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TEACHER EDUCATION

A Sourcebook of

# READINGS IN EDUCATION

SIXTH YEARBOOK 1957

AMERICAN COUNCIL ON INDUSTRIAL ARTS

SIXTH YEARBOOK - 1957 - AMERICAN COUNCIL  
ON INDUSTRIAL ARTS TEACHER EDUCATION



A Sourcebook of  
**READINGS IN EDUCATION**  
for Use in Industrial Arts and  
**Industrial Arts Teacher Education**

Carl Gerbracht, Ph.D.  
Professor of Industrial Arts Education  
State University of New York  
Editor

Gordon O. Wilber, Ph.D.  
Director, Division of Industrial Arts  
Teacher Education  
State University of New York  
Teachers College at Oswego  
Consulting Editor

SIXTH YEARBOOK - 1957 - AMERICAN COUNCIL  
ON INDUSTRIAL ARTS TEACHER EDUCATION

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# Foreword

On the occasion of presenting Yearbook Six of the American Council on Industrial Arts Teacher Education, it seems appropriate to say something about the Council's yearbook program as well as to signal the advent of a new publication.

The Yearbook Committee, appointed by the executive committee of the Council, has proposed a series of publications through the ninth yearbook and the several editors have been designated. At the last two national conventions a prospectus for each forthcoming yearbook has been presented to and discussed by the Council members. The books have reached a chapter breakdown and writers have been selected. All of the Yearbooks are in Industrial Arts teacher education.

The McKnight and McKnight Publishing Company has underwritten the publishing of Yearbook Six as it has the preceding yearbooks. The Council is deeply grateful for this support. Without such assistance the yearbook program would not materialize because of the limited group which the publications serve.

Carl Gerbracht, as editor, and Gordon O. Wilber, as consulting editor, have spent many hours over the past two years in developing Yearbook Six. They have been assisted by seven authors. Together they have produced a basic reference book for the profession, a reference which should be of inestimable assistance to the teacher educator personally and of usefulness to him in his professional course instruction at both graduate and undergraduate levels. The final manuscript represents the judgment and reflects the values of the several authors and the editors; no effort has been made to crystallize or express a Council viewpoint. Doctor Gerbracht and Doctor Wilber are commended for their effective efforts and the authors are cited for diligence in their chapter presentations.

R. Lee Hornbake, *President*  
American Council on Industrial  
Arts Teacher Education

Kansas City, Missouri  
April 22, 1957

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*DeWitt Hunt*

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Stillwater, Oklahoma

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Santa Barbara College  
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Santa Barbara, California (1961)

*John Whitesel*

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Miami University  
Oxford, Ohio (1960)

*\*Termination of appointment*



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## Preface

One of the criticisms frequently levelled at us in the industrial arts field is that we take too little note of the rest of the public-school curriculum and the whole complex of general education as we go about our specialized tasks. If in fact we do this, then we deserve criticism, for we should operate within the context of general education of which we are a part.

The chapters in this volume deal with seven important aspects of education. The technique is one of surveying some of the most significant writings in these seven areas and attempting to synthesize them, producing useful, well-considered ideas about education. Only then are the applications made and implications drawn for industrial arts. This process, it seems to us, should help to rectify the situation. If the criticism was unfair to begin with, this volume will help to prove our case.

Another major purpose that this book will serve is to acquaint its readers with the important ideas which give direction to the educative process. The writers have put these important ideas in one place for ready reference. The book should be useful to teacher educators, prospective teachers, those teaching industrial arts at all levels, and all who would understand the field.

The writers of the various chapters are to be commended for the thorough and expeditious fashion in which they have done their jobs. The large number of publishers who permitted the reproduction of significant quotations deserve our thanks. We are once again indebted to McKnight and McKnight Publishing Company for their great contribution.

We commend this book to your reading and dedicate it to the advancement of the profession.

Carl Gerbracht, *Editor*

Gordon O. Wilber, *Consulting Editor*



# Acknowledgments

A volume such as this, which is intended to acquaint its readers with the important ideas which give direction to the educative process, and which has been prepared as a survey of the most significant writings in the various areas, could be produced only with the co-operation and assistance of many persons, groups, and business firms.

The American Council on Industrial Arts Teacher Education is grateful for the courteous assistance of the following who responded by letter so graciously with permission to use direct quotations from their published works:

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American Association of School Administrators  
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# I

## Philosophical Viewpoints

R. Lee Hornbake  
University of Maryland

*This chapter establishes that sense of orientation which is vital to every successful enterprise. It seems almost unnecessary to state that one's philosophical leanings predispose him to consider the various aspects of his problems in particular ways. So it is appropriate that we invite the reader's attention to this discussion of where we stand-- or, as author Hornbake would probably prefer--where we can stand.*

*The chapter opens with some vital definitions of "philosophy" and "philosophy of education" and a statement of their function in the education complex. The body of the chapter draws very nicely some of the relationships between the school and the cultural environment in which it flourishes. Of particular concern is the section on the unique characteristics of the American way of life, for the industrial arts field as we know it is uniquely American. Next the nature of general education is explored, since it is practically unanimous that industrial arts is at home there. Finally, in the context of all this, the developing program of industrial arts education is described.*

*Taken as a whole, the chapter prepares the reader very well for the more specific educational considerations to follow.*

EDITOR

This chapter is designed to help the industrial arts educator develop or refine a philosophy of industrial arts education. Because of its developmental nature the chapter is concerned with some of the essential elements of a philosophy of education; it is not at all a display-case presentation of theoretical merchandise from which one may choose to suit his tastes. In the end the reader must establish for himself a pattern of consistent values, an integration of explanations, and a body of pertinent evidence if he is to have them at all. Only some of the most apparent suggestions are encompassed in these pages but

anyone who is interested will do well to pursue further the references which constitute the substance of the chapter.

Theories of learning and behavior must be considered in the development of a philosophy of education. Since chapter two is devoted to psychological theories, only casual reference is made to behavioral science data in this chapter.

## PHILOSOPHY AND PHILOSOPHY OF EDUCATION

Any productive deliberation over philosophical viewpoints requires a prior consideration of four interrelated questions: (1) What is philosophy? (2) Is a "way of living" equivalent to a philosophy of life? (3) What is philosophy of education? and (4) Does every person who is engaged in education have a philosophy of education?

Definitions of philosophy are numerous; a terse one presents philosophy as the "love of wisdom"—an interpretation commonly associated with Pythagoras. But before examining descriptive statements it is advisable to note briefly the fields of inquiry or disciplines usually constituting the formal study of philosophy. Broudy includes five major fields in technical philosophy. They are:

*Metaphysics.* This is commonly defined as the study of reality, or with Aristotle, as the principles of Being. This means that it proposes to study the principles common to all kinds of existence: physical, mental, necessary, and contingent. Here we encounter such topics as the nature of the self, matter, mind, body, God, reality, and appearance.

*Epistemology.* This is the study of the principles of knowledge. It is not psychology, which describes and sometimes explains the processes involved in imagination, memory, reasoning, etc., but rather it is the study of what makes knowledge valid, possible, true, and false.

*Logic.* This is the famous study of the rules of correct reasoning.

*Ethics.* This discipline examines the *principles* of right and wrong conduct. It is a study of what makes a choice right, good, or valuable. It obviously utilizes the methods and content of all the other disciplines mentioned. It is in this field that we get specific discussions of the good life.

*Aesthetics.* This discipline deals exclusively with one kind of value, viz., that of the beautiful and ugly. Again it is the *prin-*

iple of what makes a beautiful object beautiful that is peculiar to aesthetics rather than a psychological explanation of how we come to prefer what we happen to prefer.<sup>1</sup>

Against this backdrop of disciplines commonly associated with philosophy several definitions or descriptive statements are presented.

Philosophizing is but another name for the reflective processes whereby one achieves for himself integration of mind.<sup>2</sup>

. . . . It [philosophy] is that *careful, critical, systematic work of the intellect in the formulation of beliefs, with the aim of making them represent the highest degree of probability, in face of the fact that adequate data are not obtainable for strictly demonstrable conclusions.*. . . .<sup>3</sup>

. . . . I am conceiving of philosophy as a reasoned, rationally defensible, self-consistent, comprehensive statement of explanations of the significance, meanings, values, purposes, perspectives and relationships in living. Philosophy seems to me concerned with the dominant underlying problems of the relation of man to his world which all thoughtful people confront . . . .<sup>4</sup>

The word "philosophy" has from the beginning been loosely used. Apparently it, or rather the word "philosopher" was coined, or at least first given publicity by the Greek philosopher, Pythagoras, in the sixth century B. C., who spoke of himself as a "philosophos" or a lover of wisdom. . . .

It was Plato, however, who gave a specific and technical meaning to the words of this group, when he described the "philosopher" as one whose attention was fixed on reality rather than appearance and whose characteristic interest lay in grasping the essential being and nature of things. Since his time "philosophy" in its widest and broadest sense has meant *a reflective and reasoned attempt to infer the character and content of the universe, taken in its entirety and*

<sup>1</sup>Harry S. Broudy. *Building a Philosophy of Education*, p. 17. New York: Prentice-Hall, Inc., 1954.

<sup>2</sup>Robert W. Browning. "Philosophy and the Ordinary Teacher," *The Educational Forum*, 9:359, March 1945.

<sup>3</sup>Ross Finney. *A Sociological Philosophy of Education*, p. 3. New York: The Macmillan Company, 1929.

<sup>4</sup>Ordway Tead. "The Place of Philosophy in Postwar Education," *School and Society*, 50:1537:401, June 10, 1944.

as a single whole, from an observation and study of the data presented by all its aspects. <sup>5</sup>

Actually, philosophy is a rigorous, disciplined, guarded analysis of some of the most difficult problems which man has ever faced, not just anyone's point of view. It requires the best thought of which man is capable . . . Philosophers have asked and tried to answer such questions as the following:

How does it happen that mankind is here? What is life for? What is right for man to do? What is wrong? How can man live a life that is worth while and satisfying? Is there any intelligent purpose back of the fact of this world and its phenomena? . . . How do we get the knowledge we think we have? How valid is this knowledge or supposed knowledge? <sup>6</sup>

The *Dictionary of Education* defines the term philosophy as follows:

*philosophy*: (1) the science that seeks to organize and systematize all fields of knowledge as a means of understanding and interpreting the totality of reality; usually regarded as comprising logic, ethics, aesthetics, metaphysics, and epistemology; (2) an integrated, personal view, especially one that serves to guide the individual's conduct and thinking. <sup>7</sup>

It is possible to discern a thread of continuity running through the descriptive statements and definitions which have been presented. Philosophy is a rigorous, highly disciplined, intellectual enterprise. Philosophy involves a careful consideration of competing ideas and values; it urges the participant to bring to bear upon the situation all known factual data. It involves synthesis in that apparently discrete materials must be integrated. To be instrumental in influencing human behavior the philosopher must reach conclusions, tentative though they may be. Furthermore, the conclusions so reached should constitute the basis for the person's action. When interpreted in this manner philosophy is not something reserved for the cloistered halls of ivy clad universities but is, instead, a framework which gives meaningfulness to everyday living.

<sup>5</sup>B. A. G. Fuller and Sterling M. McHurrin. *A History of Philosophy*, Third Edition, p. 1. New York: Henry Holt and Company, 1955.

<sup>6</sup>Stella V. P. Henderson. *Introduction to Philosophy of Education*, p. 4. Chicago: University of Chicago Press, 1947.

<sup>7</sup>Carter V. Good (ed.). *Dictionary of Education*, p. 295. New York: McGraw-Hill Book Company, 1945.

If one is willing to accept the aforementioned criteria as being fundamental to a philosophy of life he would be compelled to conclude that a way of life is not necessarily a philosophy of life. While it is granted that every normal person develops a pattern of living, a careful distinction should be made between the simple acceptance of value patterns and a careful thinking through of diverse possibilities carried on to a conscious integration of preferred values, based upon supporting evidence. Davidson makes this distinction and in so doing presents the need for philosophy.

Actually the question is not whether we want a philosophy by which to live or are not particularly interested in the matter. It is a question rather . . . of adopting a vague, an inconsistent, a half-conscious, blindly accepted, and probably foolish philosophy or having one that is carefully thought out and based upon the best available information about ourselves and our world. Gradually, unconsciously, but surely, we all absorb from parents, from friends, from the texture of early life, those attitudes and convictions which provide the frame work of our own working philosophy of living. What we accept uncritically as right or wrong, what we feel most deeply concerned about, what we spend our time and effort in securing for ourselves – these values shape our view of life as naturally and inevitably as the things we eat and wear shape our preference for food and clothing.

It is of such deeply rooted, unreasoned convictions and values as these that our working philosophy consists, even as we begin to examine life more critically and objectively for ourselves. Indeed, the very process of reasoning, by which we conduct a more mature self-examination, is itself shaped by these underlying convictions of ours. There is no such thing as complete objectivity in philosophy. We cannot build a philosophy of living for ourselves as we might plan to erect a new home and occupy it at our convenience. All we can hope to do is to reexamine in some larger and more mature perspective the actual convictions to which we give allegiance, seeking to identify obvious limitations in our outlook and inconsistencies in our conduct. Gradually, if we are determined, we may perhaps reshape our underlying attitudes and convictions into a fairly consistent whole somewhat more nearly in line with the facts of experience and the enduring values of life . . . .<sup>8</sup>

<sup>8</sup>Robert F. Davidson. *Philosophies Men Live By*, p. 5. New York: The Dial Press, 1952.

A person interested in seeking assistance in the development of a philosophy of life has several parallel avenues he may travel. He may study the contributions of the great thinkers of all times and of all cultures.<sup>9</sup> He may study schools of philosophical thought.<sup>10</sup> He may study the disciplines associated with philosophy. He may take a major problem which confronts mankind and endeavor to understand what diverse philosophical approaches suggest by way of explanation and reconciliation. A philosophy of life is basic to a philosophy of education but education as a phenomenon constitutes a very adequate base for philosophical inquiry.

#### Philosophy of Education.

Broudy makes the direct statement: philosophy of education "is philosophy *applied* to education." He proceeds to add that there are two senses in which the term "applied" is to be taken.

1. Inasmuch as education aims at something called the good life, it is in ethics, metaphysics, and epistemology that we should find it. Pick yourself a philosophy and see what kind of education you need to bring that kind of good life about. The model of this type of approach is, of course, the *Republic* of Plato. There he asks: If justice is what I have found it to be, then what kind of state does it imply? And what educational system will produce the individual that will make such a state possible?

Another brilliant example of this approach is that of John Dewey, who begins with a theory of knowledge and translates it into a theory of learning and education . . . .

2. The other way of applying philosophy to education is to use the *method* of philosophy in the discussion of educational problems. By philosophical method is meant here (a) analysis of a problem into its presuppositions and implications. For example, we might ask in connection with a problem of the curriculum whether a fixed curriculum presupposes a Platonic or Scholastic metaphysics and whether any progress would be possible with such a fixed program. (b) Examination of a problem in education with an eye to detecting inconsistencies in the arguments adduced for or against it, (c) the classification of meanings, definitions, and terms used in educational discussion, (d) unifying data from many sources into a synoptic view

<sup>9</sup>Vergilius Fern (ed.). *A History of Philosophical Systems*. New York: The Philosophical Library, 1950, 642 p.

<sup>10</sup>B. A. G. Fuller. *op. cit.*, p. 560.

of education, and (e) comparing critically various views on a problem including the tracing of their historical bases. <sup>11</sup>

In the *Dictionary of Education* <sup>12</sup> educational philosophy is defined as "any philosophy dealing with or applied to the process of public or private education and used as a basis for the general determination, interpretation, and evaluation of objectives, practices, outcomes, needs, and materials of study."

Brubacher makes a comprehensive statement on educational philosophy in the first chapter of his *Modern Philosophies of Education*. Among other comments he states:

... When one tries in this manner to order his teaching or learning in the light of its ultimate and most inclusive ramifications, an educational philosophy may be said to be emerging.

... It [educational philosophy] seeks a comprehensive viewpoint which will operate as a common denominator for the diversities of experiences. <sup>13</sup>

Later in the chapter Brubacher comments:

... Philosophy seeks, not to eliminate preferences, but to make them explicit and to show to what consequences they lead in action. Hence it becomes a major obligation of educational philosophy to be concerned with theories of ethics and value. <sup>14</sup>

Plato regarded philosophy, the state, and education as inseparable since, to him, the task of education was to produce the individual who would make the state which, in turn, would yield the good life. John Dewey started with different assumptions about knowledge but still advocated the intimate relationship between philosophy and education.

If we are willing to conceive education as the process of forming fundamental dispositions, intellectual and emotional, toward nature and fellow man, philosophy may even be defined as *the general theory of education*. Unless a philosophy is to remain symbolic--or verbal--or a sentimental indulgence for a few, or else mere

<sup>11</sup>Harry S. Broudy. *op.cit.*, pp. 18-19.

<sup>12</sup>Carter V. Good. *op.cit.*, p. 295.

<sup>13</sup>John S. Brubacher. *Modern Philosophies of Education*, p. 2. New York: McGraw-Hill Book Co., 1939.

<sup>14</sup>*ibid.*, p. 6.

arbitrary dogma, its auditing of past experience and its program of values must take effect in conflict . . . .<sup>15</sup>

The generalizations which characterize philosophy as being arigorous, highly disciplined, intellectual enterprise apply as well to philosophy of education. And while persons who engage in teaching come to have educational convictions, values and preferences and also make adjustments to the demands of their work, there is serious question whether these conditions merit the title of philosophy of education.

Brubacher makes the distinction between "homespun philosophies" and "systematic ones" and he reserves the term educational philosophy for the latter.

It is even said that every teacher, whether he recognizes it or not, has some sort of philosophy of education. Doubtless common-sense viewpoints are often adequate to enable individuals to make successful adjustments of immediately conflicting demands, but, though these may lay claim to being homespun philosophies, they hardly qualify as systematic ones. Crucial here is the degree to which there has been a conscious and thorough articulation of a wide range of conditioning circumstances. Relatively few probe very deep. It may be generous to share the term philosophy with any offhand opinion drawn from a hodgepodge of educational experience. Yet a proper respect for terminology seems to require the reservation of educational philosophy for the more profound systematic effort.<sup>16</sup>

The educator, in search of a philosophy of education, can escape none of the rigors which apply to philosophy in general. He cannot avoid metaphysics, epistemology, logic, ethics and aesthetics. He must deal with the data provided by the social and behavioral sciences as well as with the data of some of the physical sciences. In a sense philosophy and education are two heads of the same coin; philosophy establishes human goals or purposes and education constitutes the means to these ends.

Aside from the consideration of whether every teacher does or does not have a philosophy of education, every teacher operates on assumptions about education and the educational process. Opinion about or reactions to these assumptions are sometimes mistaken for a philosophy of education. Kelly<sup>17</sup> presents a list of ten assumptions which he

<sup>15</sup>John Dewey. *Democracy and Education*, p. 383. New York: The Macmillan Company, 1916.

<sup>16</sup>John S. Brubacher. *op.cit.*, p. 20.

<sup>17</sup>Earl C. Kelley. *Education for What is Real*, p. 15. New York: Harper and Brothers, 1947.



says “have been with us so long and are so firmly grounded in tradition that they have virtually become axioms to us.”

1. We assume that the child goes to school to acquire knowledge, and that knowledge is something which has existed for a long time and is handed down on authority.

2. We assume that subject matter taken on authority is educative in itself.

3. We assume that the best way to set out subject matter is in unassociated fragments or parcels.

4. We assume that a fragment or parcel of subject matter is the same to the learner as to the teacher.

5. We assume that education is supplementary to and preparatory to life, not life itself.

6. We assume that since education is not present living, it has no social aspects.

7. We assume that the teacher can and should furnish the purpose needed for the acquiring of knowledge.

8. We assume that working on tasks devoid of purpose or interest is good discipline.

9. We assume that the answer to the problem is more important than process.

10. We assume that it is more important to measure what has been learned than it is to learn.<sup>18</sup>

Whether these assumptions do have widespread adoption is of less relevance to this chapter than the contribution they make to identifying some of the areas of inquiry essential to a philosophy of education.

#### NEED FOR A PHILOSOPHY OF EDUCATION

Education may be thought of as a process of changing behavior through the control of learning. It is a conscious effort to influence the economic, social, intellectual, spiritual and aesthetic activity of people. Behavior change, unless it is to be random and pointless, must have direction and significance; these conditions imply goals or purposes. But just any chance goal or purpose is not suitable for an educational venture for many reasons, one of which is the risk that an unsupported goal may be inimical with the well-being of the individual and society. All goals cannot be pursued due to lack of time and the absence of compatibility among unselected purposes. Hence a formal educational program, such as is carried on in a public school, is in-

<sup>18</sup> *Ibid.*, pp. 15-22.

tended to advance a few carefully selected, highly important goals. The origin of rational, defensible goals inheres in a philosophy of education.

Education is selective in another sense. The "subject matter" of education -- the knowledges, skills, understandings, appreciations, attitudes for which we teach are drawn from an unending and constantly increasing source of supply. Not all there is to know about any of the major disciplines can be taught or learned, and the existence of many disciplines only emphasizes our tremendous heritage. Hence, the subject matter which comprises the teaching content of education at any school level, such as elementary education or secondary education, or the subject matter which characterizes an area such as industrial arts is but a small part of the total. The content selected for teaching purposes represents choices and the decisions made in this regard are of fundamental importance to the learner and to society. Here again goals or objectives supported by a philosophy of education provide a sound basis for selection.

Teaching methods or teaching procedures or methods of organizing instruction are numerous and some methods are incompatible with others. Over the years teaching method has perhaps been the most controversial area of education, particularly at the local level, because the issue of method is ever present. The very act of instruction involves method and since diverse methods are available decisions must be made. Quite commonly content and method (i.e. subject matter and method of teaching) decisions are made simultaneously because how one teaches influences very directly the content of his teaching just as the selected learning experiences have close control over the instructional methods. Methods, of course, may be the intended learning (e.g. problem solving) while the content is simply the "carrier" of the method. But aside from the peculiarities of methodology the fact still remains that teaching method is an area of important educational decision making.

The goals for which we teach and the decisions which we must make in the areas of content and method are adequate to establish the need for a philosophy of education among professional educators. Unless these decisions are reached on some rational grounds, danger lies in the possibility that poor or indefensible or unexplainable choices will be made. Without some rationale behind our educational endeavor we lack a means of evaluating the effectiveness and appropriateness of education and traditional ways of doing things remain unchallenged. But an even greater danger inheres in the likelihood that unless the

professional leadership group has a philosophy of education, education may become the tool of a special interest group to mold children and youth to their liking, such as occurs in authoritarian states.

There are many additional circumstances which point up the need for a philosophy of education. Education is a creative, positive process; it is a process of synthesis, of putting things together. Many of the aspects of our culture are fragmentary and disjointed and may be in serious disagreement. Children and youth are particularly sensitive to the inconsistencies of value systems, because children and youth translate values into expectations.

Numerous writers have presented arguments favoring the teacher's need for a philosophy of education. Those which are presented are typical.

There is probably no worker whose practice is more affected by his philosophy or lack of philosophy than is a teacher. Too many teachers teach as they were taught. Others have acquired from reading or from observation certain ideas as to what they should do. So long as they stay on a beaten path they get along fairly well. But teachers cannot remain on a familiar road. They meet new problems. They must help children who have diverse personalities and backgrounds. They must select experiences and subject matter for these children. They must know what constitutes desirable conduct for children and why. They must decide on methods to use, emphases to make, values to prefer, conditions to strive for, changes to advocate. Human nature is so complex, human problems so many, that it is impossible to give prospective teachers a bag of tricks or even to help them learn a set of habits which they may use in every situation in which they find themselves. One cannot write recipes for successful teaching as one writes recipes for successful cooking ....<sup>19</sup>

For philosophy as we shall show, is most properly defined as the effort of any culture to become conscious of itself—to face honestly and stubbornly its own weaknesses as well as strengths, failures as well as achievements, vices as well as virtues. Contradicting the common notion that philosophy at its purest is an aloof, intellectual discipline unsullied by either the miseries or the joys of everyday life, we shall develop the thesis that it is the supreme instrument man has fashioned by which, through the ages, he comes

<sup>19</sup>Stella V. P. Henderson. *op.cit.*, p. 13.

to terms with himself as he struggles to organize his existence within culture. It follows, that, because education is indispensable to that struggle, even within the simplest of cultures, the only way we can hope ultimately to understand education is to subject it to philosophic scrutiny.<sup>20</sup>

....many teachers are prepared and certificated without any course work in either area [history of education and philosophy of education]. These subjects have been replaced by courses dealing largely with status studies and methods which seem to be more directly useful. The content of these courses usually stems from some philosophical system, but, since students have had little or no instruction in philosophy itself, teacher education has tended to become increasingly doctrinaire and therefore a form of indoctrination. Ultimately even the faculty may be teaching a content which reflects philosophical origins and implications of which they are unaware. It is time for a change, a change to the teaching of basic understandings....<sup>21</sup>

The opening chapter in the National Society for the Study of Education Yearbook: *Modern Philosophies and Education* cites the increased attention given to philosophy of education in this century. Since teachers are most intimately involved with this "instrument of public policy" they, above all, should have a sense of preferred values.

In view of the contradictory, often confusing, issues presented, it should not be surprising that men have resorted to philosophizing about education this century as never before. This does not mean that it is anything new for men to be in a quandary about which direction education should take. Men have confronted many such crises in civilizations's long history. Plato, for instance, wrote his *Republic* partly in response to the unstable social conditions of his day. Still, the present tensions seem more acute for education than previous ones. The principal difference between present and past eras seems to be that today education is consciously used as a tremendous instrument of public policy. Formerly, only the privileged classes benefited by an extended education. But today most states aim at universal education, the education of all classes. Conse-

<sup>20</sup>Theodore B.H. Brameld. *Philosophies of Education in Cultural Perspective*, p. 4. New York: The Dryden Press, 1955.

<sup>21</sup>F.L. Shoemaker. "Philosophy of Education as a Directive", *School and Society*, 77:401, June 27, 1953.

quently, alterations in educational direction caused by shifting configurations of tensions among the forces mentioned above have a far greater outreach than ever before in the world's history.<sup>22</sup>

#### RELATIONSHIP BETWEEN THE SCHOOL AND THE CULTURE IN WHICH THE SCHOOL FUNCTIONS

There appears early in the development of a philosophy of education the need to establish a point of view on the relationship between the school and the culture in which the school functions. Several of the preceding quotations have referred to Plato and to the significance Plato placed upon education. Plato in *The Republic* reveals a keen awareness of the usefulness of education in creating his ideal State. At one point in the dialogue he says "... let us begin and create in idea a State; and yet the true creator is necessity, who is the mother of our invention."<sup>23</sup> There follows an identification of some of the persons who would comprise the State and these include husbandmen, builders, weavers, shoemakers, carpenters, smiths, merchants, shepherds, sailors, salesmen, physicians, players, and dancers. Eventually it becomes evident that soldier-guardians of the State are essential. The qualities of the guardian are clearly delineated in terms of the needs of the State. "Then he who is to be a really good and noble guardian of the State will require to unite in himself philosophy and spirit and swiftness and strength?"<sup>24</sup> The dialogue progresses immediately to education for it is recognized that the desired behavior must be taught and learned. "Then we have found the desired natures; and now that we have found them, how are they to be reared and educated?"<sup>25</sup>

Several basic questions assist in approaching the larger problem. Is the school intended to transmit and perpetuate the dominant elements of the cultural heritage? Or does the school present an educational program which is independent of time and place? If the former, how do those who are responsible for determining the educational program choose from among the many conflicting values which inhere in any complex culture? If the latter, by what conscious means does a com-

<sup>22</sup>National Society for the Study of Education. *Modern Philosophies and Education*. p. 7. Chicago: The Society, 1955.

<sup>23</sup>Plato. *The Republic*. p. 67. (Translated By Benjamin Jowett). New York: The World Publishing Company, 1946.

<sup>24</sup>*Ibid.*, p. 76.

<sup>25</sup>*Ibid.*, p. 76.

plex culture re-create itself if not through its schools? A whole host of perplexing questions follow in the wake of these. For example, how can a democratic society educate its children and youth in terms of democratic values without running the risk of indoctrination? Are there obligations which distinguish teaching as a profession -- obligations to knowledge and to truth which the teacher must place in advance of the demands of intransigent social pressures?

At first glance these questions may seem far afield from a philosophy of industrial arts education. However, a moment of reflection will reveal that the acceptance of industrial arts into the family of school disciplines assumes that the world of work, particularly the phenomena of industry, constitutes a legitimate area of study. Can a person who lives in an industrial democracy lay claim to being an educated person if he has not become aware of the basic processes by which society maintains itself? Dewey raised the same issue before the turn of the century while in the process of reporting on the University Elementary School which he directed. He said in 1899:

We must conceive of them [work in wood, metal, cooking, sewing, weaving] in their social significance, as types of the processes by which society keeps itself going, as agencies for bringing home to the child some of the primal necessities of community life, and as ways in which these needs have been met by the growing insight and ingenuity of man; in short, as instrumentalities through which the school itself shall be made a genuine form of active community life, instead of a place set apart in which to learn lessons.<sup>26</sup>

Civilizations developed as man was able to gain greater control over his environment and much of his knowledge developed in the process of improving his technics. Formal instruction in schools has, from the outset, placed emphasis upon literary elements alone and has neglected both the origins of the knowledge with which it deals and its social significance. Butts reminds us of this early relationship.

...When modern educators eulogize the universality and permanence of truth and knowledge, it is well to remember that organized knowledge grew up in connection with the social necessities of controlling the physical environment and human conduct. When they speak of the desirability of studying "pure" science apart from its practical applications, it should be remembered that science ap-

<sup>26</sup>John Dewey. *School and Society*, p. 11. Chicago: The University of Chicago Press, 1900.

peared in the midst of a practical and social situation. When they speak disparagingly of the practical arts in favor of the fine arts, it should be noted how closely these arts were connected in their social origins.<sup>27</sup>

It is only as we are able to relate the world of work to education that industrial arts becomes a curriculum area worthy of serious consideration.

As mentioned previously, Plato gave thought to the school-society relationship and countless others have given attention to it since. The American Historical Association presents one point of view in a series of numbered paragraphs under the chapter heading of "Philosophy and Purpose in Education."

A.

1. Education is a form of action on the part of some particular social group; it is not a species of contemplation removed from social life and relationships.

2. Education always expresses some social philosophy, either large or small, involves some choices with respect to social and individual action and well-being, and rests upon some moral conception.

3. Conceived in a large and clarified frame of reference, education is one of the highest forms of statemanship: a positive and creative attack upon the problems generated by the movement of ideas and interests in society.

4. Finding its immediate expression in individuals, education so conceived is concerned with the development of rich and many-sided personalities capable of co-operating in a social order designed to facilitate the creation of the largest possible number of rich and many-sided personalities.

B.

Education an Expression of a Particular Geographical and Cultural Setting

1. Being a form of social action, education always has a geographical and cultural location; it is therefore specific, local, and dynamic, not general, universal, and unchanging, it is a function of

<sup>27</sup>R. Freeman Butts. *A Cultural History of Education*, p. 18, New York: McGraw-Hill Book Company, Inc., 1947.

a particular society at a particular time and place in history; it is rooted in some actual culture and expresses the philosophy and recognized needs of that culture. Contemporary American society of course is of vast proportions and manifests wide-reaching economic and cultural ramifications extending to the most distant parts of the world.

2. Although the basic biological equipment of man seems to be comparatively invariant and may therefore be expected to give certain common elements to education everywhere and at all times, human civilization has characteristics of neighborhood, region, nation, and more extended cultural areas, which lend unique qualities to every working educational program, however persistent and pervasive may be the universal elements entering into it.

3. Since culture plays a dominant role in giving form and substance to education, the formulation of a relevant and effective educational philosophy for a particular society at a particular time and place in history must rest in a large measure upon the findings of the social sciences, findings pertaining to the nature, trends and thought of that society in its regional and world setting.<sup>28</sup>

Edwards and Richey introduce *The School in the American Social Order* with a statement of hypothesis which is inherent in the title of the book.

Education at any given time or place is in large measure the product of the civilization of which it is a part; however much it may be influenced by custom and tradition, it is always sensitive to contemporary social forces. It is not too much to say that social forces beating in on the school from without in the long run determine the essential tenets of its philosophy, the degree and kind of educational opportunities that will be afforded the various social classes, the content and organization of the curriculum, the preparation and status of teachers, the sources of financial support, the agencies of administration, and the form of structural organization which the educational system takes.

The purpose of educational institutions is to prepare the learner to participate intelligently and helpfully in the social order of which he is a part. But society is rarely static for any long period of time.

<sup>28</sup>American Historical Association. Commission of the Social Studies in the Schools. *Conclusions and Recommendations of the Commission*, pp. 30-32. New York: Charles Scribner's Sons, 1934.



New social classes emerge and seek to shape events in their own interest; the prevailing ideology is modified or supplanted by one essentially new; political and economic power passes from one dominant element in society to another, the role of government is modified, and new political institutions emerge; the whole pattern of economic life may be greatly changed by technological progress; and the whole society may be transformed from one that is essentially religious or ecclesiastical to one that is essentially lay or secular. When changes such as these occur in the social order, the old educational institutions may function so inadequately that they prepare youth to take their place in a society that no longer exists. There is a tendency for educational policy and practice always to lag behind contemporary social change. When the lag becomes too great, educational reformers and statesman usually set about bringing the school up-to-date by redefining its goals, reorganizing its curriculum, and changing its methods. Yet the dynamics of educational change is to be found, not primarily in the work and influence of educational philosophers and reformers, but in the social forces operating in the society. <sup>29</sup>

One of the masterpieces in our professional literature, *The Unique Function of Education in American Democracy*, is predicated on five guiding principles. Principle number two is especially pertinent to the present discussion but it can be comprehended better when placed in the total text of principles.

1. Public education is anchored in the history of American civilization and at any given moment operates within the accumulated heritage of that civilization.

2. Every system of thought and practice in education is formulated with some reference to the ideas and interests dominant or widely cherished in society at the time of its formulation.

3. Once created and systematized, any program of educational thought and practice takes on professional and institutional stereotypes, and tends to outlast even profound changes in the society in which it assumed its original shape.

4. Any restatement of educational objectives and responsibilities which is rooted in reality takes into account the nature of pro-

<sup>29</sup>J. Newton Edwards and Herman G. Richey. *The School in the American Social Order*, p. xi. Boston: Houghton Mifflin Co., 1947.

fessional obligations and makes adjustments to cope with the major changes wrought in society since the last general reckoning in education.

5. Any statement of educational objectives and responsibilities that is not merely theoretical involves a quest for the institutional forms and operating practices through which education can best attain its ends. <sup>30</sup>

Later in the manuscript the contribution of education to the democratic way of life is set forth.

In any realistic definition of education for the United States, therefore, must appear the whole philosophy and practice of democracy. Education cherishes and inculcates its moral values, disseminates knowledge necessary to its functioning, spreads information relevant to its institutions and economy, keeps alive the creative and sustaining spirit without which the letter is dead. The solution of specific problems of democracy devolves upon society. Education does not arrogate that function to itself. It does not claim either the competence or the sole power—legal or spiritual. But education does preserve and spread knowledge appropriate to the solution of specific problems, instills the disciplines essential to the acquisition of knowledge, describes the points of view from which problems are discussed, sets forth the assumptions and imperatives on which solutions depend, and in the classroom illustrates the spirit and procedure in which knowledge and reason are applied in coping with the adjustments of society . . . . <sup>31</sup>

The historian, Butts, has prepared an educational history in which he has used the cultural approach. He has done so on the assumption that the history of education can be understood only when examined in terms of the institutions and ideas men lived by. To use the author's words:

Education is viewed as integrally related with the culture of each period. To understand the education of any particular time or place one must understand the culture in which it operates. <sup>32</sup>

The President's Commission on Higher Education likewise accepts the assumption of direct relationship.

<sup>30</sup>Educational Policies Commission. *Policies for Education in American Democracy*, pp. 4-5. Washington, D. C.: National Education Association, 1946.

<sup>31</sup>*Ibid.*, p. 70.

<sup>32</sup>Butts, *op.cit.*, p. 2.

Education is an institution of every civilized society... An educational system finds its guiding principles and ultimate goals in the aims and philosophy of the social order in which it functions  
....<sup>33</sup>

Bode has addressed himself to the basic question of what is the democratic way of life and what is the peculiar obligation of the school to democracy. He expressed a keen awareness of the qualities of the democratic tenets and he warned the profession of the risks involved in educating for democratic living. Some indications of his point of view may be noted in the following discrete quotations.

....Generally speaking, the purpose of schools has always been to transmit, besides certain skills and information, a selected assortment of attitudes and beliefs, in order to make sure that the younger generation will grow up in accordance with an antecedent philosophy or way of life....<sup>34</sup>

....the school must build up the attitudes and appreciations which are appropriate to its underlying philosophy. If this philosophy is a philosophy of democracy, the school must undertake to exemplify, in its organization and procedures, its conception of democratic living. This is necessary, not merely to promote a better intellectual understanding of democracy, but to create the conditions for transforming democratic precepts into established habits of feeling and willing. In brief, the school must be a place where pupils go, not merely to learn, but to carry on a way of life.<sup>35</sup>

A democratic social order will not undertake to prescribe beliefs, but it clearly cannot ignore the duty of providing assistance in this matter to its members. If it does not provide such assistance it is considerate neither of the individual development of its citizens nor of its own security. The most immediate agency for this purpose is obviously the public school. A democratic social order which understands its own character and purpose is bound to have a distinctive system of education.<sup>36</sup>

The democratic school, in brief, is an institution which aims to promote the ideal of "free and equal" by taking proper account

<sup>33</sup>President's (Truman) Commission on Higher Education. *Higher Education for American Democracy*, Vol. 1 "Establishing the Goals," p. 5. Washington, D. C.: The Government Printing Office, 1947.

<sup>34</sup>Boyd H. Bode. *Democracy as a Way of Life*, p. 12. New York: The Macmillan Company, 1950. (Quoting permission granted by Kappa Delta Pi.)

<sup>35</sup>*Ibid.*, p. 77.

<sup>36</sup>*Ibid.*, pp. 61-62.

of individual differences and by reliance on the principle of community living. It is an artificial community in the sense that it does not spring up naturally but is created for a special purpose. This distinctive institution is necessary, both because the life outside of the school is too complex to be understood without some kind of simplification and reorganization, and also because this outside life is very far from being an ideal democratic social order. . . .<sup>37</sup>

Like every other program in this field, the democratic program of education is an adventure in faith. It rests on the faith that if the reconstruction of experience goes hand in hand with sincerity and careful self-criticism, the basis of understanding among men will be continuously widened. Honest thinking generates a deeper insight and a deeper sympathy with respect to those who arrive at different conclusions. Not only so, but faith in the democratic ideal commits us to the faith that in the long run this way of life will gain increasingly wider acceptance, if the obstacles to the free use of intelligence are removed. There can be no other outcome, unless this reliance on intelligence is misplaced: on this point the gods offer no guarantees. But for democracy there is no choice. It stands or falls by its faith in the common man. This faith is the only basis on which it can undertake to remold the sorry scheme of things so as to make it conform more nearly to the heart's desire.<sup>38</sup>

Bode prepared another statement intended specifically for industrial arts educators; its relevance to the present topic is indicated in the title: *Industrial Arts and the American Tradition*. Perhaps the paragraph which best summarizes the essay cites potential social contribution of industrial arts education.

. . . My concern is with the general proposition that the teaching of industrial arts should be as much a process of shaping social outlook as it is anything else. It seems obvious, for example, that our present industrial order is in many ways an obstacle to the kind of continuous development for which a truly democratic order should provide opportunity. To make this industrial order more flexible, so that it will become a source of intellectual, social, and esthetic stimulation is one of the major problems of our democracy. It may fairly be claimed that a student has not studied industrial arts as he

<sup>37</sup>*Ibid.*, pp. 82-83.

<sup>38</sup>*Ibid.*, pp. 113-114.

should, if he has not acquired some convictions with respect to the social reconstruction which is necessary if the possibilities of this field of activity are to be realized. Without new insights of this kind he may, indeed, be a skilled craftsman and perhaps a fairly well-informed person, but he can not claim to be an educated man.<sup>39</sup>

In contrast with most of the quotations presented Hutchins has started with a different set of assumptions and has reached significantly different conclusions. One of his more direct statements may be found in *The Higher Learning in America*.

Our erroneous notion of progress has thrown the classics and the liberal arts out of the curriculum, overemphasized the empirical sciences, and made education the servant of any contemporary movements in society, no matter how superficial. In recent years this attitude has been accentuated by the world-wide depression and the highly advertised political, social, and economic changes resulting from it. We have been very much upset by all these things. We have felt that it was our duty to educate the young so that they would be prepared for further political, social, and economic changes. Some of us have thought we should try to figure out what the impending changes would be and frame a curriculum that embodied them. Others have even thought that we should decide what changes are desirable and then educate our students not merely to anticipate them, but also to take part in bringing them about.

One purpose of education is to draw out the elements of our common human nature. These elements are the same in any time or place. The notion of educating a man to live in any particular time or place, to adjust him to any particular environment, is therefore foreign to a true conception of education.

Education implies teaching. Teaching implies knowledge. Knowledge is truth. The truth is everywhere the same. Hence education should be everywhere the same. I do not overlook the possibilities of differences in organization, in administration, in local habits and customs. These are details. I suggest that the heart of any course of study designed for the whole people will be, if education is rightly understood, the same at any time, in any place, under any political, social, or economic conditions. Even the administrative details are likely to be similar because all societies have generic similarity.

<sup>39</sup>Boyd H. Bode. *Industrial Arts and the American Tradition*, pp. 8-9. Columbus, Ohio: Epsilon Pi Tau, 1942.

If education is rightly understood, it will be understood as the cultivation of the intellect. The cultivation of the intellect is the same good for all men in all societies. It is, moreover, the good for which all other goods are only means. Material prosperity, peace and civil order, justice and the moral virtues are means to the cultivation of the intellect. So Aristotle says in the *Politics*: "Now, in men reason and mind are the end towards which nature strives, so that the generation and moral discipline of the citizens ought to be ordered with a view to them." An education which served the means rather than their end would be misguided.<sup>40</sup>

On the final question of the obligations which inhere in the teaching profession perhaps no reference is more direct than is *The Unique Function of Education in American Democracy*.

This is no place to attempt a distillation of forty centuries of educational thought and aspiration, even were the powers to undertake it at command. But stress must be laid on the intrinsic and enduring features of education. Otherwise they may be neglected amid the pressures of immediate demands upon the schools; and encouragement may be given to the menacing conception that education is nothing in itself, is a mere servant of triumphant power--political, military, or economic.

It is obvious, and still must be emphasized, that education has obligations attached to the profession. The teacher is not a soldier, a lawyer, a physician, a businessman, a farmer, or an industrial worker. Other callings have their responsibilities. Teaching has the responsibilities of its commitments. In its heritage is knowledge--of the great classics deemed appropriate for instruction in the schools, of educational philosophy from Plato through Rousseau and Froebel to the latest pathbreakers, of the scientific works employed in the several branches of learning, and of the technical works on method and practice. It is the duty of teachers, according to their powers, to master as much of this knowledge as they can.

Above all, education has obligations to truth in itself and for its own sake--obligations to seek it, defend it, and make humane use of it. Education must keep alive memories, linking past with the present and tempering the sensations of the hour by reference to the long experiences of the race. It must kindle and feed the imagina-

<sup>40</sup>Robert M. Hutchins. *The Higher Learning in America*, pp. 65-67. New Haven: Yale University Press, 1948.

tion, by bringing past achievements of the imagination into view and indicating how new forms of science, arts, invention, and human association may be called into being. Education must foster aspiration--the desire to be more, to acquire greater skill and knowledge, and to create. It must cherish beauty as a value in itself and as contributing to mental health, power, and pleasure, as adding rewards to labor and delight to life. Concerned with truth and the great powers of mind and heart, education is bound to assert the liberty in which they may flourish, to quicken minds, to encourage searching and inventiveness, to employ tolerance and the judicial spirit, to inculcate habits of gentleness and justice. On these considerations education has no monopoly, to be sure, but its intrinsic obligations fall within the broad field thus laid out.<sup>41</sup>

#### UNIQUE CHARACTERISTICS OF THE AMERICAN WAY OF LIFE

*Fortune*, a magazine devoted to reporting and analyzing American business, has expressed the hypothesis: "One cannot do business intelligently in America unless one is intelligent about America."<sup>42</sup> Educators may paraphrase the principle by saying that one cannot *educate* intelligently in America unless he is intelligent about America.

The delineation and verification of American traditions and characteristics is a difficult task for several reasons. The emphases within a culture change with time and hence one must "datemark" the period. According to *Fortune*, an American resents being fixed in time, to be arrested in the image of what he used to be. We see "the native dynamism within the American way of life, released by the energies of free people." There is within the American pattern "the constant change, the constant correction of errors, the constant reappraisal, the constant evolution of American aims. Americans wish that other people could see their country as it really is: not as an achievement, but as a *process*-- a process of becoming."

Following this line of reasoning the educator cannot assess the situation once and for all but instead must make a continual survey of the changing panorama. Furthermore, the educator may make a significant contribution to the emerging national character, provided he is so inclined and adequately equipped to do so.

The identification and validation of the unique customs of a culture is made difficult also by the presence of numerous sub cultures

<sup>41</sup> Educational Policies Commission. *op. cit.*, pp. 55-56.

<sup>42</sup> *Fortune*, 43:2::61, February 1951.

<sup>43</sup> *Ibid.*, p. 194.

which inhere in any extended population. These sub cultures becloud a person's vision and bias his assessment, no matter how objective the recorder may try to be. The selective process itself is biased since one recounts whatever is most readily available to him.

It is difficult to obtain a vantage point from which to view the values and practices which characterize a people. History provides one approach and at least avoids some of the risks of reporting the superficial and transitory. Even a cursory study reveals that a new way of life developed in the American Colonies so that by the time of the Revolution only the military battles remained to be fought. John Adams is credited with saying "...The Revolution was effected before the war commenced. The Revolution was in the minds and hearts of the people."<sup>44</sup>

*Historical Documents.* By using the historical approach, documents of American history come to mind immediately. No single statement is any more revealing than the first sentence of the second paragraph of the Declaration of Independence. "We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights; that among these are Life, Liberty and the pursuit of Happiness...."

Gabriel, commenting on this aspect of the Declaration, attributes the pursuit of happiness principle to Jefferson.

Jefferson's formulation of the natural rights theory varied significantly, however, in one particular from that of Locke. The change reflected a difference between civilization as it was evolving in America and as it existed in Europe. Newton's philosopher friend Locke had affirmed the natural right of the individual to life, liberty, and property. By property Locke meant the clothing, habitations, and tools that make life possible. Jefferson substituted for property the natural right of the individual to the pursuit of happiness.

This new idea did not originate by accident. It came out of a new society, one in which feudalism had never been important and whose last vestiges were soon to be swept away by the changes that followed 1776. In American communities two with a history of more than a century and a half, an open class system was emerging that contrasted with the fixed and rigid class hierarchies of European nations....<sup>45</sup>

<sup>44</sup>Arthur M. Schlesinger, *New Viewpoints in American History*, p. 162. New York: The Macmillan Company, 1948.

<sup>45</sup>Ralph H. Gabriel, *The Course of American Democratic Thought*, Second Edition, pp. 15-16. New York: The Ronald Press Company, 1956.



The Bill of Rights likewise departed from established social-political relationships and the adoption of the Constitution was contingent upon these explicit individual and state rights.

#### Foreign Reporters and Reactions.

The initiation of the New Republic, signalled by the Continental Congress in 1774, was such a marked departure from any pattern of human relations which had existed until then that numerous foreign observers came to get a close-up view. Some were here for a long time and proved to be discerning reporters. The most celebrated among them was Crèvecoeur.

Crèvecoeur, born a Frenchman, came to this continent to serve under Montcalm in the Seven Year's War. He remained in the Colonies and in 1765 became a naturalized farmer in New York where he lived until 1780. He returned to the United States in 1783, tarried until 1790, and then went back to live in France until his death in 1813. Crèvecoeur wrote a series of *Letters from an American Farmer*. The third letter, written some time in the late 1770's, is the most famous early American characterization. In the essay Crèvecoeur endeavored to answer the question: "What then is the American, this new man?"

Crèvecoeur noted especially the absence of a class structured system, the heterogeneity of the population, lawlessness on the frontier, the prevalence of land ownership. Perhaps the most striking generalization Crèvecoeur reached pertained to the industry of the people and to the rewards which accrued to the diligent. He communicates the pattern by describing the progress of a hypothetical European immigrant.

Let me select one as an epitome of the rest; he is hired, he goes to work, and works moderately; instead of being employed by a haughty person, he finds himself with his equal, placed at the substantial table of the farmer, or else at an inferior one as good; his wages are high, his bed is not like that bed of sorrow on which he used to lie: if he behaves with propriety, and is faithful, he is caressed, and becomes, as it were, a member of the family. He begins to feel the effects of a sort of resurrection; hitherto he had not lived, but simply vegetated; he now feels himself a man, because he is treated as such; the laws of his own country had overlooked him in his insignificance; the laws of this cover him with their mantle. Judge what an alteration there must arise in the mind and thoughts of this man; he begins to forget his former servitude and dependence; his heart involuntarily swells and glows; this first

swell inspires him with those new thoughts which constitute an American. What love can he entertain for a country where his existence was a burden to him! If he is a generous good man, the love of his new adoptive parent, will sink deep into his heart. He looks around, and sees many a prosperous person, who but a few years before was as poor as himself. This encourages him much; he begins to form some little scheme, the first, alas, he ever formed in his life. If he is wise, he thus spends two or three years, in which time he acquires knowledge, the use of tools, the modes of working the lands, felling trees, &c. This prepares the foundation of a good name, the most useful acquisition he can make. He is encouraged; he has gained friends; he is advised and directed; he feels bold; he purchases some land; he gives all the money he has brought over, as well as what he earned, and trusts to the God of harvests for the discharge of the rest. His good name procures him credit; he is now possessed of the deed, conveying to him and his posterity the fee simple, and absolute property of two hundred acres of land, situated on such a river. What an epocha in this man's life! He is become a freeholder, from perhaps a German boor--he is now an American, a Pennsylvanian. He is naturalized; his name is enrolled with those of the other citizens of the province. Instead of being a vagrant, he has a place of residence; he is called the inhabitant of such a county, or of such a district, and for the first time in his life counts for something; for hitherto he had been a cypher. I only repeat what I have heard many say, and no wonder their hearts should glow, and be agitated with a multitude of feelings, not easy to describe. From nothing to start into being; from a servant to the rank of master; from being the slave of some despotic prince, to become a free man, invested with lands, to which every municipal blessing is annexed! What a change indeed! It is in consequence of that change, that he becomes an American.

This great metamorphosis has a double effect; it extinguishes all his European prejudices; he forgets that mechanism of subordination, that servility of disposition which poverty had taught him; and sometimes he is apt to forget it too much, often passing from one extreme to the other. If he is a good man, he forms schemes of future prosperity; he proposes to educate his children better than he has been educated himself; he thinks of future modes of conduct, feels an ardour to labour he never felt before. Pride steps in, and leads him to every thing that the laws do not forbid: he respects them; with a heart-felt gratitude he looks toward that government from whose

wisdom all his new felicity is derived, and under whose wings and protection he now lives. These reflections constitute him the good man and the good subject.<sup>46</sup>

An American historian of our own day, Arthur M. Schlesinger, used the Crevecoeur question, "What then is the American; this new man?" as the title of the opening chapter of his *Paths to the Present*. Schlesinger concluded that the many Europeans who tried to describe and appraise the American reached several points of agreement. A summary of the consensus is presented by Schlesinger in a single paragraph.

