. Interesting to girls. 1
6. For special education classes. 1
7. Can be used in the home. 1
8. Very practical; both boys and girls do rug work in our school. 1
Reasons why hooked rugs should not be included in a secondary school crafts program, as listed by the high school personnel:

1. Should be a part of textiles. 4
2. Too time-consuming. 2
3. Boys do not care for this craft. 2
4. Rather expensive, especially if wool is used. 2
5. Should be included in home furnishings. 2
6. Should be offered in home economics. 1
7. Too apt to use ready-made designs. 1
8. Problems of space. 1
9. Suitable only to therapeutic hospitals. 1
10. Not an essential craft. 1
11. For special groups only. 1
12. Does not present very many possibilities for expression. 1
13. Same results can be more easily obtained through other crafts. 1

Another minor craft which is taught in some of the secondary schools is that of shellcraft. The response about this craft as a part of a general craft program is shown in TABLE XXVI.
TABLE XXVI

THE IMPORTANCE OF SHELL CRAFT IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>IMPORTANT</td>
<td>4</td>
<td>7</td>
<td>36</td>
</tr>
<tr>
<td>MOST IMPORTANT</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>NO RESPONSE</td>
<td>53</td>
<td>93</td>
<td>124</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
</tr>
</tbody>
</table>

* Figures for "most important" are included within those for "important" and are not to be added in computing totals.

The data in TABLE XXVI show a belief by three groups of educators that shellcraft is of minor importance in a crafts program. The art group has only seven per cent in favor of the craft, with none indicating it as "most important". The industrial arts group shows the largest number in favor of this craft, with a 22 per cent response, but the industrial arts group has less than two per cent checking shellcraft as "most important". The high school people show 18 per cent that believe shellcraft to be "important", but only one per cent rating it as a "most important" craft.

The reasons listed in support of shellcraft as one of the crafts to be included in the secondary school program do not seem to have the solid assurance behind them that
has been so prevalent in the preceding lists. The small re-
sponse in favor of the craft, together with the rather weak
reasons for it, lead the writer to the conclusion that this
craft is of relatively little importance. In certain geo-
graphical locations and for some special problems, shell-
craft might be profitably employed.

Nearly as many reasons were given for excluding shell-
craft as were given for including it. All of these are
listed below in the order of their frequency of mention
among the three groups used in this study.

No reasons were offered why shellcraft should be in-
cluded in a secondary school crafts program from among the
art personnel.

Reasons why shellcraft should not be included in a
secondary school crafts program, as listed by the art per-
sonnel.

1. Little art quality. 2
2. Limited range. 1
3. Can do this anywhere with a lesson or two. 1
4. Non-creative. 1
5. Waste of time. 1
6. It is in areas such as this that crafts hit their
   lowest point. 1
7. Limited to localities. 1
8. Too often the product is a curiosity and lacks
design. 1
9. Could be combined with jewelry, otherwise it might get out of hand. 1
10. Danger of being too junky. 1
11. Too fussy as it is done. 1

Reasons why shellcraft should be offered in a secondary school crafts program, as listed by these industrial arts personnel.
1. Suitable for some geographic locations. 9
2. This craft appeals mostly to girls. 2
3. Creative. 2
4. If there is a need. 2
5. A craft that will be a recreation both at school and at home. 1
6. A pupil can achieve good results and have satisfying experiences rather easily. 1
7. Inexpensive. 1
8. A good hobby. 1
9. Interesting and attractive products. 1
10. Well within the ability of students. 1

Reasons why shellcraft should not be included in a secondary school crafts program, as listed by industrial arts personnel.
1. This is an incidental craft which can be accomplished by anyone trained in hand work. 2
2. Incidental to jewelry. 2
3. Should be a part of jewelry and lapidary. 1
4. Not appropriate for the secondary schools. 1
5. Does not appeal to many pupils. 1
6. Another busywork item. 1
7. There are too many other crafts that should be placed ahead of this one. 1

Reasons why shellcraft should be included in a secondary school crafts program, as listed by the high school personnel replying.

1. Develops a hobby. 2
2. Very inexpensive. 2
3. Develops coordination. 1
4. Fine for art classes, to develop creative and artistic ability. 1
5. Develops manual dexterity. 1
6. As a brief unit of another craft. 1
7. Provides excellent opportunity to develop originality and appreciation. 1
8. The hobby may lead to a part-time or full-time job. 1
9. When shells can be found, it creates a natural interest. 1
10. Develops interest and individual design. 1
11. Wide range of possibilities. 1
12. Interesting jewelry or knick-knacks. 1
13. Maybe, in some parts of the country.
14. Gathering shells is a healthful outdoor activity. 1
Reasons why shellcraft should not be included in a secondary school crafts program, as listed by these high school personnel.

