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A STUDY AND COMPARISON OF THE GENERAL OBJECTIVES  
OF ART EDUCATION AND INDUSTRIAL ARTS EDUCATION

BY

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of a Master's Degree in Industrial Arts Education  
and for partial fulfillment of the requirements  
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Industrial Arts 565

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## TABLE OF CONTENTS

I.	Introduction.....	1
II.	General Objectives for Industrial Arts Education.....	3
	Outline of Objectives.....	3
	Interest in Industry.....	3
	Appreciation and Use.....	4
	Self-realization and Initiative.....	5
	Cooperative Attitudes.....	5
	Health and Safety.....	5
	Interest in Achievement.....	5
	Habit of Orderly Performance.....	6
	Drawings and Design.....	6
	Shop Skills and Knowledge.....	7
III.	General Objectives for Art Education.....	7
	Outline of Objectives.....	7
	Art Appreciation.....	8
	Creative expression.....	9
	Fundamentals and Techniques.....	9
	Avocational Interests.....	10
	Vocational Counseling.....	10
	Articulation.....	11
	Social Experiences.....	11
	Correlation.....	12
	Contemporary Art in Daily Living.....	12
	Integration of Personality.....	13
IV.	Comparison of the Two Fields.....	13
V.	References.....	17

A STUDY AND COMPARISON OF THE GENERAL OBJECTIVES  
OF ART EDUCATION AND INDUSTRIAL ARTS EDUCATION

It is seldom that we find an industrial product in which there is no evidence of an attempt to make it pleasing in form or color, or both. It makes no difference what its use may be. In vehicles, buildings, furniture, tools, clothing and many of the other hundreds of products, we find that much time and effort is used to make the products attractive as well as to meet the purpose of usefulness.<sup>1</sup>

When we apply these two purposes to any particular product, it is soon clear that the two aspects are very vitally related. Let us take the task of designing a table for example. We find ourselves going from one purpose to the other, modifying from one point of view to fit the needs of the other. We may have the table looking very beautiful, but structurally it may not be strong. On the other hand, we may have chosen a material which is structurally sound but may not be beautiful. The task is terminated by choosing modifications of the two purposes. One may be more important than the other but one is not usually entirely forgotten.

Let us look at the problem from two points of view -- that of the designer and that of the consumer. If there were a closer relationship between the two elements, the industrial arts and the fine arts, we would certainly have better designed products on the market today. We could cope with the task of thinking out the forms to meet the demands of

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1. Bonser, Frederick G., Lois Cuffey Mossman, Industrial Arts for Elementary Schools (New York, 1939) p. 52.

the task would be one of an examination of the product to determine to what extent the qualities of excellence had been included. A design for a product must be one which will work and can be used, or it is not a good design.<sup>2</sup>

It should be mentioned that fine arts includes fields that are not directly related to the industrial arts. Examples of these would be painting and sculpture. The study of design in these areas should be provided apart from the study of industrial applications of design. However, the study of principles in one field will help in interpreting the principles in another field.

Does industrial arts education do its part in teaching the citizens of tomorrow all that is necessary for them to do well the task before them in either designing or purchasing? It is obvious that all possible is not being done at the present time, but we can undoubtedly do more than is being done now.

The purpose of this paper is to bring to light or familiarize ourselves with the general objectives of art education and industrial arts education in a move to intensify the close relationship of the two areas.

There are no steadfast objectives, so ones will be discussed which have been established by satisfactory use over a period of years. It should be brought to mind that neither the art nor the industrial arts objectives stated herein are necessarily in their order of importance.

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2. Bonser, p. 54 - 56.

## GENERAL OBJECTIVES OF INDUSTRIAL ARTS

Turn now to the industrial arts general objectives arranged by the industrial arts division of the American Vocational Association.<sup>3</sup>

1. To develop in each pupil an active interest in industrial life and in the methods and problems of production and exchange.
2. To develop in each pupil the appreciation of good design and workmanship and the ability to select, care for, and use industrial products wisely.
3. To develop in each pupil the habits of self-reliance and resourcefulness in meeting practical situations.
4. To develop in each pupil a readiness to assist others and to join happily in group undertakings.
5. To develop in each pupil desirable attitudes and practices with respect to health and safety.
6. To develop in each pupil a feeling of pride in his ability to do useful things and to develop worthy leisure-time interests.
7. To develop in each pupil the habit of an orderly, complete, and efficient performance on any task.
8. To develop in each pupil an understanding of drawings and the ability to express ideas by means of drawings.
9. To develop in each pupil a measure of skill in the use of common tools and machines and an understanding of the problems involved in common types of construction and repair.

It is now necessary to analyze and explain these objectives to determine what is involved in each and how they may be used as a basis for industrial arts education.