The composite portrait that emerges deserves thoughtful consideration. The attributes most frequently noted are a belief in the universal obligation to work; the urge to move from place to place; a high standard of average comfort; faith in progress; the eternal pursuit of material gain; an absence of permanent class barriers; the neglect of abstract thinking and of the aesthetic side of life; boastfulness; a deference for women; the prevalence of spoiled children; the general restlessness and hurry of life, always illustrated by the practice of fast eating; and certain miscellaneous traits such as overheated houses, the vice of spitting and the passion for rocking chairs and ice water.<sup>47</sup>

Schlesinger evaluates the listing and considers it incomplete and an unfortunate mixture of the significant and the trivial. Among the conditions and the early developing characteristics which Schlesinger cites there are the following:

....The great bulk of the settlers, like the immigrants of later times, belonged to the poorer classes. They and their ancestors, whether in England or on the Continent, had been artisans, small tradesmen, farmers, day laborers--the broad foundation which supported the fine superstructure of European civilization....<sup>48</sup>

.....  
 .... It has often been observed that plants and animals undergo modification when removed to America. These mutations arise from differences in climate and geography. But other factors as well affected transplanted people. One was the temperament of the set-

<sup>46</sup>Henry Steele Commager, *America in Perspective*, pp. 16-18. New York: Random House, 1947.

<sup>47</sup>Arthur M. Schlesinger, *Paths to the Present*, p. 2. New York: The Macmillan Company, 1949.

<sup>48</sup>*Ibid.*, p. 3-4.

tlar, the fact that he was more adventurous, more ambitious or more rebellious against conditions at home than his fellows... undoubtedly the act of quitting a familiar existence for a strange and perilous one demanded uncommon attributes of hardihood, self-reliance and imagination. Once the ocean was crossed, sheer distance from the old country and the challenge of new experiences further weakened the bonds of custom, evoked latent capacities and awakened the settler to possibilities of improvement hitherto unsuspected.

.....

Though the colonial agriculturist owed much to the savage, he had no wish to live like one. Accustomed in the old country to simple comforts and mechanical devices in the home and about the farm, he duplicated them in the wilderness. Every husbandman became a manufacturer and every farm house a small factory, producing flour, soap and candles, tanning skins, preparing the winter's meat supply, making nails, harness, hats, shoes and rugs, contriving tools, churns, casks, beds, chairs and tables. Such activities he supplemented with trapping, hunting, and fishing. As cold weather closed in, he used his spare time getting out rough timber products, such as shingles and planks, or spent the long evenings before the open fireplace carving gunstocks or making brooms while his womenfolk knitted, spun or wove.

Under pressure of circumstances the farmer thus became a Jack-of-all-trades....

.....

What elements of the national character are attributable to this long-time agrarian environment? First and foremost is the habit of work. For the colonial farmer ceaseless striving constituted the price of survival; every member of the community must be up and doing. When anyone failed to do his part, the authorities, whether Puritan, Anglican or otherwise, laid a heavy hand upon the culprit....<sup>49</sup>

Schlesinger embellishes this point with the following anecdote.

... A European visitor in the 1890's saw more fact than fancy in a magazine caricature which pictured a foreigner as saying to his American hostess, "It's a defect in your country, that you have no leisured classes." "But we have them," she replied, "only we call them tramps." The traveler's own comment was: "America is the

<sup>49</sup>*ibid.*, pp. 6-7.

only country in the world, where one is ashamed of having nothing to do.”<sup>50</sup>

Schlesinger returns to the “complicated nature of the farmer’s job” and points out how these circumstances “afforded an unexcelled training in mechanical ingenuity.” Another trait of national character is this aptitude for inventing and from this also a capacity of versatility. Schlesinger generalized about this saying:

The farmer’s success in coping with his multitudinous tasks aroused a pride of accomplishment that made him scorn the specialist or expert. As a Jack-of-all-trades he was content to be master of none, choosing to do many things well enough rather than anything supremely well. Accordingly, versatility became another outstanding American attribute. . . .<sup>51</sup>

As a final point about the early influences on American traditions there is the concept of equality of opportunity and of individualism.

Accordingly, there arose the ingrained belief in equality of opportunity, the right of all men to a free and fair start--a view which in one of its most significant ramifications led to the establishment of free tax-supported schools. This was far from being a dogma of enforced equality. To benefit from equality of opportunity a man must be equal to his opportunities, with the government serving principally as an umpire to supervise the game with a minimum of rules. The upshot was a conception of democracy rigorously qualified by individualism.<sup>52</sup>

#### Contemporary Statements.

One of the more cogent statements on democratic principles originated in an unusual circumstance. David E. Lilienthal was appearing before the U.S. Joint Congressional Committee on Atomic Energy on February 4, 1947; the occasion was the consideration of his confirmation as Chairman of the Atomic Energy Commission.

Senator Kenneth D. McKellar of Tennessee had pursued a line of questioning which pressed Lilienthal on his political philosophy. These questions were intermingled with others requiring factual data about the T.V.A. Mr. Lilienthal said he did not carry all the figures “in his

<sup>50</sup> *Ibid.*, p. 9.

<sup>51</sup> *Ibid.*, p. 11.

<sup>52</sup> *Ibid.*, pp. 14-15.

head." In response to direct accusation of "leftist" proclivities, Lilienthal responded:

This I DO carry in my head, Senator.

.....

Traditionally, democracy has been an affirmative doctrine rather than merely a negative one.

I believe--and I conceive the Constitution of the United States to rest, as does religion, upon the fundamental proposition of the integrity of the individual; and that all government and all private institutions must be designed to promote and protect and defend the integrity and the dignity of the individual; that is the essential meaning of the Constitution and the Bill of Rights, as it is essentially the meaning of religion.

Any form of government, therefore, and any other institutions which make men means rather than ends, which exalt the state or any other institutions above the importance of men, which place arbitrary power over men as a fundamental tenet of government are contrary to that conception, and, therefore, I am deeply opposed to them.

The communistic philosophy as well as the communistic form of government falls within this category, for their fundamental tenet is quite to the contrary. The fundamental tenet of communism is that the state is an end in itself, and that therefore the powers which the state exercises over the individual are without any ethical standard to limit them.

That I deeply disbelieve.

.....

Its [democracy's] hope in the world is that it is an affirmative belief, rather than being simply a belief against something else and nothing more.

One of the tenets of democracy that grows out of this central core of a belief that the individual comes first, that all men are the children of God and that their personalities are therefore sacred, is a deep belief in civil liberties and their protection, and a repugnance to anyone who would steal from a human being that which is most precious to him--his good name--either by imputing things to him by innuendo or by insinuation....<sup>53</sup>

<sup>53</sup>David E. Lilienthal. *This I Do Believe*, pp. ix-xiii, New York: Harper and Brothers, 1949.

The unique characteristics of the American way of life have come before the public in popular sources as well as in formal treatises. *Look* magazine for September 12, 1950 published a section called "Primer for Americans." Forty-one principles are presented and discussed.

*Fortune* devoted an issue to the topic: "U.S.A.--The Permanent Revolution." From among the characteristics cited by *Fortune*, unique to the American way of life, nine are listed here: (1) An unabashed materialism, (2) the love of diversity, (3) a unity or coherence which resists all eccentricities, (4) doctrine of the strenuous life, (5) the ideal of equality, (6) the ideal of generosity, (7) the ideal of kindness, (8) the idea of the perfectibility of man based upon the Christian ideal and (9) the acceptance of change.<sup>54</sup>

#### Champion of Democracy.

Not the least of American traditions is a strong nationalism and a feeling of need to represent the democratic way of life before the rest of the world. This feeling was expressed by the founding fathers, including Jefferson, and was accentuated by the Civil War which made us one nation, indivisible. Lincoln, it will be recalled, closed his Gettysburg address by saying: "It is rather for us to be here dedicated to the great task remaining before us--that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion--that we here highly resolve that these dead shall not have died in vain--that this nation, under God, shall have a new birth of freedom--and that government of the people, by the people, for the people, shall not perish from the earth."

It remained for Whitman to express in verse the call which was to be heard again and again--in World War I to save the world for democracy and in World War II as the arsenal of democracy.

Sail, sail thy best, ship of Democracy,  
 Of value is thy freight, 'tis not the Present only,  
 The Past is also stored in thee,  
 Thou holdest not the venture of thyself alone, nor of  
 the Western continent alone,  
 Earth's *resume* entire floats on thy keel O ship, is  
 steadied by thy spars,  
 With thee Time voyages in trust, the antecedent nations  
 sink or swim with thee,

<sup>54</sup>*Fortune, op.cit.*, pp. 64 ff.

With all their ancient struggles, martyrs, heroes, epics,  
 wars, thou bear'st the other continents,  
 Theirs, theirs as much as thine, the destination-port  
 triumphant;<sup>55</sup>

This spirit of leadership in representing a unique way of life accounts, in part, for the drive for accomplishment not only in our economy but also in our basic institutions of church and school. The early American leaders realized the vital relation of education to the success of the new Republic.

Having committed themselves to government by popular verdict, to a government with high social responsibility, many founders of the American Republic turned to education as a guarantee that a government of this type would endure--not merely to political education narrowly adapted to the genius of American institutions, but to education in the arts, sciences, and letters, assuring a deeper foundation in civilization itself. . . .<sup>56</sup>

#### Educational Literature.

The basic tenets of the democratic way of life and their implications for education appear in a broad scope of the professional education literature. Books on school administration, curriculum development, educational psychology and educational sociology devote considerable attention to democratic postulates. Perhaps Dewey's *Democracy and Education* has done more to stimulate reflection along these lines than any other publication.

In the opening sentence of the Preface Dewey states: "The following pages embody an endeavor to detect and to state the ideas implied in a democratic society and to apply these ideas to the problems of the enterprise of education."<sup>57</sup> The thirty-six chapters in the book carry out this promise in a very comprehensive manner. Any effort to communicate the substance of *Democracy and Education* by way of a quotation or abstract would be futile. There is a point where Dewey does converge his thinking about the democratic way of life so that the educational implications are apparent.

... A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience. The extension in space of the number of individuals who participate

<sup>55</sup>Walt Whitman. *The Complete Poetry and Prose of Walt Whitman*, (Volume 1). New York: Farrer, Straus and Cudahy, p. 396.

<sup>56</sup>Educational Policies Commission, *op.cit.*, p. 9.

<sup>57</sup>John Dewey. *Democracy and Education*, *op.cit.*, p. v.



in an interest so that each has to refer his own action to that of others, and to consider the action of others to give point and direction to his own, is equivalent to the breaking down of those barriers of class, race, and national territory which kept men from perceiving the full import of their activity. These more numerous and more varied points of contact denote a greater diversity of stimuli to which an individual has to respond; they consequently put a premium on variation in his action. They secure a liberation of powers which remain suppressed as long as the incitations to action are partial, as they must be in a group which in its exclusiveness shuts out many interests.<sup>58</sup>

*Science in General Education* is unusually explicit in that it sets forth the major ideals of democracy and then explains the personal characteristics essential to democratic living. An outline of the ideals is presented in the brief paragraphs which follow.

High regard for the individual is probably the most distinctive and pervasive characteristic of democratic living. In democracies, personalities are held to be precious, unique, and not capable of duplication....

The development of significant personalities can, in fact, be achieved only through mutual sharing of interests and purposes; democratic participation in group life has its own distinctive characteristic and values which require special consideration....

The third dominant ideal of the democratic society, fundamental to the refinement of democracy as a way of life, is reliance upon the free play of intelligence in solving problems of human concern--in contrast with the making of decisions on the basis of traditional beliefs, uncritical acceptance of authority, or blind impulse, or on the basis of one set of prescribed values uncriticized by comparison with the values of others.<sup>59</sup>

American traditions, particularly those which hold work in high regard, support industrial arts as a part of the education of all boys and girls. This approval should be maintained. Industrial arts educators have the obligation continually to examine the ways in which they may perpetuate and refine the way of life which respects the dignity and worth of the individual and which places its faith in the intelligence of the common man.

<sup>58</sup>*Ibid.*, p. 101.

<sup>59</sup>Commission on Secondary School Curriculum (P.E.A.). *Science in General Education*, pp. 36-39. New York: Appleton-Century-Crofts, Inc., 1938.

## NATURE AND FUNCTION OF GENERAL EDUCATION

The statement is frequently made that industrial arts education is a part of general education, with the apparent purpose of distinguishing between industrial arts and vocational-industrial education. Unfortunately the term, general education, is subject to a host to diverse interpretations. It should also be mentioned in passing that any compartmentalization of education is man made and is founded on several assumptions. One is that education is something tangible and lends itself to classification. A second is that purpose or intent is inherent in subject matter, rather than in the learner. Both assumptions are subject to debate.

Evidence of the confusion which surrounds general education may be noted by simple observation. In some schools, general education is the rubric given to the subjects or unit-courses required of all students. For example, every student in a given secondary school may be required to have four units in English, four units in social studies, two units in mathematics, and two units in science. These twelve unit-courses are referred to in the school as the general education program. Over a period of years the "lineup" may change but the classification remains. Then, too, in the same school advanced units may be earned in mathematics, science, social studies or English but the additional units are not referred to as general education since they are not required of all students. Sometimes the term "core" is used interchangeably with general education, implying common course requirements. This circumstance only compounds the confusion. The arbitrary decision of calling something general education just because it is required of all students is, at best, a superficial basis for creating a dichotomy in education.

Others have made an effort to apply the term general education to subjects or courses which are "basic" or "fundamental" or "instrumental to further learning." This is a closed circle approach--a subject is general education because it is basic and it is basic because it is general education. To refer to something as basic or fundamental is intended, of course, to connote approval. One is reminded in this connection of the saying that all people are classifiable into two groups. There are the "good" and the "bad" and it is the good who decide which is which. The history of education does not treat this approach very kindly because many of the subject areas now in the "basic" group had a difficult time breaking through the "iron curtain" of intellectual respectability and succeeded in doing so only recently. The now famous *Report of the Committee of Ten on Secondary School*

*Studies* (1893) contains an interesting paragraph showing evidence of the recent resistance met by science, social studies, and English. . . . The Conferences which found their tasks the most difficult were the Conferences on Physics, Astronomy, and Chemistry; Natural History; History, Civil Government, and Political Economy; and Geography; and these four Conferences make the longest and most elaborate reports, for the reason that these subjects are to-day more imperfectly dealt with in primary and secondary schools than are the subjects of the first five Conferences. The experts who met to confer together concerning the teaching of the last four subjects in the list of Conferences all felt the need of setting forth in an ample way what ought to be taught, in what order, and by what method. They ardently desired to have their respective subjects made equal to Latin, Greek, and Mathematics in weight and influence in the schools; but they knew that educational tradition was adverse to this desire, and that many teachers and directors of education felt no confidence in these subjects as disciplinary material. Hence the length and elaboration of these reports. In less degree, the Conferences on English and Other Modern Languages felt the same difficulties, these subjects being relatively new as substantial elements in school programmes.<sup>60</sup>

There are other approaches to general education. One school of thought, for all practical purposes, equates general education with liberal education and, in turn, subscribes to the classical studies of Greek and Roman vintage. As one writer has put it:

. . . the American people need the kind of education which prevailed among the relatively few *liberi* [free citizens] in ancient Greece and Rome. If for no other reason, we need liberal education because in freeing or liberalizing the mind it prepares the individual to discharge the duties of his citizenship intelligently and thus serves as a safeguard of our democracy. . . .<sup>61</sup>

Several groups of scholars have made major efforts to define the scope and function of general education and a perusal of their reports makes the reader respectful of the involvement. The National Society for the Study of Education has devoted two yearbooks to the topic, one

<sup>60</sup>National Education Association. *Report of the Committee of Ten on Secondary School Education*, p. 13. New York: The American Book Company, 1894.

<sup>61</sup>William F. Cunningham. *General Education and the Liberal College*, p. 18. St. Louis: B. Herder Book Co., 1953.

in 1939 and another in 1952. A Harvard Committee of twelve scholars studied the problem for three years and produced an extensive report: *General Education in a Free Society*. The American Council on Education has been active in the field and has produced *General Education in Action* and the North Central Association of Colleges and Secondary Schools prepared *General Education in the American High School*. Numerous additional titles are available and the *Journal of General Education* represents a national effort in this direction.

Some of the quotations which are presented provide a starting point in the development of a concept of general education.

...Education is broadly divided into general and special education; our topic now is the difference and the relationship between the two. The term, general education, is somewhat vague and colorless; it does not mean some airy education in knowledge in general (if there be such knowledge), nor does it mean education for all in the sense of universal education. It is used to indicate that part of a student's whole education which looks first of all to his life as a responsible human being and citizen; while the term, special education, indicates that part which looks to the student's competence in some occupation. These two sides of life are not entirely separable, and it would be false to imagine education for the one as quite distinct from education for the other--more will be said on this point presently. Clearly, general education has somewhat the meaning of liberal education, except that, by applying to high school as well as to college, it envisages immensely greater numbers of students and thus escapes the invidium which, rightly or wrongly, attaches to liberal education in the minds of some people. But if one cling to the root meaning of liberal as that which befits or helps to make free men, then general and liberal education have identical goals. The one may be thought of as an earlier stage of the other, similar in nature but less advanced in degree.<sup>62</sup>

.....

Now, a general education is distinguished from special education, not by subject matter, but in terms of method and outlook, no matter what the field. Literature, when studied in a technical fashion, gives rise to the special science of philology; there is also the highly specialized historical approach to painting. Specialism is interchangeable, not with natural science, but with the method

<sup>62</sup>Harvard Committee on General Education. *General Education in a Free Society*, pp. 51-52. Cambridge: Harvard University Press, 1945.

of science, the method which abstracts material from its context and handles it in complete isolation. The reward of scientific method is the utmost degree of precision and exactness. But, as we have seen, specialism as an educational force has its own limitations; it does not usually provide an insight into general relationships.<sup>63</sup>

A careful reading of the Harvard Report leads to questioning the Committee's acceptance of this forthright criterion. For example, when mathematics is discussed the principle of *abstraction* is introduced as the basis for determining whether the mathematics being taught is general education or special education.

We must recognize, then, that for the mathematically less gifted pupils in the ninth grade there is little straightforward mathematics available beyond elementary instruction in arithmetic and informal geometry, which, as was said, should include guidance in the use of formulas, equations, graphs, and right-triangle trigonometry. If it be thought that these students might more profitably be taught such a subject as "commercial algebra," only a cursory glance at this subject shows it to be harder than ordinary algebra. On the other hand, it is of course desirable to stimulate the interest of mathematically inept students in the number relations of arithmetic and in the elementary principles of geometry by presenting mathematics in various disguises--such as shop mathematics, business arithmetic, mathematics of the farm, and so on. In such novel forms these students can be brought to reexamine and improve their grasp of simple arithmetic and its application to practical problems.

If further mathematics is to be given these pupils, informal geometry and mechanical drawing offer the greatest chance of success because of their concreteness. In such an approach, however, one has been forced to concede one of the primary values of mathematics instruction in general education. Mathematics comprises both abstraction and the application of the results obtained by abstraction to specific real problems. Of these aspects, the basic one is abstraction. Only because it is abstract is mathematics applicable generally to problems which arise in widely different areas. When a student has reached his limit of tolerance in handling abstractions, his *general* education in mathematics must also come to an end.<sup>64</sup>

<sup>63</sup>*Ibid.*, p. 56.

<sup>64</sup>*Ibid.*, pp. 163-164.

Industrial arts literature has many statements on general education. Two are presented.

Although general education cannot adequately be defined in a single succinct statement, for the purposes of this paper, general education will be regarded as that part of education which encompasses the common knowledge, skills, and attitudes needed by each individual to be effective as a person, a member of a family, a worker, and a citizen.

.....

The questions are often asked: What is a general education program? Does it consist of a particular group of courses (communication skills, family life, general biology, and the like) specifically planned for the purposes of general education? Or is it a college-wide program in which faculty members in all courses and fields (including, of course, Industrial Arts and other professional education areas) utilize the opportunities which they have to contribute to the achievement of general education outcomes? These questions must be answered by any faculty which is planning a program for teachers of Industrial Arts.

The answers to these queries are, in large measure, conditioned by the definition of general education which has been presented above. If general education is best defined by stating its purposes, it necessarily follows that general education occurs at any point in the student's experience at which he advances toward the achievement of one or more of the goals of general education. This is true, regardless of whether that experience occurs in a course in communication or in calculus, in graphic arts or in drafting; regardless of whether it occurs in a course in family living or in philosophy, in photography or in forestry; regardless of whether it occurs in a counseling conference or in the councils of student government, on the athletic field or on the staff of the college annual.

Under this concept a really effective program of general education cannot be limited to a few selected courses labeled "general education." Faculty members in all fields and departments, sponsors of extra-class activities, and student counselors must be aware of their potential role in contributing to the general education of the students with whom they work.

It would be dangerous and fallacious to accept this viewpoint and thereupon to conclude that in a program with collegewide emphasis, no specific courses giving central emphasis to particular

general education objectives are necessary. Regardless of the extent to which teachers in drafting and design, music and mathematics, contribute to the skills of communication, all students will need specific instruction in the language arts. Regardless of the extent to which sponsors of clubs, coaches of athletic teams, and instructors in automotives and economics recognize the principles of human relations and personal adjustment, courses in the direct study of human relations and of personal adjustment (as exemplified in some psychology courses, for example) are essential. Similarly, specific courses directed to particular goals of general education are needed in such areas as family life, citizenship, health, and expressional arts.<sup>65</sup>

A program of public education obtains its orientation and its basic purposes from the society in which the program functions. Stated differently, an educational system always bears a "date" or a "place"--it is the instrument of a given society at a given time and is intended to meet the persistent needs of that society. The school, in turn, gets its direction from these broad social purposes and ideals.

Part of the educational effort in the United States is exerted in the direction of developing within the national community common values, skills, understandings and appreciations based upon the fundamental tenets of democracy. This aspect of the educational program is now referred to as *general education*. Similarly, a part of the educational effort is exerted in those areas where individuals seek to formulate designated insights or to develop specific potentialities to a higher level of proficiency. This aspect of education is now referred to as *special education*. Vocational education is a part of special education. It is impossible to maintain a sharp delineation between general education and special education and it is quite obvious that a complex society, such as ours, needs both. The only justification for raising the point at all is to clarify the scope of industrial arts and to provide a basis for determining valid educational objectives for industrial arts.<sup>66</sup>

Taylor, in his chapter in the Fifty-first Yearbook of the National Society for the Study of Education, concludes that there is widespread

<sup>65</sup>B. Lamar Johnson in the Fourth Yearbook of the American Council on Industrial Arts Teacher Education: *Superior Practices in Industrial Arts Teacher Education*, pp. 45-7, The Council, 1955.

<sup>66</sup>American Vocational Association. *A Guide to Improving Instruction in Industrial Arts*, p. 10. Washington, D. C.: The Association, 1953.

agreement on the need for general education but the philosophical bases supporting general education differ very markedly. His chapter identifies three approaches and their implications. Some aspects of these differences may be inferred from his summarizing statement.

There is little difference, however, in the variety of educational opinion about the need for more programs of general education. Where the differences emerge as to how such programs should be conceived, I believe they will move toward one or another of the philosophical positions I have tried to describe. There will be those who believe that the universe can be understood by reference to a series of self-evident principles, the nature of which can be revealed through the study of philosophy and the humanities, the arts, mathematics, and the Western tradition. There will be others who believe that the history of Western man, in science, religion, philosophy, art, humanism, and society, has handed on a body of knowledge about ourselves and our world which must be disseminated among the young, preserved by them through their education, and expanded into new discovery through efforts of the imagination. There will be still others who believe that the universe is in a state of process whose outlines can be partially seen with the aid of science, and that man, as a part of nature, fulfils the responsibility of his humanity by acting upon nature to the benefit of man.

There will be many others who believe other things, as well as those who will invent ideas for the formation of new systems of thought. But in any case, there will be educators who, under the influence of one or another of these conceptions of man and the universe, will have their own ways of trying to develop young people who will consider such distinctions to be important.<sup>67</sup>

Earl J. McGrath, former U.S. Commissioner of Education, has been active in general education circles for many years. One of his statements on the topic may be found in *General Education in Action*.

....The rapidly growing group of educators....draw a distinction between two types of studies, the "general" and the "specialized." This distinction stems from the fact that all individuals may be regarded from at least two viewpoints. One focuses on the *varying* interests, skills, and talents among human beings. Because of these variations, in part, men choose different vocations requiring special kinds of knowledge, skills, and attitudes. Different types

<sup>67</sup>Harold Taylor, "The Philosophical Foundations of General Education," p. 45. *General Education*. National Society for the Study of Education, Fifty-first Yearbook, Part I. Chicago, The Society, 1952.



of training are necessary to inculcate these qualities, and education designed for this purpose is called "specialized" education. The engineer, doctor, businessman, skilled laborer, and farmer need education of this type for the practice of their vocations. It is recognized that if our high productive capacity and high standard of living are to continue, all but the incapacitated must work, and most citizens will require some training in the skills of their jobs.

But all men have certain needs in *common*, a fact which explains the existence of social and political institutions. To satisfy these common needs, especially of the more complex kind, men must associate in a community. In a free community, in a democratic society, *all* citizens have the responsibility for solving common problems. Moreover, there is much in our personal life outside of a vocation, such as living in a family group, for which education is increasingly needed. Hence, "general" education, concerned with the problems all men have in common, is distinct from the "specialized" training addressed to the difference among them.<sup>68</sup>

There is an almost limitless amount of literature on the subject of general education; some of it is clear and illuminating while the rest only beclouds the issues. The verbal statement of relationship between industrial arts and general education is one point where clarification is needed. Is there an educational entity called "general education" so that we may say industrial arts is a "part of" general education? Or, is general education an approach to education or a series of unique educational purposes to which a subject area may subscribe?

It should be abundantly clear, even from this brief presentation of quotations, that there is diversity among those who endorse general education. The differences are not slight, lending themselves to easy resolution. Rather, fundamental differences inhere in philosophical assumptions and in the behavioral sciences. A person's philosophy of general education is simply a segment of his philosophy of education. Theories of learning and behavior are several and they lead to inherent assumptions and conclusions about the nature and function of general education.

The industrial arts educator makes progress in establishing relationships with others who are interested in general education only as he becomes explicit about his philosophical assumptions and his learning theory. Acceptance or rejection depends upon the consensus he can reach with his fellow educators.

<sup>68</sup>Earl J. McGrath in *General Education in Action*, p. xviii. Washington, D. C.: American Council on Education, 1952.

## THE DEVELOPING PROGRAM OF INDUSTRIAL ARTS EDUCATION

The dawn of civilization appeared when man learned to control his environment through his improved skills and his expanded knowledge of nature. Education began when man taught these techniques and transmitted this knowledge to the children and youth. Education *through* work is as old as civilization and was for many generations the only education at man's disposal. The historian, Harry G. Good, has made a superb summarizing statement of this relationship.

From the very earliest times, men must have taught their children the manual and domestic arts of gathering and preparing food, and of constructing and using weapons, clothing, and shelter. Out of the skills which were developed to satisfy these basic needs, all sciences, arts and crafts, and industries have grown by successive inventions, discoveries, and refinement. A hungry man craves bread; a less hungry one will expect ice cream and cake. The road is long and winding from the cave and the shack to the Parthenon and the skyscraper; but it is, nevertheless, the same road. Civilization and culture, including those intellectual phases which the Greeks called *paideia* and the Romans called *humanitas*, are the cumulative result of work done to satisfy first our basic needs and then those more subtle and refined needs and wants which have grown out of the elemental ones. Only by building civilization can man become fully human; and it is by work that he builds civilization.<sup>69</sup>

From the sixteenth century on philosophers, writers, and humanitarians were advocating systems of education which placed considerable emphasis either upon education *through* work or education *for* work. The motives behind their proposals were numerous and were not altogether compatible. Some advocated this type of education for its disciplinary value particularly for juvenile delinquents, vagrants and orphans. Others, including Rousseau, saw the manual arts as a social levelling influence. Still others identified the economic possibilities in this approach to education. There were those, too, whose minds followed a different train of thought; it was they who conceived education through work as a unique approach to learning. Bennett says of Rousseau: "*His recognition of the fact that the manual arts may be a means of mental training marked the beginning of a new era in education.*"<sup>70</sup>

<sup>69</sup>Harry G. Good. *Education Through Work*, p. 5. Columbus Ohio: Epsilon Pi Tau Brochure, 1943.

<sup>70</sup>Charles A. Bennett. *History of Manual and Industrial Education up to 1870*, p. 81. Peoria, Illinois: Chas. A. Bennett Co, Inc., 1926.

While the sixteenth and seventeenth centuries produced many concepts and theories about education *through* and *for* work it was not until the eighteenth and nineteenth centuries that “schools of industry” began to appear. At this point the names of Pestalozzi, Fellenberg, and Froebel become noteworthy.

Pestalozzi put his educational theories to the test in several experimental schools. In addition he wrote on education with his most widely known treatise being *Leonard and Gertrude*. Through a series of routes Pestalozzi had a significant impact on education in America. Perhaps the most extensive application in the United States of Pestalozzian principles occurred in the “object method” of teaching. While not directly associated with industrial arts the object method did influence the American concept of teaching and classrooms became physically enriched. Furthermore, the object method and work experiences were regarded by Pestalozzi as having the same psychological support. According to Bennett, “Pestalozzi believed that children in school should learn to work, not only because of the economic value of skill and the habit of labor, but because this experience gave sense-impressions which, like the study of objects, became the basis of knowledge. He recognized the fact that ‘doing leads to knowing.’”<sup>71</sup>

Froebel’s influence on the developing program of industrial arts was direct. His writings, particularly *The Education of Man*, and his development and application of “gifts” and “occupations” to the education of children stimulated the thinking of his contemporaries as well as educators of the twentieth century. Some of Froebel’s thinking is revealed in the following paragraph.

The activity of the senses and limbs of the infant is the first germ, the first bodily activity, the bud, the first formative impulse; play, building, modeling are the first tender blossoms of youth; and this is the period when man is to be prepared for future industry, diligence, and productive activity. Every child, boy, and youth, whatever his condition or position in life should devote daily at least one or two hours to some serious activity in the production of some definite external piece of work. Lessons through and by work, through and from life, are by far the most impressive and intelligible, and most continuously and intensely progressive both in themselves and in their effect on the learner. Notwithstanding this, children-mankind, indeed--are at present too much and too variously concerned with aimless and purposeless pursuits, and too little with work. Children and parents consider the activity of actual work so

<sup>71</sup>*Ibid.*, p. 120.

much to their disadvantage, and so unimportant for their future conditions in life, that educational institutions should make it one of their most constant endeavors to dispel this delusion. The domestic and scholastic education of our time leads children to indolence and laziness; a vast amount of human power thereby remains undeveloped and is lost. It would be a most wholesome arrangement in schools to establish actual working hours similar to the existing study hours; and it will surely come to this.<sup>72</sup>

The contributions of Rousseau, Pestalozzi and Froebel are all the more significant because their concentration was upon children primarily. It should be noted in this connection that the "school shop" movement in the United States started at the opposite ends of the public school program. Dewey and Bonser developed programs intended for children, whereas Woodward and Runkle had high school or post-high school students in mind. Woodward and Runkle came under the influence of the technical schools and work schools of Europe. These differences in origins, purposes and emphases are evident in our industrial arts programs to the present.

Reference has previously been made to Dewey's *School and Society*. Dewey operated an elementary school at the time he was teaching at the University of Chicago. It is sometimes referred to as the "Dewey School" and other times as the "University Elementary School." A rather full account of it is presented by two former teachers in the school, Katherine C. Mayhew and Anna C. Edwards, under the title of *The Dewey School*. The first three chapters in *School and Society* are lectures delivered before an audience of parents and others interested in the school. It is quite apparent that "active occupations" played an important role in the Dewey School curriculum.

The great thing to keep in mind, then, regarding the introduction into the school of various forms of active occupation, is that through them the entire spirit of the school is renewed. It has a chance to affiliate itself with life, to become the child's habitat, where he learns through directed living, instead of being only a place to learn lessons having an abstract and remote reference to some possible living to be done in the future. It gets a chance to be a miniature community, an embryonic society. This is the fundamental fact, and from this arise continuous and orderly streams of instruction. Under the industrial regime described, the child, after all,

<sup>72</sup>Friedrich Froebel, *The Education of Man*, pp. 34-35. (Translated by W. H. Hailmann). New York: Appleton-Century-Crofts, Inc., 1907.

shared in the work, not for the sake of the sharing, but for the sake of the product. The educational results secured were real, yet incidental and dependent. But in the school the typical occupations followed are freed from all economic stress. The aim is not the economic value of the products, but the development of social power and insight. It is this liberation from narrow utilities, this openness to the possibilities of the human spirit, that makes these practical activities in the school allies of art and centers of science and history.<sup>73</sup>

It remained for Bonser to draw together the influences which were converging upon the industrial arts movement. For one thing the movement lacked an accepted definition until the Bonser statement seemed to summarize the emerging program. The definition had appeared before but its most available source is in *Industrial Arts for Elementary Schools*.

*The industrial arts are those occupations by which changes are made in the forms of materials to increase their values for human usage. As a subject for educative purposes, industrial arts is a study of the changes made by man in the forms of materials to increase their values, and of the problems of life related to these changes.*<sup>74</sup>

This definition takes on greater meaning when placed against the background of the Charles R. Richards' editorial of 1904. Although the ostensible reason for writing this editorial was to urge the dropping of the term "manual training," the rationale offered by Richards summarizes the then prevailing psychological and sociological changes which supported his proposal. Richards was well informed about the work of experimental psychologists whose findings disavowed the assumptions of formal discipline. Richards was also aware of the impact science and industry were having upon our way of life and the richness of the content they afforded.

Have we not come to the time when a change is urgently needed in the term applied to constructive work in the schools? Is there a manual-training teacher in the country who does not increasingly feel the need for a more explicit and dignified title for his professional work?....

<sup>73</sup>John Dewey, *School and Society*, pp. 15-16.

<sup>74</sup>Frederick G. Bonser and Lois C. Mossman, *Industrial Arts for Elementary Schools*, p. 5. New York: The Macmillan Co., 1924.

....But it is very evident that during the last few years a fundamental change in our attitude toward the proper content and aim of constructive work has developed, and the question now faces us with new meaning and redoubled force. Not only have we now far greater need for a new designation, but the nature of the point of view into which we are growing would seem to present a thoroughly rational basis from which to derive a term of real significance. The gist of this change of view is the fact that we are rapidly leaving behind the purely disciplinary thought of manual training. As long as this idea formed the cornerstone of our creed, as long as constructive work represented in our minds simply an instrument to train the mental powers through the hand, manual training constituted at least a workable and fairly suggestive title....

But now that we not only realize that our old attitude toward the disciplinary value of constructive work is psychologically indefensible, in other words, that there is no such thing as a training of general powers through special exercises, but at the same time are beginning to perceive the immense content meaning of our field, the whole question assumes a different aspect.

.....

Now that we are beginning to see that the scope of this work is nothing short of the elements of the industries fundamental to modern civilization, such a term becomes at once a stumbling block and a source of weakness.

The whole matter would not be of such importance were it not for its bearing upon the nature and spirit of the work projected in the schools and its future trend. We are facing the question now as we have been for the past few years, as to whether we shall continue to devote our attention to miscellaneous and more or less meaningless projects, or whether we shall seek in an orderly way to develop an insight into the basic industries of our time and a knowledge of some of the steps through which these have reached their present form. A term like manual training tends to keep us at paper folding and chisel exercises. A term that indicated clearly a definite field of subject matter would do much to direct the line of advance, clear our minds and economize our efforts.

Behind every other subject in the curriculum is a body of ideas of fundamental meaning and importance. The industrial arts which stand for one of the most vital and important phases of modern civilization, throw away their claim to recognition by masquerading under a term at once inappropriate and misleading. Such a term is

both an obstacle to the full and free development of our work and to its recognition and appreciation on the part of the public.

Shall we continue to carry this incubus of an unsuitable name, or shall we do what we can to substitute a better?

In the hope of enlisting consideration and discussion, the writer proposes the term suggested above: Industrial Art. Such a term indicates a definite field of subject matter. The word Art is inclusive of both the technical and aesthetic elements, and the qualifying word points specifically and comprehensively to the special field of our material.<sup>75</sup>

Calvin M. Woodward was the chief promoter of the manual training movement in the United States. The early manual training movement found acceptance, not in the newly developing public high school, but in a separate school system known as manual training high schools. By 1900 one hundred cities in the United States had manual training high schools. Good traces the early development of manual training at the secondary school level and acknowledges the influence of Woodward and John D. Runkle of the Massachusetts Institute of Technology.

Experiments with shop-work courses were carried on by Calvin M. Woodward of Washington University in St. Louis shortly after the Civil War. With the support of business men who were interested in this educational novelty because they hoped to find in it a substitute for the old apprenticeship, a large three-story Manual Training School was erected in 1880. The prospectus declared that, "the interests of St. Louis demand for young men a system of education which shall fit them for the actual duties of life." This was a repetition, and in almost identical words, of the aims of the first high schools sixty years before that. Manual training was now to aid in doing what the older schools had not accomplished with complete success. To indicate that he was interested in manual training not only for industrial purposes but also for its value in general education, Woodward used, and perhaps coined, a phrase which swept over the country. He said that manual training made it possible to "put the whole boy to school." Woodward also showed that the schools and particularly the high schools were not holding their pupils. Few of those who entered remained to graduate. He attributed the loss to the narrow academic curriculum and found the remedy in manual training, home economics, and other practical studies. . . .

<sup>75</sup>Charles R. Richards, "A New Name" (Editorial). *Manual Training Magazine*. 6:1: 32-33, October, 1904.

Manual training, shop exercises, sloyd and other forms of handwork were introduced into schools at all levels after the Civil War. Private manual training schools were opened in many of the larger cities. When the Children's Industrial Exhibition was held in New York in the Spring of 1886, it displayed the work of all school grades and from many localities including some as far west as Chicago. A public manual training high school had been opened in Baltimore in 1883 and other cities soon followed this example. A few higher institutions had introduced shop-work several years earlier. The whole movement had developed as a result of the convergence of many forces including the demands of a society which was rapidly becoming industrialized, the introduction of object-teaching, nature study and science teaching, the activities of the organized charities which attempted to use handwork as a means of relieving poverty, the kindergarten movement which was itself fostered by the churches and the charities, the Russian system of exercise and Scandinavian sloyd.

Experience in engineering education early revealed the need of a plan for teaching the practical use of tools and the operation of machinery. Graduates of the Massachusetts Institute of Technology had to work in shops and industrial plants before they were qualified to undertake managerial positions. How to set up graded class knowledge of materials and processes was the question. John D. Runkle, President of the Institute, believed that he had found the answer in an exhibit of the Imperial Technical School of Moscow which was shown at the Centennial Exposition at Philadelphia in 1876. The defect in this Russian system, which consisted of formal and routine drill exercises for railway apprentices and which never produced any finished objects of beauty or use was not seen until later. In fact, it was not until 1894 in the naming of the Macy Manual Arts building at Columbia University in New York City, that Charles Alpheus Bennett substituted the word "arts" for the word "training" in order to embrace the concepts of beauty and utility as well as skill.

Shop-work was also introduced into the new agricultural and mechanical colleges which had been called into being by the Land-Grant or Morrill Act of 1862. An exhibit of shop-work was prepared for the Philadelphia Centennial Exposition by the Illinois Industrial University, now the University of Illinois, before the Russian system became known in this country. The appearance of the Russian system of exercises at just this point in our history was unfortunate



because it seemed to give a cheap and easy answer to a difficult problem. We could have done without it. . . . <sup>76</sup>

The two markedly different emphases, one beginning at the elementary school level following the lead of Dewey and Bonser and the other at the upper secondary school level as advocated by Woodward and Runkle, resulted in much confusion and uncertainty among the practitioners. The Dewey-Bonser influence extended upward and the Woodward-Runkle downward. The two converged on the newly developing junior high school and there was no "common denominator" available to make the two movements add up to one single program.

Both manual arts and manual training originated in a day and age largely devoid of the modern technological advances. As of 1880 the United States was still a rural society and one-half of all those employed were engaged in agriculture. Steel production stood at 1,300,000 tons; electric power consumption was negligible. The automobile, airplane, radio and television were non-existent. Since the turn of the century we have experienced a technological revolution. Some of the implications are cited in the following quotation.

Rather restricted experiences in woodworking, metalworking, and technical drawing continue to characterize industrial-arts instruction. This condition is, in part, traceable to the circumstance which prevailed during the formative years of our profession, say between 1880 and 1910. But since the turn of the century there has been a technological revolution and many new industrial phenomena have appeared. This new age is characterized by the extensive use of electrical energy accompanied by numerous electrical and electronic machines and devices; the internal combustion engine and its manifold applications, including the automobile and airplane; and a host of new metals and metalworking processes. The graphic arts industry has undergone many changes, too, in the way of new processes and new applications. Nuclear sources of power are at hand, and this single innovation may soon come to mean more than any other of man's creations.

In the developmental phases of the basic and applied sciences a relatively few top-level people carry the responsibility. But the effective production, application, use, and maintenance of the instruments, machines, and goods which result require technical competence on the part of the masses of the people. A primary personal and social contribution of industrial-arts education is precisely this

<sup>76</sup>Harry G. Good, *op. cit.*, pp. 12-13.

dual task; namely, the development of technical competence among the millions and the discovery of a variety of technical talents. These goals can be achieved only if children and youth are provided with representative experiences.

The program to date has been characterized by having pupils perform rather simple tool and machine processes in changing the shape and size of common materials. Where the instruction has been effective, manipulative skill development has resulted. People still need manipulative skills, to be sure, but they need to apply many of these skills in conjunction with principles. For example, a person adjusting a carburetor uses hand tools with dexterity but he should know principles of carburetion and principles of internal combustion engines as well. Of course the effective technician needs a variety of skills--multiple research skills, communication skills, social skills, evaluation skills.

Whether we approach the problem of content from the viewpoint of correctly representing the industrial aspect of our culture or whether we take our lead from the traits and talents of children and youth, we are committed to a new synthesis of areas represented in our industrial-arts program as well as new emphases within the areas now commonly found in the program.<sup>77</sup>

Any serious consideration of the developing program of industrial arts must be respectful of the world of events surrounding us. The 1956 presidential candidates of both major parties said in their nomination-acceptance speeches that we stand at the threshold of a new future, a future which breaks sharply with the past. An epoch started with the depression in 1929, reached a crescendo in World War II, and closed with the Korean War.

How will the new epoch affect education and how can education affect progress? What America now is it owes in no small measure to its system of public education. What America hopes to become will only increase the indebtedness.

In our country we believe that what education could do for a few aristocrats of the past, education can do for every person who wants it. For the first time in history a free people stands for equal opportunity for all for this qualitative enrichment of life through public education. This is the sense in which I mean the arts support the moral life. We are dedicated to the educational task of making the ex-

<sup>77</sup>R. Lee Hornbake. "Time for Progress," *School Shop*, 15:10::18, June 1956.

pansive life, the qualitatively enhanced life, available to all members of our society. To give this to some and deny it to others would be immoral. By education we can, and must, remove the internal inconsistencies and contradictions in American life. If we do, each individual member becomes stronger in a moral sense because, if he realizes the good life, he will live and die for it. A people so strengthened can never be defeated in peace or war. <sup>78</sup>

<sup>78</sup>Henry Hermann. *Art and Industry: Their Challenge to Education*, p. 8. Washington, D. C.: The American Industrial Arts Association, 1956.

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## II

# Psychological Theories

Walter B. Waetjen  
University of Maryland

*The foregoing chapter identified the climate in which we work. Before proceeding further, attention must be given to the material to be worked with. That basic material is human, and so a consideration of psychological theories is very much in order.*

*Author Waetjen deals with this rather complex topic in a thorough, yet concise fashion. He gives us first a look at the purposes of psychology. Next he provides a quick overview of the principal contemporary schools of psychological thought. He develops his chapter with a survey of views on three important processes: self concepts, relationships with others, and behavior, particularly as it relates to learning and growth. These are then seen in the context of the teacher's job of facilitating the development of self concept in students. Finally, implications of the ideas expressed are drawn for industrial arts and industrial arts teacher education. These will cause most of us engaged in the field to examine our teaching procedures critically, and they will surely help us to understand our role as teacher educators more thoroughly.*

EDITOR

This chapter is about people and the ways in which meanings about people, objects, and the general culture pattern emerge. A more important aspect of the material in the ensuing pages is the manner in which individuals learn about themselves as individuals. The latter may well be the most significant type of learning accomplished by people in their respective spans of life.

Not infrequently people shy away from reading about psychology, feeling that their educational experience has not been such as to enhance understanding of psychological processes. This chapter, not

with standing, is dedicated to the proposition that every person has an operational knowledge of psychology gained through everyday experience. While we may not be able to use the jargon of the professional psychologist, we are implicitly aware of basic psychological phenomena. A second proposition to which the present discourse is dedicated is that learning about psychology can be fun.

### THE PURPOSE OF PSYCHOLOGY

Perhaps each reader of this chapter has had the experience of discussing psychology with an acquaintance. During the course of the conversation it became apparent that the acquaintance saw psychology as a science that dealt with aberrant behavior. This point of view is prevalent among lay people. Pupil personnel workers in public school systems tell us that parents offer great resistance to psychological examinations for their children even when it is made explicit that the youngsters are presumed to be superior children and the examination is designed to be confirmatory in nature. As is true of many people, the parents of these children believe that psychology deals with atypical, aberrant, deviant or abnormal behavior.

Actually, psychology operates in a much wider field than that mentioned. The purpose of psychology is to contribute to the understanding of all human behavior. The reader will immediately become sensitive to the fact that this orientation opens up a tremendously broad area of endeavor. The learning of school children, the relationships in an industrial concern, family relationships, the law-obeying of people and interaction of groups such as labor unions are all within the province of psychology

As our society becomes more complex and differentiated, the scope of psychology will increase in direct proportion. This trend has produced specialization within the ranks of psychologists and we find that there are clinical psychologists, industrial psychologists, social psychologists, educational psychologists and developmental psychologists, to mention but a few. Whatever the area of specialization, the task of understanding human behavior is common to all.

### SCHOOLS OF PSYCHOLOGICAL THOUGHT

Visitors to this country express amazement over the fact that our political parties have such divergent views about certain matters and that the respective parties are so vigorous in supporting their views. This situation is akin to that which exists in psychology. There are

different points of view and the basic constructs from one psychology may and frequently do vary considerably from the basic constructs taken from another psychology. Beginning students in psychology become sensitive to this when they read a book or article written by a proponent of a certain psychological formulation and then read something written by an author identified with a different theoretical formulation. These students find that such terms as "need", "motives", "field" and "personality" have quite different meanings depending upon the formulation in which they are used. To review the concepts in each of the schools of psychological thought would be a major undertaking. In addition, it would be at variance with the intent of this chapter. Nevertheless, some concepts in the leading psychological formulations will be discussed briefly.

Any discussion of psychological theory would be seriously awry if the work of Sigmund Freud were not included. This presents a problem, however, for Freud's ideas changed as his experience increased. Freud did much to further the dynamic school of psychological thought thru his development of psychoanalysis. It must be remembered that psychoanalysis is basically directed toward therapeutic work and that it has a strong biological orientation in sexual dynamics. In describing the psychoanalysts' point of view Ruch states.

The psychoanalysts believe that childhood experiences, especially those related to sexual activities and to the child's relationship with his parents, are the foundation of later emotional experiences. As a result, when adjustment difficulties arise, it is because certain painful conflicts of childhood are repressed ("forgotten") without having been adequately resolved. These conflicts, though unconscious, continue to influence the individual's thought, feeling, and behavior, and are the cause of his emotional tension and inability to adjust.<sup>1</sup>

According to Freud the personality was composed of the Id, the Ego and the Super-ego. The ego controls conscious processes, in fact, *all* mental processes. On the other hand, the id is,

... by far the most obscure and inaccessible part of the personality, for it is entirely unconscious.... The id is by its very nature, ... blind, impulsive, irrational.<sup>2</sup>

<sup>1</sup>Floyd L. Ruch, *Psychology and Life*, Third Edition, (New York: Scott, Foresman and Co., 1948), p. 527-28.

<sup>2</sup>Patrick Mullahy, *Oedipus, Myth and Complex* (New York: Hermitage Press, 1948), p. 37.

The third aspect of personality in the Freudian conception was the super-ego. Whereas the id might be considered the "I want to" aspect of the personality and the ego the "I do" aspect, the super-ego is the "I should" component. Like the id, the super-ego to some extent dominates the ego since it injects the forces of society and moral standards. According to Freud the super-ego was learned from the expectations and admonitions of the child's parents. Thus it becomes relatively easy to see that what is popularly known as "conscience" is expressed through the organization of the super-ego.

In effect, Freud did for psychology what enzymes do in biological processes. Enzymes appear to have the capacity to organize rather diverse kinds of materials, and to catalyze them, to put them into action. This was true of Freud. He touched off a stream of thinking that promises to continue and, more important, that promises to be productive. This is not to imply that those who followed Freud accepted his ideas without question and passed them on without modification, for such is not the case. In fact most of his followers refined or modified the original formulations. These people are known as the Neo-Freudians. To describe the modification introduced by each of Freud's followers would be like trying to trace and describe each branch, each twig and each leaf attached to a tree trunk. Generally, however, the Neo-Freudians (such as Jung, Rank, Adler, Fromm, Horney and Sullivan) placed less emphasis on biological processes and more emphasis on the conditions under which we live. To them, personality is not as instinctual in nature, as it is culturally determined through inter-personal relationships.

Quite a different school of psychological thought has come from the ranks of the cultural anthropologists. Their orientation is strongly cultural, as one might suspect, and is best described by Kluckhohn and Murray as follows:

Knowledge of a society or culture must rest upon knowledge of the individuals who are in that society or share that culture. But the converse is equally true. Personal figures get their definition only when seen against the social and cultural background in which they have their being. An individual who has no part in any group and who has not been influenced by some traditional way of behaving cannot be found in real life. Although those who study culture and society are primarily interested in the similarities in personality and those who practice psychotherapy and investigate individual psychology have their focus of attention upon the differences, the



two sets of facts are inextricably interwoven. One defines the other. In actual experience, individuals and societies constitute a single field.<sup>3</sup>

In contrast to the Freudian point of view, the cultural anthropologists represent the second pole in a bi-polar field of psychology. The Freudians place emphasis on the biological aspects of personality with little cultural flavoring, while the culturalists conceive of the human being as a biologically pliant organism whose behavior is largely determined by the impact of the culture upon him.

Shortly after the turn of the century Ernest Kretschmer gave impetus to a method for describing personality dynamics that was based on constitutional factors. While working with psychotic people in an institutional setting, Kretschmer discovered that those patients with similar body builds manifested similar behaviors. Kretschmer's findings were hailed by many people in the psychological world, yet, some people hastened to point out that his work was done in connection with disturbed people and that to translate the findings to normal behavior was indeed poor procedure.

The cudgel for constitutional psychology was taken up by three Americans. Sheldon, Stevens and Tucker<sup>4</sup> have directed their efforts toward identifying the relation between body types and temperament among normal people. They have defined three body types called mesomorph, endomorph and ectomorph, which correspond to the embryonic germ cell layers. In addition, they have established correlations between the particular body types and certain behavioral traits. Stated in somewhat different terms, this means that the genetically determined body configuration of a person predisposes him toward certain kinds of behavior.

The latest psychological formulation to have an impact on American thinking in particular, is referred to variously as "phenomenological psychology", "perceptual psychology", or, "the internal frame of reference." According to this formulation all behavior is seen as stemming from the phenomenal field. The phenomenal field is considered to include perceptions of the entire universe with perceptions

<sup>3</sup>Clyde Kluckhohn and Henry A. Murray, *Personality in Nature, Society, and Culture* (New York; Alfred A. Knopf Co., 1949) p. XI-XII.