1. Projects are usually in general bad taste. 2
2. Deadening to true creative expression. 2
3. Very regional. 1
4. Doesn't lend itself to creative work. 1
5. Can be easily learned at home. 1
6. Goes out of style. 1
7. Takes too much time. 1
8. Trite; little scope for creative imaginative design or aesthetic use. 1
9. Poor educational possibilities. 1
10. Belongs in campcraft and hobbies. 1
11. Obsolete. 1
12. Products are usually poorly designed. 1

Another minor craft that has been used in some of the public secondary schools is that of candlemaking. It was placed on the information sheet to obtain the reactions of competent judges as to its value. The results of this inquiry are found in TABLE XXVII.
The data in Table XXVII clearly show that candlemaking is not one of the major craft areas. An examination of the reasons that are given including, and for excluding, this craft give clues as to the ways it might best be used.

This craft might be used, not in a regular craft class, but in an academic class as a means of motivation and retaining interest in a unit, perhaps some phase of the history of the colonies. As is suggested in the reasons listed, it might be used as a craft for special occasions, such as Christmas; or as recreation, just the plain fun of doing it.

As a general craft to occupy a regular place in the regular craft program, the replies point to its exclusion.

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>IMPORTANT</td>
<td>8</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>MOST IMPORTANT</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>NO RESPONSE</td>
<td>49</td>
<td>86</td>
<td>141</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
</tr>
</tbody>
</table>

* Figures for "most important" are included within those for "important" and are not to be added in computing totals.
All of the reasons that were given by these respondents, both in favor of candlemaking and by those who believe it to be unimportant, are listed below in the order of their frequency of mention.

No reasons why candlemaking should be included in a secondary school crafts program were given by these art personnel.

Reasons why candlemaking should not be included in a secondary school crafts program, as listed by art personnel.

1. Not if commercial molds are used. 1
2. Too far-fetched. 1
3. Little art quality. 1

Reasons why candlemaking should be included in a secondary school crafts program, as listed by members of this industrial arts group.

1. Good for seasonal crafts. 1
2. Inexpensive. 1
3. Offers opportunity for creative expression. 1
4. Gives an appreciation of materials. 1
5. Utility value. 1
6. If there is a need for it. 1
7. Useful to correlate other studies. 1
Reasons why candlemaking should not be included in a secondary school crafts program, as listed by these industrial arts personnel.

1. Too limited in scope. 2
2. Out of date. 2
3. Might be done as a unit in home economics. 2
4. Not practical today. 2
5. An incidental craft. 1
6. Inappropriate for secondary schools. 1
7. Too elementary. 1
8. Too specialized. 1
9. Too little interest. 1
10. Vocational. 1
11. Not comprehensive. 1
12. Better for adult evening classes. 1

Reasons why candlemaking should be included in a secondary school crafts program, as listed by these respondents among the high school group.

1. As a short term craft, it affords seasonal enjoyment. 2
2. Inexpensive. 2
3. Has a wide range of possibilities. 1
4. Creative results with a minimum emphasis on technical skills. 1
5. Provides an opportunity to make molds and make inexpensive projects. 1
6. Demonstration by pupils of the mold and dip methods in connection with the study of American history.

7. Lots of fun.

8. Provides correlation with an academic study of various means of telling time.

9. Lends diversity.

Reasons why candlemaking should not be included in a secondary school crafts program, as listed by these high school personnel.

1. Interest factor is low.

2. A trade school subject.


4. Takes too much time.

5. Use only in a club or for a hobby.


7. Rather limited in possibilities.

Horology concludes the list of crafts that were included on the information sheet. Some respondents have asked why it was included. The answer is that some secondary schools in the United States are including it in their programs. The writer desired to find beliefs about its value in order to know whether it should be recommended for wider use or not. TABLE XXVIII shows the results of this inquiry.
TABLE XXVIII

THE IMPORTANCE OF HOROLOGY IN A CRAFTS PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>ART</th>
<th>IND. ARTS</th>
<th>HIGH SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>IMPORTANT</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>MOST IMPORTANT</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NO RESPONSE</td>
<td>54</td>
<td>95</td>
<td>153</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>100</td>
<td>160</td>
</tr>
</tbody>
</table>

*Figures for "most important" are included within those for "important" and are not to be added in computing totals.

Horology was included on the information sheet in an effort to determine whether those secondary schools that are reportedly offering it as a craft are justified in doing so. Although the writer confesses no knowledge of this craft, it seemed to him to be beyond the average secondary school pupil in the exacting requirements of the craft or trade. The evidence in the data in TABLE XXVIII above, and in the list of reasons which follow, is overwhelmingly against the inclusion of horology in a crafts program in the secondary schools.
Reasons why horology **should be included** in a secondary school crafts program, as listed by these **art** personnel.