## INTERESTS IN INDUSTRY

Students of today are curious as to what goes on about them. The

3. American Vocational Association, A Guide to Improving Instruction in Industrial Arts. (Revised Edition, 1953), p. 18.

industrial arts courses are particularly suitable for achieving good results in this category. Their equipment and activities as well as instruction lend themselves to this objective. It is impossible for the schools to keep up with industry in obtaining the latest equipment, so it is necessary that the teachers in industrial arts take their classes to visit local industries. This is one way in which the students will develop a wholesome interest in industrial life and some of its methods and problems of production and exchange. Classroom studies may also be made of manufacturing, production, distribution, raw materials, methods, industrial vocabulary, work opportunities, and the social usefulness of skilled labor. The student will then associate industrial methods with the experiences in the shop. He will be able to contribute to an intelligent discussion about industry. All in all, he will have some basic understanding of the industrial system and its attributes in this country.

#### APPRECIATION AND USE

This involves an appreciation for good craftsmanship and design, both in the products of the past and present. It also pertains to the development of consumer knowledge to the point where the students can select, purchase, use and care for the industrial products wisely. Studies can be made of old and new catalogues, of manufacturing methods and applications, of products to determine craftsmanship, and of the value increase that comes from fine work and finish. These are only a few of the activities that affect appreciation and use.

#### SELF-REALIZATION AND INITIATIVE

According to the Guide to Improving Instruction in Industrial Arts, industrial arts teachers possess distinctive readiness for responsibility in this area. They have unusual opportunity to construct self-reliance, judgment, self-discipline, idealism, reliability, respect for authority, and ingenuity.<sup>4</sup> All of these aid in developing in each pupil the habits of self-reliance and resourcefulness in meeting practical situations.

#### COOPERATIVE ATTITUDES

Helping the students develop unselfish cooperative attitudes is the primary concern here. They should get along with their peers at work or play. The importance of courtesy and harmony in home and community life should be impressed upon the students. They should be reminded that wholesome attitudes are essential for advancement in life's earning situations.

#### HEALTH AND SAFETY

The realm of health and safety is a most essential one in the areas of the school shop, home and working life. The student's interest in causes of accidents, first aid, clothing, fires, use of tools and equipment are a few of these important steps in developing desirable attitudes and practices with respect to health and safety.

#### INTEREST IN ACHIEVEMENT

If students are properly developed with respect to this objective, they should certainly become better citizens. They should develop a

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4. American Vocational Association, A Guide to Improving Instruction in Industrial Arts. (Rev. Ed. 1953), p. 22.



feeling of pride in their work and leisure time interests. This will lead to work done to the best of their ability. They will enjoy improving, repairing, and creating items around the home. This might lead to the development of a home workshop where these activities can take place. They may join and take an active part in hobby groups in the school and community.

#### HABIT OF ORDERLY PERFORMANCE

Their purpose here is to develop in each student the habit of an orderly and efficient performance of any task. Getting off to a good start in these tasks should be emphasized. The students should develop good habits of thoughtful, careful work as well as good habits in use of time and materials. These may be brought about by having the students participate in planning shop activities. Studies may be made of planning processes and alternate methods of doing a job. Have the students appraise their work as they progress and also when they finish. Industry, productivity, and dependability in relation to the tasks are qualities that insure personal worth, regardless of the occupation pursued.<sup>5</sup>

#### DRAWINGS AND DESIGN

The understanding of many kinds of common representations and the ability to express ideas by means of drawings and sketches are the main points to be stressed in this objective. Good judgments with respect to design should also be developed. This can be done through observation and application of these principles.

5. American Vocational Association, A Guide to Improving Instruction in Industrial Arts. (Rev. Ed. 1953), p. 26.

#### SHOP SKILLS AND KNOWLEDGE

Some schoolmen insist that this is the most important objective of industrial arts. This will not be the concern here. The purpose is to analyze the objective.

Just what is meant by skills? Skill is (1) anything that the individual has learned to do with ease and precision; may be either a physical or mental performance; (2) developed by students in industrial or vocational education through the meaningful repetition of an operation.<sup>6</sup>

The students will achieve this objective by using a variety of tools and machines correctly in different situations, by studying the principles upon which machines operate, by working to reasonable standards and by using accepted craft techniques for all constructive activities.

#### GENERAL OBJECTIVES OF ART EDUCATION

The purposes of the courses in art must be constantly in the mind of the art teacher. The teacher who is conducting a program with such broad and indefinite objectives that he can not connect the class activity with several specific aims is probably not producing educationally.

A list of general objectives for art education outlined by Carl Reed, Associate Art Supervisor, New York State Department of Education is as follows:<sup>7</sup>

1. To develop a sensitivity to and appreciation of art.
2. To provide opportunities for creative expression.

6. Silvius, G. Harold, Curry, Estell H. Teaching Multiple Activities in Industrial Education. (Bloomington, 1956), p. 462.