<sup>4</sup>W. H. Sheldon, S. S. Stevens and W. B. Tucker, *The Varieties of Human Physique* (New York: Harper and Brother, 1940).

<sup>5</sup>Donald Snygg and Arthur Combs, *Individual Behavior* (New York: Harper and Brothers, 1949) p. 15.

of the individual at the center. Over a period of time there becomes distinguished from the field certain perceptions which have special reference to the individual as an individual. These perceptions constitute the self-concept and behavior is consistent with the self-concept as well as being an attempt to maintain and enhance it. Phenomenological psychology grew out of nondirective counseling, Carl R. Rogers being the most prominent of those who subscribe to this type of counseling.

The phenomenologists place strong emphasis on the role that other people play in the development of self-concept. This places teachers and parents in rather strategic roles as regards the self-development of their charges and has seemed to have great meaning to them because of that fact. The specific point of view taken by the phenomenologists in this regard and the implications it carries for teacher education will be discussed in later sections of this chapter.

#### ORGANIZATION OF THE CHAPTER

To present any one school of psychological thought in this chapter would have several advantages and several disadvantages. On the positive side, presenting one point of view would tend to facilitate progress of that particular formulation. Another advantage is that more diversified kinds of processes in personality development could be discussed if only one school of thought were set forth. On the other hand, confining the organization of the material to be presented to one point of view might tend to lead one to present tentative ideas as full-blown theory. A further disadvantage is that one could become so fully identified with a particular point of view as to hinder his taking into account evidence that is contradictory to the theory being considered.

Consequently, the reader will find in this chapter not a point of view, as such, but rather a more eclectic formulation of psychological theories. For the most part there will be a presentation of concepts which the writer believes to be fundamental to the understanding of human behavior. It is entirely possible that any one of the concepts presented may be pertinent to several of the schools of psychological thought which have been discussed briefly. In fact, there has been a conscious effort made to cut across the lines which have been drawn by the various psychological formulations.

An attempt has been made to remove the writer's emotional bias from the discussion of the concepts which follow; yet, since all human

beings behave in keeping with a value system, the reader may discern points at which the writer failed to remove bias. At such points the reader may be stimulated to seek evidence leading to a correction of the bias.

## EVOLUTION OF SELF

Where does self, or personality, or self-concept have its origin? Do human beings arrive in this world with some personality structure or do they acquire it? If it is acquired, what is the nature of the acquisition process? These questions have been pertinent since man first started speculating about the psychological nature of man.

### Self: A product of organism-environment interaction

Mead, in discussing the nature and derivation of that psychological structure known as "self" claims:

The self has a character which is different from that of the physiological organism proper. The self is something which has a development; it is not initially there, at birth, but arises in the process of social experience and activity.<sup>6</sup>

Mead thus points up that self is a product of the forces involved in the interaction between the human being and the world in which he functions. It is apparent then, that the culture in which one lives becomes an integral part of the evolving self. Hallowell makes this point explicit as well as identifying some of the processes by which self-development takes place.

Man, unlike his animal kin, acts in a universe that he has discovered and made intelligible to himself as an organism not only capable of consciousness but also of self-conscious and reflective thought. But this has been possible only through the use of speech and other symbolic means that have led to the articulation, communication, and transmission of culturally constituted worlds of meanings and values. An organized social life in man, since it transcends purely biological and geographical determinants, cannot function apart from communally recognized values and meanings, or apart from the psychological structuralization of individuals who make these their own. Learning a culture and the roles on which the persisting patterns of social structure depend is not equivalent to

<sup>6</sup>George H. Mead, *Mind, Self and Society* (Chicago: University of Chicago Press, 1934), p. 135.

learning a set of habits or skills but involves a higher order of psychological integration.<sup>7</sup>

The "higher order of psychological integration" referred to by Hallowell is what has been termed self in this discourse. By implication Hallowell communicates that a stimulus-response or mechanistic kind of psychology is inadequate for explaining the values that underlie so much of human behavior. Since man is capable of reflective thought about himself, his world, and his experience with self and the world, he distinguishes himself as part of the world, yet, as an object apart from the world. This occurrence is fundamental to the emergent self.

How this occurs is described by Jersild who says that:

The development of the self involves, among other things, a process of differentiation. The child begins life as part of his mother's body. For some time after birth he continues to be helpless and dependent. With the passage of time he shows increasing signs of being able to distinguish between people and things and between himself and others. As time passes, he explores the bounds of his own person. He notices that things from the outside world can act upon him, that there is difference between his experience and the particular happening which is making him feel as he does.

A feature of the developing self is increased awareness of personal properties and resources. The child gains in awareness of the parts of his body and of the limits of his reach. He probably also at a fairly early age recognizes the press of inner wants and needs, as distinguished from conditions that can gratify or deny the gratification of such needs.<sup>8</sup>

Writing in a similar vein, Murphy describes early stages in self-development as a result of the continuous experience between the infant and his environment.

To the newborn infant the boundaries between organism and world are as unknown as are those between any two external complexes. It is hardly likely that the responses or the consciousness of the newborn or the embryo is at any time *completely* homogeneous, undifferentiated, diffuse; but it is likely that growth and experience alike

<sup>7</sup>A. L. Kroeber (ed), *Anthropology Today* (Chicago: University of Chicago Press, 1953), p. 615.

<sup>8</sup>Arthur T. Jersild, *In Search of Self* (New York: Bureau of Publications, Teachers College, Columbia University, 1952), pp. 16-17

tend to define patterns and to mark off objects that cling together functionally. As fast as this occurs, attitudes toward the differentiated objects can develop. The child may come to look at, enjoy, and love his own hand or foot, note and love his own voice as he does that of another. These responses are the germs of the self; they are formed; as are all other known objects, by associations of recurrent experience, and they progressively achieve a degree of unity which reflects the actual recurrence, stability, and interdependence of experiences. Since the behavior of organisms is never ideally unified, with all the components tightly integrated in response to a given situation, it is inconceivable that the self, the empirical phases of the organism's own activities, could ever achieve such "unity" as law and moral and social intercourse would assign it. The tightness of structure varies with age, with intelligence, and with the social standardization of conduct through interdependent uniformities—"he who builds up the fire must not chastise the water for boiling." The individual has an attitude toward his own person that is comparable to his attitude toward music; it is general and also specific, varying in generality from one person to another but also varying from day to day, hour to hour in the same person.<sup>9</sup>

The evidence presented seems to indicate that there is no self organization present at birth, but there is present the potential for a self-system to develop. Potential in this instance is thought of as the nervous system with its inherent refinement or lack of refinement, its capacity for rapid or relatively slow conductance of impulses. Since there is no self at birth the human infant appears not able to distinguish himself from the world. Experience in observing that the world can act on him and that he in turn can have some impact on the world is an initial step in the development of that psychological structure referred to here as self. The acquisition of self appears to be completely interpenetrated and perhaps dependent upon reflective thought and verbal symbols or language.

#### Self: Entity or Process?

Accepting the idea that self is a product brought into being through the individual's interaction with his surroundings is helpful to persons charged with the responsibility for rearing children; yet, we cannot be satisfied with this alone. We must ask ourselves at least one other

<sup>9</sup>Gardner Murphy, *Personality: A Biosocial Approach to Origins and Structure* (New York: Harper and Brothers, 1947), pp. 487-488.

question, does self continue to evolve through the duration of one's life, or once formulated does the self remain static and closed to new experience? Stated more simply, is self an open or closed system? The answers to these questions would to some extent define the role of public education.

The position taken by Allport on this matter is decisive. He reports:

Personality is less a finished product than a transitive process. While it has some stable features, it is at the same time continually undergoing change.<sup>10</sup>

The stable features referred to by Allport are those perceptions of the individual as an individual which are reinforced during the experience of the person. The perceptions are those which we would say are most accurate and descriptive of the person. On the other hand, the stable features might well be those characteristics which a person can report about himself and outside observers can agree on also. Regardless, Allport's point is clear; self (or personality) is a process. The ideas of Frank are similar to those of Allport.

We may, therefore, look upon the personality as a dynamic process, the continual activity of the individual who is engaged in creating, maintaining, and defending that "private world" wherein he lives.

How the individual personality emerges is to be seen as a sequential process of growth, development and maturation during which the young mammalian organism is progressively transformed into a participating member of his group.<sup>11</sup>

Kelly and Rasey not only feel that self is a process modified by the continuing stream of experience, but in addition, they inject another dimension to the study of human behavior which is very real and important to educators. We can state it thus: all human beings are unique. In general, the means by which self arises is common to all individuals, yet these same means produce uniqueness.

The greatest modifier of all, perhaps, is experience. The individual soon starts having experiences as we know them, . . . These experiences come about through the development of the powers of perception. Each significant experience is built into structure so

<sup>10</sup>Gordon W. Allport, *Becoming* (New Haven: Yale University Press, 1955), p. 19.

<sup>11</sup>Lawrence K. Frank, *Projective Methods* (Springfield, Illinois: Charles Thomas Company, 1948), p. 8.

that one becomes what one's experience has been, modified and interpreted by one's foundational structure.

No two persons can have the same experience, since the experience is what it is because of the peculiar unique structure and background that the individual brings to it. It is not the event alone which constitutes an experience but the interaction between the event and the experiencing organism....

We can say, then, that no two individuals can, or in the normal course of events will, have the same experience. Experience builds structure and we become what we must become in the light of what we have experienced. The flow of life begins at once on unique individuals to build them more uniquely.<sup>12</sup>

Conceivably, the conception of the self processes of human beings as a dynamic, evolving force has implications for the way in which educators relate themselves to their students and apply themselves to the study of personality. Some of these implications are suggested by Stagner who writes:

Personality is a continuously developing unity. It is shaped by environmental conditions, not by animistic forces. While change is possible, it is not to be achieved by verbal magic. Scientific thinking about personality requires that we abandon evaluative, good-bad, moralistic concepts and study human beings with the same mature realism that we have learned to use so effectively in the physical realm. This is justified further because the old mind-body dualism must be abandoned...<sup>13</sup>

In summary, it would seem that most authors agree that self is a process. However, it is equally clear that self is not merely changing, it is also continually growing and differentiating. Considering the latter point leads one to believe that differentiation produces in the self system some characteristics which are relatively enduring or stable. On the other hand, some aspects of the self are relatively transient or impermanent. But one must account for the fact of change, of process, of evolvment; to state that it occurs is not sufficient for understanding of behavior nor for facilitating growth in behavior. Indeed, some people would be prone to predicate the evolution of self on the basis

<sup>12</sup>Earl C. Kelley and Marie I. Rasey, *Education and the Nature of Man* (New York: Harper and Brothers, 1952), pp. 45-46.

<sup>13</sup>Ross Stagner, *Psychology of Personality* (New York: McGraw-Hill Book Company, 1948), p. 17.

of instincts. We have seen, however, that experience is the agent that catalyzes the process by which self develops. Concurrently, and harmoniously, experience builds into the evolving self the uniqueness which makes humans valuable in their own right.

#### Behavior Stems from a Field of Force

Merely postulating that self is a process activated by the moment-to-moment experience encountered by the individual gives us a picture of people as being dynamically organized. Each experience is potentially a rich experience, with the possibility of significant change in one's behavior. This is not to say, however, that there exists a one-to-one relationship between an experience and the behavior that immediately follows it. If this were true, there would be no point in delving into self processes, since prediction of a person's behavior would be so inaccurate as to render the attempt foolhardy. Furthermore, a person's behavior could never be understood, because his interpretation of any given experience could not be predicted. Yet we know from our daily living that prediction of a person's behavior is possible.

Each of us has heard a colleague discussing the behavior of one of his students with such statements as the following, "He does not do well on written tests, but in the laboratory he applies his knowledge well", or, "John is able to express himself clearly in person-to-person conversations, yet he cannot do as well expressing his thoughts before a group." In both instances it has been observed that the student has behaved consistently in similar situations. No less important is the fact that these statements have predictive value; we *can* predict with a fair degree of accuracy how these individuals will react in future situations. Inevitably, this leads to postulating that people develop some sort of psychological structure, the substance of which is the individual's perceptions of experience.

In speaking of this structure and the impact it has on behavior one must turn to Lewin who has established himself as a frontier thinker as regards field theory.

...to understand or predict the psychological behavior (B) one has to determine for every kind of psychological event (actions, emotions, expressions, etc.) the momentary whole situation, that is, the momentary structure and the state of the person (P) and of the psychological environment (E).  $B=f(PE)$ . Every fact that exists psychobiologically must have a position in this field and only facts that have such position have dynamic effects (are causes of events). The environment is for all of its properties (directions, distances,



etc.) to be defined not physically but *psychobiologically*, that is, according to its quasi-physical, quasi-social, and quasi-mental structure. <sup>14</sup>

In a somewhat similar manner, Snygg and Combs describe the nature of the field and the relation between it and behavior. This highly unique psychological structure is referred to by them as the "phenomenal field."

...behavior is determined, not by the objective field, but by a personal, individual field which is not identical with that of any other individual. From a non-personal point of view or, in fact, from the point of view of any other person, the individual values in his field are illusory, irrational, and unreal. To the individual himself, however, they are real and reasonable and are among the direct causes of his behavior. To discard these individual characteristics from the causal field would be to discard any possibility of understanding or predicting his individual behavior. <sup>15</sup>

The individuality of our fields is described by Frank, who refers to them as private worlds.

If we will look at human behavior more clearly and reflect upon the amazing diversity of individual conduct and feelings, the way each member of the group pursues his own peculiar goals and purposes and in all of his actions, speech, beliefs and feelings, is so individualized, we must begin to realize that each of us actually lives as if in a "private world" of his own, within the life space he establishes for his personal living.

.....  
 ...it is necessary to point out that these "private worlds" are not subjective nor are they mysterious psychic structures apart from the rest of the environment. They are the life space which each individual builds up and maintains for himself by his selective awareness of, and idiomatic responses to, the several dimensions of the environment as he interprets them, with his peculiar, personal way of accepting and using the cultural and social environment for his individual needs, desires, functions and feelings. <sup>16</sup>

<sup>14</sup>Kurt Lewin, *A Dynamic Theory of Personality* (New York: McGraw-Hill Book Company, 1935), p. 79.

<sup>15</sup>Donald Snygg and Arthur W. Combs, *op. cit.*, pp. 13-14.

<sup>16</sup>Lawrence K. Frank, *Nature and Human Nature* (New Brunswick, New Jersey: Rutgers University Press, 1951), p. 129.

The authors cited indicate that as a person continues to experience there develops a psychological structure which may be referred to as the field, the private world, the phenomenal field, or any other term which designates this structure as being a resultant of an individual's highly unique experience. More significant than the fact of evolution of the field, is the fact that this field constitutes what is "real" to the individual and that he behaves in terms of what is real to him. It becomes apparent that behavior can be predicted as we come to know some of the elements in a person's field. Behavior is not transient, without established cause, nor is the field "open" to all kinds of experience. These points, however, will be discussed in ensuing sections of this chapter.

### THE SIGNIFICANCE OF INTERPERSONAL RELATIONSHIPS

Some readers may muse as to why interpersonal relationships have not been treated in connection with the evolution of self. They will say to themselves that human relationships are considered by many psychologists to be primary among those forces that have an impact on self development. Their reflections would be entirely correct. There is no defensible reason for isolating this aspect of self, unless it be on the basis of importance in the educative process which is essentially a process of human relationships. With this in mind it is relatively simple to see some application to industrial arts teacher education of the role that interpersonal relationships play in the development of self.

#### Interpersonal Relationships and Self Development

The problem in this instance is not that of finding supporting evidence for the important role that human relationships play in the evolving personality of a human being. On the contrary, the problem is to sift from the wealth of material on the subject those statements which are most definitive. With this in mind we turn to a statement made by Hallowell in a volume edited by Kroeber.

One of the necessary conditions of psychological structuralization is association of the human individual with others of his species. Physical, social, or sensory isolation makes any full realization of these inherent potentialities impossible. That is, the development of a characteristically human psychological structure (mind or personality) is fundamentally dependent upon socially mediated experience in interaction with other persons.<sup>17</sup>

<sup>17</sup>Kroeber, *op. cit.*, p. 601.

The foregoing citation is a global one, it tells of the importance of human interaction, but it does not describe the *means* by which human relationships aid the development of self. An example of the means is in order.

An observer finds a young girl assuming the habits and attitudes of her mother, as she plays with her dolls; or a two year old boy running for the pliers and screwdriver when something is broken, as his father would do. The fact that toy tools may not satisfy the boy and he insists on real pliers and screwdriver only indicates the completeness of the identification. A closer look at this child's role-playing reveals that he is not just taking the part of his father, i.e., identification, but taking the part in relation to himself, i.e., introjection. Through the process of introjection he internalizes the reactions of other people to him and learns to behave in ways that are expected of him.

The introjective process is referred to by Rogers as "evaluational interaction". He describes the role this has in the development of the phenomenal field (self development).

There soon enters into this picture the evaluation of self by others. "You're a good child", "You're a naughty boy"—these and similar evaluations of himself and of his behavior by his parents and others come to form a large and significant part of the infant's perceptual field. Social experiences, social evaluations by others, become a part of his phenomenal field along with experiences not involving others—for example, that radiators are hot, stairs are dangerous, and candy tastes good.<sup>18</sup>

Murphy has much the same point of view in placing adults in a highly strategic position as regards self development of youngsters. ...The child becomes, in rather large measure, his mother, and mother becomes himself; or to put it more broadly, self-hood is interwoven with experiencing other individuals. As fast and as deeply as father, brother, sister make their impression upon the child, they become parts of him, too. This dependence of self upon the perception of others is a primary clue to the social nature of man to his utter incapacity for any complete autonomy of either perception or action.... It is not that the child first develops a picture of himself that is rounded out and finished in detail, and then proceeds by fiat to create other selves to people his world, but rather that he

<sup>18</sup>Carl R. Rogers, *Client-Centered Therapy* (New York: Houghton-Mifflin Co., 1951), p. 499.

has been engaged continuously in a process of transfer, back and forth, between self-perception and the perception of others. The mechanisms of participation...have enabled him to find self-hood in the behavior of others, and to build a rather clear picture of their states of mind by analogy with his own.<sup>19</sup>

Previously it was stated that in the development of the field, there became distinguished from the other perceptions those perceptions which have special reference to the individual as an individual. These perceptions comprise the self concept. The authors cited in this section point out that many of the perceptions in the self-concept are reflected to the individual by the important people in his life. For example, a youngster behaves in a certain way, his parents or siblings then reflect to him an appraisal of his behavior. This reflection may be verbal or it may be non-verbal, by a shrug of the shoulders, a raised eye-brow, by studiously ignoring the child, or by a host of other ways. The individual internalizes these reflections and he behaves in keeping with them. Thus, children learn about themselves from the important people in their lives.

#### Interpersonal Relationships and the Internalization of the Culture.

The importance of people in the establishment of self-concept appears to be a facet of psychological development that cannot be minimized in the thinking of psychologists and educators. This could be and probably is true of any culture in the world; the adults of the particular culture reflect appraisals to the young. But American children have a specific culture to learn, one that is essentially industrial and democratic in nature. It is not by the alchemy of dreams nor the incantations of a witch doctor that young infants with no conception of our social order grow into staunch members of our society manifesting all the behaviors that typify the American people and their culture.

The American culture is probably a difficult one for young boys and girls to learn because of its complexity. Interestingly enough the difficulty is not so much the complexity of things that men have built such as homes, automobiles, production machines and household gadgets as it is the range of behavior that we expect from each human being. Our culture is characterized by a great diversification of roles available in the total society and by the many roles each individual must learn to play. For each age and each sex there are prescribed

<sup>19</sup>Murphy, *op. cit.*, pp. 491-492.

ways of doing things, rewards being given to those who learn the behaviors quickly and well, while punishments are meted out to the slow learners. A pre-school boy or girl learns to play roles as befits his respective age and sex just as the adolescent boy or girl must assume the appropriate roles. The same is true of young adults, older adults, and the aged. It is difficult to believe that knowledge of these roles is born in people and that they come to bloom concurrently with the physiological maturing of the individual. How do people learn the multitude of roles necessary for effective living in our society? Specifically, what part do human relationships play in learning the culture?

What makes an American child American? If the same child were born and reared in France, he would think, feel, and act like a Frenchman. Growing up in Middletown or Jonesville, U.S.A., however, it is important that he do things as his fellow Americans do. It is this process by which a child, raised in a particular family in a particular society, comes to accept and believe in its way of life, that we call "identification". This is a deceptively short word to describe the complex process by which we all come to be like, and want to be like, the other people we know. Normally the child's basic identification is with one or both parents, but there is identification also, with the ways of thinking and acting of certain other individuals outside the family.<sup>20</sup>

Stagner's ideas on the subject are somewhat similar to the foregoing passage except that he places emphasis on affection as fostering identification and punishment as not being conducive to identification. In discussing the parents' roles in identification he says:

The parents, of course, play a very important role in the child's development. They give affection and discipline. They reward and punish. They encourage certain traits and discourage others, acting either on personal prejudice or as agents of the culture, indoctrinating the values of the larger group. Furthermore, they serve as models which the child imitates. When there is a discrepancy between parental instruction and parental behavior, the child is prone to follow the latter.<sup>21</sup>

<sup>20</sup> Association for Supervision and Curriculum Development, *Fostering Mental Health In Our Schools*, 1950 Yearbook of the Association, (Washington, D. C.: National Education Association, 1950), p. 146

<sup>21</sup> Stagner, *op. cit.*, p. 345.

Much of what has been discussed above is summarized rather well by Frank who reports:

Just as the child learns to live in a cultural world and accepts the prescribed patterns of involiability and of performance . . . so the growing individual gradually learns the rules and conventions of the social world. In the same way he takes these over, incorporates them into his own conduct, . . .

.....  
No individual is ever in contact with these forces; he is exposed to the other individuals who make up his group and he experiences social order as it is constituted by other individuals using similar practices and rituals and symbols in their interpersonal relations.<sup>22</sup>

All peoples living in organized groups over sustained periods develop an orderliness in their living, in the solution of the problems they face and in satisfaction of their needs. Culture is the term we ascribe to the orderliness. It is necessary that every infant learn the culture of the group into which he is born. It is inconceivable that children would learn about the culture by willy-nilly experiences which are entirely without human relationships, for culture resides in people. So it is reasonable to believe that children learn the culture through their contact with other, more mature people. They learn how boys or girls behave, what is beautiful and ugly, what is fashionable and dowdy, in short, how they should believe and behave in general. Learning the culture is facilitated if the human relationships have a positive valence attached to them: if love, affection, valuation and respect are elements of the relationships. Such conditions enhance the child's identifying with the adult and speed up the learning process as well as the internalization of the culture. Identification in this sense is not thought of as fantasy in which a youngsters wishes that he were another person, but rather, is viewed as the youngster's wanting to be *like* another person in certain ways. Thus we see that we learn the culture thru relating ourselves to other people.

Sense of Personal Worth Dependent Upon Interpersonal Relationships

One aspect of good mental health is the evaluation that a person has of himself as regards his personal worth and integrity. Many people who are experiencing psychotherapy have low self-regard, low self-

<sup>22</sup>Frank, *Nature and Human Nature, op.cit.*, pages 115 and 120.

esteem or little love for themselves. This may be a direct result of the culture which appears to have an element of modesty inherent in it. Presumably, this element of modesty leads to self-deprecation. It is not the intent of this discourse to examine the negative aspects of the culture, but rather, to point out the manner in which a sense of personal worth is gained through relationships with people in our lives.

Even the casual student of psychology would point out that the topic under discussion was considered by Sigmund Freud to be an integral element in wholesome personality development. The emphasis in this case was on those positive relationships which one experienced in early childhood. However, it would be fallacious to assume that Freud was the only person to consider a sense of personal worth or self-love as important, for actually it is difficult to find any disagreement. The focus in this instance is on those relationships which promote the sense of personal esteem.

Rogers describes the reflexive nature of love relationships as follows:

One of the first and most important aspects of the self-experience of the ordinary child is that he is loved by his parents. He perceives himself as lovable, worthy of love, and his relationship to his parents is one of affection. He experiences all this with satisfaction. This is a significant and core element of the structure of self as it begins to form.<sup>23</sup>

The description given to this process by Cronbach is somewhat more detailed and lends itself to application to education.

The child's work is constantly evaluated, praised, and criticized by his peers and by adults. He learns that some performances and some people win praise and some do not. He acquires standards by which to judge himself, or an ideal of what a good person ought to do. If his performance and conduct are usually accepted, and he makes steady improvement toward the ideal, he learns that he is capable of meeting the standards of goodness. If he feels that he will never come near the ideal, he sprouts a sense of inadequacy.

The child's attitude toward himself reflects how others treat him. A firm base is laid if he is given affection in infancy; per contra, if he is rejected or pressed for too-rapid mastery of . . . routines, insecurity is introduced.<sup>24</sup>

<sup>23</sup>Rogers, *op.cit.*, p. 499

<sup>24</sup>Lee J. Cronbach, *Educational Psychology* (New York: Harcourt, Brace and Company, 1954), p. 110.

The love relationship and its effects is described by Montagu, a prominent writer on the subject.

To love is to be affectively related to other people and to oneself in such a manner as to render them and ourselves more secure, to convey to others the feeling that we are "all for" them, that we are there to support and cooperate with them. This, however, hard he may try, the unloved-unloving person cannot do. He wants to be and do all these things, but he can't. . . . Such a person by being inadequately loved has been inadequately related both to himself and to other persons. In other words, the love relationship is essentially a social relationship. By social we mean the interaction between persons in a manner which confers survival benefits upon them. That, then, is to say that to love means to minister to, to satisfy, the needs of other persons, and by this means to relate them to ourselves.<sup>25</sup>

One's conception of self is acquired through social intercourse. Those in our immediate and persistent social environment reflect their valuations to us, the behavers. As discussed in a previous part of this chapter this process is prime in the development of self-concept. The nature of the valuations reflected are too numerous to describe and probably defy description. As the saying goes, it would be like trying to pile up feathers in a high wind. Yet, there is one category of reflections which cannot be disregarded merely because of descriptive difficulties. Those reflections referred to deal with the personal worth of youngsters; those many ways in which we communicate to children that we love them or hold them in high regard. An examination of some specific ways in which this is done is not beside the point.

Whether one calls it love, respect, esteem or any other term, this quality can be expressed to another by virtue of respecting their individuality and uniqueness. This leaves a person free to develop along the lines of his unique organization, while the person expressing the love does not restrict, restrain or try to re-mold the recipient. A rather apparent way of expressing valuation to an infant is by virtue of providing the materials and conditions necessary for satisfaction of the infant's biological needs. In later life we can make ourselves and our resources available to the person whom we value. A third way of expressing regard for another is by actively engaging in those activities which the loved one considers important. Examples of this are

<sup>25</sup>Ashley Montagu, *The Meaning of Love* (New York: Julian Press, 1953), p. 10.



commonplace. The parents of a third grade cub scout who take part in scout activities; the mother who shows her daughter how to bake cookies when daughter voices an interest in baking; the wife who takes up duck hunting, a sport her husband enjoys; and, the teacher who stays after school and teaches a youngster the rudiments of electricity when the pupil requests. A fourth way of expressing personal worth to another person is equally applicable at home, school, church or the community at large. This is by giving people freedom to experience. Does this mean that youngsters in an industrial arts laboratory should not be restrained from throwing type, or that they bow out of their shop foreman assignment when they so desire? The answer, of course, is in the negative. The point can be developed by the example of the boy who had just observed a demonstration on the proper way to plane the end grain of a board. As the class was returning to work, the boy expressed doubt to his teacher and said he thought he could plane the end grain of his table top by going all the way across the piece. The teacher could have muttered "freedom to experience" under his breath and allowed the boy to mar the piece badly, or he could have said, "Do as I told you!". Instead, this teacher had the boy clamp a scrap piece of wood in the vise and try the all-the-way-across method which he believed would work. The outcome is apparent; however, the boy had been given freedom to experience. In addition, the teacher valued the boy all the more because he did not consider that the boy had erred.

When the various means to reflect appraisals of personal worth are used, the recipient individual interiorizes these appraisals. They become part of his self-concept and he perceives himself to be worthy, loved, and as having self-esteem. Those references cited above indicate that when a person has such a self-conception, he is then able to express the qualities of worth, respect and esteem to other people. Conversely, those people who have negative notions of their personal worth have negative notions about the personal worth of other people in their lives.

The biblical admonition to love our neighbors as ourselves assumes great significance in the light of psychological formulations, for human relationships determine what feelings of personal worth a person may have.

## BEHAVIOR IS LAWFUL AND FUNCTIONAL

Previously, in a section dealing with the field of force, it was mentioned that prediction of a person's behavior is possible to some degree. Many people believe this to be a major purpose in studying

human behavior. Inasmuch as behavior is predictable, it seems logical to postulate that behavior is lawful. Such a postulation has semantical difficulties, however, and needs clarification.

Lawfulness could well be thought of in a mechanistic way, in which there are certain irrefutable "laws" and the individual behaves in keeping with those laws. This interpretation places the individual in the position wherein he is the victim of the laws. Any such interpretation would almost rule out higher thought processes and would reduce human behavior to the level of stimulus-response activity. On the contrary, lawfulness in this instance is held as being a necessary postulate in any endeavor that sets about to explain human behavior. In this same connection, Snygg, in describing the characteristics of a phenomenological system of psychology, makes a basic assumption common to all scientific systems. The assumption reads as follows:

All behavior is lawful. This is a necessary assumption of any system, since chance behavior would be unpredictable. <sup>26</sup>

Lawfulness, then, is being able to predict behavior. Lawfulness of behavior could be thought of in relation to the consistency of behavior rather than the application of any formulae.

Similar difficulties are encountered when behavior is described as being functional. Some people resist with high dudgeon the idea that all behavior is functional or purposive, even though they do not question that this is true of their own behavior. Herein may be the clue to the understanding of the functionality and purposiveness of behavior. When a four year-old throws a temper tantrum the child's mother may make a statement to the effect that his behavior gains him nothing - it is not functional. Yet, we must keep in mind that such opinions are from an outside observer's view point. As the child saw it, his behavior was entirely functional in terms of his present psychological organization. Indeed, if he was seeking the attention of his mother, the very fact that she gave him a spanking made his behavior even more functional *as viewed by the child*. On the other hand, his mother may opine, "It availed him nothing except a spanking."

It seems logical to assume that behavior can be functional only when there are purposes for the behavior. Perhaps the same can be said of other things, too; furniture, as a case in point, is functional only when it satisfies the purpose for which it was designed. This is discussed by Kelley and Rasey in a chapter entitled "All Living Tissue is Purposive."

<sup>26</sup>Donald Snygg, "The Need for a Phenomenological System of Psychology," *Psychological Review*, Vol. XLVIII, (March 1941), p. 406.

We need the concept of purpose in order to explain the phenomena of living things. This concept is not something we can isolate in a test tube or view under a microscope. It is no less real on that account. Science has always invented concepts and even structures to conform with the behavior of matter. This is a thoroughly respectable device. No one, for example, has even seen an electron, but electrons are as real to the physicist as though they had been seen. They have to exist, else matter would not behave as it does. Living things have to purpose in order for us to account for their behavior.<sup>27</sup>

It should not be assumed from the foregoing, that all behavior is rational, or, that behavior being lawful and functional is therefore, socially acceptable. We know that this is not so. Behavior does have causes even though the cause may not be known to the behavior at the instant of action.

#### Self-Concept as an Organizing and Interpreting Force

Recently, the writer gave a short talk to a group of in-service teachers on the role that language plays in the development of self. When the talk was over two of the teachers in the audience approached the writer from different directions and one of them began by saying, "One of your ideas was so good that I wrote it down so I wouldn't forget it." At this juncture she read the statement. Before the author could respond in any way, the second teacher entered into the conversation by saying, "But that's not quite the way it was given," whereupon he launched into the "correct" version of the statement. The interesting part of this friendly discussion was that neither of the two discussants was right, the statement on the point in question was different from those of either of the two teachers. In fact, the statements were sufficiently different from the original as to render them distortions! In short, one message had been sent, but two *messages* had been received. The people involved gave no indication of hearing loss so the discrepancy could not be accounted for in that way. The lecture hall was small, the acoustics good, and the speaker's volume of voice adequate. Why, then, the difference in interpretation of what had been said? The question as posed is one that all teachers have probably asked themselves at one time or another since we have all had an experience like that described above.

<sup>27</sup>Kelley and Rasey, *op. cit.*, pp. 55-56.

Obviously, we are entering into the field of communication, and the elements of which it is composed. While Kelley does not mention self-concept specifically, it is conceivable that self-concept could be assumed in the following statement:

When we take in our surroundings, we take from them, not at random, but in accordance with our past experience and our purposes. To a degree, we take out of the scene those elements which will forward our purposes and also those elements which we fear may frustrate our purposes. These are the only parts of the scene which attain functional reality, and they attain it only to the degree that they are taken account of and acted upon by a person. This he can do only in relation to his experience and purpose.<sup>28</sup>

When Kelley's statement is kept in mind in relation to the two teachers' interpretations of what was said, we see that they perceived (or heard) what their experience and purpose made it necessary for them to perceive. What tremendous implications this has for education, and foreign relations!

Freeman, a physiological psychologist, takes much the same position by virtue of placing the individual at the center of his world, in which position he determines the nature of reality.

We are justified in taking this egocentric view, which says in effect that man conceives his world; for in the interests of preserving internal constancies, the exteroceptive system develops and maintains optimal external constancies. By means of overt reaction to specific external stimuli the human organism stabilizes and betters its surroundings, eliminates potential dangers, . . . .

From our point of view these self-constituted surroundings *are* the organism, and the behavioral processes by which they are maintained are homeostatic-regulatory. That is to say that a slander is just as much a threat to a man's good name — built up by a series of elaborate exteroceptive behaviors — as is a change in oxygen supply a threat to essential life processes. The organism will react to both displacements with behavior calculated to restore balance and equilibrium. The only difference in the two examples is that the "good name" constancy is not nearly as stable and universal as is the oxygen requirement.<sup>29</sup>

<sup>28</sup>Earl C. Kelley, *Education for What is Real* (New York: Harper and Brothers, 1947), p. 48.

<sup>29</sup>G. L. Freeman, *The Energetics of Human Behavior* (Ithaca, New York: Cornell University Press, 1948), pp. 146-147.

Humans appear to be unique insofar as they are born with no personality organization, but with continual perception of their experience they create psychological organization. Concurrently, through the perceptual process, man builds his external world of objects and people. To every individual the psychological organization which he possesses is *his organization* and it serves as an interpreting force. Since our fields and purposes are different it would follow that people do not have a common experience even though the event is the same — witness the case of the two teachers described above.

### Self-Concept Governs Perception

During the past quarter century instruments have been designed to do psychological testing of a unique nature. The answers to these tests — if they may be called answers — are neither right nor wrong. The test takes into consideration the unique organization of each person and the fact that responses to the test would be equally unique. Consequently, the answers are evaluated in terms of tendencies and patterning. An example of this type of instrument is the Thematic Apperception Test. When a subject takes the TAT he is presented with a series of ambiguous pictures which he is asked to interpret. The reader will immediately discern that the subject's "answers" would be projective. In other words, the subject would interpret the picture in terms of his self-concept. These tests are called projective tests or methods since the subject's perceptions of the pictures are selective, i.e., he projects his own organization into them.

Yet it is not only in test situations that our self-conception exercises selectivity in perception. In all situations in all walks of life perceptions are strongly flavored by the existing structure of one's conception of self. Many writers attest to this even if their descriptive terminology is somewhat different. Typical of these writers are Abt and Bellak who report:

... the first factor of significance that emerges from the varied experimental efforts in the field of perception is the general *selectivity* of all perceptual processes. There is an imposing body of both theoretical and experimental evidence which is prepared to suggest that the selectivity of stimuli may be regarded as a function of the "frames of reference" of the individual. It has been one of the burdens of the whole trend of experimental psychology to establish clearly the principle that stimuli should be looked upon as having in and of themselves no absolute stimulus value. On the basis

of years of experimental effort it has become established that each stimulus is perceived always in relation to the pattern of other stimuli among which it appears embedded in reality or to which it has become functionally related through the past experiences of the individual.<sup>30</sup>

Klein, in a volume edited by Blake and Ramsey, has similar views on the subject while introducing the idea of "leveling" and "sharpening." Leveling is the tendency of the perceiver to minimize those elements of the situation found to be somewhat incompatible, while sharpening is the tendency of the perceiver to focus on those elements of the situation which he finds important to him.

Perception is only one facet of the controlling ego system, but through it we see the manner of working of the entire system. In this sense a perceptual attitude has "purpose", but by this I mean only that it expresses a control requirement, a regulative principle. It acts very much as a "selective value" which regulates intake — i.e., what is or is not to be ignored. Its immediate "purpose" is only what it succeeds in accomplishing. In "leveling", the purpose is the obliteration of differences; in "sharpening", a heightened sensitivity to them. It is a way favored by a person for bringing about an equilibrium.<sup>31</sup>

Lecky does not mention perception in the following passage, but his use of the term "interpretations" is synonymous with perception.

Let us think of the individual, therefore, as a unified system with two sets of problems — one the problem of maintaining inner harmony within himself, and the other the problem of maintaining harmony with the environment, especially the social environment, in the midst of which he lives. In order to understand the environment, he must keep his interpretations consistent with his experience, but in order to maintain his individuality, he must organize his interpretations to form a system which is internally consistent.<sup>32</sup>

<sup>30</sup>George S. Klein, "The Personal World Through Perception," *Perception—An Approach to Personality*, *op. cit.*, p. 254.

<sup>31</sup>Urie Bronfenbrenner, "Toward an Integrated Theory of Personality," *Perception—An Approach to Personality*, edited by Robert R. Blake and Glenn V. Ramsey (Ronald Press, 1951), p. 333.

<sup>32</sup>Prescott Lecky, *Self-Consistency* (New York: Island Press, 1951), p. 155.

It seems interesting and somewhat paradoxical to the present writer that self is regarded as a continuously evolving structure (as discussed early in this chapter) and yet has elements of stability and resistance to change. The works cited immediately above strongly suggest that the selective nature of perception would appear to maintain the self-concept at its present level of constitution and even impede change. If this were so, then learning, that process of differentiation of the field, could not occur. To make such a proclamation at a convention of educators would cause much comment, even if not much acclaim for him who would utter it. There seems to be no alternative other than to search for an explanation that would account for stability as well as change and growth.

### The Organism Strives for Optimal Growth and Integration

Previously it was mentioned that behavior is lawful and functional. It was mentioned, also, that functionality implies purpose. As a person behaves in keeping with purposes, his behavior takes on *direction*. But what a disappointing way to leave a subject, merely saying that behavior is purposive, that is has direction.

Such a situation is akin to that created when a boy asked his father where shooting stars went. The parent's laconical response was, "They travel very fast." The boy really knew very little more than he had before he posed the question except that shooting stars travel very fast. He did not know where the stars went, which was the intent of his question. So it is with human behavior. What are the purposes? What direction does behavior assume?

Karen Horney, in comparing her views about man's destiny to those of Freud's has the following to say:

Freud's pessimism as regards neuroses and their treatment arose from the depths of his disbelief in human goodness and human growth. Man, he postulated, is doomed to suffer or to destroy. The instincts which drive him can only be controlled, or at best "sublimated." My own belief is that man has the capacity as well as the desire to develop his potentialities and become a decent human being, and that these deteriorate if his relationship to others and hence to himself is, and continues to be, disturbed. I believe that man can change and go on changing as long as he lives.<sup>33</sup>

<sup>33</sup>Karen Horney, *Our Inner Conflicts* (New York: W. W. Norton Co., 1945), p. 19.

Horney is rather explicit in the position she takes on this matter; the organism's purpose is development of potentialities and behavior is positively oriented in that direction. The same feeling is expressed by Bronfenbrenner, who is more descriptive about the nature of the growth processes.

From birth, the human organism manifests an active impulse to growth; that is, to extension, differentiation, and integration both within itself and in relation to the external milieu. This impulse is holistic and undifferentiated as to content. It has three aspects which are intimately intertwined.

- (a) *Conative*: an impulse to action, to utilization of maturing physiological organs and tissues...
- (b) *Affective*: an impulse to affective expression and investment of ever-widening dimensions of the organism and its milieu.
- (c) *Cognitive*: an impulse to utilize the capacity to abstraction..., to organize experience in terms of concepts.<sup>34</sup>

In setting forth the basic postulates of their theory of personality, Abt and Bellak recognize growth—the "plus dynamic"—as an integral part of their formulation.

*Personality growth and development rest upon both differentiation and integration.* This postulate asserts that personality growth and development are dependent upon two fundamental processes, learning and maturation. Learning and maturation are jointly responsible for both differentiation and integration, which characterize the personality process in varying ways at different stages in its temporal course.<sup>35</sup>

Significantly, Abt and Bellak are not restrictive as regards the tendency of the organism to grow and develop; they feel that it is in operation at all times in a person's life, even if in diverse ways.

The self-concept, which develops through time and serves as an interpretive force, gives meaning to events in terms of the individual's present organization and needs as perceived at the moment of action. Also, self concept governs perceptions through its selective action. In effect, self concept screens perceptions, permitting those which are compatible and offering resistance to perceptions more incompatible with the conception of self. These processes would appear to give a highly static connotation to self processes and so must be

<sup>34</sup>Lawrence E. Abt and Leopold Bellak, *Projective Psychology* (New York: Alfred A. Knopf Co., 1952), p. 47.

<sup>35</sup>Abt and Bellak, *op. cit.*, p. 61.



tempered with growth and integration dynamics. The emergent self can, therefore, be seen as maintaining itself thru selective perception; yet, it tends to enhance itself through growth and integration..

#### FACILITATING THE DEVELOPMENT OF SELF-CONCEPT

The word "facilitating" has a positive flavor attached to it and indicates there are conditions conducive to the healthy psychological growth of the individual. Yet, the coin has two sides. There must be conditions not conducive to good psychological growth; indeed, they may be very detrimental. As a society we are sensitive to the problems created by people who manifest poor psychological growth and health. Much time, money and effort has been spent on the study of such people.

Purely for purposes of exposition the latter aspect of this topic will be treated first: the more negative side of psychological growth. Conceivably, the more data one has available to consciousness, the more effective he should be in working out possible solutions to his problems. It should be pointed out that the emphasis here is on data available to consciousness, and not necessarily on factors<sup>1</sup> such as intelligence and breadth of experience. Nor is there any intention of minimizing the role that experience and intelligence play. Whether one has great or little intelligence and wide or limited experience, it seems reasonable to assume that the more experience available to consciousness the more effective is the person in solving his problems.

A rather generalized account of the denial of data to consciousness is given by Chodorkoff. It will be noted that he ties this in with personality adjustment in a direct way.

...defensiveness is described as primarily a perceptual phenomenon which follows as a consequence of threat to the individual's self. Defense, in essence, is the prevention of accurate perceptions of what is threatening from reaching awareness. As a result, aspects of the environment and of the person himself may be denied to awareness or be misperceived. It is in this way that the individual insures the stability of his self. Furthermore, the adequacy of the individual's personal adjustment is considered to be inversely related to the degree to which experiences are denied awareness.<sup>36</sup>

<sup>36</sup>Bernard Chodorkoff, "Self-Perception, Perceptual Defense, and Adjustment," *Journal of Abnormal and Social Psychology*, 49 (October, 1954), p. 508.

Threat, as used in the above passage, refers to psychological threat as perceived by the individual. When the individual experiences threat his defense causes him to limit the field of perception. This is essentially the feeling of Snygg and Combs who tell of the effect of narrowing of the field on experiencing threat.

This narrowing of the field is likely to occur when the individual feels he is threatened. The effect has sometimes been called "tunnel vision" and operates to narrow the field of perception to the threatening object. Thus the presence of perceptions threatening to the phenomenal self may bring about an absorption with the problem such that the individual sees his problem everywhere . . . .

Unfortunately, the restricting effect of threat in the phenomenal field simply complicates the resolution of problems. For adequate perception, we need, not a narrow field of differentiation, but a broad one. Too narrow a field from which differentiations may occur results in repetitions of the same behaviors time after time. The possibility of new, more adequate perceptions may be obviated by the narrowness of the field at the very moment when a wider field is desperately needed.<sup>37</sup>

When it is remembered that Rogers, Snygg and Combs, and Lecky conceive of the learning process as differentiation of the field, only then does the full significance of the concept of threat have its impact. When the field is restricted, limited, or made partially unavailable to the individual his learning is also restricted and limited.

At this point let us turn our attention to the more positive side of psychological growth and mental health. Recognizing that we live in a society that makes us dependent upon other people, and thus places emphasis on human relations, examination of an emergent attitude of work and play and study seems germane. People are prone to describe our culture as a competitive one, and few would dispute the fact that some elements of the culture are competitive. On the other hand, our daily activities require us to cooperate with many people in situations of an highly varied nature. This seems to be true especially of the teaching profession. Consistently we find ourselves in situations with pupils, fellow teachers, supervisory personnel and lay citizens, in which it is necessary to cooperate. To learn to cooperate is one of the expectancies if we are to function effectively in our jobs as educators. Quite apart from the role-expectancies there remains the question of what cooperation does to a person in a psychological sense.

<sup>37</sup>Snygg and Combs, *op. cit.*, p. 125.

With respect to cooperation, acceptance and harmony, the literature is replete. To the present writer, Kelly and Rasey summarize the impact that cooperation has on human behavior.

There is, . . . , one element in the cooperative process which needs attention. That is the fact that the process itself seems to have therapeutic value for the individuals involved. . . . We have, . . . , observed this therapeutic phenomenon on many occasions. As people work together, they seem to change in the direction of being more energetic, more understanding, more human. This change does not seem to be related to the personal qualities of the people worked with, nor to the level of the group goal. It seems not to be a purely intellectual change, but to involve the whole organism. It is not often possible for the person who has undergone this change to verbalize it all. He behaves differently, however, and since the change is not a superficial acquisition, he continues to behave differently. It may be that the finding of an outlet for the expenditure of energy in accordance with unique purpose accounts for this change and the apparent depth of it.<sup>38</sup>

Some parents and professional educators have thought of teaching cooperative methods and attitudes to their young charges on the basis of cooperation being a cultural value. Being such, it becomes important for people to learn, through the socialization process, to cooperate. However, development of the cooperative attitude appears not only to be a learning in and of itself, but its development enhances further learning. This may be because the cooperative process reduces threat, thereby permitting the individual to be more "open" to his experience.

#### IMPLICATIONS FOR INDUSTRIAL ARTS AND INDUSTRIAL ARTS TEACHER EDUCATION

The implications to follow are not meant as prescriptions nor panaceas, they are merely presented as one person's interpretation of the material in this chapter. The interpretations are necessarily biased by the present writer's selective perception of topics discussed in earlier sections of the discourse. As such, they are not the only implications to be drawn; they are *some* among *many* possibilities. Perhaps it would be well for the reader to consider these as hypotheses, subject to the usual critical test applied to all hypotheses. If this be

<sup>38</sup>Kelley and Rasey, *op. cit.*, p. 91.

a way of stimulating the research needed so badly in industrial arts education, then, by all means, the reader is urged to conceive of the implications as hypotheses.

1. The industrial arts teacher's role, at whatever level he is teaching, is chiefly that of *contributor* to the continuing stream of self- involvement of his students. This is, in general, no different from the role of parent or clergyman, so it is necessary to differentiate the role more clearly. Specifically, the industrial arts teacher's role is that of contributing to the self development of his students through providing experiences with tools, materials, processes and people in an industrial, democratic climate of learning. This may well be a means-ends problem, in which the end being sought is the continuous, unimpeded self-development of students by means of experiences with and acquisition of those skills and concepts necessary, in the case of teacher education, to prepare the individual as a good industrial arts teacher. When teachers in institutions of higher learning see their role as described above it seems logical to assume that ethnocentric attitudes would be considerably minimized. In other words, the industrial arts teacher-educator would see the language arts, the social sciences, psychology, vocational education and industrial arts education in relation to the over-all personality development of his students. Each discipline, each course and each experience could then be viewed as important – perspective would have been gained.

2. A function of industrial arts teacher education is to further the uniqueness of each student and provide means for students to exploit their unique self organization. This does not mean that people would be so different that they would be "going in all directions." The implication takes into account the fact that there must be a core of similarity in the personality structure of individuals who are members of a society; it also recognizes that there can be a wide periphery of uniqueness. Cultural patterns are *not* designed to produce human stereotypes. The same can be said of teacher education in industrial arts. The curriculum offers a broad area of experience from which each pre-service teacher selects those elements consistent with his unique purposes. Graduates of this curriculum would be similar in the respect that they possess the basic knowledges and skills required of industrial arts teachers, yet they would emerge from their education with highly variant and specially developed skills, aptitudes and conceptualizations. If the reader is asking himself whether this is different from that which has occurred in the past, the answer is in the negative. The only difference is, possibly, in emphasis. Uniqueness will grow,

but it is exciting to imagine the bountiful harvest all people would reap if the development of uniqueness were consciously *provided for*.

3. In the body of this chapter it was mentioned that perceptions of experience constitute functional or psychological realities which are determinants of behavior. What this suggests for education of prospective teachers is manifold. Since a person experiences, perceives his experience, and then behaves in keeping with his perceptions of experience, it would seem that a first step for teacher educators to take in planning a curriculum is to describe, *in behavioral terms*, the kind of teacher they are trying to produce. Having done this, attention could then be turned to thinking through those curricular areas and activities which would be offered, with the thought in mind of having the prospective teacher experience so richly as to produce perceptions leading to the behaviors desired. In effect, this is an attempt to provide for and to build into our undergraduates those functional realities which will give rise to the behavior desired of a good industrial arts teacher.

It matters little what one's philosophy of industrial arts happens to be in regard to this point. The issue is not what is a good program of industrial arts, nor what are the correct objectives, nor the proper sequence of courses. Regardless of conflicting ideas about good programs, correct objectives, and proper course sequence, the experiences provided in the curriculum will in large measure determine the kind of teacher the student will become. As a case in point, if it is expected that a good industrial arts teacher will behave as a professional person as regards ethics and memberships in educational organizations, this cannot be left to chance. Teachers are much more likely to behave in this manner if their undergraduate experiences help them to develop perceptions of themselves as professional, ethical people.

4. The "field" from which each person operates is unique, different from the field of any other person and is an interpreting force. Being an interpreting and organizing force it exerts a selective influence on our perceptions, tending to "play down," distort or reject those perceptions incompatible with our self organization and permitting to the field free entry of compatible perceptions. The selective and interpretive processes operate in such a way that there can be no common experience. Twenty students enrolled in the same course in a given college and year do not have a common experience. Each student perceives the instructor somewhat differently from his classmates; he perceives the lectures in an individual manner just as he does the demonstration on straddle-milling. It seems important to the

present writer that teacher-educators in industrial arts *not expect* their students to have experienced in the same way. While, initially, it may be slightly disconcerting to learn that a common experience is a myth, further thought on the matter brings to light that this is one of the ways in which knowledge is elaborated, pushed deeper, and nuances of meaning added to it.

Another question is raised, which, to say the least, is provocative. Considering that the chances are slight of different individuals having a common experience because of selectivity of perception, what can be said of our present evaluation techniques? Can there be an absolute such as is asked for on an objective-type test? What yardstick does one use in evaluating the answers given to essay type tests - or any test? The implication is not that evaluation be discarded; but, it is implied that we critically examine the purposes and interpretation of our present evaluation instruments and techniques.

5. We have learned of the many ways that people are important in the psychological development of other people. Not the least important of those ways is that young people learn the culture pattern by identifying with adults. Teachers are very significant people to students and the latter run through many identifications with them. By modeling themselves after teachers, students learn roles such as the director of activities, participator in group situations and the more generalized role of behaving like a male or female. Equally as important as learning roles is the fact that values and attitudes are learned through identification with teachers.

