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THE EDUCATIONAL LEADER

INDUSTRIAL AND VOCATIONAL EDUCATION
and ART NUMBER

Published by the Faculty of the
KANSAS STATE TEACHERS COLLEGE
PITTSBURG, KANSAS

Vol. 2

JANUARY, 1939

No. 2



The Industrial Arts Building houses the Departments of Fine Arts and Industrial and Vocational Education.

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The Educational Leader

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Educational Significance of Industrial Arts

WILLIAM THOMAS BAWDEN

In his justly celebrated address on "The American Scholar" before the Society of Phi Beta Kappa at Cambridge, Massachusetts, August 31, 1837, Ralph Waldo Emerson presented a superb analysis of the educated man and gave to this concept an interpretation that seems singularly modern. With the prescience of the poet and philosopher, he gave lucid and penetrating expression to truths that are as vital today as they were when enunciated a hundred years ago.

Emerson cited an ancient fable which relates that "In the beginning the gods divided Man into men, that he might be more helpful to himself, just as the hand was divided into fingers, the better to answer its end."

As one of the necessary and unavoidable consequences of this momentous act has come specialization and the division and subdivision of labor, which, in these latter days, has been carried to such extremes of ramification that many conceive it to be a menace to human progress. This outcome, however, was not in-

tended by the gods, whose underlying purpose was declared to be a broader development of the individual man and a richer fruition of all his powers, rather than narrow specialization. In this conception, "man is not merely a farmer, or a professor, or an engineer, but he is all."

"The fable implies that the individual to possess himself must sometimes return from his own labor to embrace all other laborers. But, unfortunately, there has been a distribution of functions. The state of society is one in which the members have suffered amputation from the trunk, and strut about, so many walking monsters—a good finger, a neck, a stomach, an elbow, but never a man."

One of the unfortunate and misleading aspects of the distribution of functions has been more or less widespread acquiescence in the notion that there is a natural division of mankind into two general classes, the thinkers and the doers. This would indeed be a disastrous classification if it were ordained or if it

could be effected. But even a cursory survey of the situation, with which even the man in the street is familiar, is sufficient to show that this concept is not in accord with the facts. An essential characteristic of the successful thinker and planner is that he be sufficiently practical to make his ideas work; that is, he must be conversant with the mechanical principles underlying the projects he undertakes. On the other hand, no one ever excelled and planning and organizing. The in "getting things done," as we say, who did not have a thorough understanding of the requisite thinking successful entrepreneur possesses an inventive mind and a lively imagination.

In this address, Emerson describes the scholar as "Man thinking," but emphasizes the fact that thinking, or the ability to think, is not sufficient to make a scholar. Action (doing) may with the scholar be subordinate, "but it is essential. Without it, he is not yet man . . . Only so much do I know as I have lived." Only that knowledge does one possess which he can use. Knowledge which does not function in some way in one's life is either non-existent for him or useless.

KNOWLEDGE FOR USE

The industrial - arts shop and drafting-room provide in the school the needed opportunity for the application and use of knowledge that otherwise may be only an abstraction to the child. To add $6\frac{3}{4} + 6\frac{3}{4} + 3\frac{1}{4} + 3\frac{1}{4}$ may be merely an intellectual exercise, having no particular interest

or significance. But if these figures represent the lengths of four pieces of wood which the boy is to use in making a box in the shop, the picture changes completely.

The boy is confronted with definite problems to be solved, such as: How long and wide a strip of wood is needed from which to cut off four pieces to these dimensions? What is the cost of this material at 9.5 cents a board-foot? When approached from this angle, the manipulation of these figures becomes something more than mental gymnastics. Teachers of mathematics have been aware of this situation, of course, and make the problems as "practical" as possible by discussing square measure in terms of wall paper for the dining-room or of linoleum to cover the kitchen floor. But even these problems are "on paper," and the children do not actually cut and paste up the wall paper.

There is a notion that has gained some currency which assumes that this problem of making learning function is solved by having the children read and study about these practical matters or perhaps even "play" with tools and materials and manipulative processes. This is a dangerous and misleading fallacy. Experiences in construction and manipulation are essential to the growing child. These experiences may be symbolic and may be characterized by a certain degree of make-believe in the kindergarten and early grades, but beyond the early stages they should be more realistic.

In the use of tools and materials we should avoid, so far as possible, the development of faulty habits of work and low ideals and standards of workmanship which must later, at great cost, be eliminated and repudiated. Doing and making are not enough in themselves; there must be purpose, approved methods, and acceptable standards of performance; and certainly the thought element must always be emphasized. A system of education which neglects to organize the "doing" phase as thoroughly as the "knowing" phase is to that extent one-sided and defective.

These statements should be sufficient to dispose of another fallacy, still embraced in certain quarters, that the industrial-arts shop serves best as a refuge for the ne'er-do-well, who has been tried everywhere else in the school and found wanting. It is not true that a boy who lacks the intellectual endowment demanded by average passable achievement in high-school English and mathematics can "do well" in the industrial-arts shop.

There are two ways of looking at this problem. First, it sometimes happens that the explanation for unsatisfactory achievement in high-school English and mathematics, and other subjects, is not lack of intellectual capacity, but lack of interest induced by inability to perceive sufficient value in the work. The boy's failure to apply himself is mistakenly reported as lack of ability. Such a boy, after exposure to a succession of different types of school regimen, may be sent down

to the shop as a last resort. If, perchance, he encounters there a new attitude of interest and curiosity on the part of the teacher and an assignment that stirs boyish desire or ambition, he may in due course be transformed from a shirker into a willing worker.

It is not an uncommon experience for such a boy to discover that increased proficiency in high-school English or mathematics or perhaps some other subject would promote the accomplishment of some end toward which he is working in the shop. If this situation arises, he may surprise the teacher of that other subject who gave him up as a dumb-bell. What takes place, of course, is not some increment added to the intellectual endowment of the boy, but a change of attitude and the acquisition of a motive.

The second approach is to reflect upon the high type of thinking involved in the methods of planning and laying out a project and in the selection and use of tools and materials in the processes of construction. These are so far beyond the capacity or comprehension of the boy who is definitely subnormal mentally that the mere statement of the case should be sufficient.

It is true, of course, that persons of less than normal mentality may be kept occupied with manual activities, but these are usually of a routine nature and of low-grade utility. In any event, to engage contentedly in this type of work is not to "excell in the industrial-arts shop."

EDUCATION IS NOT CONFINED TO THE SCHOOL

If the doctrine that the individual must be permitted and encouraged to develop a complete and well-rounded personality is significant for the scholar and other favored members of society, it applies *a fortiori* to the so-called common man. If evidence was discernible 100 years ago that the "distribution of functions" was leading to narrow specialization and the division of labor to the detriment of the best interest of the individual, surely the cumulative weight of evidence of the intervening years is overwhelming. Furthermore, if a system of schooling which neglected action and doing, in its overemphasis upon thinking and abstractions, was properly deemed deficient in Emerson's day, how much more inadequate must it be regarded now. Students of social progress have estimated that 100 years ago the typical individual acquired a full 75 per cent or more of his "education" from the associations, relationships, and experiences of life outside the school; whereas, today, in our increasingly urban mode of living these outside opportunities have been significantly curtailed. Today, many boys and girls must depend upon the school for perhaps 75 per cent or more of the instruction, discipline, and guidance essential in the preparation for life.

There is said to be an ancient Hindu proverb, derived from an antiquity that possibly antedates anything that could be called a "curriculum," which affirms that "edu-

cation" comes from four principal sources:

Work, the thing that one chooses or is assigned to do as his share of essential activities.

One's *associates*.

Nature, the out-of-doors, which we moderns know as the foundation of science and the perennial stimulus to all those who possess the curiosity and the imagination to search out her secrets.

Books, the stored-up wisdom and folly of the past.

Under a simpler mode of living than that which prevails today, the education comprehended under the first three of these sources was more or less adequately represented in the experience of the typical man or woman without dependence upon the school. The transitions from childhood to youth and from youth to adulthood were effected with reasonable ease and satisfaction and without the succession of serious crises which appear to be the lot of so many young people today. For many generations the school discharged its functions more or less completely for those chosen individuals who enjoyed its advantages, by restricting its sphere of activity and interest to the fourth major source of knowledge mentioned in the old proverb, namely, books. Book knowledge thus came to be accepted as at once the symbol, the *raison d'être*, the subject matter and method, and the *ne plus ultra* of schooling. And, by a curious twist of thought, schooling became identified with education. An ed-

ucated person was thought of as one learned in book lore.

Today, the notion is widely held, and intelligently appreciated, that education is something very much broader and more comprehensive than schooling, as is also the correlative notion that schooling is much more than book learning. Nevertheless, there are still those who contend that the school should not step beyond the bounds of book learning: or, perhaps as a generous and progressive concession, it may be permitted a limited amount of laboratory science. Anything beyond these is condemned as an excursion into the realm of fads, frills, and the fancy trimmings of a garment which, without them, amply met the needs of our grandfathers and grandmothers. The ill effects are seen when individuals entertaining these restricted ideas are elected or appointed to positions of influence as members of boards of education and even higher offices, and their opinions are reflected in the adoption or rejection of public policies that affect the lives of generations of children.

The fact is, as must be apparent upon reflection, that education must be at least as broad as the life for which it is proposed to prepare young people.

"The school that is to prepare for life cannot be narrower in resources than the civilization it serves."¹

It does not necessarily follow that the *school* must provide everything

that we include under the term, *education*. The school should not undertake any function or activity which can be performed more effectively or more economically by some other agency or in some other way; but, *per contra*, there are demonstrably certain essential functions and activities which can be performed more effectively and more economically by the school than by any other agency.

If a survey of existing provisions for the complete education of children and young people, at any given time and place, discloses that any essential service is being omitted, the loss or damage falls not alone on the individual boys and girls concerned, but on the community, the state, and society in general, as well. To illustrate, it is possible that we, in Kansas in 1939, have a considerable number of young people arriving at maturity without adequate conception of the nature and extent of their own native endowments, interests, and aptitudes, without adequate knowledge about or understanding of available opportunities here or elsewhere for earning a livelihood, and perhaps wholly without any marketable knowledge, skills, or abilities which prospective employers can utilize. It would make little difference what theories of education are in vogue or what the state of the public treasury. The facts would be the facts. If these conditions obtain, as described, they not only constitute a deplorable situation for these young people themselves, but they are a matter of immediate concern

¹Henry Suzallo: "A Program for Tomorrow," in *Proceedings*, National Education Association, Vol. 70, pp. 619, 627.

to the general taxpayer who must help carry the load of supporting all those individuals who are unable to support themselves.