1. **Gives some understanding of, and respect for, delicate mechanism.** 1

Reasons why horology **should not be offered** in a secondary school program, as listed by these **art** personnel.

1. A trade school subject. 6
2. For vocational training only. 2
3. Non-creative. 1
4. This belongs with industrial or mechanical arts. 1
5. This is a profession, and does not belong in crafts.
6. For industrial education along with wood-turning, etc. 1
7. Too few interested. 1
8. Too technical. 1
9. Belongs in the engineering department. 1

Reasons why horology **should be included** in a secondary school crafts program, as listed by the **industrial arts** group in this study.

1. An exploratory course for a vocation. 2
2. Useful in advanced high school. 1
3. As an industrial arts elective on the senior high level. 1
4. An exploratory course. 1
5. O. K. for interested individuals. 1
Reasons why horology should not be included in a secondary school crafts program, as listed by the members of the industrial arts group.

1. This is a trade school subject. 21
2. Too difficult. 8
3. Too technical. 8
4. Not considered a craft. 4
5. Too expensive. 3
6. This is a precision type of work. Can not do justice to this type of work on a craft basis. 3
7. Skill required is beyond the dexterity of this general age group. 1
8. The only value is for consumer knowledge. 1
9. Does not conform to the definition of crafts. 1
10. Not general education. 1
11. No value to this age group. 1
12. Very little application. 1
13. Periods are too short. 1
14. Too limited. 1
15. A vocation. 1
16. Too specialized. 1
17. The practical and aesthetic values of this craft can be questioned. 1

Reasons why horology should be included in a secondary school crafts program, as listed by these high school personnel.

1. Could be practical in a large school. 1
2. Could be included in a unit of jewelry. 1

Reasons why horology should not be included in a secondary school crafts program, as listed by these high school teachers and administrators.

1. A trade school subject. 20
2. Instructors are not available. 2
3. Much too complicated. 2
4. Very expensive. 2
5. Skills learned have no relation to other subjects. 1
6. Not suitable for small schools. 2
7. Belongs to industrial education. 1
8. Very few would be interested. 1
9. Room equipped for this work could not be used for anything else. 1
10. Not a part of general education. 1
11. Belongs in shop classes. 1
12. Does not fulfill the purpose of a crafts program. 1

Respondents were requested to add the name of any additional crafts which they believed to be important in a crafts program for the secondary schools. They were requested to substantiate their write-ins with reasons why they believed them to be important. A list of these crafts that were added by respondents, together with their reasons for adding the crafts, are listed below.
## OTHER CRAFTS

<table>
<thead>
<tr>
<th>CRAFTS ADDED BY</th>
<th>REASONS FOR ADDING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ART PERSONNEL</strong></td>
<td></td>
</tr>
<tr>
<td>Papier Mache</td>
<td>1. Large and imaginative - light weight constructions. 2</td>
</tr>
<tr>
<td></td>
<td>2. Can use waste material and natural resources. 1</td>
</tr>
<tr>
<td>Paper Sculpture</td>
<td>1. Wonderfully imaginative. 1</td>
</tr>
<tr>
<td></td>
<td>2. Use waste material and natural resources. 1</td>
</tr>
<tr>
<td>Felt-crafts</td>
<td>1. Easy to handle, decorative, creative, useful, satisfying. 1</td>
</tr>
<tr>
<td>Marionettes</td>
<td>1. As scenery to final production of plays. 1</td>
</tr>
<tr>
<td>Puppetry</td>
<td>1. Stage art has endless possibilities. 1</td>
</tr>
<tr>
<td>Sculpture</td>
<td>1. Creative and develop the imagination. 1</td>
</tr>
<tr>
<td>(in any medium)</td>
<td></td>
</tr>
<tr>
<td><strong>INDUSTRIAL ARTS PERSONNEL</strong></td>
<td></td>
</tr>
<tr>
<td>Photography</td>
<td>1. To become familiar with a large vocation. 2</td>
</tr>
<tr>
<td></td>
<td>2. A pleasant hobby. 2</td>
</tr>
<tr>
<td></td>
<td>3. Appreciation for and proper use of equipment. 1</td>
</tr>
<tr>
<td></td>
<td>4. Value in selection and arrangement of subjects. 1</td>
</tr>
<tr>
<td></td>
<td>5. Universal appeal. 1</td>
</tr>
<tr>
<td></td>
<td>6. Generates interest. 1</td>
</tr>
<tr>
<td></td>
<td>7. Relation to art and science. 1</td>
</tr>
<tr>
<td></td>
<td>8. Creative work with endless possibilities. 1</td>
</tr>
<tr>
<td>Oil Painting</td>
<td>1. Home decoration and study of artist's products. 2</td>
</tr>
</tbody>
</table>
CRAFTS ADDED BY REASONS FOR ADDING

Keen Cement 1. It offers the student the opportunity to make functional projects, thus further increasing his creative ability.