In many respects the industrial arts teacher is in a rather strategic position in this matter of learning the culture pattern and values through identification. Few males teach in the elementary schools with the result that many children reach junior high school not having had a man teacher. One of the first they encounter is the industrial arts teacher who is then in an ideal place to become a "model" for his eager students. This suggests that a criterion for the selection of college freshmen is the degree to which they manifest those socially acceptable behaviors (roles) with which youngsters identify. Obviously this calls for a penetrating analysis of the perceptions children have of good teachers. The same might be said of the placement of teachers. We are all familiar with the fact that some new teachers are extremely successful in certain communities and unsuccessful teaching in other communities. Teacher recruitment and placement may be partially determined by the roles or behaviors manifested by the prospective student or teacher.

6. All behavior has causation and is functional, lawful and purposeful to the individual. What about the student who washes an ingot off and drops it while wet into the crucible full of molten aluminum? Can it be said he was forgetful, that he didn't pay attention, that he was careless? These may be true from an external observer's point of view; yet, as seen by the individual his behavior was entirely plausible inasmuch as he was trying to prevent the formation of slag by removing dirt. The student's behavior did have purpose, albeit he was so intent upon his purpose that other, more dangerous, factors were excluded from perception. Under the circumstance it would seem prudent to accept the student's purpose without reflecting blame or ineptness. At the moment of action all behavior is the best an individual is capable of with his existing psychological organization.

When behavior is viewed in this manner "mistakes" and "errors in judgment" take on less of an absolute right-or-wrong connotation, they are not so emotionally loaded with notions of good and bad. Mistakes can be an integral part of the learning process when the instructor aids the learner in seeing there are better ways of attaining purposes, rather than pointing out there are right and wrong ways. The former method helps the student retain his self-esteem and casts "standards" or good operating procedures in the realm of goals to be sought rather than assuming these goals have been reached. When there is an area wherein many tools, products, materials, concepts and processes are experienced as in industrial arts, the methods for attaining ends or purposes multiply greatly; and, to the author's way of thinking, calls for insight into and acceptance of the student's purposes.

7. Fundamental to effective industrial arts instruction at the elementary, secondary or collegiate levels is the attitude that all people have not only the capacity but the desire to learn. This hypothesis is based on the "plus dynamic," the tendency of people to push themselves toward further growth, further differentiation and integration. The role of the educator of prospective industrial arts teachers becomes that of providing experiences that will enhance the development of such an attitude by his students.

Much of the course work in sociology, anthropology and psychology gives the student some knowledge of the continuous "unfolding" and growth of human beings. Unfortunately, teachers find it difficult to apply this knowledge to the behavior of individual children in their laboratories. To overcome this and give specific aid in developing the attitude that people can and do want to learn, it is suggested that pre-service teachers engage in an intensive study of a normal child's

behavior. When a body of information is obtained about the youngster from school records, conferences with former teachers, visits to the child's home and direct observation in the shop, then understanding emerges. The undergraduates begin to discern the child's eagerness to learn ways of getting along with peers, with family, with teachers, and to learn skill and content subjects in school. Summarizing such a study by determining the developmental tasks the child is working on and the school's role in helping him is a rewarding experience. The student becomes sensitive that people behave "all of a piece" and, therefore, industrial arts learnings cannot be thought of apart from learning to get along with peers and adults; in fact, the former may be contingent on the latter.

8. People are dependent upon other people for psychological development: is this another way of saying that people learn from each other? Affirmative evidence is that human development is in large measure not based on inherited patterns of behavior. Additional evidence is that our entire educational system is based on the practice of people learning from other people. But the focus here is not on academic kinds of learnings, rather, it is on the all important learnings about one's self as a person.

With insight into the significant role that human relations play in the psychological development of pupils, industrial arts educators will want to provide activities which not only portray the industrial matrix of society, but also yield rich interpersonal contacts. The teacher-educator with this insight would not want to abdicate from his position of teacher; but, instead, he would set up regular procedures for group planning, group work and group evaluation. In the free give and take of these situations each student could have rich experience in learning *what kind of person he is* from the reflected appraisals of his fellow students. Group work lends itself well to all aspects of industrial arts teacher education, even to work on projects. Here the "project" might be the development of a procedure for mass-producing small drill presses. In the sub-groups working on materials procurement, routing of parts, time and motion study, machining and assembling, each student has rich opportunity to have reflected to him by peers his strengths and weaknesses, adequacies and inadequacies. The future teachers would be working the materials of industry, with the tools peculiar to the industry, and they would be developing and refining the skills that play a part in industry. In addition, it seems apparent students would derive much benefit in the sense of psychological development.



Stated explicitly, the hypothesis is that there is a direct relationship between a teacher-educator's insight into the part human relationships play in psychological development and the free-flowing group learning activities provided.

9. Industrial arts education deals with an aspect of our culture that is increasing in scope and complexity with amazing rapidity. The technological, social and economic conditions of post-war United States are vastly different from conditions prior to the war. The task of the industrial arts teacher of keeping pace with current industrial change becomes increasingly difficult. In some respects his efforts to keep apace of technological advance is like the man on the treadmill, the faster he runs, the faster goes the treadmill. Therein lies the essence of the implication, or hypothesis. Perhaps we need not tread the mill; perhaps we can resort to using group processes which will not only develop the information deemed important, but will recognize the importance of people in the psychological growth of students.

By using group processes an instructor need not be the fountain-head of all knowledge, for knowledge can be contributed by *all* members of the group. Merely having people meet as a group will not accomplish the aim; the climate of learning created and maintained in the group will determine the quality and quantity of learning. The intent here is to describe a climate of learning that will have a three-fold effect, (1) it will remove the instructor from the role of having to provide all the information and direction to students, (2) it will engender positive feelings about self, and (3) the rate and permanence of learning will be increased.

The climate of learning in which these things occur will be acceptant. Each individual's perceptions and ideas will be valued and given due consideration in terms of the goal sought. This acceptant attitude reflects personal worth to the group members, and yet, acceptance does not necessarily imply approval. The ideas of a person will be accepted because his unique purposes are recognized; however, his ideas may not be approved by the group. Differences in opinions and perceptions, rather than being avoided, are viewed by the group as the raw material of progress. The process of mediating the differences and arriving at consensus is basic to group progress and feelings of productiveness. It seems essential that when differences of opinion are voiced it be done in a manner non-threatening to the contributor. Threat would serve only to limit the field, deny consensus, and sharply limit learning. Such a group does not need a strong directive, answer-laden leader, for as the group goals and group situations

evolve, so will leadership evolve. The fact of the matter is that leadership would probably rotate as each member perceived himself as being able to contribute something worth-while. Last, but not of least importance, is that the channels of communication in a good learning climate are open and are used. Communication is not confined to instructor-to-student, nor leader-to-member; but, it may be communication from student-to-student and member-to-member as well as those mentioned previously.

It is interesting to note that the conditions under which psychotherapy and education take place best are the same, even though the objectives are different. Both situations call for acceptance, freedom and communication. Industrial arts people are not, nor should they try to be, therapists. They can, however, set up conditions that will enhance learning and promote positive self-references on the part of their students.

10. The entire content of this chapter has been slanted toward the idea that human beings have the tendency and urge to develop, mature and expand themselves while moving in the direction of self-actualization. Humans are "becoming" creatures. If this is so, then there should be means of identifying that urge to enhance one's self. It is hypothesized here that one manifestation of the extending activity of the organism is in *creativity*.

We in industrial arts have long held that our area of the curriculum tends to produce people who are creative. If the only criterion for judging the accuracy of such a statement is whether or not there is some product of creation, then the statement is valid. Must there always be a product: a picture, a poem, a book, an article of furniture or an artifact of pewter? To the present writer it seems important to conceive of creativity in broader terms. Yes, a product may be a symbol of creativity; but, it is equally conceivable that a person may be creative through his unique ability to solve problems, through being able to maintain a high quality of human relationships, or being able to see new relationships and meanings in existing knowledge. Creativity may then be thought of not as an end product, but as the *interaction* between the individual with his unique purposes and goals, and the conditions, materials, people and processes in the individual's life.

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### III

# Curricular Approaches

Paul E. Harrison  
Chicago Teachers College

#### CURRICULAR APPROACHES

*Once the frame of reference has been decided upon, one looks around for ways of doing the job. In education, a big step is taken when major curriculum questions are settled. As author Harrison points out, such questions don't stay answered, but a certain amount of agreement on answers to curriculum questions must be achieved before much can be done about reaching goals.*

*This chapter opens with a quick look at the background of curriculum development in the United States to provide perspective. Next, curriculum design is considered, with brief reviews of the principal curriculum types—traditional subject-matter, broad-fields, and core. The section following deals with the why's, ways and means of curriculum change, marking some of the pitfalls along the way. Of special interest is the next section showing that "curriculum" is something in which everyone concerned must share responsibility including, of course, industrial arts teachers and those who prepare them.*

*In his sections on implications, author Harrison has included a sample resource unit such as should probably be found in more industrial arts teachers' notebooks.*

*The chapter closes with a summary in which are asked a number of searching questions. As such questions as these are considered, curriculum improvement will take place.*

*As is the case with all of the topics covered in this volume, curriculum is too big to be exhausted in these few pages. Author Harrison has, however, hit the high points very nicely, and has shown what needs to be shown—that curriculum is a part of a teacher's job that cannot be neglected.*

EDITOR

### CURRICULAR APPROACHES

Curriculum building and curriculum reorganization almost always produce a variety of desirable outcomes, provided the process is based upon sound principles. The most obvious anticipated outcome is upgrading in learning situations provided for the student; less obvious, perhaps, but equally valuable is the effect upon the teacher. The initial work to improve curriculum organization is difficult to get underway in a majority of instances; careful thought and planning are needed. Since industrial arts is a part of general education, the efforts of industrial arts teachers should be consistent with the efforts of other segments of the school.

The following pages review the viewpoints of educators competent in the area of curriculum, with the hope that their expressions may guide the industrial arts teacher and teacher educator in developing capability in this important work.

### HISTORICAL TRENDS

Contemporary professionals as well as lay people may tend to believe that the considerable excitement with regard to what is good, and what is less so, in our schools is unique to the atom age. Change is not peculiar to the middle of the twentieth century except perhaps in its rapidity.

Since education is a social phenomenon, anfractuously connected with the total culture, it is inevitably complex. Complications in education can only be reduced when there is an understanding of the circumstances which give rise to policies, problems and practices. As Butts has said:

. . . An adequate analysis of the present with a view to the future requires a study of the past.<sup>1</sup>

For this reason some attention should be paid to our curricular ancestry.

#### European Heritage

Early American education deviated but little from the European tradition. This was to be expected as the colonists had known no other. The purpose of education and resulting literacy was bound up with religious aspirations. The religious motive, abetted by a rigid structure, virtually prohibited curriculum change, at least up until the eighteenth century.

<sup>1</sup>R. Freeman Butts, *A Cultural History of Education* (New York: McGraw-Hill Book Company, 1947) p. 1.

Franklin's plan for an academy was the first notable proposal for a practical bent for the schools. Even so, the liberalized program, including for example mathematics and agriculture, was still secondary when compared to the religious and social prestige motives. Many of the other colonial leaders pressed for practical education and this insistence was reflected in the spread of the academy.

Following the Revolution the leaders of the new nation gave considerable thought to the role of education in the achievement of the destiny of the new country. Caswell suggests that it was during this period that three basic concepts were impressed which to this day influence the curricular pattern of the schools.

One is the belief that the safety of the nation depends upon the level of information and understanding of the great mass of the people. The idea was frequently expressed that a nation cannot be ignorant and free, that control of government is safe only in the hands of all the people and safe with them only if they are informed . . . . .

The second conception which gave new direction to education was the conviction that education should contribute directly to love of country and understanding of ideals to which it was dedicated . . . Throughout our national life the conviction that schools have a primary responsibility for developing good citizenship has been an important guide to curriculum change. It has been a major influence in developing an educational program which diverges so greatly from the European pattern from which our system grew.

The third conception developed during this period that has exerted tremendous influence in changing the curriculum of American schools was the belief that education should serve as an avenue of opportunity for the people. Education was viewed less and less as a privilege of those who could afford it or who were especially gifted along certain lines which enabled them to fit a pre-conceived pattern of education, and more and more as a means whereby men of all levels could improve their stations in life and all types of needs could be met. Although not stated in these terms, education came to be conceived as an instrument of social mobility which would contribute in this manner to the democratic ideal of individual opportunity.<sup>2</sup>

<sup>2</sup>Hollis L. Caswell and Associates, *Curriculum Improvement in Public School Systems* (New York: Bureau of Publications, Teachers College, Columbia University, 1950) pp. 5-6.

Despite the strong convictions of early national leaders the traditional motives retained their directive force until the middle of the nineteenth century. The common school program and the principle of public school support through taxation opened the way for the development of curricula appropriate to the vision of certain colonial leaders.

Concurrent with this work (of Henry Barnard and Horace Mann) was the acceleration of industrialization in our country. Here was a prime accentuator of the need for curriculum change. It was at this stage that small committees were organized to work on the school subjects. Krug believes that:

. . . This movement probably arose out of a feeling that we should start doing something ourselves more consciously to order and direct the school program.<sup>3</sup>

By and large these groups concerned themselves as scholars with the content of the academic subjects.

#### National Committees

The committee of Ten on Secondary School Studies (1891-1893) sought answers to such questions as the age at which children should study certain subjects, the number of hours per week and the number of years to be devoted to subjects, and the actual content of the courses.<sup>4</sup> According to Leonard:

. . . This committee not only did not sense the need for a changed curriculum to meet the needs of a growing nation; it provided a sad commentary on the vision of American educators.<sup>5</sup>

For several years the national committee idea held forth as the accepted approach to forming and reforming the curriculum. While there is considerable doubt as to the desirability and effectiveness of such groups, certain reports similar to that of the Committee on the Reorganization of Secondary Education may provide background to challenge practices as they exist in the school and to promote study at the local level.

. . . Today we continue to recognize this type of committee work in the existence of and prestige accorded to the Educational Policies Commission of the N.E.A. But the day has gone by when we

<sup>3</sup>Edward A. Krug, *Curriculum Planning* (New York: Harper and Brothers, 1950), pp. 279-280.

<sup>4</sup>*Ibid.*, p. 280.

<sup>5</sup>J. Paul Leonard, *Developing the Secondary School Curriculum*, Revised Edition, (New York: Rinehart and Company, Inc., 1953), p. 25.



expected a national committee of any kind to make specific, detailed recommendations for curriculum structure.<sup>6</sup>

### The Scientific Movement

Perhaps the first significant attempt at the scientific verification of objectives was made by Herbert Spencer in his essay "What Knowledge Is of Most Worth."

... Spencer believed that a scientific study of society would reveal certain types of information to be absolute essentials for human survival and for the progress of society. He divided adult living into such spheres as earning a living, rearing a family, or spending leisure time. Having made this analysis of living, his next step was to determine the information, knowledge, and skills that would make men efficient in each of these activities.<sup>7</sup>

The Spencerian influence later touched off a hunt for the minimum essentials in education, particularly at the elementary school level. Common theory held that these were the essence of education and should thus provide the base for vigorous drill.

... Perhaps one of the most common errors in histories of education is the belief that a scientific attitude toward education entails endless drill and unimaginative instruction. Actually, the science movement arose as a revolt against faculty psychology. The patient work of E. L. Thorndike, G. M. Wilson, Ernest Horn, and many others, ... was done in part to avoid the errors intrinsic in dreary drill methods.<sup>8</sup>

The minimum essentials movement (economy of time) was aimed at eliminating some of the considerable dead wood in the curriculum so that school hours could be applied to desirable content.

... The economy of time effort did not attempt to change the elementary-school curriculum at the level of basic theory, nor did it attempt to restructure the organization of the curriculum. The existing curriculum was critically examined within its basic structures, useless or nonfunctional portions were discarded, and more efficient methods were advocated.<sup>9</sup>

<sup>6</sup>Krug, *op. cit.*, p. 280.

<sup>7</sup>Robert H. Beck, Walter W. Cook, and Nolan Kearney, *Curriculum in the Modern Elementary School* (New York: Prentice Hall, 1953), p. 16.

<sup>8</sup>*Ibid.*, p. 18.

<sup>9</sup>H. Harlan Shores, *A Critical Review of the Research on Elementary School Curriculum Organization 1890-1949*. (Urbana, Illinois: University of Illinois Bulletin, 1949), p. 8.

The primary effect of the scientific measurement movement was the development of much detailed course of study material in the public schools. Teachers from the various subject fields concerned themselves with content outlines theoretically based upon scientifically predetermined purposes. Krug comments that:

. . . it was seen that although scientific evidence could not determine the curriculum, it could provide a great deal of useful evidence for the study of curriculum problems.<sup>10</sup>

We currently recognize the value of research-derived materials, but are also cognizant of the fact that such data can only assist in focusing curricular action. If a specific directive force exists it is probably socially oriented.

#### Socially-Centered Democratic Education

One of the more potent activities in the area of curriculum developed from the movement intended to inculcate democratic principles and practices into all phases of education; this was the workshop and its concomitants, human relations and group dynamics. The movement itself probably was inspired by the thinking and writing of such men as John Dewey and fostered by the conflict among world ideologies, democratic and totalitarian. While there has been long and often bitter debate as to the nature of education in a democratic society, the movement was apparently against:

- a. European philosophical traditions, particularly those stressing "absolutes."
- b. Authoritarianism exercised by "experts."
- c. Course of study writing as a curriculum activity.
- d. Scientific determination of curricular objectives and materials particularly as symbolized by quantitative and statistical studies.
- e. Mechanistic conceptions of the learning process.<sup>11</sup>ss.<sup>11</sup>

It was for:

- a. Seeking the roots of educational purposes in American traditions.
- b. Pragmatism and experimentalism.
- c. Emphasis on social, political, and economic problems in the school program.
- d. Widespread teacher participation in curriculum development.
- e. Organismic conceptions of the learning process.

<sup>10</sup>Krug, *op. cit.*, p. 281.

<sup>11</sup>Krug, *op. cit.*, p. 283.

- f. More flexible, informal curricular materials, when written down at all.
- g. More emphasis on philosophy and less on science in arriving at curricular purposes.
- h. Democracy as a way of life, particularly as symbolized by respect for personality, group planning, and reflective thinking.<sup>12</sup>

As teachers accept or reject such ideas, curriculum is determined, since the practices of the teacher in the classroom are the primary springboard for the promulgation of such concepts. Thus, Alberty points out that:

... if the school is to become a dynamic force in promoting democracy, it must be transformed into an institution that provides the finest possible illustration of democratic living. The best way to learn the ways to democracy is to live democratically, and administrators, teachers, students, and parents need to discover and practice cooperative planning and working.<sup>13</sup>

Obviously and desirably, curriculum in America is not static. It is probable that to a considerable degree all of our curricular ancestry is still operative in one form or another. This is not to suggest that modification has not occurred, but each aspect beginning with the European tradition through the minimum essentials movement still has its advocates. What then can be, should be, and is being done to formulate and develop a curriculum suitable to the times and appropriate to the locale?

## CURRICULUM DESIGN

The hour of decision in most curriculum work can quite accurately be identified as that point when decisions with regard to objectives, the basic orientation of the curriculum, and the nature of the child and his development have been tentatively agreed upon and some form of curriculum reorganization is deemed desirable.

### Scope and Sequence in the Curriculum

The curriculum organized on the basis of the various subject fields is easily defined as to limits. When the subjects are rejected as a basis for curriculum organization, the problem of determining scope

<sup>12</sup>Krug, *op. cit.*, p. 284.

<sup>13</sup>Harold Alberty, *Reorganizing the High School Curriculum* (New York: The Macmillan Company, 1953), p. 43.

becomes more difficult. The order of experience or sequence is of small concern to the subject-centered curriculum maker. Albery submits that:

... It is merely a matter of arranging predetermined blocks of organized subject matter. Since these blocks are relatively self-contained, any block may be shifted easily without disturbing other blocks, if existing arrangements do not prove satisfactory.<sup>14</sup>

Acknowledging oversimplification, Albery continues:

... Within a given subject, the scope and sequence is largely determined by the textbook maker. He decides what generalizations, problems, facts, and information are appropriate to the subject and the order in which they are to be presented. . . . scope and sequence are clearly determined in advance of classroom teaching.<sup>15</sup>

Certain educators have felt that sequence in learning is basic to curriculum planning. Brubacher identifies this as:

... [tied] to a theory of knowledge which believed that objective reality had a logical structure which could be known and stated. With such a premise it was quite reasonable to conclude that the logical organization of subject matter was more than a mere convenience of the human mind, that somehow it conformed to the stubborn facts of reality, to an invincible order of nature.<sup>16</sup>

While there are undoubtedly teachers who accept and believe in such a point of view, today, a more moderate approach would tend to suggest that the primary concern should be to avoid excessive demands or premature experiences at any level of understanding, motor development, or control, the consideration here being an avoidance of failure and defeat. Sequence as conceived here seems to be associated with readiness.<sup>17</sup>

Whitehead, in asking for a critical examination of the principles of sequence, suggests that a child learning to read and write at an early age obviates any shallow approach to the problem. He concludes that:

<sup>14</sup>*Ibid.*, p. 129.

<sup>15</sup>*Ibid.*, pp. 129-130.

<sup>16</sup>John S. Brubacher, *A History of the Problems of Education* (New York: McGraw-Hill, 1947), pp. 299-300.

<sup>17</sup>James Mursell, *Developmental Teaching* (New York: McGraw Hill, 1949), p. 317.

. . . The uncritical application of the principle of the necessary antecedence of some subjects to others has, in the hands of dull people with a turn for organization, produced in education the dryness of the Sahara. <sup>18</sup>

### Types of Curriculum

The previous pages have at least suggested some of the varying format found in curriculum. The identification of specifics from the variety should only be attempted with the notation that the former probably do not exist exactly as described here; that is, in a particular school, each type is normally modified to fit that school. The variation may not be planned, but it nevertheless exists.

### Subject Matter Curriculum

If prevalence proved value, it is probable that the greater portion of this chapter would be devoted to a rather pure subject matter approach to curriculum. An examination of the stated offerings of almost any high school and many elementary schools would establish that here is the wonted practice. Most teachers have been prepared for teaching by an academic tradition which holds that subject matter, *per se*, is that which most readily transfers to life situations, and as a consequence their teaching is so tempered. Throughout college, teachers-to-be are exposed to a logically organized system as taught by subject matter specialists. Certainly this tends to be as true in industrial arts as in English or mathematics.

### Broad Fields

One of the primary resultants in the reaction against a subject matter approach to education has been the broad fields movement. The concern here is with a presentation of an area of knowledge broader than a single subject. In essence this is a subject matter curriculum arrived at by unifying subject fields which tend to complement each other in full or in part.

In practice the broad fields approach may be represented by a combined English and social studies class, biological science as a fusion of zoology and botany, or perhaps an allied or unified arts program involving art and industrial arts and on occasion home economics. Sometimes one teacher covers the combined fields, and in other instances, "fusion" is obtained by cooperative planning among teachers of the combined subjects.

<sup>18</sup>Alfred North Whitehead, *The Aims of Education* (New York: Macmillan Company, 1929), p. 26.

It does not require extreme perceptive ability to discover basic similarities between the broad fields and subject matter approaches.

. . . The essential point, . . . is that the fusion and/or correlation movement is based on the organization-of-knowledge approach. It has been concerned with the thickness of the slice rather than with the nature of the cake.<sup>19</sup>

### Core Curriculum

The core curriculum came into prominence during the Eight Year Study. It is concerned at times with breaking down the barriers existing between subject fields; a problem approach is often used; the needs approach is also cited; and democracy, pupil-teacher planning, and problem solving techniques are emphasized in turn. One composite description of "core" sets forth the following criteria:

. . . Although these interpretations of the fundamental purpose of core vary, they all imply the complete disregard of subject boundaries and the development of problems without regard to classification according to traditional subject content.

Block classes which are true core recognize the importance to youth of acquiring skill in democratic living through actually practicing it in the classroom. Core issues may be topics to find out about; ideally they are problems to be solved. Problems grow out of the personal, social, or civic needs of youth. Problem solving techniques are used. Working in groups and in committees is common practice. Activities are so varied that each member of a class, whatever his level of ability, will be able to participate and to feel that he is making a contribution. The core class may include activities often considered extracurricular, such as student council work, expression of hobby interests, and social activities which give practice in cooperative planning.

Pupil-teacher planning is a significant aspect of method. The extent of cooperative planning, or participation by pupils in planning, varies. In some schools there are preplanned curriculum guides or resource units. Scope and sometimes sequence have been predetermined. Teacher-pupil planning is then confined to activities within a unit. In other schools, joint planning begins with the selection of the unit, continues through the formulation of the objectives or goals and the activities which will achieve them, and

<sup>19</sup>Krug, *op. cit.*, p. 91.

ends with the evaluation of accomplishment of the class and its individual members.<sup>20</sup>

Rather obviously, the reported characteristics of the core are suggestive of desirable practice for any curricular approach. A close examination would reveal that here are activities and purposes which most teachers purport to utilize. Perhaps the scrapping of old subject field restrictions tends to provide a release which moves teachers and students towards the incorporation of a greater number of such practices. Just as obvious is the certainty that concern for subject matter as an entity will not allow a teacher or student to orient himself to a program incorporating the practices indicated above.

Such a brief consideration of the format of curricular activities cannot give recognition to the true nature of the structures as they actually exist in the schools. Thus, while we can describe a subject fields approach, the broad fields, and core, it is unlikely that what we describe does exist exactly as described; indeed an administrator is often hard pressed to tell of that which is in practice in his own school. In reality, much of what is done is carried on by the individual teacher according to his motivations.

## REORGANIZING THE CURRICULUM

School activities are ongoing, thus any change must almost always be incorporated in synchronization with current practice. The teaching profession is uniquely restricted in the adoption of new practice. Some professions are able to alter practice almost instantaneously. The development of a new drug is, of course, dependent upon extensive research and applied only after thorough investigation, but the application can then be immediate. Teaching, so thoroughly limited by the slow process of behavior change, must provide its own laboratory in most instances. Research is extensive, but final documentation must await the enlightenment of the teacher in the shop and classroom.

### Critique of Present Curricular Practice

Any attempt to suggest ways in which the schools can improve education by way of curriculum revision must examine the criticism aimed at schools by people who earnestly wish to improve education.

<sup>20</sup>Grace S. Wright, *Core Curriculum Development; Problems and Practices* (Washington, D. C.: Federal Security Agency, U. S. Office of Education, 1952), p. 6.

The Second Commission on Life Adjustment Education for Youth drew certain conclusions with regard to universal secondary education during the years 1940-1953. In part they reported as follows:

1. The secondary school program was not meeting the need of all youth. However, there was a feeling that a new program could be designed which would prepare youth for college as successfully as the traditional academic program. The new program would aim to provide experiences for all youth from which they might learn to live with greater happiness and effectiveness in a free society. . . . the importance of maturation, and the emphasis on a purpose in learning – clear to the learner – were beginning to be used as criteria for judging proposed programs.
2. The secondary school had not come to grips with real problems of living – in school, in family, or in community. . . .
3. It was apparent that more insight into the problems, needs, interests, motivations, and growth processes of pupils was needed by teachers and administrators as well as psychologists. . . .
4. Sociologists, anthropologists, and social psychologists had pointed out the need for a greater perception into the structure and working of community life. . . . The schools in some communities were attempting to educate youth for living in a pattern of social and economic life which had been gradually disappearing from the community and had completely disappeared in more progressive communities.<sup>21</sup>

These conclusions were drawn from an evaluation of various studies conducted in years prior to 1953. L. Thomas Hopkins participated with the commission during their deliberations. He suggests that there are two primary reasons for the ineffectiveness of the secondary schools:

. . . First the program is organized around materials in the external environment, not in the life process of people.<sup>22</sup>

Hopkins notes that the educator is busily engaged in furthering the organization of the external environment in light of what he con-

<sup>21</sup>Second Commission on Life Adjustment Education for Youth, *A Look Ahead in Secondary Education* (Washington, D. C.: Department of Health, Education, and Welfare, Office of Education, 1954), p. 75.

<sup>22</sup>Thomas Hopkins, "How Well Are the Secondary Schools Doing Their Job?" *Pupil Appraisal Practices in Secondary Schools* Report of the Commission on Life Adjustment for Youth (Washington, D. C. Federal Security Agency, U. S. Office of Education, 1953), p. 7.



siders the needs of youth to be, which makes it doubly difficult for the student to use such organization.<sup>23</sup>

He further suggests that:

. . . The second reason why secondary schools are not set up to do a life process job is that educators know little about pupils, do not believe in pupils, and pay little attention to individual pupils except when they cause the educators to become disturbed, in which case they use inappropriate and inadequate means of dealing with the upsetting condition.<sup>24</sup>

Hopkins' condemnation of the secondary school is quite severe, yet no more so than the many points which Albery makes. He suggests that there are many elements, and that we are moving slowly toward improved practice. The trends, as he sees them, are set forth in the following chart:

*Some Discernible Trends in High School Education*

From:

1. The high school as a highly selective institution designed to provide only for the intellectually elite
2. Tradition, opportunism, drift, and pressures as bases for determining the program
3. A subject-centered curriculum firmly rooted in traditional subject matter
4. The daily ground-to-be covered assignment-recitation procedure imposed upon the student
5. Tests and examinations that stress facts, information, and specific skills

To:

1. A high school that provides vital education for all normal youth up to the limits of their capacities
2. A dynamic consistent philosophy that plays a distinctive role in a determination of policies and programs
3. An experience curriculum based on the needs, interests, abilities of adolescents in our democratic society
4. Broad comprehension units of work planned co-operatively by teachers and students
5. An evaluation program that emphasizes thinking, cooperativeness, social sensitivity, creativeness, appreciation, and self-direction

<sup>23</sup>*Loc. cit.*

<sup>24</sup>*Loc. cit.*

From:

6. School buildings and equipment determined by tradition and a limited concept of efficiency

7. Complacent self-satisfied teachers fearful of disturbing their sense of security

8. Indifferent students who are willing to accept the tasks imposed upon them as the easiest way out

9. Administrators who are fearful of change, and who devote their energies to the maintenance of "a smoothly running machine"

10. Parents who are isolated from the school

11. Teacher education that perpetuates the academic tradition, and prepares teachers to transmit the social heritage in the form of logically organized subjects

12. A program dominated by the demands of the colleges

To:

6. Buildings and equipment designed in view of the role of the school in the life of the youth and the community

7. Wide-awake progressive teachers, interested in improving the life of the school and community

8. Students who assume responsibility for participating in the planning of the work and in evaluating its outcomes

9. Administrators who are primarily educational leaders and who devote their energies to the improvement of learning in the school

10. Parents organized to provide constructive help in planning the educational program

11. Teacher education that applies the principles of modern psychology and education in its program; and prepares teachers to meet the needs of youth

12. A program determined by the needs of students in present-day living<sup>25</sup>

The preceding comments have dealt primarily with secondary education. Thorough examination suggests, of course, that they are not inconsistent with the problems of elementary school curriculum; however, specific consideration should be given this area. Shane and McSwain, for example, set forth nine issues as being typical of those prevalent at the elementary school level.

- (1) Authoritarian vs. democratic school organization
- (2) The prescribed vs. the flexible curriculum

<sup>25</sup>Alberty, *op. cit.*, pp. 24-25.

- (3) Promotion vs. failure
- (4) Departmental vs. non-departmental classroom organization
- (5) Uniform vs. individualized instruction
- (6) The selection of prescribed materials of instruction vs. teacher selection of pertinent materials
- (7) Emphasis upon preparation for adult life in the future vs. emphasis on school living in the present
- (8) The cultural heritage as subject content vs. the individual teacher's insights regarding the needs and interests of a particular group of children as a basis for selecting experiences in school
- (9) Transmission of knowledge regarding things-as-they-are vs. an active attempt to build a better society through critical study<sup>26</sup>

As one examines such listings as those set forth by Albery and Shane and McSwain, many of the issues and many of the trends seem similar. Expression here, of course, interferes with the communication of ideas; that is, the terminology of education is such that at times groups seemingly in accord are at odds while those apparently in the same camp may be philosophically far removed from one another. This suggests a need for extensive discussion and delineation so that results in curricular work are interpreted commonly.

Teachers concerned with education at the secondary school level comment that such education could become more effective if they were provided with larger blocks of time. Considerable theoretical desirability is attached to a program whereby teachers would devote the majority of their efforts to one group of students. Elementary school people, however, find that this is not necessarily the answer to the problems of education. Beck, Cook and Kearner, for example, state that:

. . . The educators who first conceived the grade school anticipated the industrial production line by more than 50 years. In the assembly-line graded school, the six-year-old comes first into the province of the first-grade teacher, who is responsible for attacking certain specified knowledge, skills, attitudes, and abilities. He then moves on to the second-grade teacher, who again attaches certain knowledge, skills, attitudes, and abilities. By the time he reaches high school, the assembly-line workers are more specialized; one teacher is responsible for certain knowledge, skills, attitudes, and abilities

<sup>26</sup>Harold G. Shane and E. T. McSwain, *Evaluation and the Elementary Curriculum* (New York: Henry Holt and Co., 1951), p. 93.

in English, another in mathematics, another social studies, and so on.<sup>27</sup>

Thus the problem becomes more complex. Merely providing a different type of organization does not automatically insure the result sought. Too many efforts are, as Tyler indicates, of the type where:

. . . New demands are met by adding more subjects or more units, or more content to the curriculum without, at the same time, eliminating any of the previous curriculum content. This results either in a crowded, indigestible offering, or an elective system in which the student is expected to make selections that the staff was unable to make.<sup>28</sup>

Educators are somewhat addicted to self-criticism and it is possible to find many volumes dealing with "what's wrong with education." A part of this critical approach is negative justification of innovations desired by individuals or groups. A significant number of criticisms are also leveled at the public schools by laymen, some well grounded, others reflecting a bias of one type or another. Many of the latter cannot be discounted, but curricular direction should not be determined by whim.

### Establishing a Pattern for Curriculum Development

The foregoing quotations were selected in part because they represented criticisms set forth by specialists in curriculum activities. A considerable part of this section will deal with positive statements by the same people as to how a curriculum should be developed.

It is pertinent at this point to suggest that other chapters of this volume tend inevitably to encroach upon "curricular approaches." Philosophy, psychology, objectives, evaluation, etc. must of course be considered in discussing curriculum format. For example, Tyler states that there are four fundamental questions which must be answered during the development of any curriculum and the plan of construction therein:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?

<sup>27</sup> Beck, *op. cit.*, pp. 35-36.

<sup>28</sup> National Society for the Study of Education, *American Education in the Postwar Period*, Forty Fourth Yearbook, Part I, *Curriculum Reconstruction* (Chicago: University of Chicago Press, 1948), pp. 3-4.

3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained? <sup>29</sup>

The emphasis of the following paragraphs will fall particularly upon numbers 2 and 3 above, with the assumption that they are the prime responsibility of this chapter.

The statement of objectives becomes critical at the organizational level. That is, an objective should suggest what could be undertaken in the industrial arts laboratory to bring about change in students' behavior. Tyler suggests:

. . . it becomes important to recognize that any statement of the objectives of the school should be a statement of changes to take place in students. <sup>30</sup>

Within this framework, however, there are several difficulties. If inference is drawn from the objective in the direction of teacher activities, a problem arises at the level of materials and procedures. A concern for content in the statement of objectives is likely to leave the student at a loss as to what to do. A general statement of desired behavior change will also produce perplexity because it cannot be related directly to the curriculum. <sup>31</sup>

. . . The most useful form for stating objectives is to express them in terms which identify both the kind of behavior to be developed in the student and the content or area of life in which this behavior is to operate. If you consider a number of statements of objectives that seem to be clear and to provide guidance in the development of instructional programs, you will note that each of these statements really includes both the behavior and the content aspects of the objective. <sup>32</sup>

An objective so stated has two dimensions in that it represents both the behavior and content for consideration. This may be represented graphically. The chart presented herewith illustrates this two dimensional approach. Neither the objective nor the content are assumed to be ideal. They are merely representative. In his syllabus,

<sup>29</sup>Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: University of Chicago Press, 1950), pp. 1-2.

<sup>30</sup>Tyler, *op. cit.*, p. 28.

<sup>31</sup>Tyler, *op. cit.*, pp. 29-30.

<sup>32</sup>Tyler, *op. cit.*, p. 30.

*Basic Principles of Curriculum and Instruction*, Tyler sets forth an example for a course in biological science. He states that:

... The purpose of the chart is to show how the chart can more compactly indicate the objectives that are being sought and how each objective is defined more clearly by the chart in terms both of the behavioral aspect and the content aspect.<sup>33</sup>

* Content aspect of the objectives	* Behavioral aspect of the objectives				
	Skill	Interpret Industry	Social	Consumer	Recreation
<b>A. Sketching</b>					
1. Lettering	X	X		X	
2. Pictorial sketching	X	X		X	X
3. Exploded views	X	X		X	
4. Schematic Drawings	X	X		X	X
5. Flow Diagrams	X		X	X	
6. Orthographic sketching	X	X			
<b>B. Instrument Drawing</b>					
1. Lines	X	X		X	X
2. Graphs and maps	X		X		X
3. Measuring and mathematics	X	X	X	X	X
4. Orthographic drawing	X	X		X	X
5. Pictorial Drawing	X	X		X	X
6. Shop drawing	X	X	X	X	X

\* The content and behavioral aspects are only representative  
Adapted from Tyler, *op.cit.*

<sup>33</sup>Tyler, *op. cit.*, p. 31.

A similar chart is presented here representing several types of behavior aimed at in industrial arts courses. The behavioral and content aspects are, of course, subject to the discretion of the teacher involved. Basically, the purpose is this: by combining the content considerations with the behavior changes desired, it is possible for the teacher to organize learning experiences for specific purposes. Thus, if the objective in the socialization area tends to be somewhat ignored (as indicated by an absence of check marks) the teacher can reconsider the involved activities in order to strengthen the learning experiences. It is Tyler's belief that:

. . . by putting these two aspects of objectives together, we get a clear enough specification to indicate on the one hand the kind of behavior changes that are aimed at, and on the other hand to specify the particular materials, the particular ideas, the particular kinds of situations to be used in connection with each of these behavioral objectives.<sup>34</sup>

It is at this point that the teacher becomes involved in the structure of the actual learning experiences. It is by means of these experiences that learning takes place and the objectives are attained. For clarification it should be noted that:

. . . The term "learning experience" refers to the interaction between the learner and the external conditions in the environment to which he can react. Learning takes place through the active behavior of the student; it is what he does that he learns, not what the teacher does. It is possible for two students to be in the same class and for them to be having two different experiences. . . . The essential means of education are the experiences provided, not the things to which the student is exposed.<sup>35</sup>

With his definition of "learning experiences", Tyler also suggests general principles for selecting them. The first principle suggests that the learning experiences selected must allow the student to deal with materials which are consistent with the content aspect of the objective. If, for example, the objective is concerned with problem solving in terms of industrial materials, the student must be provided with opportunities not only to solve problems but also to be concerned with industrial materials.

A second principle involved is that the learning experiences must be of such a nature that the student gains satisfaction from engaging

<sup>34</sup>Tyler, *op. cit.*, p. 35.

<sup>35</sup>Tyler, *op. cit.*, p. 41.

in the type of behavior suggested by the objective. Thus, a student should not only be engaged in solving problems dealing with industrial materials, but must also find that the forthcoming solutions as well as the processes are satisfying to him.

The third principle dictates that the learning experience must be suited to the students concerned. In other words, it should be appropriate to the students' experiences, attainments, and the like. This presupposes a considerable background of information with regard to each student in the class.

A fourth principle is that there are a variety of experiences that can be utilized to attain an objective. Thus, common objectives do not necessarily mean common activities. Instead this is a challenge to the teacher and the student at the creative level. The school may have a wide variety of learning experiences aimed at achieving common objectives in different ways for different students.

The fifth and final principle is that a learning experience will probably result in more than one outcome. In the process of solving problems with regard to industrial materials, the student will likely gain information about industry, industrial processes and the like. It is possible that he may acquire hobby interests or be guided in terms of occupational information. Negative results may accrue as well. The student through shallow experimentation may gain only a minimal concept with regard to a material as used in industry.<sup>36</sup>

Several conclusions may be drawn from these principles. First, that here is basis for the variety of activities commonly suggested as desirable in the industrial arts laboratory. Further, it indicates that specific consideration should be given towards pointing shop activities; that is, they can only be effective if they are carried on in terms of an objective. Certainly there is an indication of the worthiness of pupil planning activities for purposes of making the learning experiences individually appropriate and satisfying. Obvious as well, is the implication that a pure program of project construction will not suffice. A student must engage in experimentation, must read, must express himself, must document, associate, construct, design, analyze, and so on to accomplish those things which the various industrial arts objectives imply. Tyler's final suggestions with regard to the selection of the learning activities are as follows:

... The fact that there are many learning experiences which can be used to attain a given objective and that the same experience can often be used to attain several objectives means that the process of

<sup>36</sup>Tyler, *op. cit.*, pp. 42-44.



planning learning experiences is not a mechanical method of setting down definitely prescribed experiences for each particular objective. Rather, the process is a more creative one; as the teacher considers the desired objectives and reflects upon the kinds of experiences that can occur to him or that he has heard others are using, he begins to form in his mind a series of possibilities of things that might be done, activities that might be carried on, materials that might be used. As these take shape, it would be well to write them down as possible learning experiences. As they are written down, they might be outlined in more detail to indicate what they would include. Such a tentative draft of certain learning experiences should then be checked carefully against the desired objectives to see first whether or not the proposed experiences give an opportunity for the student to carry on the kind of behavior implied by the objectives and also whether the experiences sample the kind of content implied by the objectives. Next, the proposed learning experiences can be checked by the criterion of effect. Will the experiences suggested likely be satisfying to the particular student for which they are planned? If they do not result in satisfying effects, they are not likely to bring about the results desired. Third, the proposed learning experiences can be checked in terms of readiness. Do they require actions that the students are not yet ready or able to perform? Do they run counter to certain prejudices or mind sets of the students? Finally, they can be checked for economy of operation. Does the experience provide for the attainment of several objectives or does it care for only one or two? Having checked the learning experiences by those general criteria, it may be well then to check them also against some of the more particular characteristics implied by the generalizations about characteristics of learning experiences required for different types of objectives. If the tentative formulation of experiences meets these criteria satisfactorily, then it would appear to be a promising plan to develop. If some of the criteria are not well met, there may be the possibility of revision in order to make the experiences more effective. If the experiences are largely inadequate in terms of these criteria, then the tentative formulation should be dropped and others developed. In this way the process of selecting learning experiences provides opportunity for creative proposals which are then carefully checked in terms of appropriate criteria. As a result, there is opportunity both for artistry and for careful evaluation in advance of setting up the definite plans for the instructional program.<sup>37</sup>

<sup>37</sup>Tyler, *op. cit.*, pp. 52-53.

Once the learning experiences are established as valid, consideration should be given to their organization for effective instruction. The organization has two relationships: horizontal and vertical. The vertical element is commonly referred to as continuity while the horizontal element may be thought of as integration. Sequence, a third factor, is related to continuity, but goes beyond it to suggest a progressive organization; that is, the building of successive experiences upon the preceding ones.

With the three items above should be included certain organizing elements in the areas of concepts, skills and values. The concern here is to provide "threads" which hold the curriculum together through the various levels of the school system. These threads are major items as opposed to specific facts or habits. Their development is operative, perhaps in terms of years.<sup>38</sup>

#### Principles of Organization

Such principles of organization as continuity, sequence, and integration must be thought of in terms of the learner.

. . . Thus, continuity involves the recurring emphasis in the learner's experience upon these particular elements; sequence refers to the increasing breadth and depth of the learner's development; and integration refers to the learner's increased unity of behavior in relation to the elements involved.<sup>39</sup>

Beyond these considerations, there are those with regard to the benefit of logical or psychological organization. The primary differentiation here is based on meaning. The logical system, suggesting relationships existing between the whole and its parts, the presentation beginning with the simpler components and proceeding to the complex, is organized essentially in terms of the expert's visualization. Psychological organization implies a primary consideration for the way in which the pupil learns, a particular concern for organization which is meaningful to him. This is not to imply that there is necessarily a lacking in relationship. The concern is for differences in meaning which may exist.

There are, of course, many other principles involved, some of which are independent, some which are related or are a part of methodology and some which are essentially structural. The latter should receive some further consideration.

<sup>39</sup>Tyler, *op. cit.*, p. 63.

<sup>38</sup>Tyler, *op. cit.*, pp. 56-62.

Actually, the structural principles of curriculum are common elements. The reference here is to the subject field approach, the broad fields and the core, referred to in previous paragraphs. Within the framework of the subject matter approach are such typical organizations as an offering of Mechanical Drawing I, Mechanical Drawing II, etc. Below this level can be placed teacher and pupil plans: the unit, topic, lesson plan, and such specific items as instruction sheets.

Various view-points have been presented with regard to newer forms of organization; their effectiveness in terms of sequence, scope, continuity, integration, and correlation are subject to debate and interpretation. Quite obviously, the subject curriculum allows for accurate sequential organization, while core with its large time allotment provides greater integrational opportunity.

Consideration will next be given to two specific approaches to curriculum, the Social Functions Procedure and the Adolescent Needs Approach. For comparison, they should be presented rather completely.

The philosophy of a social functions curriculum is comparable to that of some other procedures. Albery suggests that its guiding form is based on:

- (1) the ideals of democratic living, (2) the nature of the individual,
- (3) the nature of learning and (4) the role of the particular school.<sup>40</sup>

A social function of living is well represented by Caswell and Campbell who state that:

... study of group life shows that there are certain major centers about which the activities of individuals and the plans and problems of a group tend to cluster. These centers, which may be referred to as social functions, tend to persist and to be common for all organized groups. . . . Since these centers or social functions represent points about which real life activities tend to gather and organize, it is considered reasonable that a curriculum which is concerned with guiding children into effective participation in the activities of real life may use these social functions or points of emphasis and orientation in outlining the curriculum.<sup>41</sup>

The major areas of human activity provide security similar to that of the subject-centered curriculum. The subject fields provide defini-

<sup>40</sup> Albery, *op. cit.*, p. 237.

<sup>41</sup> H. L. Caswell and D. S. Campbell, *Curriculum Development* (New York: American Book Company, 1935), pp. 173-186. As quoted in Albery, p. 189.

tion of ground to be covered; the areas of activity chart a course to explore. Several assumptions are basic to this type of curriculum development. Problems of the adult world are basic, but must be oriented to the child and thus the child is oriented to adult life with skills, attitudes, understandings and abilities appropriate to good citizenship. It is also assumed that contemporary civilization sets the pattern for almost all activity. Without this notion, the "areas of living" concept becomes pointless.<sup>42</sup>

The "social functions" approach can be utilized in a core type program in a subject-centered situation. It is probable that some semblance of core organization is necessary. It can be fairly stated that the scope of the curriculum is adult derived while the sequence is derived from pupil needs, abilities and interests.

Not all aspects of this curriculum approach have been discussed. The procedure is rather completely summarized in the following steps:

1. Formulate a philosophy of education, which should include an analysis of the various objectives which the school seeks to attain.
2. Decide upon the major areas of living . . .
3. Discover the major problems, forces, or needs of society that belong to each area of living.
4. Make a study of the characteristics of adolescents at each level of development (or accept a formulation already made).
5. Upon the basis of (a) the objectives of education, (b) the areas of human activity, and (c) the characteristics of adolescents, decide upon appropriate centers of interest for each grade or age level.
6. Determine the type of curriculum organization.
7. Plan units of work related to the centers of interest and appropriate to the needs, interests, and abilities of the various groups, which are significant for attaining the objectives, and which orient the student in the major areas of human activity.
8. Set up a plan for evaluating the outcomes.<sup>43</sup>

*Adolescent Needs.* The problems Approach Committee of the Wisconsin Cooperative Educational Planning Program and the Steering Committee of the Illinois Secondary School Curriculum Program produced bulletins which deal extensively with a concept of needs. The particular reference here is to the junior high school level. The derivation is in terms of growth characteristics of young adolescents. The publication sets forth the following as criteria for arriving at needs:

<sup>42</sup>Alberty, *op. cit.*, pp. 246-247.

<sup>43</sup>Alberty, *op. cit.*, p. 248.

The junior high school pupil is at a certain stage of physiological development which in turn affects his social behavior, his emotional responses, his pattern of interests, his motor coordination, his physical endurance, his ability to do intellectual work, etc.. These and other manifestations of his maturation level we might call growth characteristics. They represent the kind of behavior we can expect from the boy or girl at his present age, and hence indicate the problems he faces and must successively solve to move to the next higher level of maturity. These problems, then, constitute one category of pupil needs derived from growth characteristics — needs which a functional curriculum must help the pupil face.

Since every boy or girl of a given age grows at his own rate from a unique pattern of potentialities, each will exhibit growth characteristics different from the rest. But most of these characteristics will fall within what we might call the "normal range" for this chronological age. The fact that pupils of junior high school age are somewhat like each other, even though each is unique, makes it possible to do some curriculum planning before classes meet in September. It does not in any sense relieve us from studying each boy or girl when we come to know him, or for planning for his uniqueness, but it provides some reference points to interpret the nature and degree of his divergence and the adjustments which need to be made for him in the over-all curriculum plan.

.....

The needs of the pupil not only relate to his level of development but to the nature of the community and world of which he is a part. All education supported by public funds implies social purposes. It implies the need for preserving a certain ideology, for carefully guiding the young to the acceptance of a certain way of life, and for helping them direct their efforts and use their talents for improving this way of life. . . .

.....

A second category of needs, then, is derived from functions of the democratic state and the characteristics of the culture which relate to these functions. Boys and girls face problems by virtue of the kind of society in which they live and the kind of role they are expected to play. A curriculum geared to the needs of youth will provide experiences to help them solve these problems. <sup>44</sup>

<sup>44</sup>Wisconsin Cooperative Educational Planning Program, *Guides to Curriculum Building, The Junior High School Level* (Madison: State of Wisconsin, 1950), pp. 5-6.

A number of the publications dealing with curriculum present arguments pro or con with regard to the needs approach to curriculum design. Saylor and Alexander have summarized both sides of the debate. They indicate that those who favor the needs approach believe that it possesses these advantages:

1. The needs approach to curriculum organization is psychologically sound, . . . .
2. The needs approach provides functional learnings that are directly related to the life experience of the individual. . . . .
3. The needs approach contributes to the attainment of many of the desired outcomes of the school program. . . . .
4. The needs approach to curriculum design places the emphasis primarily on the growth and development of learners. . . . .
5. The needs approach best emphasizes the mental hygiene concept of guiding development . . . . .
6. The needs approach provides for better integration of learning activities in the school. <sup>45</sup>

The needs approach is not universally accepted. Those who argue against it set forth the following points:

1. It is difficult to determine genuine interests, needs, and problems. . . . .
2. The needs approach may minimize the social responsibility of the school. . . . .
3. The needs approach does not provide for an adequate mastery of subject matter. . . . .
4. The needs approach may ignore to too great an extent the past and the future. . . . .
5. The needs approach to curriculum organization presents serious difficulties in developing an organized educational program. . . . .
6. The needs approach to curriculum organization may result in serious gaps in the child's educational experiences. . . . .
7. The needs approach is not feasible in many presentday schools. <sup>46</sup>

The conclusions of these authors are:

. . . in its extreme form of the child centered school, in which the curriculum, presumably, would be developed from the felt interests,

<sup>45</sup>J. Gaylen Saylor and William Alexander, *Curriculum Planning for Better Teaching and Learning* (New York: Rinehart and Company, Inc., 1954), pp. 295-297.