It would be idle to argue the uselessness of preparing young people for jobs that cannot be found, and it does not offer a solution to the problem to urge that there are millions of unemployed. It is imperative that some people find work, and enough individuals must find jobs to carry those who do not. The larger the number who do not find jobs, the more highly skilled and productive must be those who do. There is no escape from the responsibility that rests upon the generation now in control of affairs to see that the oncoming generation is properly prepared to take its place in due time. As already indicated, this responsibility, educational in the broadest sense, is not discharged exclusively through or by means of the school; nonetheless, it is inescapable.

Parenthetically, as has been intimated in what has gone before, it would be a reckless and untenable position to maintain that society should, through the public school, undertake the preparation of every boy and girl, every young man and young woman, for some specific vocation. The objections to the adoption of such a policy are unanswerable, at least for the present and the immediate future, and need not be gone into here.

EXPERIENCE IS ESSENTIAL

If the education of youth is to be adequate and complete, it must include an element that corresponds

to productive "work" in the life history of man. Whatever may have been true in the past, an education consisting exclusively or chiefly of book learning does not meet the requirements today. This need is being met in progressive schools through organized experiences in making and doing things in the industrial-arts shop.

One visit to a well-equipped and well-conducted school shop is sufficient to suggest the answer to the question, why should not this function be left to the home? The colonial home and the pioneer home were much more self-contained than the typical home of today, and many of the processes and activities essential to existence were carried on in the home, or at least under the observation of the growing child. As he grew up, participation in these activities was a normal part of his daily life. No one would have dreamed of expecting a youth, growing up to manhood or womanhood in that environment, but without participating in these experiences, to be prepared to take his or her place in the community.

No more can we today expect a youth to be prepared for the duties and responsibilities of adult life, the extent of whose participation in practical work activities while growing up has been limited to the manipulation of such things as water-faucets, push-button switches, radio dials, and in rare instances lawn-mowers and snow-shovels. The typical home today is not equipped to provide growing boys and girls with opportunities for

participation in a variety of practical activities designed, first, to aid in discovering aptitudes and interests, and, second, to aid in developing elementary useful skills.

For a number of reasons, business and industry cannot undertake the task of providing these experiences and training for boys and girls, and no one would suggest that the church should attempt it. By a process of elimination, therefore, we arrive at the conclusion that if this service is to be rendered to youth by society, it will have to be through the school.

A PART OF GENERAL EDUCATION

It seems appropriate to emphasize the idea that experiences in industrial arts are conceived as a part of the general education which should be provided for all boys. It is not a question of selecting, let us say in the junior high school, those boys who expect to become carpenters, metalworkers, electricians, and perhaps engineers, and providing for them a course of instruction that will be directly helpful by developing the elementary knowledge and skills which they can use subsequently in these chosen careers. There are at least three valid reasons why this cannot be done and should not be attempted:

1. It is impossible at the junior high school stage, or even considerably later, to select the boys who are to become the mechanics and skilled craftsmen. Only in rare instances is a boy able to decide what his future career is to be on the basis of known capacity and predilection. Many choices and plans made at

this stage would inevitably be changed with the passing of time and the gaining of further knowledge and experience.

2. If it were possible to forecast the future careers of any considerable proportion of the boys, the number and variety of callings would be so great, even in a small school, as to prohibit serious consideration of a program designed to afford even the preliminary stages of vocational preparation for all.

3. No one knows enough about what preparation is needed to insure or predict success in each of the many callings that would be represented in such a program.

FINDING AND TRYOUT EXPERIENCES

We are compelled, therefore, to defer the organization of a program designed to prepare young people for specific vocations at least until such time, so far as the individual is concerned, as he is ready to make a choice of vocation. In the cases of most boys, for this reason alone, the problem is removed from the junior high school. It is a matter of common knowledge that even the colleges enroll many students who do not yet know what they want or are fitted to do.

The aims and functions of general education must determine what is done in the school, until these aims have been realized in the achievement by each child or youth of a more or less rational decision on "what to do next." It is one of the valid criticisms of general education as it has been organized in the past that it has not adequately facilitated the arriving at such decisions.

Decisions and choices should be based on knowledge or experience, or both, although all too often they seem to be based on "hunches." The vacationist traveler who is confronted with the choice between a trip to the Grand Canyon of the Colorado and a trip to Yellowstone National Park would not expect to reach a decision without reading diligently the available literature on the alternatives (information, knowledge), and consulting friends who had been to both places (vicarious experience). How much more important it is, then, that young people facing the decisions and choices of life should be given some knowledge and experience upon which to base decisions.

For reasons already indicated, the industrial-arts program cannot do more than provide a limited range of carefully selected and typical experiences, selected from industries that are basic and representative. It is believed, however, that participation in these experiences, under the guidance of a skilled and dynamic teacher, enables the boy with some confidence to decide whether he possesses interest and aptitude in mechanical things sufficient to justify him in further planning.

SUMMARY

It has been shown that, since man is indivisibly both a doer and a thinker, both of these elements must be provided for in any complete and adequate scheme of education. It is agreed that education includes contributions from other sources and influences outside the school; but radical shifts in the im-

pact of non-school influences and experiences have not been accompanied by corresponding modifications in the program of the school; so that there are serious gaps in the aggregate plan for getting young people ready for life.

The significance of industrial-arts experiences in the school is the indispensable and unique contribution which they make to a complete and well-rounded curriculum.

It is a mistake to offer any substitute or make-shift in place of active participation by all individuals in carefully organized manipulative and constructive experiences, involving also thinking and planning, and it is a fallacy to assume that this phase of the educational scheme is primarily of value as a means of reclaiming inferior or incorrigible youth.

Industrial-arts experiences help to give meaning and vitality to content and method in other school subjects, and thus to make knowledge function.

Industrial arts helps to lay a foundation upon which a subsequent program of vocational education may be built, especially for the mechanical trades and industries, by affording opportunities for boys to try themselves out within a limited range of mechanical and technical interests.

Industrial arts is and should continue to be essentially a part of general education, in which all boys should participate, with very few exceptions, regardless of antecedents, present environment, or future prospects.

Art in Our Schools Today

ELSIE LEITCH BOWMAN

The teaching of art in the schools today is undergoing the greatest change in its history, but in spite of the inevitable confusion as to how to teach, when to teach, where to teach, and what to teach, there is a gradual but sure movement forward to better educational methods.

A survey made over different parts of the country has found outstanding achievement in progressive methods in a number of schools. New York and vicinity apparently have taken the lead, although there are splendid examples of accomplishment in other places which are less congested and therefore unable to compete in numbers with the more densely populated sections.

The elementary school, according to Victor D'Amico, has been the most successful in putting art on the basis of general educational needs, according to both individual development and integration with the regular classroom program. The elementary teacher understands better than the teacher in the upper grades, the vital relationship that should be maintained between art and other studies. This may be explained by the fact that the elementary program is simple, that there is a longer creative experience for the child, and that a

closer contact is possible between these schoolroom teachers than is possible in the secondary schools. The elementary teacher also understands better the child's personality. The work of the younger child is freer in expression than that of the child in the upper grades. The latter shows adult standards, which tend to stress realism and the development of skills. The average art teacher has not learned to relate the teaching of skills to creative experience.¹

The most successful art work comes from interest aroused in other subjects. The old method was to teach art lessons that had been planned by the art director and that were unrelated to other class work or to the vital interests of the child. Skills and accuracy were stressed. During the struggle for accuracy in drawing, the idea which the child was trying to express was often lost; consequently any creative impulse which he may have had became deadened or inhibited. Today we have creative expression, appreciation of art, and real interests through integration with the class work and other occupations of the child.

Educators realize now that without creative experience there can

¹*Art Education Today*, 1936, p. 4. Teachers College, Columbia.

be no real appreciation, that art experiences must grow out of the life of the child, and that worth while integration comes from the child. The teacher guides rather than directs. Her work is to encourage rather than to criticise, and, when the need arises, to help the child discover the basic principles which underlie all works of art.

To be sure there are weaknesses in the elementary program even in the most progressive schools, for art with the aim of integrating the child's whole experience has not yet found its way into the curriculum.

There is still not enough understanding and cooperation between art and general education. Art should be felt in every department of the school and should arouse the community to art consciousness through the experiences of the children. As superintendents are in sympathy with the subject when it really functions, it is the supervisor herself who is generally to blame for any shortage in the art program.

The aim of education is the all-round development of the child and it is now generally recognized that art training is one of the necessary means for the accomplishment of this. Never before in the history of our country has there been such an awareness of art and its economic value as there is today. There is therefore a greater demand for knowledge of its fundamental principles and for an opportunity to acquire an understanding and an appreciation of the various processes necessary to its production.

Art departments are responding to these demands. Schools are endeavoring to make better citizens by developing an appreciation of that which has aesthetic value, training the judgment to select that which is good, giving experience in creative expression, and furnishing worth while interest for leisure hour occupations.

There is a growing realization that art education should consist not only of making and creating, but also of lessons in art appreciation as well. This means not merely the study of pictures but also the training of judgment in the selection and arrangement of objects for the home and the school; in choosing the appropriate in dress; and in studying general problems in civic art. Too often this phase of the subject has been neglected, for it is through training in the elementary grades of today that improvements will come in the art quality of objects tomorrow. An illustration of this is the story of the art supervisor who asked one of the directors of the Woolworth company why it is that we can find more beautiful objects in the ten-cent stores than in the more expensive shops. He replied that it is that the children are being trained in the schools to know and to select what is good, and through this knowledge, they, and therefore their parents, are demanding better designs. Carrying out this idea, some of the museums and art galleries have been calling attention to good design by showing whole cases labelled "beauty from the ten-cent store." This

has been done also in a number of schools. It is surprising how much can be found that is really good.

Integration of art with social studies is most valuable, creating as it does a relationship with appreciation and understanding between the child's interests and what the race has done. The weakness is in correlation instead of integration, touching as it does the surface instead of expressing the vital interests and needs of the child.

Authorities are not agreed yet as to what constitutes integration. It is generally felt that subject matter should not dominate but should stimulate the child's interest. Alice Schoelkopf in "Arts in the New Curriculum", says that "if in studying Greek sculpture the children have been so impressed with the fact that it grew out of the actual life of the Greek people that they in turn have been inspired to interpret some phase of their own culture, it should be counted gain."² Such stimulation in regard to the child's own environment is not only an example of success in teaching art, but the finest kind of integration.