Model Making 1. Correlates well with project activities in academic fields. 1

Soap Carving 1. Availability of material, creative.

HIGH SCHOOL PERSONNEL

Puppets 1. They are creative and give much of the aesthetic and also teach much of human and animal behavior when used in simple plays. 1

2. Gives an opportunity to study historic costumes and stimulates interest in historic literature. 1

3. Coordinates various educational experiences. 1

4. Absorbing. 1

Photography 1. There is so much photography vital to our everyday life. 2:

2. Gives a medium to develop art and creative ability. 1

Fabric Painting 1. Has appeal to junior high pupils because they work with line, texture, and color using simple techniques to make useful articles. 1

2. Satisfaction and beauty can be secured. 1

Home Mechanics and Repair 1. Develops initiative and interest in keeping the home shipshape. 1

2. Fosters a just pride in good home maintenance. 1

Papier Mache 1. A widely used medium with endless creative possibilities. 1

2. Practical, useful, interesting, and appropriate to the ability of all pupils. 1
### CRAFTS ADDED BY

<table>
<thead>
<tr>
<th>Craft</th>
<th>Reasons for Adding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sports Craft</td>
<td>1. For the repair, maintenance, and making of sports equipment. 2</td>
</tr>
<tr>
<td>Batik</td>
<td>1. Teaches a form of textile decoration.</td>
</tr>
<tr>
<td>Cork Craft</td>
<td>1. Practical and beautifully decorated projects can be made with a minimum of effort.</td>
</tr>
<tr>
<td>Embroidery, Stencil</td>
<td>1. Provides an important background for the inevitable everyday experiences of an industrial and technological world.</td>
</tr>
<tr>
<td>General Woodworking</td>
<td>1. Provides an important background for the inevitable everyday experiences of an industrial and technological world.</td>
</tr>
<tr>
<td>Glass decorating</td>
<td>1. Inexpensive, fascinating.</td>
</tr>
<tr>
<td>Ornaments Iron</td>
<td>1. Develops design and processes of fabrication.</td>
</tr>
<tr>
<td>Toy-Making</td>
<td>1. Enjoyable and teaches design.</td>
</tr>
</tbody>
</table>

Of the crafts that were added by these respondents, photography received the largest number of mentions. Millions of dollars are spent each year by amateur photographers for equipment and supplies. This subject is increasingly being added to the offerings of the secondary schools. Often times, photography is offered as a club (co-curricular) activity. Sometimes it is a part of journalism, often it is a topic in the physics class. A few schools are offering it as a separate course, and there is considerable attention being given to photography as a part of a graphic arts area.
There has been much discussion among schoolmen as to whether it is a science, an art, a craft, or a profession. It is the writer's belief that photography must be, at least in part, all of these in combination except that it may or may not be a profession.

The subject of photography poses several problems in deciding where it should be placed. It can not be denied that photography has become one of this nation's leading hobbies. Schools should take some responsibility in educating their citizens for leisure time. The problem is to find the correct place and the best way to accomplish the task as regards the subject of photography. Now, we have photography proposed as a craft.

Photography requires dark rooms with good ventilation. That is usually no major problem. The problem regarding photography as a craft is one of instruction and supervision. In any concentrated craft offering, it is almost necessary to operate it on what has been termed the "general shop" plan. This has several activities in progress under the direction of one teacher. If photography is one of these, and if the teacher is required for instruction in the darkroom, the remainder of the class are without supervision. The teacher has no way of knowing what the remainder of the class are doing. The reverse is also true. There are plans of personnel organization that may be used to offset this
disadvantage.

Photography developed at a very rapid rate since the last great war. Its place in the public schools has not been definitely established. An intensive study would be necessary to determine the proper place or places in the school's organization before it is offered widely.

Several crafts have been added by these respondents that are normally a part of the work of the upper elementary grades. These are papier mache, puppets, marionettes, and corkcraft. Some of the activities listed by these reporters are usually not considered as crafts. An example of the later is "home mechanics and repair" and "general woodworking".

Oil painting is not described adequately enough for this writer to know whether it pertains to the artist's work or general decoration of home interiors.