<sup>46</sup>*Ibid.*, pp. 297-301.

problems, and needs of youngsters, this method of curriculum design has little real place in curriculum planning at the present time. The difficulties discussed above, and particularly the fact that it neglects to too great an extent the social responsibilities of the school make it unwise and unsound in our opinion to use this approach to curriculum designing.<sup>47</sup>

Saylor and Alexander take pains to note, however, that the needs approach is essential as a part of any curriculum planning. The inclusion of other basic factors, particularly reference to the demands of the culture will make for a complete approach. They also suggest that the "needs concept" has greatly affected contemporary curriculum planning and in a desirable fashion.<sup>48</sup>

Certainly the basic principles upon which curricular activities are based are subject to interpretation. Thus, even though a teacher uses an assign-study, recite approach, a consideration of the needs concept, for example, will be of benefit. A sincere consideration can only move him toward greater adequacy in instructional practice.

#### Resource Units

Many curriculum activities are eventually organized into large interest-motivating units. This is not a singular opinion, but the consensus of many: for example, Crow and Crow<sup>49</sup>, Quillen and Hanna<sup>50</sup>, Saylor and Alexander<sup>51</sup>, Stratemeyer, Forkner, and McKim<sup>52</sup>, Krug<sup>53</sup>, and Albery<sup>54</sup> all refer to the resource unit or a similar organization as a base for teaching. Consideration will be given here to the nature, organization and application of this structural approach. Specific examples of such units are presented by several of these authors.

For purposes of definition it should be noted that there are two basic types of units generally in use for the preplanning of instruction.

<sup>47</sup>*Ibid.*, p. 302.

<sup>48</sup>*Ibid.*, pp. 302-304.

<sup>49</sup>Lester Crow and Alice Crow, *High School Education* (New York: Odyssey Press, 1951), p. 151.

<sup>50</sup>I. James Quillen and LaVonne A. Hanna, *Education for Social Competence* (New York: Scott, Foresman and Company, 1948), p. 187.

<sup>51</sup>Saylor and Alexander, *op. cit.*, p. 403.

<sup>52</sup>Florence B. Stratemeyer, Hamden L. Forkner, Margaret McKim and Associates, *Developing a Curriculum for Modern Living* (New York: Teachers College, Columbia University, 1947), p. 322.

<sup>53</sup>Krug, *op. cit.*, p. 162.

<sup>54</sup>Albery, *op. cit.*, p. 368 ff.

One is usually termed a "teaching unit" and is a specific plan. It contains detailed statements with regard to the activities of both teacher and students. The teaching unit is not restricted in use; that is, what one teacher prepares another can probably use. For the most part, however, each teacher prepares his own "teaching unit."

The "resource unit" is less formal. It is a collection of materials of all types, appropriate activities, and suggestions with regard to a given topic. The topic of a resource unit is considerably larger than that of a teaching unit. In all probability, the resource unit would provide background for many teaching units.

The unit approach is held to be desirable in terms of its own adequacy. Beyond this, however, is the opportunity that it provides for escape from the routine of daily recitation. The "resource unit" represents this approach.

Even though the unit approach to teaching is considered desirable, it is doubtful if it has been accepted to any great degree as a basis for curriculum organization in secondary education.

The essence of the resource unit is activity on the part of the students. Krug suggests that the developmental activities should be of great variety. Among them are these:

1. Research-type activities. (Reading, interviewing, listening to the radio, seeing motion pictures and other visual aids)
2. Presentation-type activities. (Reports, panel and round-table discussions, showing of visual aids, making graphs and charts)
3. Creative expression activities. (Handwork, drawing pictures, writing stories, plays and poems, singing and playing music)
4. Drill activities. (Used when students in the group encounter obstacles to further progress. For example, a high school group working on a tax problem might find it needed review and drill of certain phases of arithmetic)
5. Appreciation activities. (Listening to music, reading for fun, looking at picture)
6. Observation and listening activities. (Sharpening the senses of the pupils as an aid to learning)
7. Group cooperation activities. (Training in democratic group procedure, division of labor among groups leading to cooperation in carrying out plans)
8. Experimentation. (Learning to try out new ways of doing things, laboratory work, with emphasis on equipment the pupils can make as well as on more elaborate types of equipment)



9. Organizing and evaluating activities. (Discriminating among and selecting, ordering, and appraising the work done by themselves) <sup>55</sup>

While these are not stated in terms of the industrial arts laboratory, it is not too difficult to transfer the ideas involved.

#### CONTRIBUTIONS TO CURRICULUM DEVELOPMENT

Present day concepts of curriculum development suggest the participation of many groups and individuals. Teachers, administrators, students, and the community in general should be involved to the greatest possible extent. Krug suggests the nature and extent of this participation very effectively:

##### I. Classroom teachers.

1. Continuing study of the purposes of education from the standpoint of critically analyzing and evaluating all classroom teaching and other school practices in relation to accepted criteria.
2. Working closely with administrators, lay people, and children and youth, in setting up the features of the all-school program.
3. Contributing suggestions and ideas to, and sharing in the preparation of, guide lines for the instructional fields.
4. From time to time (but not all the time) working individually or with small groups to prepare resource units and other teaching aids.
5. Carrying out in all teaching activities the fundamental democratic criteria of human relationships and using teaching aids effectively to help with this process.

##### II. Children and youth in school.

1. Taking part with other groups (lay people, teachers, etc.) in determining the basic needs and clarifying the purposes of the school.
2. Taking effective part in pupil-teacher planning to set the environment for good learning experiences.
3. Sharing with teachers, lay people, and administrators some of the decisions involved in setting up features of the all-school program.

<sup>55</sup>Krug, *op. cit.*, pp. 178-179.

### III. Lay people.

1. Taking a vital and continuing part in study and discussion of the purposes of education.
2. Sharing in the decisions involved in setting up the basic feature of the all-school program.

Local leadership (city and county administrators and curriculum committees).

1. Facilitating local discussion and study of educational purposes by lay people, teachers, and children and youth.
2. Studying the problems involved in setting up features of the all-school program and recommending policies to be discussed and evaluated by teachers, lay people, and children and youth.
3. Setting up means in the local system to make maximum effective use of help from state leadership.
4. Directing attention of school boards to specific needs, local needs, released time for teacher participation, etc.
5. Taking steps to help local teachers adapt state guide lines for local use.
6. Making available to local teachers resource units and other teaching aids from the state.
7. Seeing to it that local needs, circumstances, and suggestions come to the attention of state leadership.

State leadership.

1. Aiding the local study of educational purposes by developing study guides, etc.
2. Suggesting sequences from kindergarten through secondary school for the instructional fields and for a core, or common learnings, organization.
3. Providing consultants who can work in the field with local groups in defining the purposes of education, setting up the all-school programs, and developing local modifications of state-suggested sequences and guide lines.
4. Furnishing resource units and other types of teaching aids.
5. Stimulating local groups to develop resource units and teaching aids.
6. Helping to prepare city and county supervisors for their responsibility in helping classroom teachers use resource units to preplan and to carry on pupil-teacher planning.

7. Influencing lay action through presenting curricular needs and problems and raising discussion in state-wide lay organizations, school board conventions, etc.<sup>56</sup>

It might seem that this approach is of almost circus proportions, yet it has been the narrow approach of past years which at least in part has been responsible for much of the severest criticism of the schools. An informed and participating community is much more likely to be satisfied with the schools than one which is either uninformed or possibly misinformed.

Curriculum work must also affect all phases of school life. Any group or area which is left out can only deter effective action. Krug's conclusions are most appropriate:

. . . It must affect on a widespread basis the conscious direction of education along the lines of educational purposes on which there can be substantial agreement. It must affect the way we set up the features of a school program to carry out such purposes. It must affect the teaching of the major instructional fields and of the common learnings program. It must affect the kinds of materials prepared by and for teachers to help them plan for their work of planning with students. It must cut deeply into teaching practices and teacher-pupil relationships.<sup>57</sup>

Thus, we have been concerned generally with the development of curriculum practices: weak points, strengths; techniques of curriculum organization and development of specific units; and responsibilities of various school, community and state groups. In each instance only a few suggestions are set forth. Further development can only be made in the light of specific school situations.

#### IMPLICATIONS FOR INDUSTRIAL ARTS

The application of current curricular thought to industrial arts eliminates, because of its nature, any attempt at specificity. Principles can be interpreted and suggestions can be made, but the teacher at the local level must be responsible for application in terms of certain students, a particular school and a given industrial arts laboratory. This demands a high degree of fluency with beliefs, learning, the nature of society generally, and the community in which the new curriculum is to function. It is also assumed that the lower levels of

<sup>56</sup>Krug, *op. cit.*, pp. 292-293.

<sup>57</sup>Krug, *op. cit.*, p. 294.

structure, the daily plan, for example, are within the ken of the teacher. The major portion of this section will deal with the general structure of industrial arts curriculum.

There are several ways in which the industrial arts teacher can initiate curriculum work. These may be in conjunction with other teachers in the school or independently.

**1. Participation in school curriculum activity.**

Curriculum reorganization at the local school level probably allows for the most extensive participation by industrial arts teachers. In one sense it is effective because it involves the teacher directly in the process. Curriculum work at the supervisory level is, comparatively, less effective because of the lack of identification by the teacher with the results of the activity.

**2. Cooperative activity with state or regional groups.**

Such activity is limited in value for the reasons suggested above. Certain guides or suggestions for curriculum structure may be of assistance to the teacher at the local level, however. The greatest benefit accrues to those who actually engage in the activity.

**3. Curriculum work in conjunction with other industrial arts teachers.**

It is possible that by such group processes a great amount of desirable work can be accomplished. The value of varied points-of-view, multiple backgrounds, and the like suggest that this is a desirable approach. The absence of representatives of other groups, school, student, community, etc., is of course a handicap.

**4. Research or experimental activity in conjunction with graduate work.**

Action type research or experimentation guided by experienced curriculum workers may provide maximum growth. It is possible that a more clearly defined approach to curriculum will evolve from attempts of this type. Again, the individual teacher will profit.

**5. Participation in local school experimentation and research.**

Much informal activity of this sort is being carried on in the schools. How often industrial arts teachers participate is unknown. Certainly participation here on an organized basis can benefit the teacher and his program. Data suggest that some experimentation in core or the broad fields approach is being conducted in the schools.

Industrial arts teachers have a fine opportunity here to point up the potential of their laboratory as a center for such work.

#### 6. Individual activity.

Most teachers are actually doing much more than they realize about curriculum. The missing element is probably that of formal organization. Thus, each teaching aid, each demonstration, every project tends to be isolated. The formation of a planned attack could well provide significance to present attempts.

Obviously, these are only a few of the ways in which teachers can participate in curriculum work. A primary concern is facilitating these approaches. Two elements will be considered. First, organization in terms of industrial arts objectives and second, the possibilities of the unit approach.

It is a moot question whether industrial arts objectives are found or developed. It is probable that when they are considered at all they are developed from literature in the field. The primary concern here should be with the rationale involved; in other words, objectives do not evolve from a vacuum.

Secondly, when the objectives have been derived from the criteria supplied by the essential needs of children and youth in relation to a democratic society, consideration should be given to behavior changes desirable in such a context.

The third step is to establish a pattern of learning activities which will tend to bring about growth in the direction of ideal behavior: i. e., desirable behavior change. In this instance a multiplicity of activities is necessary. Reading, thinking, experimenting, designing, constructing, planning, visiting, recording, and the like are suggestive of these activities. Certainly the industrial arts teacher should utilize pupil-teacher planning sessions to supplement the activities listed and to identify them more closely with the student.

Pupil-teacher planning periods can also be utilized as the basis for the fourth element in the total process – evaluation. The designation of four steps is not intended to suggest operational isolation. For example, evaluative processes must occur constantly in order that redirection and renewal may take place as necessary.

The following materials are illustrative of this approach. In actual practice, of course, the teacher must perform these processes in terms of his unique situation.

### Four Steps in Development of Curriculum

*I. Objective:* To develop an increasing ability to select, buy, use, and maintain products of industry intelligently.

*Justification:*

1. In our "money" economy we generally purchase the things we need. It is important for most of us to choose our purchases wisely.
2. There is an increasing variety of goods available which the consumer must learn to purchase and use economically.
3. There are many opportunities for the individual to repair items used in home and business.
4. Most household or business equipment requires various maintenance procedures and intelligent use for efficient operation and maximum life.
5. Handyman type activities tend to result from educational experience rather than from chance.

### *II. Pupil Behavior Characterizing the Objective*

1. He will look for desirable construction features in a product.
2. He will look for materials that are best suited to an article when purchasing an item.
3. He will be sensitive to design.
4. He will become acquainted with brand names.
5. He will use an article for the purpose for which it was designed.
6. He will recognize the characteristics of "quality" in different items.
7. He will be able to maintain products that he has purchased.
8. He will give careful consideration to purchases of personal needs.
9. He will bring various items to school to repair or maintain.

### *III. Activities for Promoting Desired Behavior*

1. Emphasize the differences between two articles seemingly of the same quality.
2. Provide a wide variety of reading materials in the consumer area.
3. Discuss points to be considered when purchasing various articles.
4. Demonstrate and explore the differences in kinds of construction including both good and bad points.
5. Discuss the suitability of materials for a variety of activities.
6. Explore the reasons for the cost of materials and products.
7. Experiment with and test materials to determine their properties.
8. Visit a lumber yard or contractor to find out how housing materials are graded.

9. Conduct experiments dealing with the value of maintenance techniques such as painting, lubrication, and inspection.

*IV Evaluation (Continuous)*

1. Ask pupils to criticize constructively articles made either by a manufacturer or by a member of the class (pencil-paper test, conference, discussion).

2. Check the application of criteria for consumption to articles which pupils construct (observation, self-evaluation, analysis, check list).

3. Determine if pupils are cognizant of such basic rules as "form follows function" and other principles.

4. Check to see if the pupil is becoming increasingly familiar with a variety of industrial materials and processes (observation, check list, discussion, pencil-paper tests).

5. Determine if pupils are developing "know how" with regard to testing various materials and products (observation, conference, discussion, pencil-paper tests).

The various steps can be expanded beyond this presentation. The techniques should be applied to each objective deemed worthy of presentation. This is essentially Tyler's approach to curriculum and is as he suggests appropriate to any structure. The value inherent in such an approach lies to a large extent in its flexibility. As the teacher becomes increasingly aware of the potential of his area he can adapt the activities and aim at particular objectives as he sees a need for specialization.

### **Resource Units in Industrial Arts**

The four-column technique as the previous approach is sometimes identified can well be the lead into participation in a core curriculum or broad fields structure if the teacher considers this desirable. Certainly it provides evidence of the breadth and depth of program available.

The unit approach to teaching is exceptionally appropriate in conjunction with the procedure above. An examination of resource units would indicate that there is a consistency of organization between the two, particularly in terms of a concern for behavior-changing activities and evaluation. The emphasis upon pupil-teacher planning is also held to be desirable.

A resource unit developed for an industrial arts situation can be derived in light of traditional structure or in a different vein; i. e., core or broad fields. The former might be based upon the machine tool

industry, the petroleum industry, printing and allied industries, etc.. They are at least tied to common elements. A somewhat broader base can be provided by developing a unit on housing, communication, or transportation. There are infinite possibilities here. It is relatively easy to delimit as desired, perhaps by referring these to a specific community.

The resource unit as a basis for industrial arts instruction allows the teacher to cooperate with the rest of the school. There are many implications for activity combined with the social studies, mathematics, and language arts. It would be highly desirable for the industrial arts teacher to assume leadership in such a move.

It is impossible to present the complete format of a resource unit in terms of the above suggestions. However, the following materials indicate one path which might be followed. The outline does not necessarily provide a definite order of steps in working with pupils.

#### Suggestions for a Resource Unit in Industrial Arts Education.

##### *How Can We Better House the People of Our Community?*

##### *I. The nature of the problem.*

- A. Many people live in houses which are entirely inadequate in terms of space and health conditions.
- B. Many people live in houses which cost far more than they should pay in relation to their other expenses and income.
- C. Advancements have taken place in our technology which have not been noted in building and remodeling homes in our community.
- D. The housing code may not reflect the newer materials available for construction purposes.
- E. What social and recreational opportunities should our housing plans consider?
- F. What type of construction is best suited to our climate?
- G. What type of construction would best reflect our tradition and our contemporary pattern of life?

(These are only a few of the possibilities. Further suggestions should arise from pupil-teacher planning.)

##### *II. Philosophy of school (beliefs).*

##### *III. Psychology (how learning can be guided).*

##### *IV. Major purposes of the unit.*

- A. To develop understandings of the necessity for developing housing which is adapted to the needs of people in relation to the lives they lead.
- B. To develop understandings of the materials and skills which our



technology and arts have made available for use in creating adequate housing for all.

C. To develop skills and techniques which will help the pupil become more capable of carrying out his responsibilities regarding housing.

D. To help the individual to realize his personal responsibility in the solving of community problems.

(Further purposes to be developed locally)

V. *Scope of the unit.*

A. Safety within the home.

B. Healthful living in the home.

C. Beautifying the home.

D. Materials for home construction.

E. Improving the home.

F. Types of architecture.

G. Recreation and social living in the home.

H. Techniques for the improvement of housing in a community.

(Such topics may be regarded as teaching units or considered generally.)

VI. *Activities.*

A. Preplanning (teacher-teacher and pupil-teacher).

1. Discussing problems which are nearest the interests of the pupils to discover the general nature of activities that might be undertaken by the group.

2. Reading to discover some of the socio-economic problems related to housing that man faces during his lifetime.

3. Collecting printed materials which indicate problems that are important locally.

4. Selecting problems for study by the group (housing in this instance).

B. Planning (pupil-teacher).

1. Exploring the field and determining the need for study.

a. discussing

b. reading

c. seeing movie for presentation of possibilities

d. consulting with others in and outside the school

e. consulting course of study to see how unit is related to the year's work

2. Defining terms.

a. determining what the idea means to members of the group

- b. relating ideas and experiences to see if there are any which are common to various members of the group
  - c. stating the definition to develop a meaning common to all members of the group
3. Statement of the problem.
    - a. implication of something that needs solving
    - b. acceptance by all of the group
  4. Discussing ways of solving problem.
    - a. presenting many aspects
    - b. discussing need for further study before intelligent planning can take place.
  5. Selecting ways for solving the problem.
    - a. available sources of materials
    - b. time limitations (this unit has to be in relation to other things that have to be done)
    - c. personal interest – shallow or deep
    - d. will problem contribute to the whole group
    - e. will procedure give opportunity for exploring new fields of endeavor, new skills, new techniques
    - f. are there both group and individual activities
  6. Delegating responsibilities.
    - a. individual
    - b. group (small and total-class group)
  7. Setting up expected standards of work.
    - a. should reach group agreement on standards
    - b. select specific ones for emphasis
  8. Making time limits.
    - a. how much time each type of activity should take
    - b. the total time
    - c. time for group and individual action.
  9. Recording the plan.

(each individual and each group should know when and where they are to be and what they are to be doing)
  10. Evaluating the steps of the plan.
    - a. evaluation should be constant, may take much replanning
    - b. evaluation should always give information so that the group can proceed logically toward the next step.

(Data from evaluation should be in terms of success or failure with respect to the established pattern)
    - c. Added planning (developed as necessary according to evaluation)

VII. *Motivation.*

- A. May occur in terms of stated interests; this may suggest unit.
- B. May partially occur during pre-planning and planning stages.
- C. May develop during unit.
- D. May never occur.

VIII. *Group and individual activities* (these are both pre-planned and planned; they are developed in light of the scope of the unit and interest and needs of group or individuals).

IX. *Evaluation* (continuous and in terms of desired behavior changes).

X. *Bibliography.*

XI. *Appendices* (may include all specific teaching materials).

Obviously, this approach to teaching requires a considerable effort on the part of the teacher prior to the actual class activity. It suggests that the industrial arts teacher must depart from the usual pattern of somewhat random activity and plan with his students with a view towards specific individual and group accomplishments. There are countless resource units available for suggestion and direction, but the primary values accrue only when the total process is undertaken by the teachers and students in a particular school situation.

## IMPLICATIONS FOR INDUSTRIAL ARTS TEACHER EDUCATION

The previous materials suggest certain principles and practices of curriculum construction as set forth by leaders in that area. It is not essential that each reader agree with them completely; rather, it is important that industrial arts people become cognizant of current thought and then assess their programs in terms of such ideas.

Industrial arts teacher educators have at least two professional responsibilities in the area of curriculum. First, if teachers in the field are to be imbued with the notion that here is something equally as important as technical know-how, they must have opportunity to experience curriculum activity as undergraduates. This suggests that all courses, professional or laboratory, should be structured so that the student is, among other things, involved in the identification of purposes and the formulation of learning experiences. Such practice is consistent with good student-teacher planning.

Regardless of the attempts made at this specific level, several general outcomes are desirable. The prospective teacher should develop understandings and abilities with regard to organizational practice. He should become sensitive to the possibility of directing laboratory and classroom activities towards the fulfillment of pre-

determined goals. This cannot be accomplished by utilizing isolated experiences. It is the function of all teachers at all times.

A second major responsibility requires the teacher educator to adopt a critical attitude towards curriculum at the teacher education level. The college program cannot be set aside as the exception which verifies the rule. Thus, if it is desirable for the high school teacher to analyze purposes, the same necessity operates in industrial arts teacher education. If larger units of instruction are more meaningful to junior high school pupils, perhaps there is a connotation of desirability here for college students. The teacher educator must examine such notions and attempt the practice of those which are sound in the light of the stated purposes of a department.

Finally, as in every facet of education, industrial arts teachers at all levels must devote considerably more research effort to the problems and issues of curriculum. It is only by consistent emphasis, thorough evaluation, and continuous effort that industrial arts curricular practices can be improved.

#### SUMMARY

The greatest difficulty in considering curricular approaches, particularly as applied to industrial arts education, is definition. In the final analysis, nothing is outside the curriculum. Suggestive of this and in summary of this chapter are the following questions which must be answered before curriculum development can proceed.

The answers cannot be considered as categorical, but as they are considered, the curriculum will correspondingly improve. The following list can only be partial, inasmuch as each teacher will have problems peculiar to his situation.

1. What are the basic tenets of American democracy?
2. What are the purposes of publicly-supported education?
3. What shall be the relation of the school to social change?
4. Who shall make the curriculum?
5. What concept of needs is basic to the curriculum?
6. How are educational objectives determined and justified?
7. How are learning activities chosen which will provide for behavior change in terms of the objectives?
8. What is the nature and place of subject matter in the curriculum?
9. What concept of the learning process is held desirable?
10. How does the curriculum provide for the uniqueness of the individual?

11. What standards of attainment are incorporated into the curriculum?
12. To what extent is research utilized to support the curriculum?
13. What concept of evaluation is considered as acceptable?
14. How shall the curriculum be structured: core, broad fields, subject fields, etc?
15. What provision should be established for utilizing evaluative criteria to revise the curriculum once established?

These and other questions need continual consideration; as stated before, no one answer will suffice. Perhaps the most pertinent suggestion that can be made to the teacher is that he must freely indulge in curriculum activity before drawing conclusions as to what will work in his own situation.

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## IV

# Instructional Methods

Donald Maley  
University of Maryland

*Methods is a weasel word. It is doubtful whether any other facet of the practice of education has been more thoroughly discussed. The importance and definition of methods is one of the main points on which the liberal arts college – teachers college debate turns.*

*Author Maley has been obliged, by the limitations of space, to do some fine-grain culling. From the voluminous material available, he has selected for consideration certain items which bear most directly on industrial arts teaching. Further, he has selected readings which illustrate these items very effectively.*

*The chapter opens with a clarification of what is meant by methods. The approach used here by Maley is refreshing in that it does not draw fine-line, pedantic distinctions, but goes only far enough to give the reader a workable understanding of what is to follow. Next, the necessary implications of the democratic ideal for methods are drawn. This is followed by a discussion of the necessity to vary methods in view of particular industrial arts objectives. Creativity, appreciation, and skill are good choices to illustrate the points made. Then instructional and organizational procedures are seen in relation to methods. Among others the discussions of the unit method (which is not used enough) and the project method (which is too often misused) are of special interest. The last expository section of the chapter deals with sensory and perceptual learning, which is of special significance in industrial arts. The chapter closes with implications for industrial arts and industrial arts teacher education. The industrial arts man who can read this section and remain complacent about his own teaching, is either (a) very good, or (b) very pitiable indeed.*

EDITOR



This chapter deals with the process by which the learner is able to obtain and give meaning to the subject matter, concepts, skills, and ideals inherent in the educational program.

As a basic starting point, it appears desirable first to attempt a clarification of the nature and implications of the term "methods" in reference to the process of education and specifically industrial arts education.

Considerable confusion appears to center about the meaning of the word "methods" when applied to the teaching-learning situation. In many instances the problem is chiefly one of semantics, while in other instances it is merely a matter of breadth or narrowness. Some writers divide teaching methods into a series differentiated purely by the size or nature of the group to be taught. Examples of these would include: individual instruction, group instruction, and total class instruction. Another writer makes the division of methods in terms of specific tools or techniques of instruction. In this category one finds motion pictures, charts, strip films, field trips, discussions, term papers, and lectures as typical methods. Another school of thought develops the concept of methods on the basis of approaches to teaching and learning. This group would include the library method, the project method, the self-study method, the teacher-directed study method, the problem method, and many more.

If one were to attempt to find unanimity of thinking regarding the meaning of method and what constitutes a method, it would be almost impossible. Yet, as one views each of the different concepts of method, it may be possible to discern one or more common denominators related to each. It is about these common denominators that most of the different methods revolve and it is in the recognition of these elements that structure and framework is provided for the implementation and development of method.

To be specific, each program, class, subject, or curriculum has *objectives* towards which it is directed. Each area has *content, concepts, skills, or ideals* to be mastered, developed or understood. Every learning situation must involve a *learner*. And, of necessity, each learning situation involves some *form of action*, whether that action be exclusively on the part of the learner, in conjunction with other learners, or in relation to a teacher.

The ability to see these four elements does not in any way pin down the nature or extent of the meaning of the word "method". Perhaps one can see more clearly even greater possibilities for diversity

in feelings and concepts about methods when one considers the desired outcomes of a program. In the study of objectives or purposes, there is introduced the element of diversity since the purposes of a single program are so different that no one procedure would be effective in reaching all the desired ends. Each area of content, skill, or ideals bring further complication and a greater need for variety in methods in order to teach effectively. Logically enough, it goes without saying that the tremendous differences in individuals, interests, abilities, and backgrounds necessitates a variation in techniques of instruction.

Method, thus, becomes a process involving action in keeping with the variations in purposes, content or substance, and human capabilities. This action is in itself the method of education, for without action no learning can take place.

Inasmuch as this chapter is to deal with methods of teaching in industrial arts it appears that the readings in this chapter must be viewed broadly and the application to industrial arts made by implication. The literature in the field of industrial arts is limited in this topic, and the readings herein are taken chiefly from the general field of educational methodology. However, the appropriateness of the materials presented will be quite apparent as one views the task of industrial arts teaching in its broader aspects. An attempt is made in the chapter to give "methodological breadth" to industrial arts and industrial arts teacher education instead of confining the readings to the topics of projects, demonstrations, and the teacher's discussions on related topics.

The materials presented herein are literary condensations using the exact wording of the respective authors with no attempt to color or qualify the meaning and/or content as expressed by the original writer. There has been no attempt to make this chapter all encompassing in the treatment of methods in industrial arts. A series of methods appropriate to a modern concept of industrial arts has been selected and the readings deal specifically with these methods.

## CONCEPTS OF AND IMPLICATIONS FOR METHOD

Basic to the approach to teaching is a fundamental understanding of the nature of method and its function in the educational process. Melvin, in his text *General Methods of Teaching*, discusses this point under the topic heading "Method and Technique".

One of the most widespread errors commonly held about teaching is that one who is in possession of a large and lusty body of

subject matter is equipped to teach. The more mature the thinker, and the more advanced his ideas, the more likely he is to believe that he should be provided with a university chair from which he would be able to provide a series of lectures which would change the world....

The error lies in the false belief that the learners whom he would influence are ready for his teaching. He expects mere youths to be interested in the problems which concerned him only after he himself had reached middle age.... *The Gap between Teaching and Learning Must Be Bridged.*

The gap between teaching and learning must be bridged by method. This is, indeed, the function of method, to find common procedural grounds between the teacher and the learner. Each looks at a different side of the shield. The approach of each to what is to be learned is different. So the teacher must explore, invent, imagine, and work to help the learner build a bridge forward, beyond his own position, to the ground on which the teacher already stands....

It is most difficult to put into words this subtle process of suitable technique and method. For what the teacher knows and what he would teach, which is seen so clearly and which holds for him so fascinating a pattern, must be cast into the hopper to appear in some fresh and varied form. This implies an act of surrender on the part of the teacher. He must not cling to things as he sees them. He must perform some rite of sacrifice, he must give up his smugness, and search eagerly to discover the terms upon which his pupils will deal with him. He must run the risk of failing to teach. He must forget that he knows, and remember only that his pupils do not.

.....

Subject matter is practically always in the wrong form for teaching and learning. It must be recast, reorganized, by learners. Consequently, the teacher is absolutely compelled to forget ideas, knowledge, and information, and persuade his pupils to do something. This is the key to method. The teacher must somehow prevail upon his pupils to act. It is pupil acting that will recast the subject matter and give it new life....

There is no side-stepping this process of self-identification of the learner with what he learns, and it is as valid in teaching adults as in teaching children. The proud and learned scholar is no more immune to its workings than the humblest kindergarten teacher. The method of the teacher either provides for student action in the line

of what he is learning, or the learning goes on slowly, with struggle, and is never really successful. . . .

.....

The initial problem of method is always that of involving pupils in action. No matter who the teacher is, or what he is hoping to teach, he must devise some scheme for getting his pupils to do something which is natural and obviously worthwhile to them, and which will result in the learning of the values suggested by the curriculum. . . . The sequence of teaching events may be described as follows (the sequence is valid both in dealing with a single individual and in dealing with a group):

*Step 1. The Learners Set Up a Goal.* Early in the learning process it is essential for the learner, or for a group of learners, to set up some definite goal or objective.

.....

*Step 2. Teacher-Pupil Planning.* During the initial period of goal setting, one of the pitfalls that students must help to avoid is unwillingness to adopt a goal because the plans for its fulfillment have not been made. . . . It is in the planning period, following the selection of the goal, that the project is clarified and made acceptable to the larger group, by analysis and imaginative visioning.

The conference is again the technique used during the planning period. . . . The more student initiative and student thinking have been previously fostered in similar situations, the more quickly and thoroughly the planning will be done.

.....

Whatever plans are made should be recorded. In fact, the recording of plans and decisions is one of the major techniques of teaching. Some simple and practical record should always be kept of what has been decided and what is proposed. . . .

*Step 3. The Pupils Carry Out the Plan Until the Goal Is Reached.* As the action proceeds, the teacher becomes more of a supervisor and an inspirer, less of a participant. It is for the pupils to do what they have set out to do. It is their scheme, their plan, and their work. It is what they have wished for, and upon its completion they will get the credit. The teacher buttresses flagging interest; gives encouragement where pupils lose faith in their work; provides help in the way of suggestions and the provision of materials; and assists pupils with unfamiliar processes of writing, performing, costuming,

locating books and directions, matters of scheduling and timing, and in fact in any way in which help is need. <sup>1</sup>

Considerable emphasis was placed by Melvin on the factor of getting the pupil into action, and a pupil identification with what he learns. Effort should be made towards developing a common procedural ground between the teacher and the learner. This common procedural ground is the method by which the teacher spans the gap between himself and the learner, and between the teaching and learning processes.

Closely related to the previous reading is the concept of pupil needs and their implications for method. This topic is effectively dealt with by Thut and Gerberich in the following discussion.

... Among all the known social principles, the democratic ideal stands out as the only one that seeks to preserve the freedom and integrity of the individual. This is the primary consideration in a democracy whenever a decision must be made.

There is psychological evidence to show that none of the social principles known to man is instinctive.... It follows that young people in democratic communities must learn to understand the democratic principle and learn to apply it in the everyday affairs of life. To help pupils become efficient in the use of this principle is coming to be recognized as the primary objective of American secondary education.

The implications of this objective are not clearly recognized or uniformly interpreted by everyone who has contact with the American secondary schools today.....

.....  
The democratic way of life is an unitary process in the sense that it reaches into every aspect of human affairs.... It is important that the teacher understand the unitary nature of democracy, but for teaching purposes it is sometimes desirable to focus the learner's attention first upon one aspect of a complicated problem and then upon another in order that later he may better comprehend the whole. In keeping with this procedure, the implications of the democratic way of life for the pupil are presented here as needs distinguishable one from the other.

<sup>1</sup>A. Gordon Melvin, *General Methods of Teaching*. (New York, McGraw-Hill Book Company, Inc., 1952), pp. 133 to 142.

*The first need is self-respect.* . . . He must be led to accept his own self-realization as a worthy and, in fact, the highest goal toward which he can direct his life's efforts. This does not imply malicious self-seeking, but rather the spirit of living and working with his equals, each of whom has a similar right.

.....

Self-respect grows with the opportunities to choose. It is built up as the pupil comes to realize his opportunity to choose freely that which in his judgment will contribute most to his personal well-being. The school can help the pupil to choose freely and wisely in spite of restricting social pressures, limited knowledge, and inadequate personal resources.

.....

Properly directed exploratory activities, including the comparison technique, may help the pupil become aware of his unexploited opportunities as an individual, as a member of social groups, as an economic being, and as a citizen. . . .

In the economic area, the need for information prior to making a vocational commitment has already been mentioned. But wise spending and saving are also involved in economic efficiency. . . .

In civic affairs, the high-school pupil may be woefully ignorant of the influence the individual can exert in bringing about better government. . . .

*The second need is to acquire social consciousness.* In a society where the individual is of primary concern, there may appear at first glance to be no need to develop social consciousness. This is not the case, for a more careful examination will show that the maximum development of the individual can be obtained only in a social environment. . . . secondary-school pupils need to be brought to the realization that individual opportunity is to be found in a social environment. Contacts with others tend not only to stimulate personal efforts, but also to provide increased opportunity for specialization in the area of one's interests, and to make possible economies of time and energy through cooperative activities.

Social consciousness may be developed out of what appears to be a natural desire for social experiences. Even very young children seem to seek the company of others. The desire for social experiences will continue as long as the resulting contacts yield personal satisfaction. Therefore, if the individual is to enjoy the benefits of community life, he must have not only a desire for social contact,

but also the ability to engage with satisfaction in activities that involve his contemporaries.

.... Respect for the rights of others is the price of individual freedom. Social consciousness includes the recognition of this fact and a willingness to pay the price.

*The third need is to develop confidence in the authority of intelligence.* The development of self-respect has been listed as a requisite to maximum individual development. However, when the individual becomes aware of new potentialities, he may find that existing institutions, customs, or attitudes stand in his way. In such cases, a conflict may arise between democratic theory and existing practice, for the welfare of the individual may appear to be accessible only at the expense of the existing arrangements.

.....  
 Secondary-school pupils are not free from shackling traditions. Frequently the college-preparatory courses enjoy a prestige among pupils that seems to have little foundation other than tradition, and yet it is strong enough to persuade many pupils to spurn courses that are more directly related to their needs and interests....

Restricting attitudes and beliefs are slowly yielding ground in the face of a more intelligent attack upon individual and group problems. The new approaches are more intelligent because they create more effective ways for the individual to achieve the good life. Intelligence means the ability to fashion actions to achieve specific purposes.

.... Tradition and other forms of authoritarianism when imposed upon the pupil restrict development, for they force upon him the habits, institutions, and customs that were designed by others living at a different time and under different conditions to achieve their own purposes. Intelligence, on the other hand, liberates the individual. It sets him free to try new forms of behavior and arrangements. .... Only those who are inexperienced in making choices are inclined toward recklessness. Experience is a sobering influence, but it may also develop confidence in the process of intelligence as a means of building a better way of life.

*The fourth need is to acquire practice in democratic living.* Finally, the democratic way of life is an active, ongoing process and not a static state of being... Democracy is a way of doing things. Hence, secondary-school pupils must learn to live, to work and to play, and to do these things in a manner that will bring them nearer the goal of individual well-being.

....It follows that if secondary-school pupils are to learn the ways of democracy, they must practice the democratic processes under conditions that are typical of life outside of the traditional classroom and which result in better living for them even while they are in school.

.....  
So, also, must the secondary-school pupil learn to deal with his personal and social problems. The learning process starts with the problems that arise as the pupil lives, works, and plays as an individual and as a social being. He learns as he acquires experiences that help him make adjustments and adaptations in his own actions and environment.....

In developing problem-solving ability, the particular problem before the learner is of less importance to the teacher than the nature of the attack that is made and the ends that are sought. Any concern that is vital enough to drive the pupil to seek a solution can be used as the basis of a learning situation....the first step in solving a problem is to establish specific goals which, if achieved, promise to bring about a larger measure of contentment.

.....  
Finally, the school can help the pupil appraise the solution which he has selected, in the light of the goal or goals he is seeking.....

The definition of purpose, the discovery and selection of appropriate means, the testing of the selected means, and the appraisal of outcomes are aspects of a single process. The process is larger than the memorization processes to which some schools continue to limit their efforts. It must be practiced in its entirety, supervised and directed by the school, if pupils are to grow in their ability to deal with problems.

.....  
One must not assume, however, that all problem solving and all cooperative experiences develop the capacity for democratic living....Problem solving and cooperation are democratic proceedings only when they are directed by the democratic ideal.... Pupils must be reminded of the kind of ends that are sought and must seek democratic ends consciously and willingly if their ability to use democratic procedures is to develop.<sup>2</sup>

<sup>2</sup>I. N.Thut, and J. Raymond Gerberich, *Foundations of Methods for Secondary Schools*. (New York, McGraw-Hill Book Company, Inc., 1949), pp. 19 to 41.



The authors in the preceding discussion have placed considerable emphasis upon the needs of the individual in a democratic society. The satisfactory adjustment to these needs by the learner is largely a byproduct of the educational method used.

One of the prime objectives of industrial arts education is to develop a sense of social consciousness and desirable social relationships and behavior. However, it is foolhardy to expect these outcomes to appear automatically. Education is a molding process and the product is in a measure a result of the process. Thus it is evident that young men and women will learn the principles and practices of desirable social living in proportion to their educational experiences that provide for such development.

### METHODS AND INDUSTRIAL ARTS OBJECTIVES

The diversity of industrial arts objectives clearly indicates a need for a close analysis of methods in relation to the desired outcomes of the program. It is a serious mistake to believe that all objectives can be achieved through the same process or method.

Each objective places a demand upon the teacher to provide a procedure that will develop or bring about the desired outcome. The methods for teaching skill are not the same as one would use to teach or develop appreciations. The development of creativity and ingenuity also require different methods. Thus, in the field of industrial arts, it is becoming more and more apparent that the single or dual method of instruction (namely: demonstration and teacher discussion) will not suffice to bring about all the desired outcomes of the present-day program. The ingenuity of the teacher is charged with first clearly indicating his goal and then developing or adopting techniques or procedures appropriate to the unique demands of the objective in terms of class organization, instructional procedures, assignments, materials, and participation.

Considerable emphasis in industrial arts has been placed upon the *development of creativity* in the student. Yet, the reluctance towards creativeness on the part of the student and a greater inclination towards reproduction and copywork are apparent. Much of the ineffectiveness in developing this characteristic has come about through the use of inappropriate methods. The teacher must provide an atmosphere in which the productive imagination of the learner is free to explore and develop. The teacher must develop the stimulus and motivation towards such activity, and provide for its guidance and direction.

Theodore Struck describes this process in a discussion titled "Creative Teaching".

For practical purposes education may be classified into two types. The first of these emphasizes the task of passing on to future generations the wisdom of the past. The second stresses the value of meeting the problems of an ever-changing world through original thinking, resourcefulness, and inventiveness. That both types of education have legitimate functions to perform is believed by leaders in education.

....Creative teaching uses the tried ideas of yesterday, but *more extensively* the mature judgment of *today* and the evolving ideas of tomorrow.

.....  
 Creative teaching calls for an active, problem-solving attitude toward life rather than one that is passive; it brings into play constructive thinking, planning and doing in contrast with aimless thought and action.

....The *great* teachers of all times have stressed *self* activity. Creative teaching then becomes a procedure in which the emphasis is upon present-day needs, and in which *actual habits* of work are established by *the learners*.

Merely to ask pupils to be original or self-reliant will not develop these qualities,.... Teaching is creative if it arouses a zeal for learning, if it stimulates selective thinking and purposeful action.

....Among the valuable habits that creative teaching seeks to develop are: (1) the habit of open-mindedness; (2) the habit of suspending judgment until the facts are known; (3) the habit of looking for causes; and (4) the habit of evaluating on the basis of facts,....

.....  
 ....Creative teaching calls for a thorough understanding of what is to be taught. *It is impossible to teach creatively without a firm conviction that the job is worth doing exceptionally well.*

.....  
 Such teaching will be effective if the instructor is able to get the pupils to accept as *their* valid goals those that mature experience and reflective thinking indicate as most promising for the present and near future.

Creative teaching proceeds upon the conviction that there are within each person creative impulses which need to be encouraged and nurtured,....

He who would encourage creative learning and original work must be sensitive to individual differences in feeling, spirit, and capacities.

....Industrial Arts projects as commonly made today show entirely too great a leaning toward servile copying. One reason for this is the fact that the majority of industrial arts teachers in service have themselves had most meager instruction in this important aspect of their work....

....It may be pointed out, however, with all humility and with a deep sense of the corresponding responsibilities, that industrial arts education--and trade education also --by their nature offer an ideal opportunity to develop such habits of clear and constructive thinking through avenues that are natural, life-like, and effective.

Creative learning takes place best where there is an atmosphere of freedom, where the learner feels free to try something that is new, where he is not restrained by outgrown conventions or cramping lock-step requirements.

The more informal and natural the teacher can be, the more likely is he to encourage creative thought and manipulative activity --but always with the reservation that freedom and informality shall not be construed to mean license....Where there is true freedom there is self-engendered activity--the ideal means of learning.

Creative or productive imagination frees us from the commonplace. It enables us to weave old experiences into new patterns of thought and of behavior.

In this age, so vibrant with change, so complex in its trends, and so challenging in its unsolved problems, there is urgent need for creative thinking and creative achievement. Thinking and doing should go together.

It would be wrong to assume that creative work refers only to that which is distinctly different from other work. Creative shopwork can be work that gives a new touch or tone to something that is quite "standard." Common materials are used in new combinations. Common objects are given a different form. All this represents creative work. The opportunities to work creatively are numerous.

....One of the purposes of creative teaching is to lead persons to see the possibilities for doing what they would do anyway, in the creative spirit. Each task then becomes a stimulating challenge as to how it might be done better or with less cost or effort.

Whatever is created is brought into being through sense-perception. It is through teaching learners to perceive more accurately that the ability to improve upon the old is developed....

....Creative learning calls for coordinated sense-perceptions. These perceptions, made at various times and in sundry places, may be combined later into new combinations.

.....

Among the outcomes sought through creative teaching are:

(1) *Creative attitude*. The attitude of mind that is sensitive to the possibilities of change is the creative attitude....

(2) *Creative thought*. Creative learning and teaching get inspiration through creative thinking as contrasted with non-creative or non-critical acceptance of what others think....

(3) *Creative doing*. Creative teaching seeks to stimulate in each individual, and to strengthen in him, the God-given inner urge to express himself creatively.

(4) *Enjoyment through creation*. Creative teaching seeks to foster and to strengthen in learners the driving power of satisfaction and enjoyment that is the natural outgrowth of accomplishment.

(5) *Adaptability*. It is believed that creative learning helps to make persons adaptable to changing requirements.

(6) *Resourcefulness*. Creative teaching seeks to impart the resourcefulness that is needed in a complex and fast-changing world.

(7) *Confidence and faith*. Creative learning is a means of attaining that confidence in self, in others, and in the ultimate achievement of what is best and most worthwhile. <sup>3</sup>

Another important objective of the industrial arts program is the *development of appreciations*. These appreciations take on many forms and are in relation to various aspects of life and living. This particular objective has been treated extensively in recent years by writers in the field of general education. The unusual qualities of this human characteristic deals with both the aesthetic and the intellectual aspects. Its measurement is extremely difficult, and the techniques for achievement are not wholly agreed upon by the authorities. The teacher's

<sup>3</sup>F. Theodore Struck, *Creative Teaching*, (New York, John Wiley & Sons, Inc., 1948), pp. 569 to 581.

function appears to be chiefly in the area of guidance and assisting in developing a background from which appreciations may arise. Yoakam and Simpson discuss the problem of appreciation development in the following statements from their text *Modern Methods and Techniques of Teaching*.

Appreciation is a form of activity so different from other types of learning that it is necessary to find a process or technique other than that usually employed in teaching to develop its various aspects.....

That appreciations can not be taught in the same sense in which facts and skills can be taught is more or less apparent to thoughtful teachers, and that a foundation can be furnished upon which appreciation may be developed is generally believed.

.....  
...Facts and information must be integrated into a meaningful whole and applied successfully before the learner can begin to appreciate or feel that they are really significant.

It is this feeling of the learner that constitutes the distinction between simple comprehension and appreciation. When one realizes that the facts, information, and techniques with which he is concerned are useful in attaining a desired end or goal, he begins to appreciate their significance and value in solving problems, in formulating projects, and in studying subject matter of textbooks in general. He appreciates what he understands and can use to advantage in reaching desired goals or creating desired products.

It seems...that the chief aspects of appreciation are the aesthetic and the intellectual. The aspect of appreciation deals with the beauty in experience. It is an appreciation of the pure form of what is observed, what a thing is in itself, without attributing meanings, values, and uses to it.

.....  
...When analysis begins, appreciation becomes an intellectual activity of one's own making and belongs to another aspect of appreciation, the intellectual. Then, study and problem solving will be the chief concern of the learner. The whole process of appreciation here differs to a marked extent from the aesthetic aspect. ....

Appreciation, therefore, is both emotional and intellectual. It is gained through experience and is often caught rather than taught. The important thing to be noted is that it is an outgrowth of experience with the thing itself. A wealth of aesthetic or intellectual experience is the necessary matrix of true appreciation.

.....

The intellectual aspect of appreciation is common, however.... The student may appreciate the significance of an invention, a historical character, or a movement in history only when he thoroughly understands it; he may appreciate phases of these and other activities without a comprehensive grasp of the conditions causing them, although the latter is doubtful. This type of appreciation may be accompanied by an emotional glow involving a feeling of pleasantness or unpleasantness, but it is a purposeful thing as compared with the more sensorial and incidental pleasure derived from aesthetic experiences.

.....

Interest in any type of classroom exercise or in any subject regardless of its nature depends, to no small degree, on properly setting the stage to obtain the desired responses from the student. Skillful teaching is marked by getting pupils in the right sort of emotional set to forge ahead in the study of a unit of work.... Pupils may learn to appreciate the masterpieces of art and literature only to the extent that they understand the conditions under which these were produced.

.....

Anticipatory interest or excitement is an important factor in motivating the appreciation activity....

Interest in intellectual appreciation probably arises from the desire to know or to be familiar with the things which we believe to be useful and practical....

In aesthetic appreciation, the out-of-class assignment -- if made at all -- should function to create greater enjoyment in the project or activity of the recitation. References need not necessarily be definite and detailed, as this practice in making assignments detracts from the pleasure of the activity.

.....

The recitation or discussion period in lessons of the appreciation type may be taken up with a variety of activities -- assignments, discussion, listening and observing, or performing for the benefit of others.

.....

When the object of the recitation is to develop an appreciation of the intellectual type, more explanation, questioning, comment, and discussion may be essential. Appreciation should come as a by-product of serious problem-solving or other activity....

Sometimes appreciation is best gained by experiencing or doing. Listening to a concert or a speech, viewing an exhibit of paintings, playing an instrument in an orchestra, or taking part in a chorus may be the surest means of developing an appreciation for the beautiful.

.....

Participation in the activities of aesthetic appreciation furnishes children with those experiences which are essential in developing a love for beauty, style, form and rhythm in experiences which result in likes, dislikes, tastes, resentments, prejudices, and other feelings and emotions. All of these experiences are involved in developing high standards of conduct and right living. Aesthetic experiences either lift us above the commonplace things of life or let us drop below this level.<sup>4</sup>

One of the objectives that receives almost unanimous approval is the *developing of skill*. To the industrial arts teacher, skill development is essential. There has been considerable comment tending to delegate skill to a less prominent status than some of the other desired outcomes. Yet in the pursual of the daily task of teaching there is evidenced considerable need for this quality. The purpose of this discussion is not to discuss its relative importance but to present some basic ideas pertinent to the development of skill. The foremost theory in this regard is that the development of skill requires practice with meaning. Herein is the problem of method for the teacher--to provide sufficient practice without the monotony of a fixed routine. Each practice should be a new and enriching experience to the point where the specific skill has achieved its relatively high degree of refinement. Burton discusses these points and others related to it in his text *The Guidance of Learning Activities* as follows:

The teaching of skills in school and in industry has been handicapped for generations because of the persistence of uncritical common sense notions concerning the nature of skill. A number of new conceptions based on extensive and valid research must be acquired by teachers before the guidance of skill learning will be well done.

*First*, teachers in school and in industry will be aided greatly if they will regard skill as refinements of meaning and not as isolated mechanisms. Skills are the means for making understandings operative. Skills have not meaning themselves separate from functional

<sup>4</sup>Gerald A. Yoakam and Robert G. Simpson, *Modern Methods and Techniques of Teaching*. (New York, The Macmillan Company, 1948), pp. 123 to 131.

situation.... The prime corollary is that skills to be learned must be met first within, and derived from a functional or meaningful situation.... The second corollary is that after first meeting a skill in a functional situation, the learner will meet it again and again in meaningful situations before practice is even thought of.....

*Second*, skills are not precise, fixed routines to be achieved through unthinking repetition. Skill performance is inherently variable. It varies from person to person, from time to time with the same person, and from situation to situation. Skills must also be developed for use in varying situations and positions.

*Third*, the acquisition of a skill has two phases: the (a) integrative in which perception of the movement and meaning are developed; and (b) the refining or facilitating in which precision is developed.....

.... Skills must be attained, granted they are in keeping with maturity levels, more rapidly than they could be by incidental practice. Modern principles in the guidance of practice, are... very different from those now widely used.

.....

1. Skills are refinements of meaning and not isolated mechanisms. Perception of the movements and understanding are essential.

2. Skills are not precise fixed routines but are inherently variable.

3. The acquisition of a skill includes two phases, the integrative and the refining.

4. Trial-and-error learning usually develops when the learner does not understand the use of the skill or does not have clear perception of it.

5. Initial delay and exploration usually develop insight which facilitates practice.

6. Retrial with insight seems to be superior to trial and error. Approximation-and-correction is a better term than trial-and-error.

.....

Organized practice should be preceded by an exploratory stage during which the learner experiments, seeks guidance, devises several alternative ways of acting.....

The *integrative* phase of skill learning in which meaning is developed demands *varied* practice which means many functional contacts and exploratory activities. The *refining* phase in which precision is developed demands *repetitive* practice. Varied practice by itself yields meaning but not proficiency; repetitive practice by it-



self yields efficiency but not meaning. Competent varied practice in early stages will reduce greatly the amount of repetitive practice needed later.

.....

Intelligent, meaningful, attentive, repetitive, practice will increase the efficiency of what is repeated. Repetitive practice should be preceded by a period of varied practice. Due allowance must be made at all levels for variability of performance and of individuals.....

....Skills are to be made more facile to enhance the meanings and attitudes. Initiating penmanship through a series of graded exercises with curves, ovals, and angle strokes practiced separately, or art and music through practice on abstracted elements, is seriously detrimental to learning. Varied practice of meaningful items should come first, followed by more systematic practice though still of meaningful materials.