An important advance has been made by the progressive schools in the way of working. The old standard, 9 by 12 inch, and still worse the 6 by 9 inch, drawing papers are being replaced by full size sheets of news print and by yard-wide rolls of wrapping paper, often pasted together to cover a whole wall surface. This gives freedom of

movement which releases the child from the limitations of space felt in the old type of material and thus furnishes greater opportunity for creative expression. The medium used in the work is also selected by the child. The joy of handling materials which appeal has a stimulating effect upon the imagination and desire for expression.

Integrated subject matter has fallen in line with the scientific advancement of the period. Stage equipment, radio, and motion pictures have all found their way into the art class workshop. The motion picture as a school art problem began several years ago. In 1935 a group of children in the Lincoln School at Teachers College, Columbia, reconstructed the life of the Cro-Magnon, reproducing their little drama with a moving picture machine. The expense was not prohibitive, and the results were considered surprisingly good and worth while. Other schools throughout the country have been carrying on a similar type of program and with equal success. The motion picture has been used also in demonstrating painting techniques, principles and applications of design, and processes of construction in the crafts. The ability to slow down the machine has made it easy to follow the various steps. Mr. Elias Katz, one of the leading enthusiasts of the educational motion picture, not so long ago published an article on "The Motion Picture in Art Education," including with it an extensive bibliography of the subject. In the

²*Teachers College Record*, February, 1935.

1938 number of *Art Education Today*, Mr. Youldon Howell of Pasadena, California, tells of having recently produced a moving picture to show what is being done in art in the schools, so that the public may better understand and appreciate how it is functioning today.

The radio too is proving its value in art classes. General talks on art appreciation have interested the public, but perhaps the newest, most valuable radio project worked out this last year was in the art department of the Indianapolis schools under the direction of Miss Belle C. Scofield and broadcast over WFBM. It was planned to furnish the research material for the art work in connection with the social study program. This made available to the classes the best material that could be obtained, and with "follow-up" lessons between broadcasts much was accomplished that would not otherwise have been possible.³

Puppets have been a school art problem for a number of years. The value of dramatization in the school program has long been accepted, and puppet plays now have their place as a worth while project from the kindergarten up. Much has been written upon the subject, and the history of the puppet or marionette dates from the earliest times. Tony Sarg is responsible, probably more than anyone else, for its revival in this country. It is a project that appeals to all children and stimulates their imagination more, perhaps,

than any other subject in the art curriculum. The puppet ranges all the way from the simplest cardboard figure to the marvelously constructed figures used in the motion picture play, *The New Gulliver*. Three thousand of these puppets, the work of A. Putshko of the Moscow studio, perform on the stage at one time, each having been made in the first place from a clay model, to give it individuality.⁴

The department of Fine Arts of Ohio State University has been experimenting for nearly ten years with the use of the moving picture in art classes. "None of these films has been more successful," said Miss Alice Robinson, "than the ones made to demonstrate the processes involved in the miniature stage. The smallness of puppets, the intricacy of their controllers, the complications of their stages make enlarged projections much more desirable than actual size demonstration."⁵

In some of our more progressive communities much thought has been given to the construction of a course of study in art in which those in charge of the social studies and other departments interested, have been working together with the art directors upon the program. Much better integration should result.

One of the outstanding experiments of the day in art education has been the Owatonna Art Education Project, begun in 1932, in which Dr. Melvin E. Haggerty was

³"The Radio in Art Education," *School Arts Magazine*, June, 1938, p. 295.

⁴*Design Magazine*, May, 1936.

⁵*Ibid*, p. 45.

the director of investigation for a time. The study, Dr. Haggerty said, "seeks to discover how the art needs of current American life can be picked up and made the basis of a school curriculum." He explained that activities in a typical American community which could properly be considered as involving art were selected.⁶ Teaching projects making use of these were planned to see whether they could be made usable in the schools. Many others, besides art teachers and professional artists, have taken part in the study and evaluation of this project. They investigated the art needs of the community and found that few were interested in knowing how to paint or model but were anxious to know how to plan their homes and arrange their furnishings and gardens and lawns to best advantage.

A movement of much value to education and to our appreciation of our own American life is the research being carried on today by artists under the Federal Art Project of the WPA. They are investigating and recording the folk arts of American origin and collecting this material into what is designated as an "Index of American Design." The work has been in progress for over two years and already there has been made a collection of over ten thousand illustrations of various objects, characteristic of different

modes of life in America down to 1890. One of the largest of the portfolios to date is the one about furniture; an especially fine part of the work is upon textiles, in which the women of the American colonies took a great deal of pride. One of our leading designers of today, Ruth Reeves, was the originator of the idea of this study. By this means we shall gain a knowledge and a greater appreciation of our own American cultural background.⁷

The teacher today realizes that the satisfaction of seeing one's work used is very stimulating to the child of any age. The enthusiasm aroused when he is making murals for a school event will develop to a surprising degree creative abilities and an appreciation of art principles. If we add its value for integration, there is probably no art problem more worth while or more generally used than this. Plans made and carried out for improving the school grounds or for redecorating a room; posters to advertise school events; illustrations for school publications; block print designs for Christmas cards, book jackets, wall hangings, and other gifts; marionettes; and costumes and equipment for pageants and school plays are outstanding projects in art education today.

There is progress in art teaching, and that progress points toward developing the child in all directions, which is the chief aim of all education.

⁶Dr. Haggerty explained the object of this project in an essay published in 1935 by the university of Minnesota Press under the title. *Art the Way of Life*.

⁷*Design Magazine*, September, 1938, p. 7.

Influence of Industrial Arts on Good Taste

O. A. HANKAMMER

The relation between industrial arts and good taste brings to mind a host of questions. Most of these questions relate themselves to concepts involving beauty, culture, art, fashion. What are they? How define them? How are they related to manners, customs, folkways, institutions? And how are they related to industrial arts? Before making any categorical statement it might be well to consider the meanings of certain terms and possible relationships between concepts important to this discussion.

For some persons the term, "industrial arts," must be quite hazy. In a recent book on art education "industrial arts" and "industrial art" were used synonymously, much to the confusion of the reader. The main elements of likeness in these two terms rest in the similarity of spelling. More commonly, the term industrial arts is used synonymously with vocational education and even trade education to the confusion of everyone engaged in any form of educational work. To help clarify the meaning of industrial arts and to indicate something of its significance in an educational program, the definition¹ as

set forth in a recent federal bulletin is given:

"Industrial arts is a phase of general education that concerns itself with the materials, processes, and products of manufacture, and with the contribution of those engaged in industry. The learnings come through the pupil's experiences with tools and materials and through his study of resultant conditions of life. It is a curriculum area rather than a subject or course, being comparable in this respect to the language arts."

There are those who seem to identify the term "good taste" with the kind of speech one uses or the kind of garment one wears at a given function. This may come from the fact that propriety and beauty are involved in any understanding of good taste. Certainly though, there should be no identifying good taste as an intrinsic quality of things, for good taste is a matter of individual judgment; it is a sensitivity to proper relations of things particularly as they involve beauty or propriety. Within the present discussion only that constituent of good taste spoken of as beauty is being considered. And here beauty is not thought of as an abstraction. Beauty does not exist as a separate entity. It can be discovered only as an attribute of something else. Beauty expresses the emotional tone within the individual. In no wise does it indicate a characteristic of an object

¹Maris M. Proffitt: *Industrial Arts: Its Interpretation in American Schools*; Bulletin, 1937, No. 34, p.1; U. S. Office of Education, Government Printing Office, Washington, D. C.

in the same sense as in naming the color of an object. The concept of beauty further involves the idea of purpose or suitability which means that things may be beautiful under one set of conditions and not beautiful under another set. These distinctions may seem more philosophical than important, but they do have a bearing on the topic, because they seem to indicate that taste can be trained and cultivated and that good taste should be cultivated.

Apparently taste that is not born of knowledge usually brings into one's surroundings that which is more ugly than beautiful. But having learned the principles of beauty one becomes restive in the presence of ugliness. He seeks to modify, to improve, to beautify, bringing greater enjoyment to himself and a more attractive environment to others. Though infinitesimal as far as the individual's contribution is concerned, time and numbers accumulate these ideas and modifications into a cultural fabric.

Culture has been defined "as the total social heritage of a group which is created and transmitted through the medium of the social process." We, therefore, can realize readily that anything which affects the social process will materially affect culture. Technological change due to invention has profoundly affected institutional phases of American culture. It has tended to make living exceedingly complex. It has thrown a tremendous burden, though not adequately assumed, upon our educational system. Since "industrial arts concerns itself

with the materials, processes, and products of manufacture, and with the contribution of those engaged in industry" and manufacturing concerns itself with technological improvements, we have in industrial arts a curriculum area which makes direct contact with those elements so profoundly affecting American culture. The attack is as direct as learning a language. One does not merely read about a language but speaks it. This point is too often lost sight of in chasing the butterfly of hand skills. The fact that many industrial arts programs but dimly see their place and function is no more reason for rejection of the area than it is to condemn music because all pupils cannot sing beautifully.

Some industrial arts teachers, and of course many teachers in other fields, have not been aware of the two-way action obtaining in the industrial arts area. Industrial arts not only looks in the direction of modern industrial processes and future developments but also looks back into the era of handicraft. In the process of "cultivating" taste, analyzing processes, and determining methods, standards and ideals obtaining in the past are often confused or brought into conflict with those of this Machine Age. Only as we know the past can we interpret the present and only as we appreciate the present can we anticipate the future. Because of the seeming conflict between handicraft and machine production, as evidenced by industrial arts practices, it may be worth the time to spend the re-

mainder of the discussion on contrasts between handicraft, representing the past, and machine production, representing the present. Embedded in such a discussion are many implications bearing upon the training of taste.

Three basic factors are involved: the worker, the product, the socio-economic aspects. An attempt to evaluate these factors is not within the province of this discussion, but some observations concerning the basic factors may be pertinent. Handicraft has always been looked upon as an output of an individual highly skilled in his craft. This skill has usually been associated with skill of hand rather than of mind. It has directed the attention to the worker, the craftsman. Some think him to be the exemplar of democracy. His initiative has been praised; his creative genius established in history. The little deviations and accidental touches found in his work were the guarantee that the work was hand-wrought, the only one of its kind—a unique production.

The significance attached to the craftsman has been magnified even more when we come to examine the craftsman's product. The search for antiques is more than a pleasure or a hobby. It is a business. Even faking antiques is a big business. Unlike its creator, an antique becomes more valuable with age. In fact, usually its value is in direct proportion to its age. Though bulky in proportions, floridly ornate, or old in materials, it may command attention and even value, not for its intrinsic

worth but because the object is encrusted with associations or is "the only one of its kind." This does not imply that after all the craftsman's masterpiece has nothing to offer. Such an attitude would be on a par with rejecting historical data. The product of the handicraft age does, in many cases, illustrate the idea that beauty may be intrinsic with creating. Masterpieces convey the spirit of timelessness. They too convey the feeling of silk and brocade, wealth and luxury. Handicraft products are slow of birth and perhaps eternal as they live through inspired mutations.