7. Reed, Carl, Early Adolescent Art Education (Peoria, Illinois., 1957), p. 19.

3. To teach the fundamentals and techniques which will provide the means of achieving art expression.
4. To develop satisfying avocational interests.
5. To seek out the talented and to provide counseling in the choosing of a vocation.
6. To provide a gradual transition from pre-adolescent art training to art education suiting the needs and interests of adolescents.
7. To provide for social experiences and an opportunity to engage in some wholesome activities with the opposite sex.
8. To correlate art with other areas of the curriculum.
9. To develop the relationship between contemporary art and daily living.
10. To help in the development of well-integrated personalities.

The following are analyses and explanations of each of these objectives:

#### ART APPRECIATION

This is a most important aim of art education. It involves providing for the experiences and the acquiring of knowledge and skill which will develop an understanding and appreciation of man's creative expression. Margaret Mathias, in her book The Beginnings of Art in the Public Schools, stated the problem in this way: "If we are to hope for a society with art appreciation and some ability to meet art problems, an adequate art course must provide for developing ability for self-expression and for understanding the expression of others"<sup>8</sup>

One point needs to be stressed. This is the fact that appreciation cannot be taught. Each pupil has to develop it within himself. The student must identify himself with the object that is to be appreciated.

8. Mathias, Margaret, The Beginnings of Art in the Public School, (New York, 1924), p. 1.

This includes knowing, and to know something one has to learn. Thus art appreciation relates itself with that which has to be learned. This requires (1) real analysis and understanding of art principles, (2) knowledge of the possibilities and limitations in the use of materials, (3) the meaning of creativity, and (4) the problems involved in it. This shows then that art appreciation cannot be accomplished as an isolated aim or subject area.<sup>9</sup>

#### CREATIVE EXPRESSION

Some might think that this is merely allowing the students to play with materials and praising them for every combination or new technique they create. This is incorrect. John Dewey wrote that "...what is sometimes called an art of self-expression might be termed one of self-exposure; it discloses character--or lack of character-- to others. In itself it is only a spewing forth." <sup>10</sup>

Creative Self-expression is a process which involves intelligence and emotions. The creative process should be carried on only in an art classroom where the students are fully occupied in their creations. It demands a sincere application of all skills, techniques, emotions, and information which will enable that best development of the students's original ideal of the creation.

#### FUNDAMENTALS AND TECHNIQUES

A technique may be defined as the individual use of materials as a means of expression. This depends on the different ways by which it

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9. Reed, P. 21.

10. Dewey, John, Art as Experience (New York, 1934), p. 62

is used to express an idea. It develops according to the individual's own needs. As attested by Lowenfeld, a technique, like appreciation, cannot be taught.<sup>11</sup> Each child must develop his own technique. What can be taught is a procedure. A procedure consists of the different steps in the general principles in using a material. For example, there are several principles in making an etching. These refer to the preparation of the plate, the acid used for etching, the control of the etching processes, printing processes, etc. These procedures can be explained. They lead the student to a possible development of an individual application to his technique.

#### AVOCATIONAL INTERESTS

It seems as though art as a hobby is steadily growing in popularity in our nation. The great movement in this direction has proved stimulating. Introducing problems in the classroom with a variety of materials will create an interest in them which may be developed later into a hobby. Many such hobbies can be turned into considerable profit.

Some students will have already developed art hobbies which they will want to carry on in the art studio. This gives the teacher an excellent opportunity to help broaden the student's scope and encourage the use of principles which will guide him toward more successful results.

#### VOCATIONAL COUNSELING

The students who have developed a sincere interest and talent in art should be counseled in the choosing of a vocation. This is particularly

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11. Lowenfeld, Viktor, Creative and Mental Growth (New York, 1957), p. 28.

important in junior high school and above. Many schools have guidance specialists, but the task of giving the student information and helping him acquire the proper attitude for making decisions about his career is usually best done by the art teacher.

#### ARTICULATION

The courses in art on the elementary, junior high school, or even senior high school level should all be connected. The art attitude brought up from the elementary classes is very important. There should be a working relationship between the teachers of all three levels. The student should proceed from one level to the next with the attitude that art is a pleasant, satisfying experience in which he can participate. If he doesn't adopt this attitude, the next teacher faces an almost impossible task. This integration of art is many times neglected.<sup>12</sup>

#### SOCIAL EXPERIENCES

The relaxed informal organization of the art classes provides a good atmosphere for the students to engage in social activities with classmates of both sexes. This is essential because the boys and girls at this age are shy and associate closely only with their own sex. Several things tend to delete this shyness. The successful art creation tends to help establish respect between the students. Cooperation within a group is brought about by working together and by sharing tools and equipment.

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<sup>12</sup>. Reed. p. 27.