.....

Theoretically, it might be possible to provide enough functional situations to produce skill without drill. More can be done in this direction, but practical, functional illustrations of rather remote connection should not be dragged in artificially or they will be almost as meaningless as some of the abstract exercises. Teachers need definite training in recognizing valuable meaningful applications.... Truly functional, real-life applications simply cannot be supplied in sufficient number to develop necessary skill. Furthermore, learners come eventually to recognize and accept drill as sensible. Teachers at all levels, therefore, particularly on upper levels may safely use systematic drill experiences..... There is no inconsistency between functional teaching and practice for skill.<sup>5</sup>

**INSTRUCTIONAL AND ORGANIZATIONAL PROCEDURES IN RELATION TO METHODS**

The limited space available does not permit a lengthy discussion of all the noteworthy writings on the different kinds of methods. In this part, there is included a series of writings describing various methods that differ in their instructional and organizational procedures. In addition, they differ in the nature of expected outcomes.

These writings are included because of their implications for industrial arts teacher education as well as industrial arts at the sec-

<sup>5</sup>William H. Burton, *The Guidance of Learning Activities*, (New York, D. Appleton-Century Company, 1944), pp. 395 to 401.

ondary school level. The intent here also is to develop a greater appreciation of the breadth and diversity of methods appropriate to industrial arts.

The industrial arts laboratory through its unique facilities and environment has found itself abundantly rich in potential for the use and application of a wide variety of methods; perhaps more so than any other area in the school. It is at once an activity area, a classroom, a haven for problem solving, an ideal situation for experimentation, and its potential for individual, group, or class projects is unlimited. Yet, regardless of all this potential, the singleness of purpose and method and the narrowness of its instructional procedures appears to predominate. Herein is a challenge for teacher education institutions to assume a leadership role in developing and broadening the concept of method to a point where the teacher may with ease and facility make use of numerous methods as they appear appropriate to the needs of the learner. In this section excerpts from the literature deal with the following methods: group instruction, demonstrations, the unit method, the project method, experimentation, and the problem solving method.

The *group instruction method* may be interpreted in several different ways. In one instance the group may be a segment of the class that has been called together for instruction on some aspect of the program or the work being done. The composition of this group may be arrived at in terms of their level of progress, interest, grade level, type of work done, and at times difficulties encountered. This is known as incidental grouping rather than organized or integrated grouping and differs little from total class instruction except in the number of learners.

A more meaningful form of group instruction is the organized group, where the group works to the solution of a common problem or project. All aspects of the instruction are carried on by the group from the planning to the evaluation of the work. This latter type of group instruction is described by Ritter and Shepherd in the following discussion:

.... group instruction is a group activity which stimulates growth in desirable individual and group traits..... It embraces all aspects of an activity unit of an area of experience or any other group undertaking in which all members work toward recognized objectives and assume responsibility for reaching them....

*Planning by the teacher and pupils* is one aspect of group work. Both pupils and teacher should participate in working out the plans by which known objectives are to be reached. ....

*Preliminary or survey planning* is used when leading the pupils into a wide area of exploration, when attacking a large unit of work, when beginning the solution of a problem, or even when starting the study of a given section of subject matter. ... This planning might include: (1) the objectives, (2) ways and means of reaching these more or less specific objectives, (3) ways and means of checking progress and final results, (4) the evaluation of the procedure and of its effect on the pupils. ....

Another type of planning pertains to the *daily work* or the *smaller activities* that go to make up the larger parts of the whole and eventually the whole itself. ... Some factors to consider are these: (1) organization on the part of both the pupils and teacher is necessary to make this short-range planning most successful. .... (2) Co-operation among the various members of the class is perhaps more important in the short-range planning than in planning for a longer period. ... (3) Courtesy in the busiest workroom or recitation is an absolute essential for most effective and pleasant relations. ... (4) Additional factors enter into the planning for the short-time activities. Among these are individual differences of pupils, likes and dislikes of pupils, and time available for activity.

.....

By way of *summary* it may be said that while planning is an important part of instruction of any kind, it is especially important in group instruction. This is true not only for the teacher but each member of the group. Planning clarifies the objectives, the means by which the objectives are to be reached, the type and amount of checking to be done as the work progresses, and the kind of final evaluation which is to indicate how well objectives have been reached.

A second element of group instruction is the *assignment*. The meaning of this term... broad enough to cover all activities which prepare pupils to work as individuals or as a group on the task at hand. ...

Whatever the level of excellence of the assignment there are certain basic factors to be kept in mind by all concerned, especially the teacher. *Establishing motives for work* is among the most important of these. ....

Some aids in establishing healthy motives for work follow: (1) The immediate goals and even those that are remote should be made clear to the pupils....(2) the goals should not only be clear: they should be attainable through reasonable effort, difficult enough to challenge, yet easy enough to encourage. (3) The goals should seem valuable to the pupils. That is, they should be worth while and interesting to them. (4) Undoubtedly there should be clearly stated directions to follow in reaching the desired goals....(5) Appeals to the pride of the pupils are powerful motives in getting work done. This is true in most cases both as to quantity and quality of work. ... (6) A fair check on the work accomplished by pupils serves to activate them....

A second factor of the assignment for group work is the *material to be used*. Materials are usually provided in a more formal way by the course of study, the textbooks, the references, and a wide range of related printed materials, possibly from several fields....

A third factor in making assignments involves the *procedures used*. Such procedures vary widely in effectiveness.... Perhaps near the top of effective assignments would be the class-developed ones, arranged on difficulty levels and suitable to the various abilities of the pupils of the group.

.....

A third important element of group instruction is perhaps best indicated by the term *sharing*. This element may be divided into two types: (1) sharing the materials which have been assigned for definite study...; (2) sharing information acquired independently of regular assignments.... All pupils should benefit from this sharing with others; those who give, no more nor less than those who receive.

A fourth element may be termed the *clarifying factor*. Difficult procedures, operations, or skills often can be taught to a group as well as to an individual....

The fifth element is the *checking* of the results of teaching.... Generally speaking, the teacher checks on the work of the assignment and expects the checking to indicate to some degree the kind and amount of effort expended by the pupil on the assignment. Teachers should also try to check the undirected work by securing brief statements or reports from the students. This undirected work reveals the extent of pupil interest.<sup>6</sup>

<sup>6</sup>E. L. Ritter and L. A. Shepherd, *Methods of Teaching in Town and Rural Schools*, (New York, The Dryden Press, 1950), pp. 32 to 37.

The *demonstration* has been one of the most extensively used teaching methods in industrial arts. The effectiveness of this method is highly dependent upon the teacher's ability and his sensitivity to the problems of the learner. This method of instruction may be used on an individual, group, or class basis. Pupil participation in the demonstration should be encouraged and an application of the principles or factors learned should be made as soon as possible after the demonstration. Gordon O. Wilber has described this method in his text *Industrial Arts in General Education* in the following manner:

The demonstration is generally accepted as one of the most effective techniques for industrial arts teaching. In the hands of a skilled teacher the demonstration may be made to appeal to a variety of senses. . . . Moreover, (the student's) attention may be directed to the important points which should be observed. Student interest is easily held, for the demonstration involves action-- action with tools and materials which naturally intrigue and interest youth. . . .

In order to be effective, however, a demonstration not only must be well-planned, but also must be skillfully performed. . . . It is of the utmost importance . . . that every teacher master thoroughly the art of giving a demonstration and then practice until near perfection is achieved.

.....

There are three types of demonstrations which are commonly given by the industrial arts teacher. These are: (1) the class demonstration, (2) the small group demonstration, and (3) the individual demonstration. The class demonstration is usually considered the most important of these. . . . it is given to the entire group, it is usually reserved for core material for which all students are to be held responsible. . . .

The group demonstration is given as the need arises, as when two or more students are ready for certain new material or are having difficulty with some specific phase of work previously demonstrated. . . .

The individual demonstration is the one most frequently given. . . . As the teacher moves among the students, he will discover where difficulties are being encountered. Individual help and, in many cases, a repetition of certain parts of a previous demonstration is the only answer to this problem. . . . The instructor should keep constantly in mind that student growth and behavior changes--not projects-- are the ends in view. . . .

.....

The giving of a demonstration divides itself naturally into three parts: (1) preparing for the demonstration, (2) presenting the lesson, and (3) checking or clinching the lesson. . . .

...If the demonstration is to be effective, much preparation and previous planning must have taken place. Some of the more important of these preliminary steps are:

*Determine the need for the demonstration.* . . . It is assumed that the demonstration is designed to further the objectives of the course and, therefore, to bring about certain desired behavior changes. . . .

*Review and plan the procedure.* . . . Make sure that every step is planned and is performed in its proper sequence. . . .

*Obtain the materials needed.* Unless the demonstration is one which includes the getting out of stock, see that all materials are at hand.

*Check the machines.* If machines are to be used, see that they are properly adjusted and ready for use. . . .

*Check and prepare all hand tools.* . . . Whenever possible use the same tools that students will be expected to use. Be sure that all edge tools are sharp and in working order.

*Obtain or prepare any necessary visual aids.* Make sketches or drawings on the blackboard, if required. . . .

*Practice the demonstration.* The instructor should be absolutely sure that the demonstration will "click." The only way to make certain of this is to run through the procedure before the class arrives. . . .

*Have partly completed projects at hand if they are needed to facilitate the lesson.* . . .

...To make the lesson most effective, however, certain techniques will need to be used. Some of these are:

*Arrange the students so that all may see and hear.* . . .

*Explain the purpose of the lesson.* . . .

*Perform the demonstration at a rate that will permit the students to see exactly what is taking place.* . . .

*Talk to the class.* A flow of talk should be kept going while the lesson is presented. . . .

*Ask questions of the class.* A lesson in which the class does not participate is of questionable value. An instructor can never be sure that his lesson is "getting over" unless he checks continually as it progresses. . . .

*Have students participate.* It is frequently possible to have students participate in the activity which is being demonstrated. . . .

*Stress safety practices.* The most effective way to teach safety is through a positive approach by demonstrating the safe way to work. . . .

*Repeat parts of the demonstration, if necessary.*

*Check the results of the demonstration against the plan.*

#### Checking or Clinching the Lesson

The teacher's responsibility does not end with the finishing of the demonstration. Certain very definite steps must be taken to make sure that the students have grasped all the details and that they will remember the more important points. . . .

*Summarize important points.*

*Ask summarizing questions.*

*Give the students an early opportunity to apply new knowledge.* . . . every effort should be made to shorten the time between a demonstration and the application as much as possible. . . .

*Put away tools and materials.* Putting things away is an opportunity for the instructor to set an example for the students. . . .<sup>7</sup>

In recent years there has been a noticeable trend toward the *unit method* of teaching. It is a co-operative venture in which the students and teacher work together in the development of a unit of work around a common theme. One such unit in Industrial Arts could be -- "the significance of steel to every day living" or in electricity the central theme might be "electricity in the modern home". In each instance the many facets of the topic are studied by way of group and individual processes, and the development, reporting, and evaluating are done in a similar manner. All activity centers about the central theme and the problems of the learner/s as the unit proceeds. Ritter and Shepherd describe the unit approach in their text *Methods of Teaching in Town and Rural Schools*.

. . . . The term *unit of work* is commonly used when referring to the type of procedure in which teacher and children plan, obtain materials from various sources, integrate their findings around a central theme, and form their own generalizations. . . . The plan of unit teaching is applicable to any type of school. . . .

<sup>7</sup>Gordon O. Wilber, *Industrial Arts in General Education*, (Scranton, Pennsylvania, International Textbook Company, 1954), pp. 127 to 137.

*Psychological bases for organizing and conducting work on the unit plan are these:* (1) It stimulates and directs thinking in a way not possible by such older methods as the use of questions and answers based on textbook material.... (2) Learning takes place and facts are mastered because they are encountered in their natural functional relationship to one another.... (3) Also new connections are made, new relationships develop, and broader concepts formed in solving problems involved in units.....

*Some advantages of the unit plan of teaching are:* (1) It helps prepare children for democratic living.... (2) It provides good opportunities for personality development.... (3) Units of work offer opportunities for developing good leadership as well as the ability to follow and assist through committee procedure effectively employed. (4) Such a plan increases ability to make adjustments essential to happy community living....(5) Facts take on real meanings and skills may be acquired with less effort under this plan than under some others, because there are definite motives back of the efforts and the learning takes place in natural settings. (6) Units furnish splendid opportunities to organize for future use knowledge which children acquire when working on the theme.

.....

There are different *ways of organizing units*....*First*, the teacher who has plenty of training and experience and the right attitude may be able to organize all or the major part of the curriculum around units of work in such a manner as to enable the children to acquire important facts, master essential skills, and develop desired appreciations. *Second*, for the majority of teachers it seems wiser to use the following plan of organization: (1) to set aside a part of the day's program for the unit work, (2) to have other periods during the day to work on the regular content and skill subjects, and (3) to tie up these two parts of the program as much as possible..... *Third*, in the upper grades, some instructors prefer to organize units around specific subject-matter fields, centering the interest in geography, history, health, or science.....

Regardless of the type of organization selected, the following *factors* have been found *useful* as bases for the *teacher's planning*: (1) making the approach, (2) setting up the unit, (3) planning the procedure, (4) determining the activities to be incorporated, (5) arranging the subject matter to be included, (6) summarizing the findings, (7) forecasting the outcomes in terms of anticipated appreciations, knowledges, and skills, and (8) providing the materials and equipment.



.....

At least *four requirements are essential for successful unit teaching*: (1) insight and effort on the part of the teacher, (2) equipment, (3) understanding on the part of the community, and (4) knowledge and use of community resources.

The *teacher's role* is of utmost importance in carrying on units of work. The following qualities are essential: (1) The skill to adapt herself to the various abilities, individualities, and experiences of her group. (2) The ability to see what subject matter is related to the theme to be studied, where materials pertaining to it may be got, and how these can be organized into an effective working procedure for children to follow....(3) The ability to see the potentialities of and the necessity for tool subjects... and to help children to feel the need for practice and development of these necessary skills. (4) The ability to organize children for work... (5) The ability to recognize the characteristics essential for good citizenship and for happy individual living.

.....

As a unit is launched and carried on, many specific problems present themselves for solution....There are *definite steps* which *children may follow* in solving each of these problems. *Sensing and stating* the problem is the first step. The children should clearly understand the problem to be solved.....*Planning the solution* is second. The children should plan (usually with guidance) the methods of attack and the materials to be used.....*Collecting data and materials*, the third step, requires ingenuity and time. The fourth step, *predicting the solution*, usually comes in the form of a tentative solution.....*Solving the problem* is the fifth step. The data collected should be assembled by individuals or by committees and should be organized for use....*Judging and checking results* is the sixth and last step....

In comparison with other definite techniques of instruction, the measurement of results of teaching by units is more difficult. The facts and skills acquired can be measured. But the more or less intangible changes in personality, in attitudes, understanding, interests, and ideals cannot be as accurately determined. Probably the best way to judge growth in these respects is through observation of children's conduct.<sup>8</sup>

<sup>8</sup>Ritter and Shepherd, *op. cit.*, pp. 23-31.

The unit method just described pointed out the psychological bases upon which this class procedure is developed as well as the various ways the teacher may organize such units. Primary consideration was given to the teacher's role in the carrying on of such a method of teaching. One of the most important aspects of this approach to teaching is the manner in which the units are planned. Schorling discusses planning the unit of work in his text *Student Teaching* as follows:

The wide acceptance of the unit concept has come at least in part as a protest against treating each day's lesson as an unrelated and isolated segment of learning. It used to be a common practice of teachers to make rigid daily lesson plans arranged so as to conform to the interval of the class period. In more recent years, however, we have seen the need for the gradual growth of the individual pupil through participating in experiences that are continuous, integrated, and unified around a central problem or project.

.....

The unit plan takes on many forms in different school systems. Indeed, many names--contract, challenge, job, etc.--are used to identify the method. Probably no acceptable definition of the unit plan could be formulated. However, one can describe what takes place and list the ideals that emerge when teachers employ it. The following basic guides are suggested:

1. *The years' work is divided into a series of related units, each built around some central or organizing idea.....*

When designing or reorganizing a unit, keep in mind the recurring activities in everyday living.

.....

2. *A well-planned unit includes many and varied activities in which pupils must find, organize, and use facts that throw light on the basic problem which the class is studying. There should be many things for pupils to do that call not only for physical activity but for a wide sampling of mental life, such as constructing, drawing, carving, pasting, painting, cartooning, reading, memorizing, writing, dramatizing, investigating, and graphing. These activities will range from the simple and easy to the complex and difficult. By spreading the activities over a wide range of both interest and difficulty the teacher finds it easier to adjust to the needs of individual pupils.....*

3. *In a well-planned unit much of the time that was formerly called the recitation period will be devoted to work. Obviously an*

hour in which pupils collect information, prepare reports, and share experiences is a type of class period very different from that of an earlier day, largely devoted to questions and answers. The proponents of the unit plan have combined techniques borrowed largely from two sources: (a) procedures employed in the science laboratory and (b) the ideals of the project method....<sup>9</sup>

The term project and/or *project method* has appeared to have a singular significance to most industrial arts teachers. In most respects the project method has been the production of some item in the shop or laboratory. The project method implies more than the production of some item. The item must have use and purpose. The learner is chiefly responsible for directing and planning his own activities and learning. The problems encountered in the course of the project development are studied and solved by the student with the teacher participating by guiding and assisting in the learning process. Ready-made plans by the teacher are not a part of this method. Risk amply describes the project method of teaching in his text *Principles and Practices of Teaching in Secondary Schools*.

The predominating pedagogical concept of the project no doubt had its origin in the new psychology of learning that considered the individual as a purposing, developing organism whose knowledge, abilities, and traits of character are developed through experience with the environment....

.... With the development of the unitary concept of the learning act, it became apparent that much learning would be more real, worthwhile, and lasting if it concerned real life problems or approximated life situations. Such an organization of learning activities needed a name. The term *project* seemed to be the best nomenclature available to characterize such practical units of learning....

The concept of the project as it finally evolved may be described as a unit of learning activity having the following characteristics.

1. The undertaking is complete in itself
2. The learning activity is aimed at a definite, attainable goal
3. The learning activity is purposeful, natural, and life-like in its procedure to attain the goal
4. The learner plans and directs his own learning activities

<sup>9</sup>Raleigh Schorling, *Student Teaching*, (New York, McGraw-Hill Book Company, Inc., 1949), pp. 140 to 144.

5. The goals or ends of achievement are definitely and objectively measurable.

.....

Projects have been variously classified depending upon the purposes and objectives by which the learning activities are unified and shaped. The most common classifications... of a project provides for three types; namely, (1) projects embodying the production of some physical or material product, (2) learning projects, and (3) intellectual or problem-projects.....

.....

In using the project method the first step is to start with a purpose, an object in view, instead of assigned lessons. Activities engaged in to attain a purpose are satisfying, and purposeful activity engenders interest in the activity and the outcomes.....

Other factors that make the project a purposeful activity are the facts (1) that the pupil sees it as a definite undertaking complete in itself, (2) that there is a definite attainable and desirable goal, and (3) that as work proceeds, something definite is being accomplished.....

.....

Two other factors serve to make the project method effective. The purpose and goal of the project is the pupil's. He is, therefore individually responsible for the satisfactory completion of it.....

Further, the project method provides for individual needs. Individuals differ and provisions should be made for needed individual development. The project provides for freedom of expression, initiative, and opportunity to create.....

Finally, the project rests soundly upon the psychology that knowledge, abilities, and the development of character result from active participation in solving a problem or difficulty.....

An examination of the teaching procedure employed in developing a project shows that the following steps are usually provided for:

Step 1. *Purposing*. This introductory step concerns decisions about what is to be done. This is accomplished by determining the goals to be attained.....

Step 2. *Planning*. This step is important because of the educational value of planning the attainment of any goal....

Step 3. *Executing*. This step consists of the learning activity involved in carrying out the plan....

Step 4. *Evaluating.* The success of the activity or the project is checked in the light of the desired goal....

In order to have an effective school program, teachers must make a careful study of pupil needs, interests, and abilities to assure a satisfactory range of experiences to attain the objectives of education. Plans for projects may be made in advance to assist the teacher in directing learning into desired channels, but these cannot be handed out in ready-made plans if the spirit and effectiveness of the project method are to be maintained.

.....

There are two ways in which teachers make use of the project method. One is to organize a course or portions of a course by projects and carry out other portions of the course by some other method. The other is to make use of projects as a part of some other plan, usually to provide for individual interests or needs.....<sup>10</sup>

Industrial arts as taught in the college programs and at the secondary-school level has remained blind to the fact that a considerable part of the work of industry is in the realm of *experimentation*, analysis, and testing.

Glues are tested for their holding qualities under different conditions, the foundry sand undergoes meticulous testing and analysis to guarantee the moulder that he will have sand of the appropriate qualities. The many structures on an airplane assembly are given rigid tests for strength and stability. Paints are tested as well as automobiles, pavements, roads, clothing, roofing materials and shoeleather.

The presence of this activity in industry can not be denied. Yet in a school program that professes "the interpretation of industry", "the understanding of materials and processes", and "consumer knowledge", there is an almost complete absence of such activity.

The industrial arts laboratory is an ideal setting for such activities with its many tools of industry plus the raw and finished products. Yoakam and Simpson describe the experimental method in the following statements taken from their text--*Modern Methods and Techniques of Teaching*.

... It is a significant fact that the experimental method may be used to some extent, at least, in learning every school subject and in every grade of instruction. The method requires that the learner shall

<sup>10</sup>Thomas M. Risk, *Principles and Practices of Teaching in Secondary Schools*, (New York, American Book Company, 1941), pp. 470 to 475.

be permitted to discover things for himself, that he experience conditions as they actually are, and that he formulate his own inferences and conclusions from the data obtained in making his observations....

As the name implies, experimental learning is learning through one's own experiences. It is a form of problem-solving, or reflective thinking. It is a searching for actual truths about things and processes, the main value of which lies in the fact that pupils learn through its use to discover things for themselves, rather than having them told outright by the teacher or discovering the answer in some text or reference book. It is a method of learning which has been characterized as the scientific method. The principle underlying the theory holds that pupils must learn to arrive at definitions, processes, operations, and rules through controlled experience, and not merely by memorizing them from books or from dictation by the teacher. By this method of learning, the pupil should proceed from the particular instances to the general conclusion rather than from the general conclusion to the particular instances.

.....

In experimental thinking or learning the experimenter is learning to proceed scientifically.... He locates a problem and defines or limits it; he develops a hypothesis or hypotheses as to the solution of the problem; he creates an experimental situation in which he exercises control over these tentative solutions; he tries out the effect of each and measures it; he isolates each one of these factors and keeps it from being affected by others; finally, he comes to a conclusion or fails to come to a conclusion as the case may be.

.....

The chief function of experimental learning is the discovery of the truth -- the formulation of a sound conclusion from observable data. It inevitably leads to generalization, to a principle or a rule.....

It is quite probable also that pupils retain more permanently what they learn by the experimental method than by other methods of learning. This fact can be partially explained on the supposition that pupils understand a principle or a process better when they discover it for themselves, and that experimental learning is essentially an active process.....

The aim of this method of learning is most effectively realized when pupils tend to try out their hypotheses about things, to read experimental literature, and to apply the method to a variety of situations in everyday life.....

Experimental learning is possible in almost any subject, but it is obvious that it especially characterizes the experimental sciences.....In literature, music, and art it is properly used; also in the industrial arts.

True experimental learning requires problem situations, in which pupils are permitted to investigate and try out the effects of different possible solutions with a view to formulating their own conclusions.....The task of adapting the materials of these subjects to the more modern way of experimental study constitutes an important obligation on the part of the teacher. If the textbooks in use do not contain problems for investigations and study, the teacher must analyze the materials with the view to creating situations for experimental learning. ....

.....  
...Experimental learning is its own best motivator because it is natural, purposeful, and active. Extrinsic motivation is neither necessary nor desirable.

The very nature of the experimental method of learning often makes it necessary to omit the assignment in out-of-class study until pupils have learned something of the technique of experimentation. Careful guidance is necessary during the initial stages. The teacher must direct the process through questioning, comment, and explanation.....

The interest of boys, particularly, in home experimentation suggests that the teacher should take an interest in practical mechanics and simple chemistry and cooperate with boys to extend their experimental learning in homes, shops, and laboratories. Such magazines as *Popular Mechanics*, *Popular Science*, and others furnish much interesting material for outside assignments that may greatly increase the child's appreciation of the experimental method and furnish him an excellent hobby for his leisure hours. Care should be taken, however, to give young children sufficient class instruction and demonstration so that they will learn not to try dangerous experiments and to consult their teacher when in doubt. Many a future chemist or physicist may find his life interest in these simple boyhood experiences.

.....  
In the laboratory work, lecture and demonstration precede actual experimentation. Whatever may be the course of action, there are certain principles to be adhered to in conducting the recitation in experimental learning. They are:

1. *Demonstrations.* How to do a thing or carry on an activity calls for a demonstration by the teacher to make the performance clear to the learner....

2. *Discussions.* A discussion of problems, techniques, and materials with pupils for purposes of directing their thinking is essential.....

3. *Evaluation.* The recitation should help pupils to analyze, evaluate, and organize materials, to reject anything which does not bear directly on the solutions of problems, and to include all materials which further satisfactory solutions.....

4. *Conclusion.* This is the culmination of all reflective thinking or reasoning -- the arrival at a satisfactory conclusion.....

5. *Verification.* When a conclusion is adopted by the class as the one most likely to be correct, it must be proved....

6. *Application.* This is the final step in all learning. It is the acid test of mastery of an activity or process....

.....

Proof of the success in teaching experimental learning can be quite adequately determined by observing the behavior of children while carrying on the process. Oral and written tests are valuable for purposes of obtaining a detailed check on the knowledge gained through the process.....<sup>11</sup>

*Problem solving* is the sixth and last method of this section. Here again the industrial arts laboratory provides a fertile environment for this method of instruction. The purposes of this method are fundamental to everyday living in which each individual meets and solves numerous problems. The function of problem solving in the school is to acquaint the student with the problem-solving procedures and then to assist him in evaluating such procedures. The instructional program in this method is centered about real problems that are meaningful to the group. The teacher may function in the capacity of a resource person, an advisor, or a co-worker on the problem. The procedure is explained as follows by Risk in his text *Principles and Practices of Teaching in Secondary Schools*.

Problem-solving in relation to learning may be defined as a planned attack upon a difficulty or perplexity for the purpose of finding a satisfactory solution. This involves the process of *reflective thinking*, not merely the accumulation of beliefs or the

<sup>11</sup>Yoakam and Simpson, *op. cit.*, pp. 103-110.



blind acceptance of facts just because someone in authority gives them to us.....

.....

We can...define a *problem-solving teaching procedure* as a process of raising a perplexity, difficulty, or problem in the minds of pupils in such a way as to stimulate purposeful, reflective thinking in arriving at a rational solution of the perplexity, difficulty, or problem. Three elements seem to be involved; namely, (1) a situation which presents some difficulty, perplexity, or doubt requiring solution, (2) a goal or end concerning some aspect of the situation for which no ready answer can be given, and (3) a desire or motive that stimulates an attempt to find the answer. The problem-solving teaching procedure contemplates, to be sure, proper supervision of the efforts of pupils in arriving at satisfactory solutions.

.....

.... Training in the method of attacking problems should have a considerable transfer value.

Besides its practical value in relation to everyday life, problem-solving is of special value in the development of personality. There is no better way to teach independence and initiative. The pupil chooses his own actions because of the conditions set by the problem; there is a conscious aim, and there must be intelligent self-guidance.....

Another value of problem-solving, usually little mentioned, is that the experience of real problem-solving gives pupils an understanding of things that is rarely afforded by reading and reciting about facts or events. Problem-solving, through its use of reflective thinking and vital experiences gives a different insight into the relationships involved.....

In addition to increased ability to solve his own problems, the pupil gains power to evaluate intelligently what others do and think. Their problems are like his problems, and problem-solving teaching should not only teach him practical and efficient methods of attack, but it should free him from the principal errors likely to lead to unsound solutions.....

Two other values of problem-solving teaching are important because they affect both the attitude of the pupil and the spirit of the whole school. In the first place problem-solving appeals to instinctive drives..... Further, this appeal to instinctive drives--curiosity, a desire to master the facts, a desire to examine and handle the

material used, a desire to construct or put together, etc.--is a means to establish a favorable pupil-teacher relationship.....

There appear to be two distinct ways in which problem-solving may be used. One way is to make incidental use of problems in connection with the other work of the course or units, the other is to organize the course or units entirely on the problem basis.

.....

The essential steps in problem-solving are: (1) recognition and statement of the problem arising in a difficulty or a perplexing situation, (2) inspection and proposal of a solution or solutions-- statement of hypotheses, (3) critical evaluation of the suggested solutions-- trying out each one, and (4) verification of accepted solution.

.....

There are three types of classroom procedure that may be used effectively in problem-solving; namely, (1) problem-solving by the teacher, (2) problem-solving by the group (teacher and pupils jointly) and (3) problem-solving by individual pupils.....

Manifestly, problem-solving by the teacher should be used primarily to demonstrate for the pupils how problem-solving is carried forward.....

Problem-solving by the teacher is comparable to the lecture-demonstration in the laboratory in the sense that it sets forth the essential data and the results to be understood, but it differs from the lecture-demonstration in that the teacher is concerned primarily in teaching the how of problem-solving.....

The limitations and weaknesses of this procedure as a regular teaching device are quite evident.....there is no assurance that the pupils actually think through the steps with the teacher;... Further, the steps are all planned by the teacher, whereas the importance of problem-solving is to afford the learner an opportunity to plan, initiate, evaluate, and reach his own conclusions, because this is what we want him to do in everyday life.....

.....

Problem-solving by the group can be carried on in several ways. In the average school it can, no doubt, be done most efficiently under the skillful guidance of the teacher.....

Like problem-solving by the teacher, the value of this procedure is not limited to the facts or the relationships developed, although the conclusions are important. As much value is derived from learning how to attack a problem, how to gather data, how to organize and evaluate such data, and, finally how to organize and verify

conclusions. It gives insight into the way man can and should arrive at tenable conclusions concerning everyday problems. . . .

Problem-solving by the group has its limitations, for the most part very much like other kinds of socialized classroom work. The slower, less capable pupils will be apt to share less in active work than the more capable. The real thinking will be done by the brighter pupils. . . .

During the course of problem-solving by the group, the teacher has an opportunity to point out errors in procedure, reasoning, conclusions, etc., looking to the values to be derived from problem-solving. . . .

. . . . .

The fact that problem-solving by the group may not provide satisfactorily for individual differences, emphasizes the need for some plan whereby the individual pupil does his own problem-solving. The individual plan puts the pupil "on his own," that he may gain the independence and ability which he might fail to acquire under the group plan. This is especially true for the slower pupils. The pupil works at his own rate, and gets help when he needs it.

. . . . .

An objection frequently advanced against the use of problem-solving as a plan for conducting classwork is that many schools do not have adequate books or facilities for such work. . . . An interested teacher and an interested class will supply a surprising abundance of supplementary material. It is a poor community, indeed, that can supply no resources from its homes.

. . . the following three-step plan for organizing problem-solving activities is proposed because it anticipates the need for flexibility while at the same time providing a systematic procedure that is both logical and psychological. . . .

*STEPS IN THE PROBLEM-SOLVING PROCESS*

- I. Introductory step (Preparation)
  - 1. Raising the problem (Gaining a motive --purposing)
  - 2. Defining the problem-- getting an exact idea of the problem
    - (a) Observing -- getting together necessary data
    - (b) Recalling past experience -- reasoning about the situation.
- II. Developmental procedure (Assimilative activities of pupils.)

The order of activities will depend upon whether the inductive or the deductive procedure predominates.)

1. Organizing known facts, principles, relationships, etc., related to the problem.
2. Advancing hypotheses for the solution of the problem or suggesting and selecting method of procedure to be followed.
3. Gathering data:
  - (a) Through reading
  - (b) Through observing
  - (c) Through selection of illustrations, examples, etc., for use in the solution.
4. Critical evaluation of data as applied to the solutions.
5. Formulating conclusions.
6. Checking or verifying results.

III. Application of or summarization of resulting conclusions.

The fundamental philosophy emphasized...is that teaching is the process of guiding pupil learning....the principal functions of the teacher are as set forth...

1. Introductory step (Preparation)

.....

2. Developmental procedure

.....

3. Application step

.....

....At least four pupil factors must be considered by the teacher in adapting problems to pupil needs, namely (1) native ability of the pupil, (2) experiential background, including both school achievement and cultural advantages gained from the home, (3) personal interests, and (4) special aptitudes and training.

.....

The teacher *must* have a broad perspective of the objectives and functions of high school education and the contributions to be made by different subject matter fields.....

Not only must the teacher see his important relationship to the whole school program, but he must also have a very thorough grasp of his own field in its aspects and in its relation to life. The teacher must see his subject as it touches life problems if he is to become proficient in training pupils in solving everyday problems.<sup>12</sup>

<sup>12</sup>Risk, *op. cit.*, pp. 451-467.

Numerous methods in common use today are in many respects adaptations of teaching procedures that have been in existence for some time and have risen or fallen in keeping with the educational theories of the particular period. Some methods lose their effectiveness as new understandings in the realm of educational psychology develop. Other methods cease to be effective due to changing purposes, subject areas, and content in the school program. In recent years much attention has been focused upon the concept of "problem solving" in education. The final reading in this part of the chapter deals with several techniques that have been under considerable discussion and are still upheld by some as fitting approaches to the "problem" approach to teaching. These procedures are discussed by Bossing in a discussion titled "What Are Some Problem-Solving Methods?" in his *Teaching in Secondary Schools*.

#### THE HERBARTIAN "FORMAL STEPS" AN INDUCTIVE PROCEDURE

The nearly forgotten once famous Herbartian Formula Steps in teaching represent one of the early efforts to develop the inductive procedure into a teaching formula. . . . There is no reason why teachers may not modify the teaching technique of a basically sound form of learning into a modern pedagogical form of directing pupil learning.

1. *Preparation.* The first formal step of Herbart was preparation. In this phase there was to be aroused in the mind of the student a conscious need to solve a problem, and to lead the student to a clear recognition and understanding of the nature of the problem. . . .

2. *Presentation.* The second formal step, presentation, paralleled the inductive step--the collection of data. In this step Herbart carried forward the actual presentation to the students of the new materials to be learned. . . .

3. *Comparison and abstraction.* The third step involved the effort to analyze the data presented and to organize it into significant relationships. . . .

4. *Generalization.* The fourth and final step, in the Herbartian formal steps, meant the summary of the critical and careful evaluation of the preceding step into a general conclusion or statement of a principle, as the case might warrant.

5. *Application.* This was the fifth step added by Herbart's followers. . . . The teacher, or sometimes the students, therefore applied the new generalization arrived at in the fourth step to many

new particulars. This had an additional pedagogical value, in that it insured the abstraction of the conclusion of principle from association with the original framework of the problem. . . .

. . . The fact that it has been made unpopular, through misuse by teachers who have taken over its form without a full appreciation of its spirit, should not relegate it to the limbo of forbidden methods. . . . There is no reason why the Herbartian formal steps reconstructed to conform to our best educational ideals may not at times be applied to the lecture or recitation methods.

#### THE MORRISONIAN "TEACHING CYCLE AND PROBLEM-SOLVING"

Closely akin to the Herbartian formal steps is the *cycle plan of teaching* as applied by Morrison to what he calls the science type learning. . . . both (Herbartian and Morrisonian methods) are based upon the inductive procedure, and as such represent two teaching methods that are applicable to problem solving. The cycle plan is admirably adapted as a problem-solving technique. . . .

1. *Exploration*, Morrison says, has three main purposes; namely: economy, the establishment of an apperceptive base, and orientation. . . . It serves also to tie up the experiences of the student with the problem to be studied and thus motivates him. . . .

2. In *presentation* the teacher gives to the class, by lecture or demonstration, the essential understanding of the unit. . . .

3. The *assimilation* phase plunges the student into the details of the understanding he seeks to acquire. Here he learns to collect the data of that understanding from sources which the teacher has made available to him in the form of lists of reference books, mimeographed sheets, etc. . . .

4. The organization step carries forward the work of the last phase into a coherent logical statement of conclusions, or the essential basis for the understandings that have culminated from the study. . . .

5. The final step, *recitation*, does not contribute to the further understanding or solution of the problem except as an attempt to convey the results of one's study to others fixes the understandings more firmly or gives final clarity to one's thinking. In this phase some students present orally the results of their organization and understanding, while the rest of the class offer written summaries of their work. . . .

The strong similarity between the first four steps of the Morrisonian "Cycle Plan" of teaching for the science type units and

the inductive procedure becomes quite evident as each step is studied and the relations noted.....

### PROJECT METHOD

Originally the "project" had reference to a method of problem solving largely associated with practical problem-situations of a manipulative or constructive nature in manual arts or agriculture. As problem-solving procedures became accepted as educationally more important, the techniques of the "project" were recognized as having broad application value in all types of problem-solving situations.... Pedagogically the method is fundamentally sound and contemporary in applicability to *problem-solving learning*. All authorities on method accept four steps in the project-method procedure and agree on the nomenclature of those steps.....

1. *Purposing*. Throughout the whole of modern methodology is heard the note of emphasis upon motivation. It was stressed particularly in the consideration of the problem method.... Because of its practical problematic nature, the project should enlist the wholehearted cooperation of the student even more effectively.... As far as possible, the students should be encouraged to originate projects. There are difficulties of a very real nature, however, in undirected, pupil-initiated projects. The all-absorbing thing that the student may be emotionally set to do, possibly has little educative value. Or, it may have educative value for another time and place, but little value in contributing to the immediate needs of the student in the particular learning stage which he may have reached at the moment.....

It should be borne in mind that the genius of the project lies in the wholehearted enlistment of the student in the doing of it.....

2. *Planning*. ....the crux of the project method is in the planning. It is the important phase of the problem-solving aspect of the project. The success of the project depends upon the care with which the details of procedure in the undertaking have been worked out. The student should carry the chief responsibility for planning. He cannot achieve vicariously the power for good planning. The strategy of good planning comes only by constant intelligent planning, with some errors; but with the errors, comes wisdom.... The competent teacher will guide the activity by subtle questions that direct the student's attention to problems of procedure, force a careful appraisal of a given step in the development of a plan of action, and in consequence lead the student to an habitually critical study

of a plan before the plan is adopted. . . . When group acceptance of a common project has taken place, the teacher may act as discussion leader to draw from the group a desirable plan for the execution of the project.

3. *Executing.* The execution of the project is the most interesting phase of project teaching. In the eager mind of the student this is the most vital part of the project procedure. He finds here that activity and the doing of things of a tangible nature, in which are developed immediate interests of a most challenging sort. . . .

As far as possible, the teacher should see that necessary materials are readily available. As in the problem method, the student should be able to keep attention and energy centered on the educative aspects of the projects and not allow time and effort to be dissipated in fruitless bypaths. . . .

.....

The teacher needs to observe closely the progress made while the execution phase is in progress. Plans should be followed carefully. The student should be trained to follow plans as carefully as he is trained to make them, and at the same time he should be taught to maintain a critical attitude toward those plans. . . . The teacher must at all times act in the role of friendly stimulator, lest enthusiasm falter in difficult or non-spectacular phases of the project's execution. . . .

4. *Judging.* The final stage in project learning is the passing of judgment upon the finished product. . . .

Here again the tendency of the teacher will be to act as judge and jury without reference to the students. The procedure here must be conditioned by the circumstances. If the project is individual, the student should become as far as possible his own best critic. The teacher should equip him with the necessary standards of evaluation and guide him in his use of them. . . .

Where group activity is involved, student judging is most desirable. It is the student who needs to develop powers of critical analysis and the ability to offer constructive suggestions. . . . A student is more likely to receive seriously the judgments of his peers than he would those of the teacher. The average student is much more concerned with the opinions of those of his own age or set than with any others. The teacher should take advantage of this additional spur to student incentive. . . .

.....



### WHAT SPECIAL CONSIDERATIONS ARE INVOLVED IN PROBLEM APPROACH?

The practical nature of problems is in large measure accountable for the special considerations that govern their selection. Every problem should be scrutinized carefully, with the following criteria in mind:

1. *It should have definite educational values.....*
2. *It should be adapted to the needs of the situation.....*
3. *Availability of materials should be fully considered.....*
4. *The time consumed must be commensurate with the values that accrue from execution of the problem project.....*
5. *The adaptability of problem performance to the regimentation of the school should be carefully considered.....*
6. *Cost of materials often proves the determining factor in the selection of problem projects.*
7. *A problem should be capable of completion within the time limits set by the course.*

Although the teacher may not appear to occupy the center of attention in some aspects of the problem method, yet the teacher is an important cog in the machinery of this method.... A teacher who has the ability to see problems clearly, the power to analyze with a keen discernment, and the facility to synthesize and draw conclusions with an uncanny accuracy, will be a rare help to the students in their mastery of the difficult technique of problem attack....

For those methods which have for their primary purpose the development of mental skills, concepts, attitudes, and ideals, -the problem is somewhat basic, particularly for those which deal with general ideas.... The problem and project methods are the newer methods developed to train students specifically in the solution of problems. They are not readily usable in perceptual or associational learning, except as these become by-products of problem-solving effort....<sup>13</sup>

### SENSORY OR PERCEPTUAL LEARNING

The sensory organs of seeing, hearing, smelling, tasting and touching have been identified as the perceptors through which all learning enters on its way to the mind. These five items to others are

<sup>13</sup>Nelson L. Bossing, *Teaching in Secondary Schools*, (New York, Houghton Mifflin Company, 1952), pp. 101-135.

known as the primary senses through which the human being learns about his environment. Certainly it can be agreed that the efficient use of the senses is extremely important to effective learning.

Audio-visual or sensory education to a limited degree is generally practiced by all industrial arts teachers by virtue of the materials and equipment used. Yet, there remains extensive areas of related and technical understanding that demands the abundant use of teaching aids in their many and varied forms. The teacher-education program has as its obligation the adequate and appropriate use of such materials in setting up a pattern for teaching and learning.

The importance of these materials in carrying on a more effective and efficient educational program is amply evidenced when one observes the nature and extent of the present-day school population, the nature and extent of the facts, knowledge, concepts, and theories to be taught, and the competencies expected of the individual in the limited time available to develop them. The growth and improvement of teaching through these aids will be in proportion to the degree to which they are understood and properly used. James S. Kinder, a distinguished author in the field of audio-visual education discusses these points in his text *Audio-visual Materials and Techniques*.

.... audio-visual education is not a new subject to be introduced into the curriculum; in fact, it is not a subject at all. Nor do visual and sensory materials and techniques replace other proved teaching devices. These new devices, however, are important in extending the school's curriculum materials and in enriching instruction. Their appeal is varied, and their simple concreteness will be beneficial to every child, regardless of his mental capacity. There is a place for audio-visual materials and techniques in every school curriculum.

Each curriculum material has its own unique contribution to make to the pupil's educational development. In some instances a certain material is basic; in others it is supplementary.....

.....

The task before the schools today is so broad in scope and so complicated in character that education must utilize every tested and approved method known.....

.....

....The purpose of teaching is basically to arouse the pupil and to direct his behavior into channels which are desirable, such as the development of proper skills, useful habits, conceptual understandings, acceptable attitudes, personal appreciations, and critical-mindedness.

The philosophy of audio-visual education accepts this tenet and holds that audio-visual materials validate this principle.... The classroom, the materials and tools of learning, and the teacher add to or subtract from the meanings acquired by the student. Audio-visual materials, reading materials, discussions, and other tools of learning exist for one purpose only--effective learning. They are means to an end, that end being the transmission, creation, interpretation, and evaluation of experience.

.....  
Principles Governing the Presentation and Use of A-V Materials.  
.....

1. No one type of method or material should be used to the exclusion of others.
2. Certain materials seem more appropriate for certain units of understanding, or in connection with certain objectives, than others.
3. Too much material used at any one time may befog rather than clarify learning....
4. Preparation for the proper use of visual or other learning material must always be made.
5. The materials should be woven into lessons and teaching procedures, because they are integral parts of lessons.
6. The pupil must be prepared and handled as an active participant.
7. The pupil must be held responsible for what goes on during the lessons.....
8. On the whole, examples, specimens, or demonstrations should be positive rather than negative. ....
9. The teacher should provide opportunities for language training, oral and written, to accompany perceptual experiencing.
10. Above all, never use materials haphazardly nor allow the lesson to become mere entertainment unless the lesson objective is just that and nothing more....
11. Materials of instruction, teaching procedures, laws of learning, and the objectives of education must be coordinated and integrated.

Some Practical Values of Perceptual Materials. ....

*They overcome the limitations of restricted personal experiences of pupils.....* Audio-visual materials, more than other teaching

media, tend to equalize this disparity in experiential background. If pupils cannot be taken to cultural places, then bring the cultural places to them.

*They overcome the limitations of the walls of the classroom.* It is indisputable that traditional methods of teaching often do not free children from the restrictions of the classroom.....

*They provide for the direct interaction of the pupils with the realities of the social and physical environment.* One of the greatest criticisms of the traditional classroom is its enervating effect on the pupils. Instead of constantly "reading about" or "talking about" social and physical phenomena, pupils need to come into direct contact with them in as many ways as possible.....

*They give initial concepts which are correct, real, and complete.* Learning things correctly initially is economical learning..... It is easier to learn initially the correct addition combinations, for example, than to learn them incorrectly and later have to make corrections.....

*They awaken new desires and interests.* As the pupils' experiences are broadened and enriched, as their perceptions are keener, as their concepts are more complete, they will inevitably respond with new desires, thoughts, attitudes, and interests.....

*They provide motivation and stimulation.* Visual instruction will undoubtedly motivate and stimulate learning of all types..... These aids will be equally effective to renew stimulation and motivation as the unit is being developed. Audio-visual materials have a salutary psychological effect.

*They provide for economical learning.* An old Chinese proverb contends that one picture is worth ten thousand words. Certainly seeing an object or a process will save much explanation and verbalization. Clearer and more intense images will result. Retention will be longer.....

*They provide integrated experiences which vary from concrete to abstract.*.....

Audio-visual teaching increases the possible educative growth of non-academic-minded pupils. The pupil of less-than-average intelligence will profit immeasurably from a wise use of audio visual aids..... Direct and vicarious audio-visual methods are a boon to such pupils. This is not to say that only the non-academic-minded pupil profits from such materials and methods.

.....

Each audio-visual tool has its own specific utilization techniques....Experience and research provide the following general principles which apply to all the materials.

1. They should be integrated with the curriculum --be it one of experience or subject-matter type.
2. They should be previewed or tried out in advance of use in classroom.
3. They should be *taught*, not merely shown.
4. Provision should be made for definite follow-ups.
5. Records should be kept of results obtained; evaluations should be made.
6. Too many aids should not be used at one time.
7. The type of materials used should enrich the experience being taught.
8. They should be used in the regular classroom or laboratory.
9. They should supplement, not supplant the teacher, textbook, and other materials.
10. They should be available when and where needed.
11. They should be factually and technically correct.
12. No one type of material is best for all learning situations; each has a specific role in order to provide maximum effectiveness. <sup>14</sup>

#### IMPLICATIONS FOR INDUSTRIAL ARTS AND INDUSTRIAL ARTS TEACHER EDUCATION

Foremost in the implications of the previous writings and excerpts on methods is first that such methods do exist and second, that they have been found to be appropriate and effective in certain teaching-learning situations. The third implication is inherent in the fact that all purposes of education, all objectives of a program, or all the needs of students cannot most effectively be attained without methods appropriate to the situation. The function of the teacher-education institution is to help young men and women to become effective in the use of a wide variety of instructional tools and methods.

A college student may be required to read about these methods, and again he may not. However, even if he did read about them, is this as meaningful as if he were to experience such methods in his

<sup>14</sup>James S. Kinder, *Audio-Visual Materials and Techniques*, (New York, American Book Company, 1950), pp. 4 to 12 and 43 to 73.

own learning? Conclusive testimony on this point is offered when one views the nature of methods used by teachers, particularly teachers just out of college. The one method they know and are capable of performing with a considerable degree of competence is the demonstration. It appears logical that this should be so, since they have just completed four years of experiencing fine demonstrations, with very little real experience in experimentation, problem solving, group projects, unit methods, or the recognition of teaching in terms of objectives rather than the developing of a few skills and techniques.

Educational psychology and the function of the American educational program have passed far beyond the stage of teacher-telling or explaining and then having students repeat or duplicate the deeds of the teacher. The whole realm of social adjustment and providing experiences designed to promote desirable social relationships appears to have been left to chance in an environment that abounds with possibilities for their development.

The task of assisting students or pupils in problem solving experiences is a rather difficult one where the teacher has never experienced a similar situation in his education. The teacher's task is a problem of human engineering with the human being the most complex mechanism in existence. This complex organism becomes the charge of the teacher to assist, to guide, to motivate, to encourage, to teach, and to evaluate. Yet, the very vehicle (method) by which this is done is conceived so narrowly with the preparation and experience in method confined to a few techniques that also have their limitations. Just as a fine carpenter has more than one kind of a chisel, at least five or six saws, and a variety of different tools, each for a given purpose, the teacher also must possess a working knowledge of a variety of methods appropriate to the situation at hand.

A portion of this chapter was devoted to a discussion of methods appropriate to the objectives of the program. Herein it was intended that the teacher provide experiences aimed at developing skills, creativeness, or appreciations. Other techniques may be utilized in the development of consumer knowledge, understanding basic processes, or the development of desirable social relationships. These are all tasks that the teacher in the secondary school is asked to perform. As a consequence, methods and subject matter classes in teacher-education institutions must provide the student with sufficient experience and background for working effectively in these areas.

It appears that the implications for the previously described methods for industrial arts teacher education are basically a matter of

consolidation, whereby the institutions are not only teaching crafts and developing skilled young men for teaching but that the teacher-education institutions also become a laboratory where one learns methods to the same extent that he learns the skills of construction, drawing, and metalworking. The integration of various methods in shop and laboratory class instruction is a primary consideration with significant implications for the methods previously mentioned.

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## V

# Guidance Procedures

James R. Hastings  
State University of New York  
Teachers College at Oswego

*Guidance is being recognized more and more as an integral part of the teaching-learning process. Further, what is now known of teacher-preparation demands that valid guidance procedures be assiduously applied to the business of teacher-education. To be more explicit, prospective teachers must experience good guidance as students if they are to perform their guidance function well as teachers.*

*Author Hastings has combed the rather voluminous materials in the field and has selected for discussion the most significant features.*

*His chapter opens with a quick look at the evolution of concepts of guidance as the term is used in education and a discussion of basic present-day concepts.*

*The body of the chapter describes the principal techniques of (1) obtaining guidance information, and (2) using it.*

*As one reads further, he will be struck by the vital importance of the guidance function, particularly when he views the extent to which knowledge in this field is applied – or not applied – to present teacher-education practices.*

*The section on implications for industrial arts and industrial arts teacher education ties the whole chapter together and sharply defines the tasks which face us in this area.*

EDITOR

Concepts of guidance have changed and broadened greatly since the turn of the century. The basic aims in providing guidance services to youth, however, remain largely the same as when first conceived. The educational emergence of the term "guidance" took place in Boston in 1908 when Frank Parsons began vocational placement guidance for out-of-school youth. The historical development of the guidance movement has been an interesting and rapid one in its attempts

to keep pace with the parallel development of educational thought and practice.<sup>1, 2, 3, 4</sup>

While the field of guidance was developing, changes were also occurring in the concepts of the purposes of education and the nature of learning. In the late nineteenth and early twentieth centuries the concept of learning emphasized memory as being important in the learning process. The concept of "mental discipline" or "mind training" also had great influence. These concepts focused the major emphasis upon subject matter in education.