Several other crafts were written in one or two times only. This is not considered by this writer to be a sufficiently large response to make these crafts major offerings in a crafts program. All of these, and others, may be important to a particular person in a particular situation. It is not the intent of this study to exclude anything that, in the light of the objectives of developing educated persons, can be found of value. It is rather to find those that give the greatest reward to the largest numbers
for the time available and the expense involved. These minor crafts, although valuable at times, are not considered to fill all of the requirements for general adoption within a crafts program.

The conclusions, as they were drawn from the data recorded from the information sheets, and recommendations regarding the use of these findings in organizing a course of study in the crafts area for secondary schools will be found in CHAPTER IV.
CHAPTER IV
CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS
This investigation was conducted (a) to sample the opinions of numerous persons familiar with the teaching of crafts, and with crafts programs regarding the values of this whole area in the general offerings of the secondary schools, and (b) to determine those crafts that best fulfill the objectives of such a program, if it is to be included in the secondary school curriculum. The specific questions initially asked were:

1. Do crafts offer sufficient value in general education to be included in the secondary school program?

2. If they do, what department or section of the school's organization should be responsible for a program of crafts?

3. If crafts are taught, should the crafts course be offered to both boys and girls?

4. If crafts are taught, what are the most important crafts that should be included in a secondary school program?

Allied questions that the study sought to answer were:

1. Should a crafts program, if it is found to be of value, be required or elective?

2. Should boys and girls, if they are to be taught crafts, be taught together or in separate classes?

The findings of this investigation are shown in the
following major conclusions:

1. More than 98 per cent of all of the people reporting expressed the belief that a crafts program offers sufficiently large general educational values to be included in the secondary school program.

2. There was a variation of opinion among those reporting as to which section of the school's organization should be responsible for the crafts offerings.

Of the art personnel, 68 per cent believed that the art department should offer the program, 7 per cent thought that the industrial arts department should offer it, and 12 per cent thought that either or both should offer the program. Four per cent believed that all departments should cooperate, and 4 per cent believed that a combination of art, home economics, and industrial arts should offer the program. Five per cent did not respond.

Of the industrial arts personnel reporting, approximately 6 per cent stated their belief that the art department should offer the program, 70 per cent thought that the industrial arts department should offer it, and 20 per cent were willing for either or both industrial arts and art to offer the program. Two per cent were in favor of all departments cooperating. One per cent believed that home economics should offer the program and one per cent believed that physical education would be the best department to
offer crafts.

Of the high school personnel that reported, approximately 32 per cent believed that the art department or area should offer crafts, 21 per cent thought that the industrial arts department or area should offer the program, and 37 per cent stated the belief that either or both departments should cooperate in this undertaking. Approximately 3 per cent of the high school people reporting were willing for home economics to offer crafts, and an additional 3 per cent believed that home economics with one other department should offer the program. Two per cent believed that all departments of the school's organization should cooperate in presenting a crafts program. One per cent was in favor of the vocational department or division and one per cent listed practical arts as the place that crafts should be offered.

There was some opinion presented that all departments of the high school should present the program cooperatively, thus utilizing all facilities and the entire teaching staff to the best advantage.

3. There was a nearly unanimous agreement that the program of crafts should be offered to both boys and girls. There were, among the art personnel, no objections to the program being offered to both boys and girls. The industrial arts respondents showed less than two per cent
objecting to the program for both boys and girls. The high school personnel had less than one per cent objecting.

4. The crafts subjects listed in the order of their importance, as indicated by all reporting agencies studied here, are:

   a. Leathercraft
   b. Graphic Arts
   c. Woodcraft
   d. Metal Art
   e. Plastics
   f. Ceramics
   g. Weaving
   h. Jewelry and Lapidary
   i. Basketry
   j. Rubber Mold
   k. Hooked Rugs
   l. Shellcraft
   m. Candemaking

Horology, because of the cost, time, and difficulty of the subject, was adjudged by the respondents as not suitable for inclusion in a high school crafts program. It was considered a trade school subject. Only 6 per cent of art, 4 per cent of industrial arts, and 7 per cent of the high school respondents checked horology as important to a high school crafts program.
Several additional crafts were suggested for inclusion among the crafts valuable to high school pupils in a crafts program. These are arranged below in the order of their frequency of mention.

a. Photography
b. Papier Mache
c. Puppets
d. Paper Sculpture
e. Home Mechanics and Repair
f. Fabric Painting
g. Oil Painting
h. Sports Craft

The findings of this investigation are shown in the following conclusions with regard to the allied questions as indicated by those who replied:

1. Approximately 45 per cent of all reporting art personnel believed the crafts offerings should be elective, whereas 23 per cent favored them as required courses. Two per cent were in favor of a required course in grades seven, eight, and nine but elective in all grades above the ninth. Thirty per cent did not respond to this question.