We should note that the passing of the handicraft age represents an enormous socio-economic change. We still are unadjusted to many of the effects of this change. In industrial arts we hold to many of the ideals of the handicraft era to the exclusion of modern requirements. Such an attitude has always put leaden feet on educational developments.

We should note that originally the craftsman was the designer, the manufacturer, the dealer, and the salesman. He saw the product through all of the processes from raw material to delivery into the hands of his patron. He had a profound appreciation and understanding of his tools and materials; hence, design was integral with the process of creation. It was with the development of the academic approach to learning that all of this came to be separated. Gradually the artist lost contact with the shop. Finally, art was not a part of daily

living but something to be found in the gallery; whence the birth of the "fine" and "applied" arts.

With the development of the machine age the producer, the product, and the socio-economic scene changed completely. Now the output is considered in terms of mass production; it is flawless, with the millionth article as perfectly produced as the first. The product is the thing, valued because it is numerous. Its worth is determined by its newness. Its beauty is intrinsic with function. The new materials reflect the spirit of the moment. One can imagine that things slick, shiny, hard, and things streamlined and straight, could be spawned only by remarkable machines, huge and swift.

The machine requires that ornamentation be intrinsic, that it stand, not by association, but on its own worth. For the masses, the machine spells salvation in release from toil, the privilege of possession, and a new order of social equality. Paradoxically enough, capitalism installed the machine which is communistic in spirit. Never before was there such an insistent demand for co-operative effort. Narrow limitations characterizing the handicraft era have given way to wide relationships between persons, tools, processes, and materials. Strangely, to the extent that beauty is to be wrought into the products of the machine age, the artist-designer is again being brought into the shop. The separation of the "fine" and the "applied" in the arts was fatal to unity. In things beautiful, as in

living, there is a totality which suffers no splitting asunder if vitality and strength are to remain. The artist must know the craft in terms of production methods, and production methods must know art as an integral element of the total product.

The competent industrial arts teacher knows and understands these things. He has an appreciation of the richness inherent in the area for which he is responsible, its teaching possibilities, its social implications. Such knowledge supplies the raw stock from which good taste, the sense of right relations or fitness of things, may be matured. He contacts persons who appreciate the arts, sees works of art, old and new. Most of all, he produces beautiful things and knows how to use them fittingly, which is proof of his good taste.

As a curriculum area, industrial arts serves as an integrative medium. The child in his manipulative activities is brought into intimate contact with and perceives things accepted by civilized man as a part of his material culture. The bowl the child molds has worth not only from a utilitarian and psychological point of view, but also because it makes significant the long evolutionary process by which utensils and tools have brought about remarkable social changes. As the child disciplines himself through mastering the inherent qualities of the various industrial arts media, he derives a sense of satisfaction in being able to show tangible proof of having solved a problem in con-

quering stubborn materials. He senses his akinship with the great producers of all times. The finest achievements in the arts take on a deeper meaning. A study of one art throws new light on another. The student who knows styles in furniture, silverware, architecture all of the material things surrounding him—who appreciates the history and romance of these material things, who recognizes their form and color and how they were produced either as a handicraft or a machine product, has within himself those

things which make for an integrated taste. The child who associates with things meeting universal cultural standards and grows through the investigation and manipulation of media constituting our material culture and shares these experiences cannot but have an educational background which makes for a better understanding of the present order and the "eternal fitness of things." This is the contribution which industrial arts makes in the development of good taste.

Why Not Crafts?

BERTHA A. SPENCER

Crafts are plied both as a profession and as a hobby. In the professional group, and it is a large one too, are those who pursue one or more crafts as a means of livelihood. In other groups, some form of handwork is followed merely as a leisure time activity, a relaxation to provide wholesome entertainment.

Since it is instinctive with us to do things with our hands, it would be a very simple matter to develop a more general interest in crafts for leisure time. Such crafts as woodcarving, bookbinding, jewelry, and weaving make fine hobbies, can be easily carried on in the home, call for little or no equipment, and in many instances are made of inexpensive materials gathered in the neighborhood. Many such articles placed on the market have a ready sale value, bringing in rich returns on the materials and time invested.

Basketry is such a craft. Fortunately, it has successfully resisted the machine invasion, and to the delight of those who enjoy making useful and attractive articles from natural materials, remains today a true handicraft. Primitive baskets are to be seen any day along the highways leading into the Ozarks. Southern people weave the long needle pines into interesting articles to attract the tourist's eye. Fre-

quently a craft, which is taken up as a medium of personal expression to enrich the routine of housework or the office desk, is later turned into a means of money making. Persons so equipped today have much to keep them happy and balanced in these trying times.

Because of the great desire in children to be doing things with their hands, almost any craft appeals to them. How easy it would be for the public school to take advantage of this instinct to train boys and girls in a number of crafts! Such instruction would give them valuable experiences in the handling of tools and materials, some knowledge of the processes involved in the making of articles of daily use, an opportunity to develop skill, and, perhaps the most important of all, an appreciation of a desire for good materials, and good workmanship, which would develop good taste in the selection of articles for the home. Such training carried on over a period of years will foster ideas and activities which will raise standards and improve the quality of the work of the commercial world.

Naturally the serious craftsman must be creative. It is only the technique which can be mastered. With a few tools and a good text, the craftsman must strive to make

his work individual. This is the valuable side of all craft work. Just as the writer develops an individual style that is all his own, so must the craftsman develop his art. It is not necessary to be an artist to be a skilful craftsman, although it is essential to have a feeling for beauty and fitness. By beauty is meant good workmanship, good form, and good color—all of which may be acquired by the worker who realizes that good design for any craft begins with the careful consideration of the materials he uses and a respect for the limitation of his tools and tool processes. And this same careful consideration must be kept in mind as he proceeds and until the last touch has been given.

Many of our colonists were fine craftsmen in their native lands. At first they were concerned with providing food and shelter for their families. This done, they turned their attention to their crafts, and soon small shops sprang up, similar to those they had left in Europe. Father and sons were busily engaged in turning out articles for the home—beautiful cabinets and other pieces of furniture, pottery, pewter plates and bowls, and copper lanterns. The women spent their leisure hours spinning and weaving. The early woven coverlets of this period are a truly American craft. Since colonial days, however, our energies have been so bent upon building up a great industrial nation that we have had no time for handicrafts. The result is that many fine craftsmen have turned their attention to other pursuits. But now that we

have attained the success for which we were striving, we find that improved industrial methods have given us a leisure which we are not prepared to use. There is a growing realization that definite steps must be taken to prepare for this new need.

There has been a general tendency to rush through life with no time for hobbies, even to reject as waste of time any piece of work that can be turned out more quickly by a machine. Yet, as everyone knows, a good hand-made article has an individuality and charm which no machine-made article can possess.

We are aware that adults do not use their leisure time profitably and that young people are restless and in need of profitable, worth while activities for idle hours. Crafts meet these needs by providing such a diversity of activities as to appeal to all persons and to hold their interests. Crafts offer unlimited opportunities for self-expression, and the wide range of choices open to the worker permits him to follow his natural interests.

For the person interested in design and color, there is block printing and leather tooling. If the interest lies along the line of developing skill, pottery bookbinding, or metal craft will have a greater appeal. These crafts offer a wide range of experiences. Any one of them followed over a period of years would prove very satisfying, would make a most pleasurable hobby for leisure time and might lead one, if the worker so desired, into the field of the professional artist.

There is a growing interest in linoleum and woodblock printing in school as well as among artists and printers. This, perhaps, is the most popular craft today with both amateurs and professionals. School children and amateurs use linoleum; professionals use cherry wood. As a school activity, blockprinting possesses interest and is full of possibilities. Linoleum is readily obtained, is inexpensive, and is very easy to cut.

Many of our book and magazine illustrations are block prints. Our Christmas cards, program covers, and place cards are block-prints. This art borrowed from the Japanese has been taken by our artists, who are being encouraged to depict the homely, everyday scenes of American life. This adopted craft is rapidly developing into a true American art.

The art of printing on textiles was known to the Egyptians and to the Chinese. The women of India have always been famous for their beautiful printed cottons.

Since the early part of this century the printing of textiles in the United States has become firmly established. Today many of our artists are giving their attention to the designing of fabrics. Merchants advertise with great pride their hand blocked linens, designed by such well known artists as Tony Sarg, Marguerite Mergentime, and Ruth Reeves.

Pottery making is, no doubt, one of the oldest crafts known to the human race. Ever since primitive man discovered that the impression of his foot remained in the soft clay

and that his hearth fires hardened and changed the colors of the earth, pottery making has been used to make articles of utility and beauty. Many of our English and Dutch settlers were potters in their native land. In Pennsylvania potters turned their attention to the making of lovely tiles for their fireplaces. In Ohio there was a colony of potters who made crude wheels and turned to the making of jars and jugs which they floated down the Mississippi to New Orleans to exchange for sugar and molasses.

To one woman, Mrs. Longworth Storer of Cincinnati, is due the revival of pottery. She was greatly impressed with the fine exhibit which she saw at the Centennial Exposition at Philadelphia in 1876. She succeeded in interesting a number of her friends in the subject, and it was not long before they were making pottery in a little shop which they had fitted up in an old abandoned school house. They called their pottery "Rookwood" after Mrs. Storer's country home. Their friends smiled and called them the lady potters. But this pottery started in 1880 merely as a pleasurable hobby, grew and grew, until today it is recognized as America's finest pottery.

Pottery building makes a very desirable home craft, for all one needs is the clay. No tools are necessary. As to firing the ware, it can always be sent to the nearest kiln as was done in the days of china painting. Fortunately our United States is rich in clay banks. We cannot travel many miles in any direction without finding plenty of material with which to

work. Pieces may be built entirely by hand by rolling the clay into coils about the size of one's little finger and working them together, one on top the other until the desired shape and size is gained. This method we have borrowed from the Indians. Work on the potter's wheel is much more fascinating and, of course, much faster. Potter's wheels are inexpensive or can be made for very little. An old sewing machine makes an excellent frame for the wheel. Skill is acquired in an amazingly short time. Analyzing clays, mixing colors, trying new glazes, firing the pottery—all these operations are open to the person who enjoys the scientific side of pottery making.