The report of the Commission on the Reorganization of Secondary Education entitled *Cardinal Principles of Secondary Education*<sup>5</sup> introduced a radical change in the stated purposes of education giving guidance a new emphasis. Prior to the report, secondary education was considered to have essentially a college preparatory function. No emphasis was placed on the *civic-social-ethical* factors of living. In 1938 the Educational Policies Commission published a comprehensive report, *The Purposes of Education in American Democracy*<sup>6</sup>, and in 1944 the National Association of Secondary Principals outlined "The Imperative Needs of Youth" in *Planning for American Youth*.<sup>7</sup> Each of these reports reemphasized the importance of the individual and his problems of adjusting to the present society. This reorientation of thinking has presented many problems to those concerned with the guidance function in education as Bossing points out:

<sup>1</sup>Anna Y. Reed, *Guidance and Personnel Services in Education* (Ithaca, New York: Cornell University Press, 1947)

<sup>2</sup>Anthony Humphreys and Arthur E. Traxler, *Guidance Services* (Chicago: Science Research Associates, 1954), chap. V.

<sup>3</sup>John M. Brewer, *History of Vocational Guidance* (New York: Harper and Brothers, 1942)

<sup>4</sup>James R. Bedford in *Encyclopedia of Vocational Guidance*. Oscar J. Kaplan, (Ed.) (New York: Philosophical Library, 1946), pp. 461-478.

<sup>5</sup>Commission on the Reorganization of Secondary Education, *Cardinal Principles of Secondary Education In American Democracy* (Washington: Educational Policies Commission of the NEA and American Association of School Administrators, 1938)

<sup>6</sup>Educational Policies Commission, *The Purposes of Education in American Democracy* (Washington, D.C.: Educational Policies Commission of the NEA and the American Association of School Administrators, 1938)

<sup>7</sup>*Planning for American Youth*, p. 43, *A Summary of Education for All American Youth* (Educational Policies Commission. Washington, D.C.: National Association of Secondary School Principals, 1944)

...changing conceptions of education have complicated the problem of education versus guidance as a special function. With better knowledge of the complex psychological nature of the human organism and the introduction of a radical change in the conception of learning and the goals of education, which came about in the past quarter century, the guidance movement has faced a period of confusion and adjustment. A better understanding of individual differences has complicated the guidance problem since each individual has to be considered an entity with peculiar educational needs and cannot be fitted into a few pattern stereotypes.<sup>8</sup>

With the development of the behavioral concept of learning, the question has arisen as to whether education and guidance can be considered as separate functions or whether the terms are, in fact, synonymous.

#### CONCEPTIONS OF GUIDANCE

The definitions of guidance that are popularly accepted today make it difficult to determine how guidance is to be separated from at least one phase of general education itself. Some think of guidance as organized services designed to give:

... systematic aid to pupils in solving their problems and in making adjustments to various situations which they meet.<sup>9</sup>

Each guidance authority seems to have attempted to express his own viewpoint in an attempt to be more definitive than others in the field. Traxler approaches the subject this way:

...Guidance as defined by those who approach the problem rationally implies first of all, recognition and understanding of the individual and creation of conditions that will enable each individual to develop his fullest capacities and ultimately to achieve the maximum possible self-guidance and security both economically and socially. This concept of guidance epitomizes our democratic philosophy. It is as enduring as democracy applied to the life of the school.<sup>10</sup>

<sup>8</sup>Nelson L. Bossing, *Principles of Secondary Education* (New York: Prentice Hall Inc. 1955), p. 461.

<sup>9</sup>Cooperative Study of Secondary School Standards, *Evaluative Criteria* (744 Jackson Place, Washington, D.C.: 1950), p. 221.

<sup>10</sup>Arthur E. Traxler, *Techniques of Guidance* (New York: Harper and Brothers, 1945), p. 13.

Erickson has this to say about various viewpoints held:

... Because of the interrelationship, many people have become confused and have interpreted guidance in terms of widest extremes. Some people have maintained that education is guidance while others have insisted that guidance is only the process of making better vocational choices. Neither of these points of view is realistic when it is related to present-day education.<sup>11</sup>

Another writer, Arthur J. Jones, who has been a leading authority in the guidance field for over a quarter of a century, presents the meaning of guidance this way:

Viewing the life of the individual as a whole, guidance may be said to have as its purpose helping the individual to discover his needs, to assess his potentialities, gradually to develop life goals that are individually satisfying and socially desirable, to formulate plans of action in the service of these goals, and to proceed to their realization.

This practically identifies the purpose of guidance with that of education. It places major emphasis upon the development of the whole individual who is now functioning and will in the future function in a social environment. It is a useful concept because it stresses the unity of one's life and reveals the impossibility of separating one aspect of life from another. ... One of the most vital elements in our efforts to educate individuals is the assistance we give in connection with choosing and developing these life purposes or goals.<sup>12</sup>

The term "personnel work" is being used with increasing frequency since World War II with the increased attention and emphasis placed upon student guidance at the college level. An interesting comparison of guidance and personnel work is made by Jones in his statement:

Guidance is used to indicate a type of personalized service in the elementary and secondary school; personnel work is used for services in business, industry and many forms of government work. It is also used in higher education as "student personnel work". In the past few years the term pupil personnel work has been used with

<sup>11</sup>Clifford E. Erickson, *A Basic Text For Guidance Workers* (New York: Prentice Hall Inc., 1947), p. 4.

<sup>12</sup>Arthur J. Jones, *Principles of Guidance and Pupil Personnel Work*, (New York: McGraw-Hill, 1951), pp. 77-78.

increasing frequency for similar services in the secondary and in the elementary school . . . .

.....  
 [in industry] personnel work deals primarily with the worker; it takes no part in the actual process of production. It has a direct relationship and responsibility to the general administration and to the heads of departments.

.....  
 . . . . personnel work [in education] is not easily defined. We have clear statements of the purpose of personnel and of the personnel point of view, fairly definite descriptions of personnel services, and outlines of personnel programs, but few if any clear statements of what student personnel work is.<sup>13</sup>

The general contention among guidance people that ‘personnel work’ and ‘pupil personnel services’ place too much concern on the *services* aspect as compared to the concern for the all-around development of the individual is fully expressed by Reed when she states:

Guidance is more inclusive in scope, in available resources, and in methods than “personnel service.” It may include guidance through the example of parents, teachers, and others and guidance which comes incidentally from the heading of a book, attendance at a lecture, participation in some community service and the like. Guidance may derive from group activities such as assembly or home-room programs, club conferences, and classroom discussions, and it may also derive from counseling interviews implemented with the best tools and techniques . . . . Services of this type lie all around each one of us not only in our infancy but throughout our entire life. “Personal service” on the other hand, seems much more specific; it is never unconsciously offered and is always personal in character and application; the personal interview is its major technique.<sup>14</sup>

Considerable rethinking of purposes and practices has been accomplished in recent years concerning the scope of pupil personnel services since their original development. This rethinking is indicated in the statements contained in the “Student Personnel Point of View” as drawn up by the Study Commission of the Council of Guidance and Personnel Associates. These statements, concerning ways in which personnel work helps the individual, are seen as applying to all types

<sup>13</sup>*Ibid.* p. 80-85.

<sup>14</sup>Reed, *op. cit.* p. 71.

of personnel work whether it be in business, industry, schools or colleges.

1. In securing orientation to his working environment
2. In securing satisfactory living conditions
3. In attaining success in his work
4. In securing a sense of belonging; of being accepted by some group or groups
5. In developing good physical and mental habits
6. In understanding himself
7. In developing acceptable and effective ways of expressing his emotions
8. In developing lively and significant interests
9. In learning the value of time and money and the wise use of each
10. In progressively developing appropriate vocational interests and plans
11. In developing individuality and a sense of social responsibility in relation to his individuality
12. In developing a sense of life values
13. In developing the necessary flexibility and consideration to live and work with others
14. In developing satisfying and socially acceptable adjustments to the opposite sex
15. In discovering ethical and spiritual meanings in life
16. In developing the responsibility and assuming the obligations of a citizen and worker in his community.<sup>15</sup>

Space does not permit a more thorough discussion of all the various viewpoints which are held in the field of guidance and personnel work..Sources such as Willey,<sup>16</sup> Jones<sup>17</sup> and Smith<sup>18</sup> have very adequate comparison of the various views. Williamson<sup>19</sup> presents a comprehensive overview on the pupil personnel program.

<sup>15</sup>E.G. Williamson, Chairman, *The Student Personnel Point of View* (rev. ed.; Washington, D.C.: American Council on Education, 1949), pp. 6-11.

<sup>16</sup>Roy DeVerl Willey and Dean C. Andrew, *Modern Methods and Techniques in Guidance* (New York: Harper and Brothers, 1955), chap. I.

<sup>17</sup>Jones, *op. cit.*, chap. III.

<sup>18</sup>Glenn E. Smith, *Principles and Practices of the Guidance Program* (New York: Macmillan Company, 1951)

<sup>19</sup>E.G. Williamson, *Counseling Adolescents* (New York: McGraw-Hill Company, 1950), chap. II.

## NEED FOR GUIDANCE

Teachers of industrial arts are very much aware of the ever increasing complexity of our environment. The various developments in the areas of pure and applied science and the mechanization of industry have all contributed to increased vocational specialization and opportunities. These changes have brought about higher educational requirements and higher standards of preparation for entry into many occupations. The growth of industry has led to dense concentrations of population with attendant sociological problems.

The schools have attempted to keep pace with the industrial and sociological problems of society which have greatly expanded their curriculum in many areas. This expanded curriculum has complicated the students' choice of appropriate courses and activities which will enable him to reach his goals. These factors all contribute to greater recognition of the fact that individuals need help, as pointed out by Traxler:

Psychologically, a need for guidance is found wherever the environment is sufficiently complex to permit a variety of responses and whenever individuals are not equipped to react instinctively to the stimulus of the environment. Among animals and in primitive social orders, the guidance of youth is taken care of by the parents. Even in fairly advanced civilization which maintains a certain homogeneity, the home can continue to be the chief guidance agency. Thus, in the largely agrarian society which obtained in the United States until 1900, there was no keenly felt need for organized guidance other than that provided by the family. <sup>20</sup>

.....

At the same time the changing environment has placed much greater responsibility upon young people for the making of wise choices; educational agencies have become aware of large differences among individuals in their potentialities for success in different areas. <sup>21</sup>

A number of divergent sources have provided the foundation for the basic concepts which have guided the development of guidance work. The concepts used stem from the fields of religion, philosophy, psychology and sociology. Teacher educators and educational personnel

<sup>20</sup> Arthur E. Traxler, *Techniques of Guidance* (New York: Harper and Brothers, 1945), p. 1.

<sup>21</sup> *Ibid.*, p. 2.

in general are primarily concerned with the sociological and psychological aspects of their work with individuals.

*Sociological Bases.* One of the basic premises of our way of life is the belief in the fundamental worth of the individual and that each individual has a worthwhile contribution to make to our society through being able to achieve his maximum potential. To do this he needs help. Jones emphasises the recognition of individual needs when he states:

Guidance is founded upon the principle of the conservation of human life and human energy; it is based upon the fact of human need.

.....  
 ...Everyone needs assistance at some time in his life; some will need it constantly and throughout their entire lives, while others need it only at rare intervals at times of great crisis. The possibility of education, as well as the necessity for it, is founded upon the essential dependence of people upon one another. Young people, especially, are not capable of solving life's problems successfully without aid. <sup>22</sup>

There is to be noted in the writings in the guidance field considerable use of the terms "needs" and "problems" which are frequently used interchangeably in describing either the approaches or techniques to be considered in working with the individual. An explanation of these terms and their meaning are contained in Wrenn's statements:

... A *need* is a demand of the organism, whether or not acknowledged or understood by the individual. A need is a "construct", or a hypothetical concept of a physiological tension which is electrochemical in nature. The situation which gives rise to the construct may be instigated from either within or without the organism. It is as real as the physical structure itself although it may not be within the range of conscious awareness.

A problem, on the other hand, is something of which the individual *is* aware and for which he has no immediate solution. Without awareness there is no problem. But the individual may not link a felt problem with a basic need. His problem is that he hates his job, but he may or may not see the relationship between this and his need for social acceptance... A problem is the outward expression

<sup>22</sup>Jones, *op. cit.*, p. 3.



or result of a need. It could be classified as a symptom of some unmet need. If dealt with directly, the results may be only superficial.<sup>23</sup>

It has been mentioned that up to about fifty years ago much of the guidance of children was accomplished in the home, or through informal contacts in the community. Changing conditions in the home and community in recent years preclude, in the majority of cases, opportunity for learning about occupations and the development of handyman skills derived by performing necessary duties around the home or through observing various lines of work in the community. With a higher percentage of both parents working the opportunity for parental guidance and counseling has also been reduced. These changed home factors place an increasing responsibility on the educational program of the school to provide these necessary experiences and information. This condition is summarized in the statement:

The changed conditions have operated to throw upon the school added responsibilities. It must not only care for the general education of the young man or woman but must assume a large part in providing training in cooking, sewing, budgeting, food values, handwork of various kinds, recreations, and even moral training. It is useless for us to say that it is unfair and unwise to shift these burdens from the home to the school. Some of them the school can do much better than the home. In any case, the question is not whether the home should or should not do it. We are faced with a situation, not a theory: this training is vital; our children must get it in some way; no one is now assuming the responsibility; someone must do it; it is clear that the home is not doing it; the best agency at present available is the school.<sup>24</sup>

In addition to the changes occurring in the home, many significant and far reaching changes have occurred in the field of labor, business and industry since the turn of the century. With the development of the mass production principle has come increased specialization within industry and labor alike. It has become increasingly important for persons to select some particular line of work and learn to do it as efficiently as possible in order to meet the ever increasing demand for more goods and services. In this same period there has also been a shift of emphasis among the various types of industry. An understand-

<sup>23</sup>C. Gilbert Wrenn, *Student Personnel Work in College* (New York: The Ronald Press Company, 1951), pp. 13-14.

<sup>24</sup>Jones, *op. cit.*, p. 6.

ing of the shift in emphasis and specialization among the industries can be gained from a comparison of the classification of occupations in the census figures from 1900 to the present. The shift in occupational distribution is shown in Table I.

TABLE I  
*Percentage Distribution of Labor Force and  
Gainful Workers by Major Occupational Groups 1900-1949*<sup>25</sup>

<i>Occupational Group</i>	<i>Percent- age 1900</i>	<i>Percent- age 1920</i>	<i>Percent- age 1949</i> <sup>26</sup>	<i>Percent- age 1940</i>	<i>Percentage Change in Numbers 1900-1949</i>
Agriculture Forestry, Fishing	34.3	26.0	15.1	12.8	-25.0
Manufacturing	2.2	3.0	1.7	1.4	+40.0
Construction	21.5	27.2	19.2	22.3	+14.7
Transportation and Public Utilities	5.8	3.8	3.4	3.4	+27.0
Service Industries	5.7	7.3	6.4	6.4	+14.4
Extraction of Minerals	11.4	13.6	20.6	17.8	+242.0
Trade Distribution and Finance	13.9	15.8	18.2	16.7	+167.0

Changes in the age distribution of our population hold implications for those concerned with guidance. An examination of Table II reveals the percentage of our total population between the ages of 14-19 is increasing fairly steadily although not as rapidly as in the upper age levels.

This change in population distribution holds several important implications for guidance. Many more youth each year are going to be faced with the problem of selecting either vocational employment or selecting a course to follow in higher education. A recent report on the nation's youth pointed up this condition by stating:

<sup>25</sup>*Statistical Abstract of the United States, 1942.* pp. 66-82.

<sup>26</sup>U.S. Bureau of Census Estimates.

In October 1950, although the principal activity of the youngsters 14 and 15 years old was school, Bureau of Census estimates showed that one in five children in the age group had a job. Most of these workers (86 per cent) however, were employed outside school hours only. School claimed the full time of only a little more than half of all the 16 and 17 year old boys and girls (51 per cent). Among young workers in the 18 and 19 year group, only one in six was combining school with work.<sup>27</sup>

The growth of our population in the upper age levels coupled with the changes in our technological society which have resulted in shorter working hours has brought increasing attention to the wise and constructive use of leisure time by more and more people. The problem of how to use leisure time constructively is of vital importance not only to the individual but for society as well.

Other important developments in the sociological aspects of our life such as an increase in the number of women workers; a definite rapid trend toward urban living; and an increased mobility of our population<sup>28</sup> all contribute to a more complex society requiring the individual to make many more adjustments than formerly.

TABLE II  
*United States Population*  
*Percentage Distribution by Age Groups 1900-1975*<sup>29</sup>  
*in Millions*

Age Groups	1900	1920	1940	1950	1975
Under 5 years	9.2	11.6	10.5	16.3	18.0
5-14	17.0	22.0	22.4	24.4	35.2
15-19	7.6	9.4	12.3	10.7	17.6
20-34	19.4	26.4	32.9	35.5	49.8
35-44	9.2	14.1	18.3	21.6	22.2
45-54	6.4	10.5	15.5	17.4	23.2
55-64	4.0	6.5	10.6	13.3	19.9
65 Years and Over	3.1	4.9	9.0	12.4	20.7
TOTAL	76.0	105.7	131.7	151.7	206.6

<sup>27</sup>The Interdepartmental Committee on Children and Youth of the Federal Government, *Youth the Nation's Richest Resource* (Washington, D.C.: Government Printing Office, 1953).

<sup>28</sup>J. Frederick Dewhurst and Associates, *America's Needs and Resources* (New York: The Twentieth Century Fund, 1947), chap. III.

<sup>29</sup>Source: Bureau of Census  
Figures for 1975 are estimated projection. For detailed discussion see: Bureau of Census "Current Population Reports" Series P-25 No. 78.

Secondary school and college enrollments have shown a steady increase during the last twenty-five years. According to the most reliable figures available, more than 65 per cent of high school-age youth are attending secondary schools. From 15 to 16 per cent of all college-age youth are attending colleges and universities.<sup>30</sup>

A recent report estimates that college enrollments will more than double by 1970 with a total enrollment of approximately 6,557,000 students predicted. These enrollments are seen as a result of a number of factors; such as, a wider diversification of college curriculums; greater effort to provide college education for those who are capable; opposition by labor unions and others to early employment and others.<sup>31</sup> With more students remaining in school and attending higher education institutions the necessity for careful educational guidance is apparent.

### PSYCHOLOGICAL BASES

Much of the development of the guidance field has been influenced by the psychological studies of the individual. These studies have dealt with differences between individuals, differences within the individual, differences between abilities and interests and the general nature of personality, learning and personal adjustment.

Fundamental to the work or relationship which the teacher has with an individual must be an understanding of what "needs" or "wants" motivate that person. The basic wants of individuals are stated by Landis thusly:

The adolescent youth-group wants what all people in our culture want: (1) recognition and status, (2) respect and social favor, (3) response and happy social interaction, (4) security and group acceptance, (5) experience and expression, (6) achievement and success, (7) happiness and freedom.<sup>32</sup>

Effort must therefore be directed by teachers and guidance workers toward aiding the individual student to satisfy these wants.<sup>33</sup>

<sup>30</sup>Newton Edwards and Herman G. Richey, *The School in the American Social Order* (Boston: Houghton Mifflin Company, 1947), pp. 654-655.

<sup>31</sup>Francis H. Horn, "Our Expanding College Enrollments," *N.E.A. Journal*, XLIII (April, 1954), pp. 217-218.

<sup>32</sup>Paul H. Landis, *Adolescence and Youth* (New York: McGraw-Hill Book Company, Inc., 1947), p. 89.

<sup>33</sup>Merle M. Ohlsen, *Guidance, An Introduction* (New York: Harcourt-Brace and Company, 1955), chap. II.

It is also known that individuals differ in many respects; such as, emotionally, physically, socially and mentally, all of which may be measured in various ways. The differences noted among individuals and within a given individual are significant guideposts to effective guidance by the teacher or guidance worker. A less well defined but nevertheless very significant aspect of the teacher's understanding of the individual deals with the psychology of personal adjustment and acquiring a knowledge of the student's self concept.<sup>34</sup> An especially good explanation of the self concept as it applies to guidance and counseling is developed by Rogers.<sup>35</sup>

The basic principles and aims of guidance to be practiced by all personnel stem from an understanding of the sociological and psychological bases of the guidance function.

#### GUIDANCE AIMS AND PRINCIPLES

Aims and principles serve as guideposts for the counselor in reaching the desired goals in his work with individual students. In the early development of the guidance movement there were some diverging aims and purposes as expressed by the various leaders of the field. Of late there has come about a considerable consensus of opinion concerning what the aims and purposes should be.

Froehlich, a long time leader and worker in the field, bases much of his thinking on these basic assumptions:

1. Guidance work is not confined to "guidance experts".
2. An effective guidance program is possible in a small school.
3. Guidance services cannot be superimposed upon a school but must become through a process of gradual growth an integral part of the school's program.
4. When establishing a guidance program the range of services should be limited to functions which can be performed adequately by the available personnel.
5. The development of the program is dependent upon the speed with which the staff acquires skill in handling additional guidance tools.<sup>36</sup>

<sup>34</sup>J. Anthony Humphreys and Arthur E. Traxler, *Guidance Services* (Chicago: Science Research Associates, 1954), chap. III, passim.

<sup>35</sup>Carl R. Rogers, *Client Centered Therapy* (New York: Houghton Mifflin Company, 1951), pp. 3-64.

<sup>36</sup>Clifford P. Froehlich, *Guidance Services in Smaller Schools* (New York: McGraw-Hill Book Company, 1950), pp. 7-8.

While these assumptions are primarily in terms of a total program, Froehlich makes them with the consideration in mind that all teachers will have a part. All these assumptions hold implications for the classroom teacher and teachers of industrial arts at all levels.

Another list of principles which has been devised for the assistance of those interested in guidance work on all levels is aimed at individualizing the process as follows:

1. Guidance is concerned with the "whole" student, not with his intellectual life alone.
2. Guidance is concerned with *all* students, not only with special or "problem" students.
3. Guidance is concerned primarily with prevention rather than cure.
4. Guidance is more than just the activity of a specialist; it involves the whole school staff.
5. Guidance is concerned with the choices and decisions to be made by the student.
6. Guidance is concerned with developing student self-understanding and self-determination.
7. Guidance is "counsel" – not "compulsion."
8. Guidance is a continuous process throughout the school life of each student.<sup>37</sup>

The most comprehensive overview of all principles involved in working with individuals at all levels is best summed up in the list developed by Reed:

1. Guidance is an integral part of education. It begins in the home and continues throughout school life and initial work life. It serves as a facilitating and integrating agency in all areas of life.
2. Vocational guidance has a social and an individual aim. It is a co-operative factor in the social economy of the time. It is a direct responsibility of the educational system.
3. Individuals, both youth and adult, face many problem situations.
4. The unitary character of individual problems and the necessity for unity in performing guidance functions must be recognized.
5. Persistent and consistent recognition of individual differences is essential to guidance service. Progress in analysis of the individual is dependent upon progress in the psychology of individual differences.

<sup>37</sup>C. Gilbert Wrenn and William E. Dugan, *Guidance Procedures in High School* (Minneapolis: The University of Minnesota Press, 1950), pp. 2-3.

6. Self evaluation is an important factor in individual growth.
7. A scientific attitude and the use of scientific methods is essential in dealing with human problems.
8. The humanitarian or service motive is fundamental to successful guidance.
9. The major function of the counselor is to assist the individual in securing all possible information upon which to base his decision.
10. Cumulative records are essential to individual guidance.
11. Making contacts with others is important both for personality growth and for personality integration.
12. Ultimate decision in any area of life rests with the counselee.
13. Educational administration must assume responsibility for guidance service. Centralized control and decentralized execution is desirable.
14. Leadership must be delegated to specially prepared personnel. The entire faculty must participate.
15. Guidance services properly performed should keep the educational system in close contact with community needs and its guidance facilities.
16. Adequate time for the performance of guidance functions is a prerequisite to success.<sup>38</sup>

It may be seen that although the responsibility for initiating and administering a guidance program is recognized as best placed in the hands of a few well trained personnel, successful implementation requires the cooperation and participation of all teachers. To this end industrial arts teachers must be prepared to accept their full share of responsibility.

### Types of Guidance

The kinds of guidance to be provided are to a large extent governed by the nature of problems confronting the individual involved. Numerous studies have been conducted to determine the nature of these problems. Many of these problems have been brought together and organized in a very helpful way by Ruth Strang.<sup>39</sup> A national survey of 18,000 high school students using the *SRA Youth Inventory* presents a good insight to the problems of youth. The problems are grouped under the following headings: physical, school, social, dating,

<sup>38</sup>Reed, *op. cit.* pp. 53-54.

<sup>39</sup>Ruth Strang, *The Role of The Teacher in Personnel Work* (New York: Bureau of Publications, Teachers College Columbia University, 1946).

personal and vocational.<sup>40</sup> The *Mooney Problem Check List* suitable for identifying problems of individuals on the junior high, senior high, college or adult level lists 330 items under the following headings: (1) Health and Physical Development (2) Finances, Living Conditions and Employment, (3) Social and Recreational Activities, (4) Social-Psychological Relations, (5) Personal-Psychological Relations, (6) Courtship, Sex and Marriage, (7) Home and Family, (8) Morals and Religion, (9) Adjustment to School Work, (10) The Future: Vocational and Educational, and (11) Curriculum and Teaching Procedures.<sup>41</sup> This check list has been a valuable aid in identifying problem areas of individuals or groups.

While it is usually possible to list a problem under a classification heading, that problem is seldom unrelated to other areas and problems and therefore more complex than would at first appear. The same problem in two different individuals is seldom the same in character. Usually there are so many complications that multiple implications and effects are observable.<sup>42</sup>

The types of guidance to be provided for meeting various types of problems are generally recognized as falling under eight heads: (1) health and physical development, (2) home and family relationships, (3) leisure time, (4) personality, (5) religious life and church affiliations, (6) school, (7) social, (8) vocational. Many of the older books in guidance contend that all guidance should be vocationally oriented and all work with the individual should be developed from this standpoint.<sup>43</sup> The prevailing concept, however, recognizes the unitary nature of guidance to the end that all guidance is education. This view is succinctly expressed by Jones:

Education is not concerned merely with the training necessary for an occupation; it is concerned with the development of *individuals* from the all-round point of view; and guidance, as a definite

<sup>40</sup>H.H. Remmers and C.G. Hackett, *Lets Listen To Youth* (Chicago: Science Research Associates, 1950).

<sup>41</sup>Ross L. Mooney, *Mooney Problem Check List* (Bureau of Educational Research, Ohio State University, Columbus, Ohio. Published by Psychological Corporation, New York, 1950).

<sup>42</sup>John W. Rothney and Bert A. Roens, *Guidance of American Youth* (Cambridge: Harvard University Press, 1950), pp. 4-5.

<sup>43</sup>A good example of this viewpoint is: George E. Myers, *Vocational Guidance* (New York: McGraw-Hill Book Company, 1941).



part of the educational process, is also concerned and must be concerned with the *entire* individual.<sup>44</sup>

Guidance of all kinds has a common purpose: to assist the individual to make wise choices, adjustments and interpretations in connection with critical situations in his life. It is generally recognized that the situations in the life of youth for which organized guidance in the school can be presented by teachers and others are in connection with school, vocation and leisure time.<sup>45</sup> The preparation of teachers in special subject areas such as industrial arts might well consider these three aspects of guidance as it pertains to their special area.

#### TECHNIQUES OF OBTAINING INFORMATION ABOUT THE INDIVIDUAL STUDENT

It would be of little advantage to be aware of the basic concepts and purposes of guidance without an equally thorough understanding of the prevailing techniques of implementing the concepts. Implementation is concerned with the "what", "when" and "how" of gaining information about the individual student and putting this information to use in various ways to aid the individual student.

Effective guidance is predicated upon the assumption that the teacher or counselor has in his possession as much pertinent information as possible on each student's needs, potentialities and problems. Gathering significant information, then, about the pupil from as many different sources as possible is considered the most important first step in a sound approach to guidance. The importance of understanding the individual student on the elementary and secondary level has been recognized since the inception of guidance work. Increased attention has been devoted to this since the development of the student personnel services program at the college level.<sup>46, 47</sup> The value and importance of experience and understanding in this area have been

<sup>44</sup>Jones, *op. cit.*, p. 94.

<sup>45</sup>*Ibid.*, p. 97.

<sup>46</sup>Maurice D. Woolf and Jeanne A. Woolf, *The Student Personnel Program* (New York: McGraw-Hill Book Company, 1953), pp. 8-17.

<sup>47</sup>*The Student Personnel Point of View*, American Council on Education Studies, Series VI, Vol. XIII (Washington, D.C.: American Council on Education, 1949).

emphasized by those concerned with teacher education work.<sup>48</sup> The study by the Commission on Teacher Education made special point of this in its final report in this way:

Education, however, [the commission] considers to be an intensely personal affair, [promoted by genuinely personal relations . . . . Such interest and understanding is more likely to exist if [counselors] themselves, during the period of their professional preparation, have had teachers who possess these characteristics. The tendency to bring more and more faculty members into the work of guidance, to see to it that this becomes a matter of give and take between the student and his counselor, and to encourage the latter to concern himself with the whole range of the undergraduate's developing needs and deserves support and extension.<sup>49</sup>

The gathering of information about the individual is viewed by practically all as being a process to be shared by both counselor and counselee for it has mutual benefit. This is particularly so for those engaged in preparing to become teachers as pointed out by the commission.

Efforts were being made to help would-be teachers to understand what is required for success in the profession, to consider what would constitute significant evidence bearing on their own competence or promise in these respects, to welcome or seek means of obtaining such evidence, and to take personal responsibility for deciding thereafter whether to proceed and, if so, in what direction.

Such practice in self-analysis and self-education the Commission considers particularly desirable for a prospective teacher. It develops his ability to understand his own motivations and work out plans for satisfying them in ways consistent with professional success; it promotes his skill in the identification of problems and the location and use of resources relevant to the solution thereof; and it predisposes him to treat his own students later on with the same respect that he has enjoyed.<sup>50</sup>

The gathering and utilizing of information to aid in the optimum development of the individual is of prime importance at all levels. It

<sup>48</sup>Clifford P. Froehlich and John Darley, *Studying Students* Chicago: Science Research Associates, 1952), p. xii.

<sup>49</sup>The Commission on Teacher Education, *The Improvement of Teacher Education* (Washington, D.C.: American Council on Education, 1946), p. 70.

<sup>50</sup>*Ibid.*, p. 72.

is generally recognized that no one has yet devised an adequate method of studying the "individual as a whole". The method generally recognized by all authorities to be most satisfactory consists of viewing the individual in different situations by various techniques and synthesizing the results in some form of a case study for counseling purposes.<sup>51</sup>

The techniques most generally recognized for their value and promise are summarized below:

### Observations

Observation is considered by practically all authorities to be a basic technique. Through the careful observation of students in a variety of situations over a period of time a much broader understanding of individual behavior is possible.

Observation of any kind involves the observer, the person observed, the situation in which the observation is made, the process of observation and the use of the interpretation of the observation.

Information concerning personality traits, behavior, attitudes and reactions can be gained to supplement the other more objective information about the individual. Observations can provide data concerning the more subjective elements of a person's behavior and may take these forms: unrecorded observations; record of a student's behavior in a particular class or group; rating or a combination of a rating scale and description which gives support to the rating.<sup>52</sup>

Several general principles are seen as important in making reliable observations. These principles as explained by Strang are:

1. Observe the whole situation.
2. Select one student to observe at a time.
3. Observe students in their regular activities such as those in the classroom, on the playground or in passing from class to class.
4. Make observations over a period of days.<sup>53</sup>

In general, observations as an aid in guidance have had their greatest usage and value at the elementary school level, where the

<sup>51</sup>Ruth Strang, *Counseling Technics in College and Secondary Schools* (New York: Harper and Brothers, 1949), p. 18.

<sup>52</sup>Ruth Strang, *The Role of the Teacher in Personnel Work* (New York: Bureau of Publications, Teachers College, Columbia University, 1953), pp. 313-314.

<sup>53</sup>Strang, *Role of the Teacher*. . . *op.cit.* chap. VIII.

teacher has a greater opportunity to observe the individual child over longer periods of time. It should be recognized that unless teachers can see the value of recorded observations they will not take the time to make them.

For a more detailed description and discussion of procedures in recording and using the observations, the sources by Strang<sup>54</sup>, Warters,<sup>55</sup> Froehlich and Darley,<sup>56</sup> and Traxler<sup>57</sup> will prove most helpful.

### Rating Scales

Descriptions of behavior under various situations and conditions are recognized for their value but have their limitations in that they are subjective and limited by the ability of the observer to describe what has been observed. Rating scales are another manner of recording observations. Rating is in essence directed observation. Rating scales in general have the advantage of being more objective and less time consuming for the teacher or counselor.

There are many variations in the form by which observer evaluations are made. They all have two essential features, however: (1) a listing of the characteristics which are rated; and (2) a scale for the evaluations of these characteristics.

According to the definition given by Greene<sup>58</sup> and others, a scale is an estimate of qualities or abilities. Millard<sup>59</sup> also classifies intelligence and achievement tests as rating scales. Most writers, however, use the term more narrowly.

Scales may be designed for use in various ways as explained by Warters:

When a scale is used for securing from an individual some expressions of his attitudes and beliefs, the scale is more frequently

<sup>54</sup>*Loc. cit.*

<sup>55</sup>Jane Warters, *Techniques of Counseling* (New York: McGraw-Hill Book Company, 1954, chap. VI.

<sup>56</sup>Clifford P. Froehlich and John G. Darley, *Studying Students* (Chicago: Science Research Associates, 1952), chaps. V, VI.

<sup>57</sup>Arthur E. Traxler, *The Nature and Use of Anecdotal Records* (rev. ed. New York: Educational Records Bureau, 1949)

<sup>58</sup>Edward B. Greene, *Measurement of Human Behavior* (rev. ed., New York: The Odyssey Press, Inc., 1952), chap. XVI.

<sup>59</sup>C. V. Millard, "Basic Growth Concepts and Their Use In A Program of Guidance" in *A Basic Text for Guidance Workers*, C. E. Erickson, editor (New York: Prentice-Hall Inc., 1947), pp. 37-40.

called a "test" or an "inventory" than a rating scale. When the instrument is used for obtaining from others an estimate of their impression or judgement of the individual with respect to the characteristics named in the scale, the instrument is usually called a "rating scale." If the instrument is used for securing from an individual statements regarding his own impression of himself or the impression that he believes he makes upon others with respect to certain characteristics, the instrument is generally described as a "self-rating scale."<sup>60</sup>

Rating scales, in practice, have been most valuable for gathering a developmental picture of an individual's character traits or personality.<sup>61</sup>The importance of personality as a factor to be considered in guiding an individual is emphasized by Jones:

The importance of personality in life can hardly be over-estimated. . . . Getting a job, keeping it, and promotion are all clearly affected by personality traits. Some studies have shown that as much as 80 per cent of first jobs and 75 per cent of promotions were due primarily to personality qualities. Another study showed that 90 per cent of dismissals were due not to lack of skills but to personality factors, mostly lack of social adjustment and emotional stability.<sup>62</sup>

The utilization of information gained from a rating scale by the industrial arts teacher could be invaluable in aiding in the development of individual students along socially desirable lines. It is worth noting that where rating scales appear in the literature pertaining to their use in industrial arts, they are referred to primarily as grading devices,<sup>63,64</sup> rather than as instruments for gathering information to aid the individual being rated. The value of rating scales in this latter respect is emphasized by Strang when she states:

Another value of ratings, which is frequently overlooked, is their stimulating effect upon the individuals who are rated. The

<sup>60</sup>Warters, *op. cit.*, pp. 113—114..

<sup>61</sup>Ruth Strang, *Counseling Technics in College and Secondary School* (New York: Harper and Brothers, 1949), p. 75.

<sup>62</sup>Jones, *op. cit.*, p. 201.

<sup>63</sup>John M. Norton, "A Rating Scale," *Industrial Arts and Vocational Education*, XXIX (April, 1940), p. 161.

<sup>64</sup>Ralph B. Leasure, "Pupil Personal Rating Report Card," *Industrial Arts and Vocational Education*, XXIX (September, 1940), p. 262.

mere knowledge that his behavior is being observed and recorded usually encourages a student to try to make a good impression. If the conduct under observation is associated with significant educational objectives, and the student's ratings are made known to him in a tactful manner, they aid in his self-analysis. They are especially helpful in guiding his educational and vocational plans and in leading him to correct certain personality "fault lines" that may seriously interfere with his success.<sup>65</sup>

The two forms shown in figures 1 and 2 are examples of rating scales developed by industrial arts teachers. They are based upon educational objectives and intended for use in evaluating student progress and in counselling.

The use of student self-rating has been receiving less attention in the current literature of the field due to its low validity and reliability as shown by numerous studies on its use.<sup>66</sup>

The rating of individual students is also recognized as having particular value for its effect on the one who is doing the rating for it tends to focus the attention of the rater on the individual development of every student.<sup>67</sup> Because the teacher of industrial arts enjoys such a rich opportunity to observe students in an informal atmosphere, the use of rating scales holds many opportunities for aiding not only the teacher but also for providing information which may be made a part of the student's central cumulative record.

### Questionnaires and Self-Report Forms

The gathering of identifying and background information about an individual student is facilitated by the use of various forms and procedures for obtaining personal data. The personal data blanks are used mainly for: (1) obtaining background information on new students, (2) bringing up to date certain factual information, and (3) securing some of the background information needed to provide special service or counseling in some division of the school or college.<sup>68</sup>

The use of a standardized student data blank is generally recognized for its value to the counselor or teacher, since it makes possible the gathering of a great deal of information about each individual in a short time. It provides the teacher or counselor with some

<sup>65</sup>Strang, *Counseling Technics . . .*, *op. cit.*, p. 75.

<sup>66</sup>Warters, *op. cit.*, p. 198.

<sup>67</sup>Strang, *loc. cit.*

<sup>68</sup>Warters, *op. cit.*, p. 159

Greene Central School Greene, N.Y. Roland Wolford		5 WKS.	10 WKS.	15 WKS.	20 WKS.
STUDENT RATING SHEET					
TERM	<i>Cooperation:</i>				
	(A) Is a volunteer in activities.				
	(B) Assumes responsibility in group activity.				
	(C) Cooperates only when directed.				
	(D) Is unwilling to cooperate or assist in routine activities.				
	(E) Refuses to cooperate.				
	(NC) No chance to observe.				
	<i>Design and Creativity:</i>				
	(A) Designs own projects applying accepted principles.				
	(C) Recognizes and accepts good design in selecting projects.				
(E) Changes good designs to poor ones.					
(NC) No chance to observe.					
COURSE	<i>Growth in Expression:</i>				
	(A) Improves in drawing, oral expression and written reports.				
	(C) Shows improvement in one area of expression.				
	(E) Shows no improvement in expression.				
	(NC) No chance to observe.				
	<i>Growth in Technical Understanding:</i>				
	(A) Uses previous experience to help solve new problems.				
	(B) Selects tools and materials wisely.				
	(C) Limits himself to developing only tool skills.				
	(E) Concerns himself with only the value of the project.				
(NC) No chance to observe.					
STUDENT'S NAME	<i>Industry:</i>				
	(A) Makes constructive use of all class time.				
	(B) Works voluntarily but frequently wastes time.				
	(D) Works only when directed or when the mood arises.				
	(E) Refuses to work.				
	(NC) No chance to observe.				
	<i>Personal satisfaction:</i>				
	(A) Exhibits pride in himself.				
	(B) Exhibits pride in his work.				
	(C) Takes pride in only the finished project or his grade.				
(E) Complains or acts unhappy.					
(NC) No chance to observe.					
	<i>Resourcefulness and Application of Information:</i>				
	(A) Can plan with a minimum of help.				
	(B) Needs help in finding new information for planning.				
	(C) Makes poor application of known information.				
	(D) Omits necessary information for the job.				
	(E) Depends on instructor for all details.				
	(NC) No chance to observe.				
	<i>Variety of Interests and Curiosity:</i>				
	(A) Plans projects in all areas of work.				
	(B) Reports on new current interests.				
(C) Seeks and gives new information only when directed.					
(D) Shows interests in only one activity.					
(E) Fails to find a single interest. Never asks questions.					
(NC) No chance to observe.					
<i>Comments and Suggestions:</i>					

MOHAWK CENTRAL SCHOOL  
 INDUSTRIAL ARTS DEPARTMENT Name \_\_\_\_\_, IA \_\_\_\_\_  
 M.J. Brennick

STUDENT EVALUATING SHEET FOR CLASS ESTIMATES.

QUALITIES	Failing Work (No Score)	Below Average (1 Point)
Co-operation	Self Centered	Cooperates under pressure
Responsibility	Tries to avoid responsibility	Sometimes leaves job unfinished
Safety Consciousness	Frequently disregards safety rules	Sometimes misuses familiar tools
Consumer Knowledge	Wastes materials	Uses any material handy
Exploration and Curiosity	Doesn't seem interested in things around him	Interested in only certain types work
Planning & Creative Expression	Copies work of others	Pays little attention to design or planning
Effort And Industry	Makes little effort to improve	Works only when he feels like it
Knowledge of Information	Weekly test average of F	Weekly test average of D
Application of Information	Usually depends upon others	Frequently does not use his full ability
Workmanship Ability	Leaves projects incompleted	Shows poor workmanship
Assignments	Usually incomplete or late without reason	Frequently of poor quality



Expected Of Every One (2 Points)	Above Average (3 Points)	Outstanding Or Superior (4 Points)
Willing to work with others	Enjoys his work with others	Shows leadership in group
Needs only necessary help	Generally responsible	Completes a job on his own
Generally a safe worker	Always uses safe practices	Suggests improvements to shop safety
Selects material wisely	Understands value & use of products	Gets maximum use out of materials and money
Willing to explore various areas	Curious about all types of work	Asks WHY?, & voluntari- ly investigates new fields
Plans with accepted design	Tries for improved design	Shows originality and careful planning
Makes good use of all class time	Does more than the required work	Industrious. Consistant- ly does his best work
Weekly test average of C	Weekly test average of B	Weekly test average of A
Makes proper use of what he knows	Attempts to find out further information	Makes full use of available resources
Workmanship generally acceptable	Shows ability in a particular work area	Displays skill in various work areas
Makes an honest effort to meet requirements	Usually meets assignment requirements	Assignments well done and complete in detail

preliminary background material prior to an interview where supplemental information may be gained.<sup>69</sup>

Guidance sources such as Traxler,<sup>70</sup>Warters,<sup>71</sup>Jenkins<sup>72</sup>and Froehlich and Darley<sup>73</sup> contain numerous examples of these standardized forms for use at various levels. Information contained on these forms is usually made a part of the cumulative record. Many teachers, however, can profit by using questionnaires or personal data blanks of their own to supplement the information contained in the cumulative record. This is particularly true for the industrial arts teacher. Hill<sup>74</sup> conducted a survey using a form especially devised for the industrial arts students to provide the teacher with a better picture of his own students. Silvius<sup>75</sup>gives an example of a typical form which might be modified to fit a given situation and states that the age of the student and the type of class will determine the kind of information that the teacher can best use. The value and importance of supplementing the student's cumulative record in the guidance office is emphasized by Hoyt<sup>76</sup>who devised a useful record for this purpose. Much useful information can also be supplied by the student's parents in many cases if this information is sought in an organized manner. This procedure seems to hold considerable value at the college level where background information concerning the student is sometimes not readily available.<sup>77</sup>

A very comprehensive and useful discussion of suggestions for the development and use of student questionnaires and personal data sheets is contained in the book by Warters.<sup>78</sup>

<sup>69</sup>Froehlich and Darley, *op. cit.*, p. 154.

<sup>70</sup>Arthur E. Traxler, *Techniques of Guidance* (New York: Harper and Brothers, 1945).

<sup>71</sup>Warters, *op. cit.*, chap. IX.

<sup>72</sup>Nora C. Jenkins, "Personnel Records and Forms," *Student Personnel Services*, American Association of Colleges for Teacher Education, 1949.

<sup>73</sup>Froehlich and Darley, *op. cit.*, chap. VII.

<sup>74</sup>Lester V. Hill, "Vocational Interest of Boys in Grades VI and VII", *Industrial Arts and Vocational Education*, XXXI (May, 1942), pp. 185-90.

<sup>75</sup>G. Harold Silvius and Estell H. Curry, *Teaching Successfully The Industrial Arts and Vocational Subjects* (Bloomington: McKnight and McKnight, 1953), pp. 2-3.

<sup>76</sup>Kenneth B. Hoyt, "How Well Can Classroom Teachers Know Their Pupils," *The School Review*, LXIII (April, 1955), pp. 228-235.

<sup>77</sup>J. David O'Dea and others, "Parents Can Assist the Counselor", *Phi Delta Kappan*, XXXIV (May, 1953), pp. 323-325.

<sup>78</sup>Warters, *op. cit.*, chap. IX.

### Autobiographies

One of the most widely recognized and recommended devices for obtaining information about individuals is the student autobiography. Practically all recent references on counseling techniques give considerable attention to its value in spite of the limitations inherent in any subjective device of this type. The autobiography is valuable because it allows for considerably more freedom of expression than most other means of gathering personal data. For this reason its use must be premised upon a complete feeling of confidence that the data reported will be kept confidential by the teacher or counselor.

Freedom to express one's self is recognized as having certain therapeutic values particularly when the writer has the opportunity to discuss the problems revealed in the document with the teacher or counselor and thereby gain new insights and understandings of himself.<sup>79</sup> Other purposes of the autobiography are outlined by Hamrin as: revealing changes over a period of time; highlighting significant events; disclosing personal insight of the individual; stimulating self-study and; providing a source of worthwhile activity or projects.<sup>80</sup>

A wide range of forms or approaches to the autobiography has been proposed in the literature. Essentially two procedures are proposed: (1) obtaining information by means of a detailed outline (structured), or (2) by means of a freely written composition (unstructured). One study<sup>81</sup> on the subject reveals that both approaches have their value but that the structured autobiography tends to disclose more of the individual student's problems than does the unstructured form. Regardless of the procedure to be used, it is important for the student to have sufficient time to reflect and express himself in the autobiography—two weeks is considered adequate. For a thorough discussion of the use and interpretation of the autobiography, the reader is referred to the references by Froehlich and Darley<sup>82</sup> and Strang<sup>83</sup>.

### Sociometric Devices

In addition to gathering information from the student himself and from adult observers, it is proving valuable to obtain peer reactions to

<sup>79</sup>Willey and Andrew, *op. cit.*, p. 276.

<sup>80</sup>Shirley A. Hamrin, *Guidance Talks to Teachers* (Bloomington, Illinois: McKnight and McKnight, 1947), pp. 179–180.

<sup>81</sup>Paul J. Danielson and J. W. M. Rothney, "The Student Autobiography: Structured or Unstructured?", *The Personnel and Guidance Journal*, XXXIII (September, 1954), pp. 30–33.

<sup>82</sup>Froehlich and Darley, *op. cit.*, chap. VIII.

<sup>83</sup>Strang, *Counseling Techniques . . . op. cit.*, chap. IV.

individual pupils. Sociometric methods can be used by teachers and counselors for organizing effective work groups, for indentifying leaders and for isolating and indentifying cliques and cleavages within the group.

Understanding the individual's status within the group can provide important clues for the teacher concerning the student's reactions in different situations. Most judgements in this area are highly subjective. Commenting on these subjective observations, Jennings states:

Even though teachers do locate certain affinities and dislikes accurately without the help of sociometry, they still have no way of knowing who may have wanted to join a group and who was out, or did not know how to go about it, or was afraid of being rebuffed. Moreover, unsystematic observation is usually accurate only at the extremes—spots some of the highly chosen children and some who are left out. It tends to be less accurate in the middle range of children who are not conspicuously chosen or left out.<sup>84</sup>

Since industrial arts teachers frequently use group projects and committees, an understanding of techniques which can aid in building strong group relations may be of considerable value.

Although the construction and administration of a sociometric test is not extremely difficult, it needs to be accomplished with understanding to provide valid results.<sup>85</sup>

#### Cumulative Records

Some of the more appropriate means for gathering information about the individual have been outlined for use by industrial arts teachers. The cumulative record is a means of making available to the teaching staff an organized body of information about the individual which has been gathered from the various sources.

*The Handbook of Cumulative Records* of the U.S. Office of Education clearly states the need for cumulative records:

It is obvious that the individual characteristics and differences of children must be ascertained and recorded before they can be

<sup>84</sup>Helen H. Jennings, *Sociometry in Group Relations* (Washington, D. C.: American Council on Education, 1948), p. 12.

<sup>85</sup>For a comprehensive discussion see:

Clifford P. Froehlich and John G. Darley, *op. cit.*, chap. XV.  
Jennings, *op. cit.*

Ruth Cunningham and associates, *Understanding Group Behavior of Boys and Girls* (New York: Bureau of Publications, Teachers College, Columbia University, 1951)

made to serve as a basis upon which meaningful and purposeful learning experiences for pupils can be planned.<sup>86</sup>

A cumulative record, then, is a valuable tool in the important task of guiding students.

Various lists of criteria or characteristics of the cumulative records system have been developed in considerable detail by authorities such as Traxler<sup>87</sup> and Strang<sup>88</sup>. When reduced to their basic elements the criteria for a cumulative record may be stated as follows:

1. It should be as *simple* as possible.
2. It should be practical, requiring the minimum amount of clerical work by teachers or counselors.
3. It should be *flexible* so that it can be easily modified to meet increased needs or changed conditions.
4. It should be adaptable to the conditions found in the school.

The cumulative record is usually organized in a manila folder or packet in some central place for ready accessibility and supervision. The record may vary considerably in form and content according to the nature and needs of the educational program and the way it is to be used.<sup>89</sup>

It is of the utmost importance for all teachers to know what type of information is to be found in the cumulative record, how they may supplement the record, and how to interpret the information which the cumulative record usually contains. Strang mentions several ways in which teachers go wrong in interpreting records.

... (1) in making too sweeping generalizations and in drawing inferences not warranted by the data on the records; (2) in failing to note important relationships; (3) in being influenced by their own prejudices or by previous impressions of the individual; and (4) in giving too much weight and authority to test results. Too seldom are records used to raise questions. Too seldom do teachers make the distinction between what the record *shows* and what it *suggests*.<sup>90</sup>

These records are usually kept and maintained for the teachers' use. It is therefore, essential that teachers of industrial arts know how to use this basic guidance resource.

<sup>86</sup>National Committee on Cumulative Records, *Handbook of Cumulative Records*, U.S. Office of Education, Bulletin No. 5, 1944, p. 22.

<sup>87</sup>Traxler, *op. cit.*

<sup>88</sup>Strang, *Counseling Technics* . . . chap. VII.

<sup>89</sup>Traxler, *op. cit.*, chap. XII.

<sup>90</sup>Strang, *The Role of the Teacher, op. cit.*, p. 400.

### Guidance Testing As A Means of Studying The Individual

A number of subjective means of gathering information concerning the individual have been discussed in the previous section. Tests as usually considered an essential part of any guidance program as a means of providing more objective evidence to aid teachers and counselors in counseling with the student.

Tests and the testing program were once considered ample to provide all the information needed. The present concept however, considers testing as only one means of obtaining information and that test results are to supplement the other information available.<sup>91</sup> It is generally recognized that considerable progress has been made in the improvement and refinement of instruments available, but there still remains much to be accomplished in this regard. Super comments on this:

Despite the great progress in psychological testing since World War I, the variety of characteristics which can be measured still leaves a great deal to be desired... the measuring instruments we now use even for the most adequately measured traits such as intelligence and vocational interest are still crude and only half understood....