Forty-eight per cent of the industrial arts personnel reporting believed that crafts courses should be elective; 29 per cent favored them as required courses. One per cent favored a required course in grades seven, eight, and nine,
and elective thereafter. Twenty-two per cent did not respond to this question.

Sixty-five per cent of all reporting high school personnel indicated a preference for elective craft courses; 18 per cent were in favor of having them as required courses. Three per cent believed that crafts should be required in grades seven, eight, and nine, and elective in grades ten, eleven, and twelve. Fourteen per cent gave no response to this question. There was no distinguishable difference between high school administrators and high school teachers.

2. Seventy-five per cent of all reporting art personnel were in favor of boys and girls being in craft classes together; five per cent favored separate classes for boys and for girls. Two per cent indicated that part should be together and part separate. Four per cent hold the belief that it "doesn't matter". Fourteen per cent gave no response.

Seventy-eight per cent of all reporting industrial arts personnel were in favor of boys and girls being in craft classes together; six per cent favored separate classes. Five per cent said that either together or in separate classes or both would be satisfactory. One per cent indicated that it "doesn't matter". Ten per cent gave no response.
Sixty-six per cent of all reporting high school personnel were in favor of combined classes; 14 per cent favored separate classes. Six per cent indicated that part should be together while others should be separate. Fourteen per cent gave no response.

Certain additional conclusions may be drawn as an outgrowth of this study:

1. The terminology pertaining to subjects which this writer has labeled crafts, and to which others have applied other terms, such as arts-and-crafts, handcraft, handicraft, handiwork, and others, is somewhat confusing.

2. Art teachers generally lack the technical preparation necessary to be effective crafts teachers.

3. Many industrial arts teachers lack adequate preparation in the field of art and the fundamentals of design to teach the crafts most effectively.

RECOMMENDATIONS FOR DEVELOPING A COURSE OF STUDY FOR SECONDARY SCHOOL CRAFTS

It is not possible to make a complete course of study that will be applicable to all school situations throughout the United States. It is assumed that the administrator and the teacher who use this guide as an aid in setting-up a crafts program, will do so with a particular local situation in mind. It probably will not be possible or even desirable to offer all of the crafts presented on the following pages
in all school situations.

No craft should be attempted unless a qualified teacher is available. It may not be necessary to establish a "crafts shop", or have one teacher for crafts only, although in most situations this is the most desirable. Others of the staff may be capable of teaching certain crafts, for example, weaving may be taught by the home economics teacher, or ceramics or wood carving taught by the art teacher.

WHO SHOULD PARTICIPATE IN A CRAFTS PROGRAM  
It is the sense of those reporting that most pupils will benefit from a well organized crafts program. It is recommended that secondary school administrators seriously consider the adoption of such a program. The program should be available to all pupils of the school in accordance with recommendations hereinafter set forth.

REQUIRED OR ELECTIVE  
It is virtually impossible for one teacher to present all of the crafts to all pupils in one semester, or even one year. One craft teacher should present three or not more than four crafts each semester. Some of the more involved crafts should be considered as advanced, and should occupy one-half to a full semester each.

The program would probably be operated on what industrial arts people know as the "general shop" plan, that is, several activities in progress at one time under the direction of a single teacher.
It is recommended that two semesters of craft offerings be required in the early part of the secondary school as an introduction to those subjects which were adjudged to be most rewarding. This should cover a sampling of approximately six areas of crafts, with emphasis on doing and on establishing good work habits. After the initial beginning course, the writer recommends that any additional crafts be elective, to both boys and girls.

DEPARTMENT THAT SHOULD OFFER CRAFTS It is the sense of those reporting that the department or other division of the school's organization which offers crafts makes little difference. Probably a combination of the art, the industrial arts, and the home economics departments might prove to be the best organization, although this should not be held as excluding other departments.

Some schools will wish to establish a crafts area as a separate and distinct organization with one or more especially trained teachers in charge.

There was some indication crafts might be offered as a cooperative enterprise and in this way obtain better integration of all subject matter fields. If this arrangement is undertaken, it must be determined that each teacher is qualified to teach his respective area of crafts.

CLASS MEMBERSHIP It was the majority opinion of those
responding to the information sheet that crafts classes should be mixed classes. This does not preclude separate classes for boys and girls if circumstances seem to warrant.

**CRAFT SUBJECTS** The following list of craft subjects with major topics under each, constitute those considered most important by the respondents to the information sheet used in this study. They are listed in the order in which they were rated by the respondents to the information sheet. They should be used as a guide in organizing the subjects of the course of study. Not all crafts will be used in any given school. They should be selected with the aims and objectives of the school in mind. Neither does this rule out the crafts adjudged to be of lesser importance. When a craft is needed for a specific purpose and fulfills one or more of the aims of education, it may be added or substituted for one of those listed.