There is no work quite so fascinating as jewelry or metal craft, and nowhere can be found the same possibilities for individual achievement and creative ability. The craftsman has a wide range of metals from which to choose in making articles for the home or for personal adornment. As a home craft, it can hardly be excelled in usefulness. The tools required are comparatively cheap and with care will last a lifetime. Because of its great appeal to both boys and girls, leaders and councilors of summer camps and scout groups are including many opportunities for simple jewelry and metal working in their summer courses.

It is very encouraging to see how many organizations are providing programs for children during the summer months, offering them opportunities for self-expression of all kinds, especially in crafts.

Leather tooling is one of the best crafts for beginners. It has the advantage of being clean and inexpensive. The materials are easily handled, and few tools are required. With a modeling tool, a hard surface on which to work, and a sharp knife almost any leather piece is possible. For those who have the ability to draw, the possibilities are unlimited.

Almost every nation has what might be called a national craft. Name any country, and immediately some craft peculiar to that people comes to mind. For example, the Swiss with their woodcarving, the Mexicans with their drawnwork and their gay colored baskets, the Japanese with their woodcuts. If we could build up in America the same high regard for handwork that exists in all European countries much of the restlessness among our young people might be eliminated.

Abroad, manual skill is held in high esteem. Children are taught the craft of the household, but not under the name of vocational education. They attain these skills as naturally as they learn to walk. In every village are the tiny shops, more often a room in the home, where members of the family or where the neighborhood children go to learn and to work. The shops are provided with crude benches and with very little equipment, such as Americans would consider most inadequate, yet they turn out the finest quality of handwork. When I have visited such shops throughout Europe and Old Mexico, I have always been impressed with the hap-

py, contented atmosphere and the patience and skill of the workers.

If we could set up small shops where children would be encouraged to go, not only would this provide profitable work for leisure time, but children becoming absorbed in creative work would develop new interests, which would stay with them through life. Training in any craft calls for a very direct exercise of the critical powers and develops judgment and skill which will increase the individual's efficiency whatever his calling may be.

In many localities craft classes for adults are being conducted. While this is an admirable thing to do, we

cannot help but see that this form of work will never be entirely satisfactory; any craft requires patience, and many years of experience are necessary before the worker can hope to master his art. For the mastery of any craft like the mastery of any musical instrument, begins in childhood while the fingers are nimble and there is time to explore, develop, and acquire skill.

We have long emphasized the importance of preparing for a livelihood but have given little or no attention to the need of training for leisure hours. Crafts for all children is one answer to the leisure time problem.

Why not crafts?

Aims and Functions of the General Shop

R. L. SCHWANZLE

To elaborate on the aims and functions of the general shop involves consideration of changes and trends in the industrial-arts field as a whole. Any attempt to isolate and evaluate the contributions of any single area of education without recognizing its status in relationship to the total pattern can only lead to "dead ends." The direction or significance of changes occurring in the field of industrial arts with the view of summing future values can be determined only in the light of evolving social forces, and such forces affect the total structure. Conceptions of change for the mere sake of "change sake" justifies the label of "fads and frills," too frequently found tacked on the doors of education. Economic, political, and social movements invariably reflect changes in organized education, and it is the influences of such changes that eventually find their way into the functional aspects of the various areas of experience in the schools. Industrial arts is properly recognized as one of the areas of experience in the schools that reflect influences of these forces.

It is necessary to review the nature of the purposes that have dominated the different periods of industrial-arts education in order to obtain a more valid perspective concerning contemporary practices. A

brief examination of the history of industrial-arts education in relation to present aims and functions reveals some of the origins and causes of the confusion prevailing in the field and may serve as a basis for a constructive approach to the current pattern, which appears to have become permeated with the thought of the general shop. Further study of the history of industrial arts indicates that countless purposes or aims for instruction in this field were advanced from time to time. Former aims and practices have persistently carried over into succeeding periods. This implies that present day programs have been constructed or reorganized, in a large measure, by adding new ideas and practices to those transferred from preceding periods. The reliability or appropriateness of former aims and practices to new conceptions and demands has not always been carefully considered, and frequently incompatible aims and practices parallel one another in present-day programs.

"Manual training" growing out of the needs of a "vocationally economic" philosophy was concerned primarily with manipulative or hand skills to be acquired through the use of wood and was based upon disciplinary values. With the increasing inertia of a

society that had been dominantly agrarian to one that was becoming increasingly industrialized, a wider use of industrial materials became evident in school shops and laboratories. Although formalized procedures and skills continued as basic values, the criteria of utility and design became an inherent quality of these values, and the term "manual arts" gradually evolved. The evolutionary nature of these movements represented efforts to synchronize content and method with the expanding vocational aspects of a technological society, which was fundamentally acquisitive and individualistic in principle. The earlier industrial arts subjects embodied values that were derived from the principles of the society that they were serving and projected values that tended to perpetuate the *status quo* by directly preparing pupils for adulthood. These subjects further embodied values that reflected community traditions of indigenous, moral, and ethical standards, unrestrained use of private property, inconsistent concepts of freedom and equality, competition, individual isolation, and the like. Until recent years it was these values that emphasized the meaning of the aims and functions of the industrial-arts curriculum, as well as the curricula of many of the other areas of education.

Although these terms still prevail, a broader and more inclusive term, "industrial arts," has grown out of an "educationally social" philosophy with the view of more effectively interpreting individual needs,

potentialities, and behaviors for purposes of individual adequacies in coping with emerging problems and issues in our present social order. The growth of the present movement has been further stimulated by the demands being made upon various areas of experience in the total school program. These demands present themselves through the tremendous increase in the school population, particularly in the secondary level; through new conceptions of the responsibility of the school in a democratic society; through impact of the results of industry upon human living; through changes in psychological theory; and through the changing character of the school population. Briefly, these forces were instrumental in emphasizing the need for examining current practices in industrial-arts education and such examinations focused themselves upon basic philosophies, objectives, content, methods, techniques of evaluation, and administration. These considerations in turn gave rise to the so-called general-shop movement in the field of industrial arts.

Early experiments in developing the general-shop plan were centered about the principle of a single shop incorporating several areas of activity to be carried on simultaneously under the direction of one teacher. These consisted largely of a series of two or more unit shops "squeezed" into one room. In some plans, the content and equipment of as many as eight unit shops were "pre-shrunk" and brought into one

room. Many general-shop programs are still being operated, organized, or installed with the same thought prevailing. The fundamental purpose of these plans was *orientation*, and this purpose took many meanings. Orientation in manipulative skills, in home efficiency, in farm activities, in guidance functions, in handy-man abilities, in vocational insights, in the use of materials, in related informations, in industrial life, seemed to characterize the meanings of this purpose. General woodworking shops, general metal-working shops, general electrical working shops, farm mechanics shops, home mechanics, comprehensive general shops, general drawing, general auto mechanics, arts and crafts, integrated general shops, and numerous other forms of general shops came into existence to project the values of orientation and exploration. These types were found in the elementary, secondary, college, and university schools, as well as in the strictly vocational preparatory institutions. Likewise, these different types of general shop were found in privately financed schools as well as in schools financed through tax sources. Thus we have described briefly the growth of the general-shop movement in the industrial-arts curriculum, which was based largely on orientation and exploratory purposes with the view of projecting utilitarian and descriptive values in a social order that had grown from a strongly individualistic type to one of a strongly interdependent nature. Possibly the teacher may be justified in question-

ing his own practice occasionally with the thought, "Are my efforts contributing to the principles of an interdependent society, or, am I contributing to the principles of totalitarianism?" "Can I be more certain, or need I concern myself with such thinking?"

PRESENT-DAY AIMS AND FUNCTIONS OF THE GENERAL SHOP

Since industrial-arts activities are so frequently recognized as a part of the functions of general education today, it might be well to put first things first and give some interpretation to the meaning of general education. It is doubtful that general education can be conceived of as functioning apart from any social order; nor can it be readily conceived of as projecting values that are technical, informative, descriptive, or social without conceding that such values would as readily serve the fundamental concepts of any other social order, unless the tenets of a given society are stated. To do otherwise merely infers "nailing concomitant or supplementary functions into thin air." Germany, Russia, and Italy have forms of practical education that involve descriptive or informative, technical and social values that are obtained through orientation and integration. Therefore it might be concluded that a statement of general education relative to the values of any particular area of education without substantiating its setting makes teaching largely a "bag of tricks." Evidence of such practices are found frequently in current

plans of organization and reorganization. This may be attested by examining "prescriptions of local, county, state, and not infrequently national programs."

Some difficulty might be encountered in attempting to set up an all inclusive definition of general education. A statement of this nature might likewise be subject to many different interpretations. "Starting blocks" might be provided, however, by the following quotation:¹

"The purpose of General Education is to meet the needs of individuals in the basic aspects of living in such a way as to promote the fullest possible realization of personal potentialities and the most effective participation in a democratic society."

The aims and functions of the contemporary industrial-arts program, as a phase of general education, may be stated in a slightly different manner; however, the values remain fundamentally the same as stated in the aforementioned quotation.²

"The aims and functions of industrial arts in general education are directed toward promoting individual and social growth through providing experiences for the individual in the basic relationships of living in an interdependent industrial society."

Other statements might be offered but the interpretations of values would be quite similar, there-

fore it is necessary to examine these values with the view of arriving at tangible materials that can become functional. Inasmuch as the present general-shop program is vitally concerned with the nature of the individual, his needs, potentialities, and wants as well as the nature of the social group in which he participates, it is apparent that expanding modes of conduct or forms of behavior become ends, as well as the influences that affect the nature of the social order.

It next becomes necessary to examine the characteristics of the interdependent social order with which the individual interacts. Several basic tenets seem to characterize the democratic philosophy, namely, a democratic social order:

1. Consciously projects common interests and purposes. To project common interests and purposes, co-operation, sharing, and social sensitivity are necessary.

2. Subscribes to the worth of the individual. Worth of the individual is approximated through individual creativeness and the development of interests and appreciations.

3. Maintains faith in the intelligence of the individual. Faith in intelligence points to values in reflective thinking and the disposition to act on the bases of tentative conclusions.

4. Has no fixed standards or absolutes. This principle gives rise to implications for methods through intelligent participation and adjustments in changing standards.

Skills, attitudes, understandings, general habits, and abilities as well as specific habits become learning products in terms of guiding social principles. Such products may be derived in other orders; however, social principles of other orders give

¹Report of the Committee on the Function of Science in General Education, Commission on Secondary School Curriculum. Progressive Education Association. D. Appleton-Century Company, Inc., New York, 1937. p. 23.