## CORRELATION

The intention of this method of working has been that whatever motivation the pupil needs can be and is often furnished by what he has learned or what he is studying in another subject field. In many instances excellent results have been achieved, but this has not always been the case. The chief objections to this approach are these: (1) it is based on fictitious relationships, (2) it narrows the field of interest of a particular student, (3) art becomes a "servant" of other areas of study, and (4) it minimizes the developmental value of art appreciation and its significance in the pupil's life.<sup>13</sup>

These criticisms may be true but it is only fair that we check on the motivating devices used by the teacher. If the teacher is a creative person and a wise counselor of boys and girls, he will overcome these criticisms and lead the student to see natural relationships. Then what has been learned or experienced in any other area may become the source of inspiration. It cannot be over emphasized that creative method and creative teaching are one and the same. Good method becomes ineffective at the hands of a poor teacher.

## CONTEMPORARY ART IN DAILY LIVING

The activities of the art program should lead to appreciation and understanding of contemporary art as it is involved in the student's daily life.

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13. DeFrancesco, Italo L., Art Education, Its Means and Ends. (New York, 1958), p. 140.

Too often art appreciation has been concerned largely with paintings of the old masters. Not only the paintings of our time, but the modern creative work of the industrial designer and architect have been overlooked. There should be a direct relationship between teaching the principles of design and color, and the application by students to their solutions of everyday art problems in contemporary living. The knowledge, skills, and attitudes gained in the art classes should assist these students in creating for themselves a more graceful and pleasant living environment.

#### INTEGRATION OF PERSONALITY

Participation in the creative art program contributes materially to a successful interaction of the personality with its environment. A balance of emotion and intellect is essential in the well-integrated individual. Rosabell MacDonald sums it up for us. "There is a balance between his receiving and giving, his contemplation and action, his concentration and relaxation, and his individual and social living. A man developed on both appreciative and creative side is a man with a **chance** of remaining whole and balanced....A man cannot live by bread alone; so also he cannot live by acquisition and exterior values alone. To feel that he is actually a part of life, he must live sensually and emotionally as well as rationally."<sup>14</sup>

#### COMPARISON

In conclusion it seems necessary to compare the objectives of the two areas. This would indicate the importance of the work done by each

14. MacDonald, Rosabell, Art as Education (New York, 1941) p. 16.



field and show where improvement seems necessary.

The objective in industrial arts education concerning appreciation and use compares to those aims in art education applying to art appreciation and contemporary art in daily living. One hears more about the phrase "art appreciation" than "industrial art appreciation", but one is made to believe that there are a great deal more products to appreciate industrial-wise than art-wise. It must not be forgotten, as mentioned previously, that the principles behind judging qualities not related to industrial arts may be used to help interpret qualities which do pertain to industrial products.

The self-realization and initiative objective in industrial arts and the integration of personality objective in art are similiar. The latter seems to be a more inclusive term covering all the factors that develop well-rounded personalities.

Another of these factors is the co-operative attitudes objective in industrial arts. It can also be compared to the objective concerning social experiences in art education. Again, however, social experience is only one method of obtaining cooperative attitudes.

The objective concerning the feeling of pride in doing useful activities and developing worthy leisure-time interests compares to that aim in art dealing with the development of avocational interests. In this age of do-it-yourself hobbies, more emphasis is placed on activities dealing with industrial arts than art. Drawing and design are incorporated in the fundamentals and techniques objective in art education. However, the type and amount of teaching in this area is entirely different from

that of industrial arts. Blue prints and working drawings are seldom used in art. More emphasis is on design, though.

The objective pertaining to shop skills and knowledge is similar to the fundamentals and techniques objective in art education. The art field relies more on creativity than industrial arts, therefore not as much work is done in this area. The industrial arts field is definitely more conscious of materials, their characteristics and sources, than art people are.

The objectives areas in industrial arts which are unique and do not outwardly compare to any of those in this set of art objectives are: interest in industry, health and safety, and orderly performance. Some teaching is surely done in these areas in art, but it is more important in industrial arts. Let us take the health and safety objective for example. The vast amount of power tools and equipment accounts for the emphasis on this objective. As a second example, let us take the orderly performance aim. Industrial arts is definitely more concrete and precise in directions, procedures, and operations than art. This derived from the fact that industry has the same characteristics.

The major difference to be noted is perhaps the fact that art education places most emphasis on creation, whereas in industrial arts education the emphasis is placed at the present time on skill. The phrase "at the present time" is inserted because the field of industrial arts education is comparatively new and is constantly reappraising its curricula for the improvement of its role in education.

From these explanations and comparisons, it may readily be seen that the two areas of art education and industrial arts education are similar in some respects. They both contribute to the major purpose of education which is the developing of a well-rounded individual and preparing him for his occupational choice.<sup>15</sup>

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15. Silvius and Curry, p. 378.

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