It may be noted that design and planning are not included in the following list. This is not because the writer believes them to be unimportant; on the contrary, the design and planning of each project should be one of the major aspects of the project. Because this is important to all crafts, it is assumed that the design and planning of a project will be given its important share of time. Likewise, the historical and other related aspects of a craft should be stressed, where appropriate.
I LEATHERCRAFT

1. Introduction and related materials.
2. Tooling
3. Lacing
4. Attaching hardware
5. Carving
6. Embossing
7. Finishes

II GRAPHIC ARTS

1. Graphic methods of reproduction
2. Linoleum block
3. Silk screen
4. Book binding
5. Simple typography
6. Photography

III WOODCRAFT

1. Introduction and related information
2. Wood carving
3. Whittling
4. Wood mosaic (intarsia)
5. Finishes

IV METAL ART

1. Introduction to metals
METAL ART (CONTINUED)

2. Metal foil tooling
3. Forming (various methods)
4. Chasing (when appropriate)
5. Spinning (for grades 10 and 11 only, when equipment is available)
6. Lost wax casting (when appropriate)
7. Enameling
8. Metal finishes

V PLASTICS

1. The plastics family
2. Forming and joining
3. Internal carving
4. Casting (when appropriate)
5. Carving (when appropriate)
6. Turning (when appropriate)
7. Liquid plastic finishes

VI CERAMICS

1. Introduction to ceramics
2. Slab
3. Coil
4. Slip casting
5. Wheel
6. Glaze and firing
VII WEAVING

1. Weaving, past and present
2. Baskets and mats
3. Simple looms
4. The four-harness loom

VIII JEWELRY

This unit might be included in the unit on metal art instead of being a separate unit.

1. Jewelry made of wire
2. Jewelry formed from flat stock
3. Metal and plastics
4. Lapidary
5. Metal and stone
6. Casting (when appropriate)

IX RUBBER MOLD CRAFT (when appropriate)

1. Molds requiring a simple one-piece backing
2. " " two-piece backing
3. " " multiple-piece backing

ADDITIONAL RECOMMENDATIONS

TERMINOLOGY It is recommended that a committee or commission be established to determine the best definition and terminology for the work now being done in the secondary schools and to which this writer has applied the term
"crafts". The committee, after establishing proper terminology, should recommend its adoption in all standard dictionaries and encyclopedias and by all societies working in this field.

**THE CRAFTS TEACHER** The crafts teacher needs to possess special preparation to teach a crafts program properly. He needs the technical training and skill which is normally associated with industrial arts, and he needs the knowledge of design and artistic training normally associated with those with a background of art preparation. It is recommended that the agencies which establish the requirements for teachers' credentials study the requirements needed by good crafts teachers and take the necessary steps to assure the public schools of skilled teachers. It is suggested that a possible solution is that students with industrial arts teaching majors who elect to teach crafts be required to take an art minor, and that art majors who plan to teach crafts be required to minor in industrial arts.
BIBLIOGRAPHY


APPENDIX
Superintendent of Schools  
Murphy High School  
Mobile, Alabama  

Dear Sir:

As part of the thesis requirement for the Ed. D. degree at Oregon State College, I am preparing "A Course of Study for Secondary School Crafts".

In an effort to determine the crafts that should be included in a secondary school program, an information sheet is being sent to chairmen of the art or the industrial arts departments in teacher-training institutions throughout the United States, and to four secondary schools in each state—the latter being chosen by the State Directors of Education.

Your school has been selected by your State Director of Education as an outstanding school in teaching crafts. May I impose upon you as superintendent of your high school to fill in one set and have an instructor fill in the second set? An extra set is provided for your file. Additional copies are available, if you request them. Please return the completed information sheets to me as soon as reasonably possible. A self-addressed stamped envelope is included for this purpose.

The results of this study will be included in my doctoral thesis and, perhaps, published at a later date. All information of a personal nature will be kept strictly confidential, unless specific permission is given to quote from your information sheet. A summary of the findings of this information sheet will be made available to you, if you request it.

Thank you for taking your time and spending your effort in assisting me in this professional effort.

Gratefully yours,

Robert A. McCoy
Professor Roland Torgerson, Head
Department of Industrial Arts
Bowling Green State University
Bowling Green, Ohio

Dear Sir:

As part of the thesis requirements for the Ed. D. degree at Oregon State College, I am preparing "A Course of Study for Secondary School Crafts".

In an effort to determine the crafts that should be included in a secondary school program, an information sheet is being sent to chairmen of the art or the industrial arts departments in teacher-training institutions throughout the United States; and to four secondary schools in each state—the latter being chosen by the State Directors of Education.