²Mimeo Report. The Franklin County, Ohio, Industrial Arts Experimental Program. Prepared in conference by members of the Franklin County Industrial Arts Committee, Ohio State University, Columbus, Ohio. 1937. p. 3.

these products other "color and odor."

Further examination of the meaning of general education reveals that the nature of the individual constitutes a vital context of the program. In view of the fact that the nature of the individual is appraised through interactions with his environment, some attempt should next be made to portray briefly what this implies for the general-shop program. It is generally recognized that learning is experience, and theories of learning must take their departure from a conception of the human organism or the nature of the individual. Human beings are dynamic and possess inherently the desire for self-direction. The individual is constantly striving to satisfy tensions that exist between himself and his environment; however, this does not necessarily imply that the individual is always conscious of the tension he is attempting to satisfy. When the individual knowingly directs his efforts toward these ends, he establishes purposes. Such purposes arrived at through interaction with realistic environment tend to reorganize the individual's behavior patterns into meaningful relationships affecting himself and the situation at hand. It is these *relationships* in terms of individual and social behaviors that become the aims and functions of the general shop. It is intended to reflect life-like situations, where behaviors become constantly evolving ends and personality growth a reciprocal contribution between the individual

and his environment. An exposition of this kind implies that the situation should provide as wide a range of experience as possible compatible with the nature of an industrially interdependent social setting.

It is next necessary to proceed to consideration of what the "relationships as aims and functions" of the general shop mean for content and method. Possibly one of the more valid approaches might be accepted in utilizing the results of the study published by the Committee on the Function of Science in General Education, Committee on Secondary School Curriculum, *Science in General Education*. It was found in surveying the needs of the adolescent that the evolvment of youth was conditioned by four basic aspects of living, namely: personal living, immediate personal-social relationships, social-civic relationships, and economic relationships. The aforementioned categories are not considered as separate entities, inasmuch as the process of living cannot be considered as a series of compartmentalized experiences.

It is significant that these aims differ from the statement of aims so frequently expressed previously. For the most part, previous aims were accepted in toto from the well known report, *Cardinal Principles of Secondary Education* (1918),³ or they were "drafted" from other sources to justify industrial-arts practices. The final report of the Committee on Standards of Attainment in Industrial-Arts Teaching,

³Bulletin of the United States Bureau of Education, No. 35, 1918.

American Vocational Association, December, 1934,⁴ sets forth a summary of objectives for industrial-arts teachers which became the focal point on the horizon and the justification for many practices by transference. These statements of objectives were largely interpreted as categories for the classification of individual activities and these in turn were to be taught in such ways as eventually to achieve the goal stated. Subjects were classified and prescribed on the basis of serving certain ends more adequately than other subjects. To the lot of industrial arts fell the responsibility of giving the individual the experiences necessary to attain proficiency in the vocational objective and to some extent experiences in worthy home membership and leisure-time efficiency. Other areas of education served the functions of other objectives and the additive results of these experiences presumably produced the predetermined types of adult behaviors. Objectives, aims, or purposes represented the "futures" of the educational market. Frequently the market slumped because of changes in psychological, as well as philosophical principles, and aims and functions moved into closer relationship to one another and became "present functions." Present aims and functions of the industrial-arts curriculum are concerned with the conditioning of behaviors which are constantly in a flux of readjustment

resulting in intelligent self-direction, intelligent cooperation, and the like. Therefore, aims of the present industrial-arts curriculum must be representative of the existing life experiences in an interdependent social setting and behaviors become the object of evaluation, in principle as well as effect.

Personal living as an aim and function of the general shop implies situations in which the individual is afforded opportunities to develop as an individual. He should be permitted to develop characteristics unique to his own individuality which in turn reflect his needs and provide insights for meeting such needs. In short, he should be permitted to develop as a person. Regimentation does not always provide this opportunity. Needs may have a variety of meanings, but needs are conceived of here as growing out of the "interactions of the individual and the social situations." He needs to gain appreciations, understandings, and attitudes relative to the value of his physical well-being. He should further have an opportunity to develop a philosophy of life obtained through experiences that reflect the influence of the material cultures, the effect of scientific progress, and the resultant effects of these on thought, conduct, and conditions under which men live together.

Activities that provide experiences in the *immediate personal and social life* of the individual might be considered as a second aim of the general-shop program. These experiences contribute to understand-

⁴*Standards of Attainment in Industrial Arts.* Final Report of the Committee. American Vocational Association, December 7, 1934, p. 12.

ings concerning: the effects of an industrial society upon home life, personal freedom, and social responsibility; the effects of relationships with culture groups whose modes of living and standards are different from those of his own group through contacts with agencies outside the school; by helping him to interpret varying standards of living with their industrial implications; by broadening the scope of his interests in the industrial and material world; and by providing opportunities for experiences that encourage interest in special and hobby activities of a constructive and artistic nature.

The individual further has need for understandings relative to problems and confusions of social import, such as child labor, unemployment, social security, pensions, governmental control, housing, and the like. It is somewhat doubtful if one can justify a logical arrangement of curriculum materials of an era in our history that has failed to recognize these problems. These problems are either a part of, or in close proximity to, all the experiences of the individual in his total environment. The unfolding of these problems does not "just happen;" intelligent solutions must be arrived at through permitting intelligence free play in analyzing the various forces that contribute to such problems. The rise of industry has had marked effect in the changes that have been wrought in our social institutions. Evidence of such influences are found in community, state, and national institutions.

Therefore, *social-civic relationships* become inherently vital aspects of the aims and functions of the industrial-arts curriculum.

Machine technology has been instrumental in creating new forms of economic organization. With such creations have come benefits to society as well as confusions. Scientific research concerning industrial development, techniques, and welfare has been rapid and too frequently has paced social development. These conditions provide opportunities for vitalizing studies in the industrial-arts curriculum. Studies relating to sources of raw materials, processes pertaining to the wresting of these raw materials from their natural environment, manufacture, distribution, and effects on standards of living are closely interwoven with the experiences of the individual in the shop or laboratory.

"Hence the principal needs of the adolescent in this aspect of living are emotional assurance of progress toward adult status through participation in adult economic affairs, vocational orientation, wise selection, and use of goods and services, and participation as a citizen in the solution of basic economic problems."⁵

Thus the *economic relationships* become intimate functions of the aims of the general shop.

It is not the purpose here to set forth a philosophy for industrial-arts teachers, even if this were possible; however, the attempt is made to outline briefly the thoughts and

⁵*Science in General Education*. The Commission on Secondary School Curriculum. 1937, p. 32.

values that are basic to the consideration of aims and functions of the general shop.

Teaching has become an increasingly difficult procedure because of the change in thought regarding content and method. Teaching must remain largely a "sleight-of-hand performance" so long as the industrial-arts program is primarily concerned with factual knowledge and habit formation. The end of education, particularly the aims of industrial-arts education, in such instances, lies almost entirely within the content, and method serves as a means to this end. It would be a comparatively simple matter for a few selected individuals definitely and minutely to plan industrial-arts courses for the community, state, or even the nation if one were to accept this concept of education. And by the same token, methods could be prescribed to "impose" the desired informations and habits. When teachers become more intimately aware of the fact that every normal person has the capacity to think; that he has needs, desires, purposes, motives, and foresight; and that he learns through purposeful activity, it is then that the aims and functions of the general shop become meaningful.

Objectives may be deserving of further consideration since they greatly affect content and method. Industrial-arts people have long been prone to give lip service to "professionally acceptable" objec-

tives, but have usually neglected to define the meaning of these objectives.

As has been previously mentioned, industrial-arts objectives do not differ from the objectives of the school, but they do differ in their contributions to the objectives. And the statement or study of such objectives should include, in part: types of behavior (attitudes, abilities, knowledges, and skills) constituting the objective; industrial-arts activities that will offer experiences in these behaviors; and implications for environmental conditions, such as equipment, facilities, and organization that will enhance such experiences. Consideration of content and method relationships then becomes apparent. Under such appraisals, the situation itself will determine the methods or procedures, which may be multiple in scope and nature. Content and method then become means to ends, and not ends in themselves. An exception is possible insofar as scientific method may be a teaching and learning procedure as well as a desirable product. It becomes generally obvious that the aims and functions of current experiments in the general shop movement have become intensely centered in "the construction and finesse of the human project," one with emotional balance, an integrated personality, intelligently self-directive and socially responsive.

Industrial Arts and Leisure

FRANKLIN H. DICKINSON

Each year, owing to present economic conditions, the people find more and more leisure on their hands; some persons find it difficult to put these leisure hours to a profitable use. However, if one would inquire among his friends and acquaintances, he would be surprised to find what many are doing with this time after the short day's work is done. Working with the hands is a solace to the spirit; hence people are using wood, metal, clay, leather, linoleum, wax—all sorts of materials—to keep their hands and minds busy during the long hours which would otherwise be idle time.

Especially among the men is there a tendency to turn to the building of furniture for the home. These men as a rule, have had very little, if any, mechanical training which would help them in their construction work, nor do they understand the principles of design. Many such pieces of furniture, of which the makers are very proud, lack both rhythm and harmony of lines in their construction. If these amateur builders could have a little constructive criticism from a good industrial-arts teacher, it would go a long way in helping them in their design and construction.

In their enthusiasm these workmen read books and magazines that give ideas and information helpful

to amateurs but almost always leave out the important link of information they need to complete the work. If a man who is trying to build from such a pattern lacks the necessary resourcefulness or initiative, he must seek this information from some one who knows. Here is where industrial and vocational education can be of help to the industrious man by giving advice, instruction, and guidance. In almost every community there is today a well trained teacher of industrial arts who will be glad to serve these people. They should go to him. The teacher can help them to get their problems in definite shape and to build in a satisfactory manner.

No matter what one does, there is a certain technique one must follow in order to build successfully, and a certain amount of skill must be acquired to avoid crudeness. In industrial arts are taught design, technique, construction, and use of tools for wood, metals, and other materials, as well as the use of machinery. The teacher, who has a general training in mechanics and a fund of related information about materials, can help the man with leisure find materials for his work.

When a man becomes interested in building things at home, he begins to buy tools, both hand and power. Many portable power ma-

chines can now be purchased and placed in one's basement, garage, or any space available as a shop. The demand for small power machines is steadily increasing, for there is a fascination about operating a machine. Many men have established in their homes shops, which are well equipped for the work they have chosen to do in leisure time. A doctor in New York City has over a thousand tools in his home shop.

However, there is considerable danger in operating power machinery, and the amateur should learn how to operate his machine safely as well as how to maintain it at its highest efficiency. Here again the hobbyist needs the direction of the industrial-arts teacher.

To have a good looking piece of furniture, the builder should be sure the lines are proportional. In order to make them so, he must become familiar with the fundamental laws governing good design. Industrial arts teaches this. In the use of hand tools as well as machine tools, it is important that there be good technique. Training in industrial arts gives this. If a piece of furniture is not well built, it may not stay together; hence construction is important. Industrial arts teaches the best way of doing such work. Kinds of wood, how best to use them, their adaptability to the piece desired, and how to match the grain are all taught by the industrial arts teacher. All these things add to the final beauty of the furniture.

Wood carving has always had a peculiar charm for the man with

leisure. Its earliest practitioners were whittlers. The jack-knife is a tool always at hand; so many boys and men spend hours at this appealing occupation. The industrial arts teacher can direct this apparently aimless art into trends of usefulness and beauty. The man who whittles wooden chains and peach-seed baskets can be led into making beautiful model ships, coaches, lamp bases, and other articles.

The records show that a number of men have developed profitable businesses from the projects they started in leisure time. In some instances they have had to employ help to carry out the work. The beautiful spinning-wheel lamps seen on the market today are the product of a boy's basement shop. Lowell Browne, maker of the wooden handles for bags, first worked with a cheap scroll-saw in his home shop. Now that shop is equipped with power machinery; its products include buttons, buckles, piperacks, turned tableware, and other novelties.

The man who undertakes to put his ideas into realization soon discovers he needs to know how to read drawings and make them. A great variety of drawings are found in books and magazines, but these are useless unless one understands drawing and its language. Drawing is a universal language through which one can convey his ideas to other people. No matter what language he speaks, the artist reveals what he sees in his mind's eye through combinations of color and lines. In industrial arts one is taught

to make drawings, both mechanical and freehand, and how to read them. The student who has had these courses can use his pencil to make sketches of his ideas and thus explain them to another.

Often a teacher spends much time trying to make clear to an interested person what the blueprint should tell him. It makes little difference how well educated this person may be, for if he has not had drawing, he finds the blueprint hard to understand. The architect meets this trouble with his clients in trying to get them to understand house plans. When the client finally approves the drawing, he thinks he knows just what he is getting, but when the house is being built he often finds that he did not understand and must pay extra for changes that must be made. Then he wishes he had studied drawing during his school days or had spent some leisure time learning to read blueprints.

A would-be inventor thought he had completed his machine but found that certain parts interfered with the movement of other parts. He made the necessary changes only to find that they interfered with still other parts. His finances were depleted, and he did not complete his machine. Here is another place where a knowledge of planning and the ability to make an intelligible drawing would have been of great help. Industrial arts provides for this training in evening classes, part-time classes, and adult-education classes.

Many people find wood-turning

both fascinating and profitable and give much time to it as a recreational occupation. Lathes from the crudest foot-power type to those of the very finest and most intricate design are in use in home shops. However, most people, using their leisure time turning wood, buy a small 6 by 24 inch lathe driven by a one-fourth-horse-power electric motor. Both lathe and motor can be purchased for a few dollars and serve the purpose well.

The amateur learns his turning processes by the trial and error method and by following the instructions in magazines, which for the most part teach the scraping method. Scraping tools and methods are good for turning on face-plate work and for pieces having the grain running transverse to the center axis of the lathe, but this method is bad for spindle turning where the wood is parallel with the center axis of the lathe. All spindle work of the latter type should be done by the cutting process, with the use of the turning gouge and skew-chisel. When properly ground and whetted on an oilstone to a very keen edge, these tools make neat and smooth cuts so that little sandpapering is required.

The scraping method requires as much time in sandpapering to smooth out the rough places as is spent in scraping; when the spindle is finished, it shows poor workmanship and is only a rounded stick of wood. With persistent practice and a little instruction from an industrial arts teacher who understands how to use his tools, these amateur

wood-turners would make marked improvement in a short time in the appearance of their products.

The Industrial Arts Department of the Kansas City Public Schools, through its thorough program of training and instruction, has created a desire in the students to carry their work farther than just what they can get in the school. The students have established home workshops in which they continue working all the spare time they have. This takes them off the streets, keeps them away from street-corner gangs and undesirable places, and is a large factor in producing good habits in the young men. Their fathers often work with them. This brings in another very desirable factor which is closer relations between father and son. Many times the son finds a good pal in his father and vice versa.

The stores which handle small power tools such as are used in industrial arts work report very heavy sales during the holiday season. If one would visit some of these home shops, he would be filled with amazement to see what is accomplished in them. The school encourages the students by allowing some credit for *bona fide* work done at home, and a large number of students are taking advantage of the opportunity.

In many senior high schools, evening classes two nights each week

are sponsored by the board of education and taught by one of the regular teachers. The class assembles at 7:30 and dismisses at 9:30 p. m. The equipment of the industrial-arts woodwork department is used, including power machines and hand tools. The students make such pieces of furniture and turned pieces as they are capable of under the guidance of the teacher. The class is open to both men and women.

Not only do these persons put their leisure time to a profitable use in the evening school, but several have home workshops where they spend much time. Several have told the writer that they enjoy the time they spend in this way and consider that the industrial arts department is rendering a very real service in allowing them to use the school shop and have supervision by the teacher.

In a number of communities, N.Y.A. maintains schools where an industrial-arts teacher is employed to give instruction to boys from relief families. The boys spend their time making furniture, and the shops are operated in such a way that a boy can spend practically all his leisure working there. When he finds a job outside for a time, he is permitted to lay his work away until he is idle again.

There are many other ways in which industrial arts is instrumental in promoting interesting and profitable leisure-time activities.

CAMPUS ACTIVITIES

Two new members have been added to the staff of the Women's Department of Health and Physical Education. Miss Hattie Stoskopf, a student assistant in the department last year, is now a full time instructor. Miss Lela Horton, also an instructor, is a graduate of North Texas Teachers College. Previous to last year she was studying toward her doctorate at New York University.

Dr. C. B. Pyle and Dr. Paul Murphy, both of the psychology department, attended the annual meeting of the American Psychological Association in Columbus, Ohio, during the week of Sept. 5 to 10. They also attended meetings of the American Association of Applied Psychologists, which met in Columbus at the same time. All meetings were held at Ohio State University. They were accompanied by Howard Siple, senior in psychology, and Garth Thomas, psychology major, who graduated last spring. Mr. Thomas is teaching in the psychology department at Kansas University this year while working on an advanced degree.

Miss Irma Gene Nevins, on leave for study at New York University,

recently was awarded a prize of \$100 by the C. I. T. Safety Foundation for third place among teachers submitting a plan for safety education courses.

Miss Lucille Hatlestad, on leave for study at the University of Iowa, was on the campus for ten days following registration. She was getting data in connection with the physical examinations given by the Women's Department of Health and Physical Education for use in her doctor's dissertation.

Mr. Harold M. Perry has been added to the staff of the Department of Commerce and Business Administration. Mr. Perry is a graduate of the State Teachers College, Whitewater, Wisconsin, where he received his B. of Ed. degree in 1929. He completed his Master's degree at the State University of Iowa in 1938. Mr. Perry taught three years in the high school at Galena, Illinois, where he was instructor of commerce, athletic director, and coach. Later he held a similar position in Elgin, Illinois. Mr. Perry is a member of Sigma Tau Gamma and of Pi Omega Pi, the National Honorary Commerce Fraternity.

Theodora Stebbins, who received her B. S. in 1931 from the College and her M. S. in 1932 at the University of Iowa, has recently been appointed to the position of hospital dietitian in the General Hospital of St. Louis.

Lucille Rust, B. S., 1921, traveled in the British Isles during the summer.

Miss Louise Gibson of the Home Economics Department spent the summer vacation in Guatemala, C. A. She reports that the trip afforded all the elements of a perfect vacation: sparkling climate, wide variety of scenic beauty, and handicraft displays, which are works of art.

Dr. Elizabeth Cochran, professor, of history, is traveling in Europe. While abroad she will spend some time at the University of London.

Miss Lillian Schmidt, formerly supervising teacher in vocational home economics, resigned in July to accept a position in the department of education at the University of Georgia, where she will teach methods and supervise student teaching in home economics. Miss B. Lillian Nelson has been appointed to fill the position left vacant by Miss Schmidt. She is a graduate of the Iowa State College, from which institution she received both her B. S. and M. S. degrees. Miss Nelson has had experience in both teaching and supervision. For several years she

was connected with the Indian Service and taught home economics on the reservation at Pine Ridge, South Dakota.

More than 275 industrial-arts teachers, supervisors, and other educators participated in a four-state regional conference held at the College, October 7 and 8. Dr. W. T. Bawden served as general chairman of the conference, assisted by R. L. Schwanzle and O. A. Hankammer.

In a business session near the close of the two-day meeting the conference unanimously adopted a resolution asking President W. A. Brandenburg to call a second meeting at Pittsburg in 1939 at a date to be determined later. The same executive committee was reelected to plan and organize next year's meeting.

Professor William L. Hunter, head of the Industrial Education Department, Iowa State College, was a guest speaker at a dinner held in the Cafeteria Annex by the Industrial Education club, Nov. 1. Professor Hunter used as his theme, "The Poetry of Craftsmanship" through which he built a philosophy of teaching and of education by reading a number of different poems, some of which were of his own composition.

Majors and minors in the School of Printing recently organized a Graphic Arts club which is to be affiliated with the National Graphic Arts Guild. Ray A. Boyer, senior from Girard was elected president.

Dr. W. T. Bawden and George E. Braley of the Industrial Education Department attended the twenty-ninth meeting of the Manual Arts Conference held in Chicago, November 10 to 12. While on the trip, they visited the campuses of the University of Chicago, Northwestern University, Chicago Teachers College, and the Illinois State Normal University at Normal, Illinois.

Dr. O. A. Hankammer was re-elected president of the Kansas Industrial Arts Association at its meeting in Topeka Nov. 5.

The Department of Industrial Education has published a 32-page directory of industrial-arts teachers and supervisors in Kansas, which contains the listing of 505 towns and 744 names. The directory is now in its second edition since September.

The National Association of Biology Teachers was organized during the meeting of the National Education Association in New York City the first of July. The biology faculty of the College has been active in promoting this organization which is now an affiliate of the National Association. Professor J. A. Trent was the delegate from the Kansas Unit to the national meeting.

George E. Ruggles, Assistant Professor of Biological Sciences, who is on sabbatical leave, is studying at Kansas State College, Manhattan.

Claude Leist, Associate Professor of Biological Sciences, has returned to the College after a year on leave doing research work at the University of Kansas.

J. A. Trent, Assistant Professor and Director of Teacher Training in the department of biology, was on leave last summer studying at Ohio State University.