May I impose upon you, as head of the department of industrial arts in your college, to fill in one set of questions and have an instructor or fellow professor fill in the second set? An extra set is provided for your file. Additional copies are available, if you are willing to request other members of your department to fill them out. Please return the completed information sheets to me as soon as reasonably possible. A self-addressed stamped envelope is included for this purpose.

The results of this study will be included in my doctoral thesis and, perhaps, published at a later date. All information of a personal nature will be kept strictly confidential, unless specific permission is given to quote from your information sheet. A summary of the findings of this information sheet will be made available to you, if you request it.

Thank you for taking your time and spending your effort in assisting me in this professional effort.

Gratefully yours,

H. R. Laslett, Ph. D.,
Professor of Educational Psychology.

Robert A. McCoy
INFORMATION SHEET ON CRAFTS

Name.................................................. Department..........................................

Institution.................................................. Enrollment..........................................

Your Position..................................................

Definition: As a guide in filling out this information sheet, Secondary School Crafts is defined as "one of the creative, practical activity courses, usually done by hand aided by simple tools and machines, requiring imagination, dexterity, and an appreciation of the aesthetic and historical values of the more common tools and materials now available in our society."

Do you believe that a program of crafts offers sufficient value in general education to be included in the secondary school program?

Yes....................... No..........................

Indicate the reason for your response:

Required...................

Elective.................

(Check one)

Indicate the department that, in your opinion, should offer a program in crafts, and the reason why you believe it should be offered in that department.

Art....................... Industrial Arts.....................

Reason:

Other..........................................

Should the program of crafts be offered to both boys and girls?

Yes....................... No..........................

Reasons:

(If "yes," check below.)

Together....................

In separate classes..............

Directions for checking list on back of page.

Please check the crafts that you believe should be included in a secondary school program:

(A) Single check, in the box provided, those crafts which you believe should be included in a secondary school program.

(B) Some items checked are probably more important than others. Please double check those crafts that you consider most important.

(C) Single check subtopics that should be included in the craft selected.

(D) Draw a line through the name of the craft which you believe to be of little or no educational value.

(E) Please give the reasons for making the selections you have marked.

Example: Rubber mold craft presents an opportunity to reproduce wood carvings, modeled clay work, art pieces, and other similar subjects in plaster or plastic. It is well within the ability of secondary school pupils.
<table>
<thead>
<tr>
<th>1. LEATHERCRAFT</th>
<th>6. GRAPHIC ARTS</th>
<th>7. JEWELRY AND LAPIRARY</th>
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<tbody>
<tr>
<td>a. Tooling</td>
<td>a. Linoleum block</td>
<td>a. Casting</td>
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<td>b. Carving</td>
<td>b. Book binding</td>
<td>b. Wire</td>
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<td>c. Embossing</td>
<td>c. Silk screen</td>
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<td>d. Lacing</td>
<td>d. Other</td>
<td>stones and shells</td>
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<td>e. Attaching hardware</td>
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<td>f. Other</td>
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Reasons for choices:

(See (E) above)

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<tr>
<th>2. WOODCRAFT (not general woodworking)</th>
<th>8. PLASTICS</th>
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<tbody>
<tr>
<td>a. Wood mosaic (inlay pictures)</td>
<td>a. Forming from flat sheets</td>
</tr>
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<td>b. Whittling</td>
<td>b. Casting</td>
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<td>c. Carving</td>
<td>c. Internal carving</td>
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<td>d. Other</td>
<td>d. Other</td>
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Reasons for choices:

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<th>3. METAL ART</th>
<th>9. CERAMICS</th>
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<tr>
<td>a. Metal foil tooling</td>
<td>a. Slab</td>
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<tr>
<td>b. Chasing</td>
<td>b. Coil</td>
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<tr>
<td>c. Spinning</td>
<td>c. Slip casting</td>
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<td>d. Lost wax casting</td>
<td>d. Other</td>
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Reasons for choices:

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<th>4. BASKETRY</th>
<th>10. HOOKED RUGS</th>
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<tbody>
<tr>
<td>a. Reed</td>
<td>Reasons:</td>
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<tr>
<td>b. Cane</td>
<td></td>
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<td>c. Raffia</td>
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<td>d. Other</td>
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Reasons for choices:

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<th>5. WEAVING</th>
<th>11. HOROLOGY (watchmaking and repair)</th>
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<tbody>
<tr>
<td>a. Card</td>
<td>Reasons:</td>
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<tr>
<td>b. Simple loom</td>
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<td>c. Four-harness loom</td>
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<td>d. Other</td>
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<td>c. Internal carving</td>
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<td>a. Slab</td>
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