At a meeting of the Kansas Printing Teachers Association held in conjunction with the Teacher's meeting in Topeka, Laurence G. Cutler of the printing staff was elected secretary for the ensuing year.

Thirty students and faculty members attended the fall meeting of the Southeast Kansas Industrial Education Association meeting, held in Neodesha on October 22.

A recent report on the work done by the Psychological Clinic reveals that a total of 789 cases have received some form of service during the past two years. Twenty-three cases have received complete diagnostic service, 113 partial diagnostic service, and 653 group educational diagnosis. Some of the problems handled in the Clinic were those involving speech defects, delinquency, behavior problems, mental deficiency, vocational guidance, and special educational disabilities. Included among the agencies referring cases were school systems, relief agencies, and the Red Cross.

FIELD NOTES

Biology majors who are Fellows working for advanced degrees in higher institutions are: Henry Dunham, A. B. 1935, Department of Biology, Brown University; Jack M. Burnett, A. B., 1935, School of Medicine, Washington University, Saint Louis; John L. Schwab, A. B. 1937, Department of Bacteriology, Ohio State University, Columbus; and Wendell L. Johnson, B. S. 1938, Department of Zoology, Indiana University, Bloomington, Indiana.

William Y. Baker, a former assistant in the biology department, has formally announced the opening of his offices for the practice of psychiatry and neurology at 702 Stimson Building, Seattle. Dr. Baker was a pre-medic student at the College from 1926-29, received the M. D. degree in 1933 from the University of Nebraska, and was on the staff at St. Elizabeth's Hospital, Washington, D. C., when he accepted a Rockefeller Foundation Research Fellowship early in 1938.

Garrett Morrison, psychology graduate who is now working on an advanced degree at Duke University, reports that he has been awarded a research assistantship for the ensuing year with a substantial in-

crease in stipend. His work will involve teaching a class in elementary psychology as well as assisting with experimental work in the psychology department. He has just completed a piece of research in collaboration with Dr. T. L. McCulloch, which will probably soon appear in one of the psychological journals.

George M. Plagens, a former member of the biology staff of the College, is now serving a medical internship in the General Hospital, Santa Barbara, California. Dr. Plagens received his B. S., degree here in 1926, his Sc. D. in the University of Michigan in 1931, and his M. D. at the University of Kansas last spring.

Anna Yate Stoffer, B. S. in 1918, M. S. in 1932, was a member of the Summer Workshop of the Progressive Education Association in Denver the past summer. Mrs. Stoffer, who teaches home economics in the public schools of Tulsa, was sent by the Board of Education to study at Teachers College, Columbia University, the summer of 1937, and to Denver the past summer in the interests of the curriculum revision program of the Tulsa schools.

COMMENTS ON BOOKS

Teaching About Vocational Life

By Mildred E. Lincoln

Published by International Textbook Company, Scranton, Pennsylvania, 1937.

Today when the educational world is looking in every direction for help in the guidance of students in their efforts to prepare themselves in the various fields of their chosen life work, it is quite fitting that attention be drawn to this timely book, *Teaching About Vocational Life*. It is in the nature of a handbook of principles and procedures, its material covering a wide field of educational and vocational information.

The author has gathered from the great mass of information that has been written about guidance the interesting and successful plans that are in operation today.

In the beginning of the book the objectives of guidance are formulated, and the responsibility of the school for giving educational and vocational information is set forth. Though the school must work with the home and other agencies of society, it is evident that the school is best equipped to impart educational and vocational information during the vital years of development when the children's choices are pending. Fourteen vocational objectives,

seven educational objectives, and the objectives of the National Education Association are listed.

One big problem ahead of those interested in guidance is the correlating of the various functions of guidance. Just which courses shall be exploratory? Where does individual counseling come in? What about placement and follow-up? The answers to these and many similar questions will point to the solution of the problems of the program of successful and fruitful guidance.

Guidance must start early in the school life of the child. Even in the pre-school days there is a great opportunity for guidance. The occupational information must be presented through regular school subjects in many cases in order that the pupil may not become too guidance conscious. There is a possibility that the pupil will not make the most of his opportunities if he gains the impression that his teachers are trying to push something onto him in the way of formal advice or direction. The sugar-coated dose of guidance will have a much more effective result.

The teacher who is successful in guiding her pupils in the various lines of activity will be the teacher

who has a fine and varied background. Many teachers have been past-masters at guidance under the old system, but since so much emphasis has been placed on formal guidance, these same teachers show a lack of interest in the whole plan. The school subjects will have to be utilized more, and there is need of much study to prevent the bore-some overlapping that is sometimes found. New teaching devices—the drama and radio are two—present great possibilities for exceptional work in guidance. The next few years will see a still greater use of the radio in school instruction.

The last chapters of the book are given over to the techniques for measuring the results of instruction and determining criteria of success. The individual work of the counselor and his place in the entire setup are clearly outlined. The appendix is full of valuable information for those who are interested in guidance. The bibliography is extensive. Students of guidance will find it worth while to give this book a careful examination.

George E. Braley

History of Manual and Industrial Education: 1870 to 1917.

By Charles Alpheus Bennett

Published by The Manual Arts Press, Peoria, Illinois, 1937.

As the title suggests, this volume confines the discussion of this comprehensive topic to well-defined time limits of a significant era in the development of manual and industrial education. It begins where an earlier volume by the same author,

Manual and Industrial Education Up to 1870, left off and continues to the period where another vital change within the field took place.

In each of the thirteen chapters the author has gone methodically and chronologically into the history of this particular type of training in some of the more important countries on the European continent, England, and the United States. The trend which marked the opening of the era was the analysis of the mechanic arts for teaching purposes and hence the book continues with the intervening events up to the passage of the National Vocational Education Act in the United States in 1917.

As Mr. Bennett states in his preface "... the aim has been to give the facts and the opinions of men in recognized standing. The reader is left free to draw his own conclusions."

This is truly spoken. Throughout the volume, which at times becomes difficult reading because of the large amount of factual material presented, the author is in the remote background and appears to the reader only in broad general summarizations.

The book opens with the Russian system of tool analysis for the teaching of mechanic arts, takes one through the sloyd of Scandinavia, and continues with the manual, trade, and technical education in France, Germany, and England. Greater detail, of course, is given to the movement in the United States, beginning with the pedagogically organized shopwork instruction.

Following a discussion of the secondary and elementary schools comes a picture of the growth and development of teacher training and associations of teachers to be concluded by the vocational education movement which was climaxed by the passage of the National Vocational Education Law.

The volume is profusely illustrated with the types of projects under-

taken at the different schools, a number of portraits of eminent leaders, and photographs of the buildings and shops under discussion. Much original source material is appended to each chapter. Mr. Bennett concludes his volume with a comprehensive list of significant dates, which are broken into decades under the several countries.

Laurence G. Cutler

WAYFARING

This column is devoted to notes and letters from faculty members away on leave or from other friends of the College who are doing interesting things in the field of study or travel.

Excerpts From a Letter of THELMA CARNAGEY

We (my mother, father, and I) left Pittsburg, September 11, 1938, with the idea of touring different parts of the United States by driving mostly along the border. Our first stop was in Baton Rouge, La., where we visited the state capitol. It is a beautiful building, the walls and floors are made of imported marble from many countries. From Baton Rouge we drove to New Orleans. The *Vieux Carre*, or French Quarter, the original town of New Orleans, preserves bits of old France and Spain of a vanished age. Quaint architecture, half hidden courtyards, and narrow streets have been little affected by present day Americanism. The cabildo, which was erected by the Spanish government, is one of the interesting and historical places. It was in the cabildo that the Lafitte brothers, pirates, were held.

The cotton fields of the South should yield a big crop this year as everywhere one looked, he could see cotton.

Our drive down the western border of Florida was rather monotonous as there was much swamp land. At Tampa, we drove across to Melbourne, which is located in the eastern border. There we were the guests of Harriet Upham, a college graduate. She took us over to Melbourne beach, which is truly a beautiful place on a moon-light night. The citrus trees were loaded with fruit, but to our disappointment, it wasn't the time of year to pick it. Leaving Melbourne, we followed the Indian River for about forty miles, passed through pine forest, where we were greatly interested in the turpentine industry, and arrived at St. Augustine. Here we were disappointed in not drinking from the Fountain of Youth, but a heavy rain storm prevented us from getting out of our car.

Going up the eastern coast, we stopped at Washington D. C. From here we took a sight seeing trip to Mount Vernon, Arlington Cemetery, the Tomb of the Unknown Soldier, the White House, the Capitol Building, the Washington mon-

ument, the Lincoln memorial, the Congressional Library, the Bureau of Engraving and Printing, the Smithsonian Institute, and other national buildings. At the Bureau of Engraving and Printing we watched our United States money and stamps being made.

Our plans were to go on to New York City and Boston, but when we reached Philadelphia, we found that a hurricane had hit the Eastern Coast the day before and that bridges were out and roads closed. Instead we drove to Niagara Falls, where we took the sight seeing tours on both the American and Canadian shores. It was a beautiful day, and the falls were at their best with a gorgeous rainbow over them. Leaving Niagara, we followed the lake shore drive to Chicago.

Our drive through Pennsylvania, Ohio, Indiana, Illinois, and Iowa was mostly in the farming districts.

After crossing the central part of the United States, we arrived at the Black Hills in South Dakota. Our first stop was at the Stratosphere Bowl, where Stevens and Anderson took off in their stratosphere balloon to make an international altitude record of 72,395 feet. We then drove to the top of Mount Rushmore (6,060 feet) to see the National Memorial. Out of the enduring granite of Mount Rush-

more, stupendous busts of Washington, Lincoln, Jefferson, and Theodore Roosevelt are being cut under the direction of Gutzon Borglum, the noted sculptor. The faces are sixty feet from the chin to the top of the head. Each nose is as large as the entire head of the Sphinx of Egypt. The eyes measure nine feet across, and the mouth eighteen feet in width. The memorial is 6,200 feet in altitude. A concise history of the United States, written by Calvin Coolidge, will be carved on the face of the cliff. The work is made possible by special appropriations of Congress.

Leaving the Black Hills we drove through the Big Horn Mountains to Yellowstone Park, which was still open. Just as we reached Old Faithful, it was almost through erupting, so we waited an hour to see it at its best.

Our last interesting drive, to date, was along the Columbia River Highway, which has steep crags and cliffs, jutting promontories, yawning chasms, and numerous waterfalls. Perhaps Multnomah Falls is the most noted of these.

We are planning to spend several weeks in Oregon before driving to California. We will visit the Red Wood Forests on the way.

Thelma J. Carnagey