For these reasons the psychological study of a person's abilities and personality traits requires more than testing techniques. When a suitable test is available, its use will generally save time and obtain the information in a more objective, valid and usable form than would otherwise be the case.<sup>92</sup>

The selection of tests to be used in a testing program or with individuals is generally considered to be a responsibility which should be shared by the entire staff: teachers, counselors and administrators. This is especially so in the case of tests to be administered in special subject matter fields.<sup>93</sup> It is, therefore, important that teachers of special areas have a working knowledge of those tests and procedures most applicable to their particular subject or field.

Since there are so many different types of tests and so many factors to be considered in the selection and administration of a test,

<sup>91</sup>Clifford P. Froehlich and Arthur L. Benson, *Guidance Testing* (Chicago: Science Research Associates, 1948), p. 3.

<sup>92</sup>Donald E. Super, *Appraising Vocational Fitness* (New York: Harper and Brothers, 1949), p. 8.

<sup>93</sup>Willey and Andrew, *op. cit.*, p. 153.

reference should be made to some of the authoritative sources on the subject before final decision is made on their selection.<sup>94</sup>

The administration of the tests, in a large measure, will fall on the shoulders of the teacher. This is emphasized by Willey when he states:

Since most of the instruments are group tests, the teacher can (and will be asked to) administer them. Without the help of teachers, the expense of administering any large scale testing program would be formidable. Teachers will also be asked to score and record the results of tests....

A testing program is of no value unless the test results can be put to use. Here the teacher makes a significant contribution by using test results to individualize instruction and to assist the student in making desirable choices in life adjustment.<sup>95</sup>

While the greatest proportion of an industrial arts teacher's work with tests is likely to be with those administered as a group, there are many instances where individual tests might well be administered. Some authorities<sup>96</sup> also advocate that the individual student should participate in the selection of the test to be administered.<sup>97</sup>

Although there are thousands of available tests, the general categories for classification are fairly well accepted as follows: (1) scholastic aptitude, (2) achievement, (3) special abilities or aptitudes, (4) interests and (5) personality.

Mention has been made of the importance and value for teacher educators and teachers of industrial arts in having a working know-

<sup>94</sup>See:

1. Oscar K. Buros, (Editor) *The Fourth Mental Measurements Yearbook* (Hyland Park, New Jersey: Gryphon Press, 1953)
2. Super, *Appraising Vocational Fitness*, *op. cit.*
3. American Psychological Association, "Technical Recommendations for Psychological Tests and Diagnostic Techniques" supplement to the *Psychological Bulletin*, LI (March, 1954), part 2.
4. H. H. Remmers and N. L. Gage, *Educational Measurement and Evaluation* (rev. ed., New York: Harper and Brothers, 1954)
5. Willey and Andrew, *op. cit.*, chaps. VII, VIII, IX, X.
6. Froehlich and Darley, *op. cit.*
7. Froehlich and Benson, *op. cit.*

<sup>95</sup>Willey and Andrew, *op. cit.*, p. 153.

<sup>96</sup>Donald E. Super, "Testing and Using Test Results in Counseling," *Occupations*, XXIX (November, 1950), pp. 95-97.

<sup>97</sup>E. S. Borden and R. H. Bixler, "Test Selection: A Process of Counseling," *Educational and Psychological Measurement*, VI (Autumn, 1946)

ledge of test instruments applicable to their field. Space will not permit a detailed discussion of these at this time more than to summarize the major types and to mention one or two tests of each type worthy of consideration.

*Scholastic aptitude tests.* One of the basic principles of modern education indicates that we cannot expect all students to do equally well in school. It is important that each student be evaluated in terms of his ability. Although many studies<sup>98</sup> tend to show that so-called intelligence or scholastic aptitude tests have many limitations they are still accepted widely for their value in predicting ability to succeed in future schooling. Tests of this type have in general been questioned as to validity due to their emphasis on verbal reasoning and to reading ability.

Recognition should be made of the value of scholastic aptitude tests in counseling pupils regarding educational opportunities. Naturally the decisions pupils make regarding the length and content of their formal education will influence the vocational opportunities open to them.<sup>99</sup>

Typical examples:

1. *American Council On Education Psychological Examination For High School Students* by L. L. and T. G. Thurstone, American Council on Education, 744 Jackson Place, Washington 6, D. C.

Renders two scores: L score – linguistic ability

Q score – technical abilities

2. *Otis Quick-Scoring Mental Ability Test* by Arthur S. Otis, World Book Company, Yonkers-on-Hudson, New York.

Beta test, grades 4–9; Gamma test, high school through college. Considered one of most economical and easiest to administer and score.

*Achievement Tests.* Tests of this type are primarily designed to provide an indication of the student's accomplishment in a given area or subject. When achievement tests are selected or designed, consideration should be given to both statistical and curricular validity. Curricular validity is the extent to which the test content is represen-

<sup>98</sup>Ethel L. Cornell and Annette Gillete, "Construction and Educational Significance of Intelligence Tests," *Review of Educational Research*, XX (February, 1950), pp. 17–19.

<sup>99</sup>Super, *Appraising Vocational Fitness*, *op. cit.*, pp. 92–104.



tative of course content. Very little if any information is available on the validity of many achievement tests because the makers believe the validity must be determined in terms of the objectives of the school and the course. This is particularly true in the area of industrial arts.

A high correlation with a criterion of this type is not considered a good measure of the achievement supposedly defined by the criterion because the criterion may be low in validity and/or reliability. Teachers' marks have been shown to have serious limitations as valid predictors of success or general achievement. Some teaching, for example, is largely factual in nature, stressing verbal memory rather than comprehension or appreciation. Achievement tests developed by a teacher operating in such a fashion, are apt to be factual in nature, stressing verbal memory and neglecting or omitting the measurement of attitudes, appreciation, analysis, the ability to solve problems and apply knowledge, and creativity. Such tests and teaching would correlate highly. In general, achievement tests are being improved through wider acceptance of the broad educational objectives served by the course.

The use of standardized achievement tests is seen as having much value by Williamson from the standpoint of furnishing a record of growth in out-of-class activity and secondly, of providing a substitution for the unreliable criteria of academic success and teachers' grades.<sup>100</sup> It is interesting to note that only two standardized tests in the area of industrial arts are listed in the *Fourth Mental Measurements Yearbook*,<sup>101</sup> one of them dealing with mechanical drawing. Typical examples of general achievement tests:

1. *Cooperative General Achievement Tests* by Willis E. Spaney, R. E. Watson and others, Cooperative Test Service of American Council on Education, 15 Amsterdam Avenue, New York 23, New York.
2. *Progressive Achievement Test* by Ernest W. Tiegs and Willis W. Clark, California Test Bureau, 5916 Hollywood Boulevard, Los Angeles 28, California.

*Special Aptitudes or Abilities Tests.* Aptitudes have been described as a set of characteristics indicative of ability to learn some specific knowledge or skill.<sup>102</sup> From the standpoint of the person who

<sup>100</sup>E. G. Williamson, *Counseling Adolescents* (New York: McGraw-Hill, 1950), pp. 165–166.

<sup>101</sup>Buros, *op. cit.*, pp. 551–558.

<sup>102</sup>See: W. V. Bingham, *Aptitudes and Aptitude Testing* (New York: Harper and Brothers, 1937), pp. 16–18.

is going to help guide the student in his development, it is important to understand that an aptitude is the capacity, usually undeveloped, to learn a skill or ability necessary for success in a particular area of work. The *Revised Minnesota Occupational Rating* is one example of an attempt to relate basic aptitudes to a given occupation. Information of this type in the hands of the industrial arts teacher could aid him in counseling with his students from time to time.

Experience has indicated that general scholastic aptitude tests, when properly used, are just as effective as tests designed for specific school subjects. The latter are usually intended for use with individuals rather than groups.

A few professional organizations such as those of engineers, physicians and teachers have been active in developing special aptitude tests in their fields. To date, studies have revealed very little conclusive evidence concerning aptitudes which will predict success in teaching.<sup>103, 104</sup>

One of the most useful tests for the industrial arts teacher to know how to administer and interpret is the mechanical aptitude test. These are of two types; performance and paper-and-pencil. Since the occupational opportunities of many industrial arts students will be in the mechanical field, valuable use can be made of these for counseling purposes.

Typical examples:

1. *Revised Minnesota Paper Form Board Test* by R. Likert and W. Quasha, Psychological Corporation, 522 Fifth Avenue, New York 18, New York.
2. *Mechanical Comprehension Test*, by G. K. Bennett and D. E. Fry, Psychological Corporation, 522 Fifth Avenue, New York 18, New York.

*Interest Inventories.* Considerable interest and attention has been given to the use of interest inventories by teachers and counselors during the past few years. Interests are understood to be those things which give satisfaction or represent a successful adjustment to a situation. An individual is interested in those things which satisfy his needs; thus interests pertain directly to goals.

<sup>103</sup>Jerome E. Leavitt, "Predicting Teaching Success," *Phi Delta Kappan*, XXXV (April, 1954), pp. 281-282.

<sup>104</sup>Dewey B. Stuit, *Predicting Success in Professional Schools* (Washington, D. C.: American Council on Education, 1949), chap. VIII.

Guidance should be concerned with assisting the individual to both clarify and achieve his goals. Some of the major goals of young people are associated with success in school or vocations. Since success in school and vocational work is determined by interest or motivation as well as by ability, tests of academic and vocational interests are considered of value in student personnel work.

An infinite number of factors and circumstances are recognized as influencing interest, as summarized by Super:

Interests are the product of interaction between inherited aptitudes and endocrine factors, on the one hand, and opportunity and social evaluation on the other. Some of the things a person does well bring him the satisfaction of mastery or the approval of his companions, and result in interests. Some of the things his associates do appeal to him and through identification, he patterns his actions and his interests after them; if he fits the pattern reasonably well he remains in it, but if not, he must seek another identification and develop another self concept and interest pattern.<sup>105</sup>

Aptitudes should not be confused with interests. Studies tend to show that there is a rather low correlation between tested interests and aptitudes.<sup>106</sup> This fact is emphasized by Meyers:

It is entirely possible, of course, to have an aptitude for an occupation and no interest in it, or to have an interest in it, but no aptitude. But the problem of the vocational interest inventory is not learning the pupil's expressed interest in a particular occupation, but rather of discovering the degree to which he possesses the general pattern of interests that characterized successful workers in a specific occupation.<sup>107</sup>

Interests of an individual are generally determined by (1) observation, (2) claims of the individual and (3) measurement. It has been recognized that the interest of adolescents and young adults are prone to change. However, most authorities agree that interest inventories can be used with a high degree of validity from the ninth grade on.

Because industrial arts teachers have such an excellent opportunity to observe the interests of individuals and to obtain statements

<sup>105</sup>Super, *op. cit.*, p. 406.

<sup>106</sup>R. G. Anderson, "Do Aptitudes Support Interests," *Personnel and Guidance Journal*, XXXII (September, 1953), pp. 14–17.

<sup>107</sup>George E. Myers, *Principles and Techniques of Vocational Guidance* (New York: McGraw-Hill Book Company, 1941), p. 206.

of interests from them, the value of being able to reinforce this information with the results of an interest inventory should be recognized. It would be a grave error however, to rely too heavily on the results of the interest inventory to the exclusion of other sources of information.<sup>108</sup>The inventories most widely used and which hold the most promise for general application are listed below.

Typical examples:

1. *Kuder Preference Record* by G. G. Kuder, Science Research Associates, 228 South Wabash Avenue, Chicago 4, Illinois.
2. *Strong Vocational Interest Blank* (for men or women) by E. K. Strong Jr., Stanford University Press, Stanford, California.

The field of guidance testing is so broad that it has been impossible to more than scratch the surface of the subject. For a more thorough treatment of the subject, the reader is invited to study the references listed in footnote No. 94.

#### TECHNIQUES OF USING GUIDANCE INFORMATION

A number of procedures and techniques for obtaining information about the individual useful in the guidance function have been discussed. This information is of little value if it is not put to use. Utilizing guidance information is accomplished in two general ways; (1) counseling with the individual, and (2) using group guidance procedures.

#### Counseling Concepts

Counseling as a part of education is recognized as a highly individualized process designed to aid the individual to learn, to develop citizenship traits, acquire occupational information, develop personal and social values and develop the other attitudes and beliefs which go to make a well adjusted human being. Williamson extends the meaning of counseling to include motivation when he states:

Moreover, counseling helps to produce certain desirable motivational effects by aiding the individual to select personal goals which themselves act reflexively as facilitators of further learning. Such goals may be vocational, personal, social, ethical or any type which the individual desires to set as immediate or remote objectives to be achieved through learning.<sup>109</sup>

<sup>108</sup>Froehlich and Benson, *op. cit.*, p. 37.

<sup>109</sup>Williamson, *Counseling Adolescents*, *op. cit.*, p. 3.

Another authority views counseling as a self-realization process for a social purpose which involves helping the individual to understand what he can do and what he should do to strengthen his best qualities, to handle his difficulties rationally rather than being driven by unconscious forces, to find suitable channels for his emotions and to move toward his more acceptable self. Counseling is seen as a means of building social attitudes and, through better people, building a better world. Strang sums up this viewpoint by stating:

Counseling at its best is the art of helping a person to understand himself, his relations to others and the world in which he lives. It is a learning experience for the student. It helps him to change his confused or inadequate perception of his life situation so that he can move toward a more adequate self-organization.<sup>110</sup>

Wrenn views the counseling process as a relationship based on mutual respect with younger or less mature person being led to a self-determined resolution of his problem.<sup>111</sup> Another point of view is represented by Rogers in which counseling is considered as a type of therapy.<sup>112</sup>

From the foregoing it may be seen that there exists considerable difference in viewpoint concerning the counseling function. In spite of considerable divergence in these viewpoints there are several points of agreement. Arbuckle identifies these points of agreement as being: (1) Counseling is a process involving two people, (2) The basic objective of counseling is to assist the individual to solve his problems independently, (3) Counseling is a professional task for professionally trained people.<sup>113</sup> In this context teachers are considered to be professionally trained personnel alert to their responsibilities and opportunities to guide students through individual counseling.

For a considerable period of time due to the traditional pattern of education and teaching, guidance and counseling were considered to be a function separate and apart from the duty and responsibility of the classroom teacher. This view is rapidly disappearing as represented by the concept expressed in the following statement:

<sup>110</sup>Strang, *Counseling Technics*, *op. cit.*, p. 15.

<sup>111</sup>C. Gilbert Wrenn, *Student Personnel Work in College* (New York: Ronald Press, 1951), p. 59.

<sup>112</sup>Carl R. Rogers, *Client Centered Therapy* (New York: Houghton-Mifflin Company, 1951), pp. 15-17.

<sup>113</sup>Dugald S. Arbuckle, *Student Personal Services in Higher Education* (New York: McGraw-Hill Company, 1953), pp. 122.

The older type of separate functioning of counseling outside the classroom and beyond the formalized teaching in the classroom, is gradually being replaced by a new type of reciprocal relationship. When instruction viewed as assistance to learning becomes focused upon the individual and personal problems of the student, then we see most clearly the fundamental commonality of the two educational processes.<sup>114</sup>

Recent literature in the field of guidance and counseling is directing more and more attention to the central role which the classroom teacher is expected to play in counseling students. Two excellent examples are the books by Arbuckle<sup>115</sup> and Strang.<sup>116</sup>

As a result of more attention and emphasis being placed upon the importance of the counseling function as the central core of guidance to be performed by the teacher, considerable discussion has centered about how the counseling is to be performed or accomplished. Approaches to counseling fall largely into two categories; (1) directive or (2) non-directive with a few falling in between, which are considered eclectic. Counseling, however, is considered to be an adjustive process by all.

Arbuckle points out that the directive people believe counseling to be a "means of helping people learn to solve their own problems" while the non-directive people propose that counseling is a "means of allowing the client to gain an understanding of himself to a degree which enables him to take positive steps in the light of his new orientation."<sup>117</sup>

Even though the two schools of thought apparently are in agreement on the end result they each propose to reach the end by a different method.

The procedure for developing ability on the part of the student to understand himself and his problem is the chief difference in approach to be noted. The non-directive people feel that the student has within himself the necessary powers to view and analyze his problems and arrive at decisions which will permit him to move forward under his own direction. The directive people believe the student needs help in

<sup>114</sup>Williamson, *op. cit.*, p. 3.

<sup>115</sup>Dugald S. Arbuckle, *Teacher Counseling* (Cambridge, Massachusetts: Addison-Wesley Press, 1950)

<sup>116</sup>Strang, *Role of the Teacher... op. cit.*

<sup>117</sup>Dugald S. Arbuckle, "Good Counseling - What Is It?" *Educational Administration and Supervision* XXXIV (May, 1948), p. 305.

viewing and analyzing his problems and in making new adjustments. They maintain the counselor is in a better position to view the student's problem than the student is himself.

It is recognized that the non-directive approach is most adaptable to personal, emotional type problems whereas the directive approach is more suitable where direct factual information must be provided.<sup>118</sup>

Most authorities agree that no two counseling situations are identical and that the approach to be used is governed by the nature of the individual student and his problem. The previous discussion has not been presented with the purpose of attaching undue importance to the approach or technique used, but to point up the major viewpoints in existence, for as Strang states:

Techniques must never interfere with the essential warm, human relationship that should exist between counselor and counselee. The counselor is in danger of destroying this relationship if he uses techniques mechanically or centers his attention on the use of the technique rather than on the person seeking help.<sup>119</sup>

It is agreed that practically all classroom teachers have many opportunities to counsel with individual students concerning instructional problems, behavior adjustments and other personal matters. The informal atmosphere of the industrial arts shop affords excellent opportunity for individual counseling by the industrial arts teacher.

It is only natural that students seek certain of their teachers in whom they can confide concerning personal problems and plans. The level of counseling which the teacher can perform will usually be limited in depth by his time, experience and training but he should recognize his responsibilities for counseling students on those problems which grow out of the classroom work. It is also important for the teacher to recognize his own limitations in counseling with individuals and make appropriate use of referral to other more qualified personnel in specialized areas.<sup>120</sup>

<sup>118</sup>For a clear presentation of the differences of counseling procedures see:

1. Dugald S. Arbuckle, *Teacher Counseling, op. cit.*, chap. II.
2. Warters, *op. cit.*, chap. XVII.
3. Shirley A. Hamrin and Blanche Paulson, *Counseling Adolescents* (Chicago: Science Research Associates, 1950), chap. III, IV.

<sup>119</sup>Strang, *Counseling Techniques, op. cit.*, p. 29.

<sup>120</sup>Clifford E. Erickson, *A Basic Text for Guidance Workers* (New York: Prentice Hall Company, 1947)

A number of recent guidance texts have been written with particular emphasis upon the guidance function and relationships of the teacher. Williamson outlines a number of significant contributions the teacher may make through student counseling and concludes that: "Prevention of problems by performing functions implied in effective teaching is one of the chief personnel functions of teachers."<sup>121</sup> The specific activities which characterize the role of the teacher in a counseling and guidance program are well summarized by Wrenn and Dugan. They include:

1. Uses cumulative records and other available resources to understand each student as an individual.
2. Provides security and recognition through a friendly, helpful relationship with each student.
3. Modifies teaching methods and gives individual help to meet differing needs, abilities and readiness.
4. Stimulates interests and helps each student explore new opportunities for expression and individual participation.
5. Contributes to systematic appraisal with anecdotes and other objective reports concerning individual students.
6. Identifies and refers to appropriate resource services (health, child study clinic, counselor) students with immediate or potentially serious difficulties.
7. Develops an understanding and cooperative relationship with the home.
8. Cooperates with trained guidance workers in therapy.<sup>122</sup>

The functions of the teacher as a counselor on the secondary school level, as just outlined, are not appreciably different from those of the teacher at the college level as outlined by the American Council on Education Studies in *Student Personnel Work*.<sup>123</sup>

In view of the important role the regular classroom teacher should play in the counseling of students, it is readily apparent that the industrial arts teacher should receive at least elementary background for these responsibilities in his undergraduate preparation.

<sup>121</sup>Williamson, *Counseling Adolescents*, *op. cit.*, pp. 58-59.

<sup>122</sup>Wrenn and Dugan, *op. cit.*, p. 45.

<sup>123</sup>Donald J. Shank and others, "The Teacher as Counselor" No. 10, American Council on Education, Series VI, *Student Personnel Work* (Washington, D.C.: American Council on Education, 1948), p. 10.



### The Counseling Interview

The relationship of the counseling interview to the total program of guidance activities engaged in by the teacher, is an exceedingly important one. The interview is considered the prime means by which all the essential information concerning a student and his problems may be brought forth in a personal face-to-face relationship to aid the individual in obtaining a better insight and self-realization concerning himself. The interview is also looked upon as a learning situation for both the teacher-counselor and the student. Strang comments on the interview this way:

There is no substitute for a warm and understanding relationship. This personal relationship can be built in the interview situation. There the teacher-counselor can give his full attention to the individual. There, too, the student often feels freer to express his thoughts and feelings than he does in a group. . . . No other technique creates so favorable a relationship for personal growth. Without the interview, it is difficult to see how an individual can be effectively guided in self-discovery leading to self-realization.<sup>124</sup>

The importance of understanding the function of the interview and how to conduct it is implied in the previous statement. Smith makes more direct reference to this in his discussion of teacher competencies for counseling:

The competencies needed by the teacher which are directly related to counseling are, in the main, of three kinds: (1) skill in interviewing; (2) the ability to recognize and interpret pertinent information about pupils; and (3) skill in using sources of information related to their respective subject matter fields.<sup>125</sup>

The purposes of the interview will vary from one situation to another. These purposes primarily determine the ultimate structure, methods and techniques to be employed. The primary objectives of any interview are generally recognized as: (1) the establishment of rapport and mutual respect, (2) the gaining or giving of information, (3) guidance in solving a problem or planning a course of action, and (4) the releasing of personal tensions and changing emotional feelings.

Some of the specialized techniques and approaches to be used in interviewing for use in particular situations in various areas are

<sup>124</sup>Strang, *Role of the Teacher. . .*, *op. cit.*, p. 392.

<sup>125</sup>Glenn E. Smith, *Principles and Practices of the Guidance Program* (New York: The MacMillan Co., 1951), p. 274.

thoroughly treated by Bingham and Moore<sup>126</sup> and Robinson.<sup>127</sup> The counseling interview is analyzed by Erickson, and several particular characteristics are specified to distinguish it from other types which he defines.

1. It is a person-to-person relationship.
2. One participant (interviewer) has assumed or has been assigned the responsibility of helping the other participant.
3. The interviewee has some needs, problems, blocks, or frustrations he wants to attempt to change or satisfy.
4. The welfare of the interviewee is of central concern.
5. Both participants are interested and willing to attempt to find some solutions to the interviewee's difficulties.<sup>128</sup>

Procedures in conducting the interview will vary depending upon the viewpoint held by the teacher-counselor as to whether more can be accomplished by a directive or non-directive approach. Several important steps are recognized, however, as being essential.

1. Preparation—it is essential that as much background information as possible be gathered by the interviewer prior to the interview.
2. Establishing friendly relationship and rapport—the establishment of a feeling of mutual trust and confidence in a relaxed private setting can be most instrumental to the success of the interview.
3. Analyze the problem and search for deeper causes or difficulties—uncovering the basic problem and its underlying causes is one of the essential purposes of the contact and is the only means from which possible solutions can stem.
4. Have student realize courses of action or alternatives—the counselor's job is to help the student identify his own problem and plan a course of action.
5. Closing the interview—if possible the student should be encouraged to summarize progress made and establish possible next steps.

<sup>126</sup>Walter V. Bingham and Bruce V. Moore, *How to Interview* (Third Edition) (New York: Harper and Brothers, 1941)

<sup>127</sup>Francis B. Robinson, *Principles and Procedures in Student Counseling* (New York: Harper and Brothers, 1950)

<sup>128</sup>C. E. Erickson, *The Counseling Interview* (New York: Prentice Hall Inc., 1950), pp. 5–6.

6. Recording and following-up information – a record of progress made or plans to be followed should be made following each interview with a follow-up to determine the extent to which plans are carried out.

Although the interview is the most frequently used and a vitally important technique in counseling, it is also one of the most subjective and difficult to validate.<sup>129</sup> Its influence is evidenced in numerous ways, many of which are not so immediate that they can be measured. Its inherent value lies in the personal relationship established in the individual counseling process which calls for a large measure of faith on the part of the interviewer that he can exert an influence for the betterment of the counselee. This feeling is reflected by Farnsworth in his excellent article on counseling:

It is not too much to hope that careful attention to the needs of the individual by a counselor will in the long run change the general attitude on any campus from a somewhat rigid, intolerant, unthinking one to a most considerate, friendly, permissive one, which at the same time exerts a steady, unrelenting pressure on every student to develop high personal and collective standards of honesty, integrity and accomplishment.<sup>130</sup>

#### Group Guidance

There are many types of problems and information which are most appropriately dealt with by the teacher or counselor by means of group techniques and procedures. Jones defines group guidance as:

...any group enterprise or activity in which the primary purpose is to assist each individual in the group to solve his problems and to make his adjustments.<sup>131</sup>

The rapid increase in school enrollments during the past few years has in many instances precluded the possibility for adequate individual counseling, making the use of group procedures the only means of making available to large numbers of students much needed help. The many different types of information and problems usually included in group guidance fall in three major areas: orientation, educational guid-

<sup>129</sup>Strang, *Counseling Technics* . . . , *op. cit.*, pp. 138–148.

<sup>130</sup>Dana L. Farnsworth, "Maturity Through Student Counseling", *Phi Delta Kappan*, XXXVI (February, 1955), pp. 196.

<sup>131</sup>Jones, *Principles of Guidance*, *op. cit.*, p. 303.

ance and vocational guidance.<sup>132</sup> The use of group guidance procedures is not intended to supplant or in any way lessen the importance of the individual counseling which the teacher or counselor may perform. In fact, the background of information gained from group guidance meetings is seen as having much value to counseling.<sup>133</sup> In addition to the general background of information which the individual may gain, he also obtains the benefit of sharing viewpoints and learning that others may have interests or problems similar to his own. In this connection, Jones has this to say:

It gives an opportunity for the discussion of problems that are common to the group and develops an awareness that the problems are not peculiar to the individual but are shared by others.<sup>134</sup>

Group guidance procedures have been used extensively in home-room, in special guidance courses and in connection with clubs and other extra curricular activities. Considerable group guidance may be accomplished within the scope of regular courses when the opportunities are recognized and utilized. Industrial arts holds rich potential for this type of guidance due to the exploratory and orientation aspects of the course, particularly at the junior high school level. This point is emphasized by Frieze when he states:

Explorations provide one way of laying the foundation of all vocational and educational guidance. Self-analysis, counseling, placement and follow-up are built upon the study of occupations. Emphasis on this aim of industrial arts varies somewhat in different sections according to the dominance of industry. Helping to prevent occupational misfits is economically sound and socially desirable. Industrial arts assists in this through its directing influence on a boy *either toward or away from* industrial occupations as a group. Sometimes it helps him to find a particular trade or industry in which his capacities, aptitudes and possible abilities lie. Its educational guidance value has been demonstrated where exploration has been stressed.<sup>135</sup>

The opportunity for providing educational and vocational guidance information to groups of industrial arts students in their regular class-

<sup>132</sup>Robert Hoppock, *Group Guidance* (New York: McGraw-Hill Company, 1949), p. 3.

<sup>133</sup>Gilbert C. Wrenn, *Student Personnel Work in College* (New York: Ronald Press Company, 1951) p. 227.

<sup>134</sup>Jones, *op. cit.*, p. 304.

<sup>135</sup>John F. Frieze, "Philosophy of Industrial Arts for American Education," *Industrial Arts and Vocational Education*, XXIX (January, 1940), p. 2.

es is an especially rich one because of the students' natural interest in industry as a result of their shop activities. The inclusion of units of instruction dealing with the educational, occupational, personal and social aspects of guidance as it may pertain to special areas of instruction or subjects, is recognized as a growing trend from surveys made in this field.<sup>136</sup>

Group guidance techniques have probably had most widespread usage for orientation purposes at all school levels. Most colleges and universities today employ some form of freshman orientation varying in length from a few days to a full first semester course. Content of the courses vary depending upon their purposes and the type of institution. Various approaches and types of courses currently being conducted are described by Strang<sup>137</sup> in *Student Personnel Work in College*. Their value in helping the student to establish a sense of direction and to make progress toward his goals are emphasized.

The use which is being made of orientation type courses for group guidance work in industrial arts teacher education is pointed up in the 4th Yearbook of the Association, in which fourteen responses were made to:

Specific effort is made in the orientation program to provide for the transformation from high school to college with respect to such factors as personal responsibilities, quality and quantity of work, nature of the work, rights and privileges.<sup>138</sup>

Professional orientation courses during the first part of the freshman year are also being used by seventeen institutions which train industrial arts teachers.<sup>139</sup>

The value of group guidance is widely recognized for its use in the various ways which have been mentioned. It should be recognized, however, that it is only one means of guidance which needs to be supplemented by other procedures. Because of the opportunities for imparting guidance information of common value to industrial arts students in a group, industrial arts teachers should be well acquainted

<sup>136</sup>Daniel Sinick and Robert Hoppock, "Research on the Teaching of Occupation 1945-1951," *The Personnel and Guidance Journal*, XXXII (November, 1953), pp. 147-149.

<sup>137</sup>Ruth Strang, "Orientation of New Students," in *Student Personnel Work in College*, Gilbert C. Wrenn (Editor) *op. cit.*, chap. X.

<sup>138</sup>R. Lee Hornbake and Donald Maley (Editors) *Superior Practices In Industrial Arts Teacher Education*, Yearbook 4, American Council on Industrial Arts Teacher Education, 1954. pp. 31-32.

<sup>139</sup>*Ibid.*, p. 72.

with group guidance procedures and the type of information and problems which may best be treated by group procedures.

### INFORMATION ON EDUCATIONAL AND OCCUPATIONAL OPPORTUNITIES

Providing information to students is one of the principal services offered by the teacher-counselor functioning in a guidance capacity. Information to be supplied usually is one of two major types; educational or occupational. It is to be recognized, however, that these two types of information frequently overlap and that one may hold implications for the other.

#### Educational Information

Certain areas of educational information needed by students have been mentioned in connection with orientation. In the past, educational guidance information has been thought of primarily at the secondary school level. Generally speaking, there is more of an awareness that pupils at all levels should be given such information as will prepare them for making appropriate plans, choices and adjustments in their present and future educational programs.

In recent years more and more attention is being devoted to the matter of educational guidance at the elementary level. Although guidance at this level is concerned primarily with obtaining a better understanding of the individual and his problems, it is also concerned with helping the individual recognize his interests, aptitudes and abilities and make the necessary adjustments in order to compensate for them.<sup>140</sup> These adjustments frequently involve his future educational plans. The alert teacher can be a potent force in helping to establish well defined educational goals for the elementary student.

This influence can be made most effective usually in the seventh and eighth grades where the educational plans are being built which will be followed for the next few years. Proper choice of educational plans is frequently associated with the occupational choice of the individual. It is at this point that educational guidance and vocational guidance become almost synonymous. Each must complement the other if the individual is to realize his goal.

Furnishing information concerning the possibilities of further education in either high school or college can serve as a motivating

<sup>140</sup>Roy DeVerl Willey, *Guidance in Elementary Education* (New York: Harper and Brothers, 1952), pp. 7-11.

force to many, particularly when the values of a high school or college education are pointed out in terms of additional possibilities for employment and earning power.

Students in industrial arts classes who are planning for college, business, trade or technical school beyond high school, will have need for information covering a wide range of educational opportunities.

Gathering catalogues and brochures from colleges, trade, business, industry and technical schools for information to meet the anticipated needs of pupils may well be accomplished by the industrial arts teacher on a selective basis, thereby supplementing the file of those materials maintained by a central guidance office. The value of such a procedure is contained in a statement by Frankel:

The type of service which the individual subject teacher can and should give, begins where the guidance specialists leave off. It is devoted primarily to furnishing the pupil the particular information and guidance *within* his chosen field that he needs to attain maximum success. Moreover, the student will get the facts, not when it suits the convenience of the entire school plan, but rather when he the learner, is ready for them.<sup>141</sup>

The importance of the subject matter teacher in being prepared and able to furnish educational guidance to secondary school students is further emphasized by Smith:

Pupils frequently seek out teachers to aid them in securing information about college or other post-high-school educational or training opportunity. Classroom teachers are in an excellent position to observe and evaluate the educational interests, aptitudes and achievements of pupils. The services of teachers in this connection may be made increasingly valuable through developing a knowledge of educational information related to their respective subject matter fields.<sup>142</sup>

Because industrial arts teachers will come in contact with many students who will be unable to pursue a full college education, the many other possibilities for education and training of shorter duration either in technical institutes or within industry should be made known to the students.

<sup>141</sup>Alice H. Frankel, "Guidance in the Industrial Arts Shop," *Industrial Arts and Vocational Education* XXXVII (April 1949), p. 150.

<sup>142</sup>Smith, *op. cit.* p. 181.

Sources of information of the types mentioned can usually be obtained by contacting the State Department of Education, the National Association of Manufacturers and personnel directors of major industries within the state or area where students are most apt to be applying.

Educational information to be supplied at the college level to industrial arts teachers in training, will be largely concerned with the development of a clearer understanding of the curriculum for teacher preparation. The important aspect of guidance at this level may well deal with the selection of elective courses within or outside the curriculum to overcome weaknesses or develop strengths which may be discerned through individual inventories and the results of such standardized tests as are used.

Information and guidance pertaining to graduate work or specialized areas of preparation will be needed by many college students during their last year of undergraduate preparation. Knowledge of possible opportunities for graduate work and areas of specialization provided at this time, can serve as a motivating factor and aid in establishing goals for further study.

An especially important phase of educational information which has been receiving increased attention since World War II is that pertaining to the opportunities in military service. The fact that military service has become a fixed part of the life of most young men today brings guidance applying to this phase of each young man's life into sharper focus.

The attitudes and motives which the young man carries into service within him can be strong determining factors influencing what he accomplishes while in service. Clifton, head of the enlisted classification section of the navy, makes much of this point in a recent article:

Unless *positive and realistic attitudes* toward military service are fostered, countless youths will continue to hold negative and uninformed attitudes detrimental both to themselves and to society. It must be made evident that military service is part of the normal citizenship pattern and that since it can be *expected*, it can be *planned* for, either in conjunction with a civilian life plan or as a career in itself. The main thing is to engender healthy attitudes toward military life and toward military careers.<sup>143</sup>

<sup>143</sup>Robert S. Clifton, "Counseling Youth for Military Service," *The Personnel and Guidance Journal*, XXXIV (December, 1955), p. 202.



The educational and career opportunities open to school and college youth have been steadily improved and made a center of interest by all branches of the service. There are roughly four avenues of education open to the serviceman: residence courses, extension courses, group study and the United States Armed Forces Institute, which is the real backbone of the program. The Institute makes available some 6000 courses at the high school vocational-technical and the college level through contracts with some fifty colleges and universities in the country.<sup>144</sup>

So important has this phase of educational guidance become to all concerned, that a comprehensive text covering the general philosophy and the opportunities in the armed forces educational program has been prepared by a committee of the American Council on Education.<sup>145</sup> This text is the best single source available on the subject and should be a source of ready reference for teachers and counselors of secondary school and college youth.

#### Occupational Information

Perhaps no other aspect of guidance can be more closely correlated with the teaching of industrial arts than that which deals with imparting occupational information and a knowledge of the occupational structure of our society. Little point needs to be made of the increasingly complex nature of this occupational structure when it is realized that the United States Employment Service, for instance, has formulated more than 22,000 different occupational definitions under more than 40,000 different titles. The need for understanding and interpreting this industrial complex in today's schools has become widely recognized.<sup>146</sup> The presentation of occupational information can contribute much to the understanding of the industrial society in general and better enable the individual to find his appropriate place in it.

It should be realized that occupational information consists of more than the narrow connotation implied in the term "job information." The proper scope of occupational information is defined by Baer and Roeber this way:

<sup>144</sup>*Students and The Armed Forces* (Washington, D.C.: Department of Defense, 1952), p. 61.

<sup>145</sup>American Council on Education, *Your Life Plans and The Armed Forces* (Washington, D. C.: The Association, 1955)

<sup>146</sup>Gordon O. Wilber, *Industrial Arts in General Education* (Scranton, Pennsylvania: International Textbook Company, 1954), chap. II.

In addition to facts about occupations and industries, occupational information should cover such matters as the national job structure, local employment trends and opportunities, all kinds of training facilities, socio-economic trends and conditions and various types of referral sources of assistance.<sup>147</sup>

The problems confronting youth in occupational choices cannot be underestimated. The intelligent choice of an occupation can only be made with sound understanding of both the occupation in which the student is interested and also an understanding of his own aptitudes and abilities. There often exists a considerable difference between a student's interests and the opportunities which actually exist. Attention was drawn to this problem in an early study<sup>148</sup> in which was revealed the wide difference in the percentage of youth who desired certain types of work and the percentage of those actually engaged in those tasks:

<i>Field</i>	<i>Percentage of Youth desiring the field</i>	<i>Percentage of Youth employed in the field</i>
Professional-Technical	38.3	7.5
Managerial	9.1	4.1
Office-Sales	18.5	27.1
Skilled	18.2	4.3
Semi-skilled	6.3	14.9
Unskilled	2.5	14.6

A quick examination of more recent reports from The Bureau of Census and those on *individual states*<sup>149</sup> reveals little appreciable change in the employment pattern of youth at the present.

The importance of teachers, particularly those at the secondary level, being informed and able to present information on occupations, has been pointed out by a study of 561 Iowa teachers. The study indicates that 90 per cent of the teachers felt that teacher training institutions should require of their graduates a thorough knowledge of occupations related to the field of their teaching major.<sup>150</sup> The recent

<sup>147</sup>Max F. Baer and Edward C. Roeber, *Occupational Information, Its Nature and Use* (Chicago: Science Research Associates, 1951), p. 1.

<sup>148</sup>Howard M. Bell, *Youth Tell Their Story* (Washington, D. C.: American Council on Education, 1938), p. 132.

<sup>149</sup>Charles M. Armstrong, *Industrial and Occupational Trends in New York State* (Albany, New York: The State Education Department, 1954)

<sup>150</sup>Roland G. Ross, "Occupational Information In The Schools," *Occupations*, XXVII (March, 1949), p. 397.

report of the National Manpower Council<sup>151</sup> discloses that most high school personnel seem well qualified to give guidance on higher education but seem to know little about occupations and opportunities in industry.

The task of providing occupational information may be properly divided into two aspects; (1) the function of securing information and facts as a background for the counselor and (2) the function of studying occupations by students themselves as a method of guidance.

A proper understanding of the occupational structure of the world is necessary in order to gather and disseminate occupational information. The United States Employment Service set up a standardized classification of occupations according to the kinds of work involved utilizing seven major occupational groups.<sup>152</sup> This occupational grouping was somewhat refined and expanded in the report of the 1950 census. The 1950 census provides employment and related information for eleven major occupational groups. These eleven groups include 446 titles of specific occupations.<sup>153</sup> These basic sources serve to provide an overview of the major occupations in the United States.

#### Sources of Occupational Information

Most of the materials suitable for assisting the teacher in providing occupational information are readily available in printed form. Forrester's occupational information source book<sup>154</sup> is a most comprehensive compilation of some 3,200 selected books and pamphlets from over 350 sources. Over 700 of the items listed are free of charge.

The two bulletins by Greenleaf<sup>155</sup> from the United States Department of Health, Education and Welfare are probably the two most inexpensive and readily available sources which a teacher interested in developing occupational information units might find helpful. The text

<sup>151</sup>National Manpower Council, *A Policy For Skilled Manpower* (New York: Columbia University Press, 1955), chap. III.

<sup>152</sup>United States Department of Labor, Bureau of Employment Security, *Dictionary of Occupational Titles*, Second Edition Volume I and II (Washington: United States Government Printing Office, 1953)

<sup>153</sup>United States Bureau of the Census, *United States Census of Population: Vol. II Characteristics of the Population; Part I* (Washington, D. C.: United States Government Printing Office, 1953)

<sup>154</sup>Gertrude Forrester, *Occupational Literature* (New York: H. W. Wilson Company, 1954)

<sup>155</sup>Walter J. Greenleaf, *Occupations: A Basic Course for Counselors*, United States Department of Health Education and Welfare Vocational Division, Bulletin No. 247 (Washington, D. C.: Government Printing Office, 1954)

by Baer and Roeber<sup>156</sup> represents the most comprehensive treatment of the entire subject now obtainable.

*Evaluating Information.* A wealth of material is available from private publishers, business and industry, and governmental sources. Because there is so much material, it is important that it be carefully evaluated before using. To help set standards for publishers and to aid counselors in evaluating materials, a monograph has been prepared by a committee of the National Vocational Guidance Association.<sup>157</sup>

*Filing Information.* Since most printed information materials are in the form of booklets and single-sheet monographs, it is imperative that some organized filing plan be used if information from the various sources is to be made readily accessible. An organized filing plan which is keyed to the Dictionary of Occupational Titles or some similar system, is an invaluable aid in coordinating information from a number of sources. Many plans have been developed. Three which would lend themselves to ready adaption by the industrial arts teacher are:

1. *Michigan Plan for Filing and Indexing Occupational Information*, Sturgis Printing Company, Sturgis, Michigan. (alphabetical)
2. *Occupational Filing Plan*, Chronicle Guidance Publications, Inc., Moravia, New York. (Subject classification)
3. *A Plan For Filing Unbound Occupational Information*, Bureau of Guidance, State Education Department, Albany, New York. (Based on Dictionary of Occupational Titles)

*Discovering and Using Information.* While much information is available, that which the student finds for himself based upon his own community, is generally recognized as being most meaningful and realistic for planning purposes. The community survey holds the greatest opportunity for industrial arts classes. Wilber comments on the use of the community for interpreting industry this way:

Almost every community regardless of its size has some kind of industry. It is important that students know how industries are operated, what they manufacture or process, what raw materials are used and what types of work the employees do.<sup>158</sup>

<sup>156</sup>Baer and Roeber, *op. cit.*

<sup>157</sup>Occupational Research Section, National Vocational Guidance Association, "Content of A Good Occupational Monograph—The Basic Outline," *Occupations*, XIX (October, 1940), pp. 20–23.

<sup>158</sup>Wilber, *op. cit.*, p. 251.

Guides for conducting community surveys are contained in several of the better sources<sup>159</sup> and might well be adapted for use by industrial arts teachers with their classes.

Numerous other means of using information for investigating occupations are of course possible; such as field trips, films and visiting speakers. These should be utilized by all teachers wherever possible. Directions for using the various means are especially well developed in books by Kitson<sup>160</sup> and Forrester<sup>161</sup> and are readily adaptable by the industrial arts teacher.

The majority of high school and college youth are concerned with problems related to selecting and training for a vocation. This involves educational planning and gathering and using information about various occupations. Teachers of industrial arts can assist students in meeting their problems by providing timely and accurate information and by acquainting them with essential information about themselves.

#### IMPLICATIONS FOR INDUSTRIAL ARTS AND INDUSTRIAL ARTS TEACHER EDUCATION

The development of the student in preparation for the teaching profession involves the mental, emotional, physical and social aspects of his make-up. The preparation of an industrial arts teacher is further concerned with the over all goals of a curriculum which will (1) provide a broad general education and all-around growth of the individual, (2) provide opportunity for the acquisition of professional insights for fulfilling the many-faceted role of teacher.

The overview of the guidance field presented in this chapter has revealed some challenging implications for the improvement of industrial arts teacher education.

Implications to be drawn with respect to guidance are affected by the general purposes and goals of teacher education. It seems, therefore, that these implications naturally fall into two broad categories for consideration of any program or practice involved in the preparation of industrial arts teachers.

<sup>159</sup>Baer and Roeber, *op. cit.*, chaps. X-XI.

Greenleaf, *Occupations... op. cit.*

Smith, *Principles and Practices... op. cit.*, chap. VII.

<sup>160</sup>H. D. Kitson, *I Find My Vocation*, revised edition (New York: McGraw-Hill Book Company, 1947)

<sup>161</sup>Gertrude Forrester, *Methods of Vocational Guidance* (Boston: D. C. Heath and Company, 1951)

The categories recognized are: (1) the competencies and understandings which need to be imparted to teachers in preparation in order that they may be fully qualified to fulfil their guidance responsibilities as teachers; and (2) the practices which should be implemented at the teacher education level to ensure a fuller accomplishment of program goals and to provide a background of experience for the prospective teacher. The implications drawn are therefore concerned with these two aspects of teacher preparation.

### Competencies and Understandings Needed

1. Industrial arts teachers in preparation need to become well oriented to the overall functioning of a total guidance program in the public school. This orientation should include an understanding of the place and function of the program, the various aspects of the total program, and what their relation to it as teachers may be. Such an understanding developed in the professional sequence and the practice teaching period of the prospective teacher's undergraduate experience, will better enable him to supplement the total school guidance program through the information and services which he can render to his students in industrial arts.
2. The professional preparation of industrial arts teachers should include a general orientation to the basic concepts and aims of guidance as practiced in any given state or region. This is in keeping with the growing trend where all teachers, particularly those in the special areas, are expected to furnish guidance to those students with whom they are in most frequent contact and about whom they know the most. Industrial arts teachers, therefore, need a working knowledge of the basic aims and purposes so that they may work in harmony with others in the school.
3. The preparation of industrial arts teachers should include opportunity to become familiar with the content and use of the cumulative record system used in public schools. Industrial arts teachers should be taught to recognize that they can contribute valuable information to this record as well as obtain information from it. The interpretation of some of the data contained in the folders may require the services of a trained person. This also needs to be known. Teachers need also to recognize that much information contained in a stu-

dent's folder may be valuable not so much for what it tells as for what it suggests about the individual student.

4. Industrial arts teachers need an introduction to the more common means of gathering and recording information about students useful for guidance purposes. These might include the use of observation techniques, sociometric devices, personal data blanks and inventories suitable for application in the industrial arts shop.
5. Industrial arts teachers should have a basic understanding of standardized tests and testing procedures. Particular attention should be given to those tests which can supply worthwhile information concerning interests and aptitudes relative to industrial arts activities. Tests of most value are those which may be administered by the industrial arts teacher himself.
6. All industrial arts teachers should have a basic understanding of effective counseling procedures and techniques for use with students. Such understanding is fundamental to the whole area of recognizing and dealing with individual differences in students.
7. Industrial arts teacher preparation should develop in each prospective teacher an ability to gather and present educational and occupational information pertinent to the interests and aptitudes of junior-senior high school students of industrial arts. The presentation of much of this information will require a basic understanding of the use of group guidance procedures.

### Teacher Education Practices and Student Experiences

A fundamental concept of guidance is the recognition of individual differences as they exist in people. One of the greatest problems a teacher has is dealing with these individual differences as he encounters them in his students. A most valuable guide to the teacher in coping with the differences will be those experiences or techniques which have been employed with him or which he has seen employed during his period of teacher preparation. If industrial arts teachers are to become guidance conscious and encouraged to employ effective guidance procedures with their students, they need to be exposed to those procedures during their preparation as teachers.

A number of implications may be drawn from this for the selection of practices and experiences with which students should come in contact prior to teaching.

1. There should be a definite orientation course or program which all students majoring in industrial arts are exposed to during their first semester of preparation. The course or program should be designed to acquaint the student with the requirements and responsibilities of an industrial arts teacher and the teaching profession in general. Effort should be directed toward helping the individual evaluate his potentialities and weaknesses at this time, in order that maximum growth may be effected during his undergraduate preparation.
2. Maximum use should be made of all industrial arts staff members for individual counseling purposes by having small groups of students assigned to them. Effort should be directed toward helping each staff member become a well qualified counselor. Where possible recognition should be made of those staff members best qualified by reason of aptitude and interest and time should be provided for these people to fulfil this most important function. Counseling of this sort should be recognized as educational rather than as problem-centered.
3. Use should be made of a cumulative record system readily accessible to the industrial arts student and his counselor for use in program planning, personal achievement and counseling, and for evaluation purposes. A particularly valuable aspect of such a record may well be the evaluation of the student on qualities of character, integrity, judgement, professional responsibility and interest, in addition to academic achievement. Use of a record in such a manner should make the future teacher more disposed to employ observation and records with his own students for counseling purposes.
4. Experiences should be provided in taking certain standardized tests and in interpreting the results of such tests as general intelligence, mechanical aptitude, personality, interest inventory and others. The experience and information gained from seeing the data employed can provide valuable background information for use by the future teacher with his own students as well as aiding him in his own program of preparation. The testing program might well be a part of the professional orientation during the first semester as mentioned earlier.



5. Each prospective industrial arts teacher should be given the experience through projects and assignments to participate in a community occupational survey. Each student should also be required to gather and organize information pertaining to a few of the major occupations related to each of the technical courses taken in undergraduate preparation. Information and data gathered should be suitable for presentation to his own students in the future.
6. The opportunity for prospective teachers to organize and participate in leisure time activities and clubs related to industrial arts should be planned and encouraged on the college level. The experience and information so gained by students can provide an invaluable background for developing and conducting similar leisure time activities with their own pupils in the public schools.
7. A portion of the experience gained during the practice teaching period should include some direct contact with the guidance department and personnel in the public school to which the practice teacher is assigned.
8. Provision should be made for the industrial arts education department to perform regular follow-up of its graduates in-service during the first one or two years following graduation. Guidance provided at this time can serve not only to aid the individual in adjusting to his job but can provide a rich source of information for improving the pre-service preparation of teachers.

Many of the implications that have been mentioned point to the addition of content to courses already being taught in many institutions. The content of many of these courses no doubt already exceeds the time available in which to teach it. Little will be accomplished by superimposing the various aspects of guidance on the already full course. It might, therefore, be appropriate to establish elective or required courses in the professional sequence such as "Guidance Procedures for Industrial Arts Teachers" or "Occupational Information for Industrial Arts Teachers" for the purpose of adequately preparing industrial arts people to fulfill their guidance responsibilities.

There exists, also, at many teacher training institutions the problem of which department should exercise control over many of the guidance functions mentioned. This will be particularly true where an office of student personnel services is involved. It should be rec-

ognized that in teacher preparation we are primarily concerned with "education of" rather than "service to" the individual. It would be dangerous to assume that students were gaining the basic understandings and competencies necessary for teachers to hold, merely because they were coming in contact with some services on the college campus. These understandings and competencies can only be accomplished by a planned approach to include the necessary content in the teacher education curriculum.

### SUMMARY

Guidance is seen as a unified process: educational, vocational and personal-social, prevailing at all levels in the education and development of the individual. The fundamental needs and processes remain the same on all levels but with different emphasis occurring at the various stages. Coordination of guidance activities is provided by the central guidance office with the classroom teacher and teacher of special subjects playing an ever more important role.

Industrial arts teachers have many unique opportunities to meet the needs of individuals in their classes and thereby develop potential in their students. Means of utilizing appropriate guidance procedures need full consideration to improve teacher effectiveness.

The practices and abilities of industrial arts teachers with respect to guidance can be made more effective through an improved program of teacher preparation which places a greater emphasis on developing teachers attuned to their guidance function.

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## VI

# Community and Professional Relations

Howard D. Decker  
West Virginia Institute of Technology

*In pursuing this elusive topic, author Decker has had to explore aspects of the social sciences. In so doing, he has produced material of great concern to us, because (1) education is a social pursuit, and (2) industrial arts is a socially-oriented field. The reader unfamiliar with the currents that swirl about us will be stimulated by this brief excursion, and others will find here a fairly comprehensive treatment of an interesting aspect of community and professional life.*

*The author begins by defining this thing we call "the community", and follows with a frank review of what makes it behave as it does. There are those who will find this section disturbing, but it had to be included to help us know where we stand. Then, instead of concerning himself with the interaction of teachers as individuals and the community, the author has described the interaction of schools (notably colleges) and the community, which is more significant.*

*In the section on professional relations will be found the admission that diversities exist within the teaching profession, but hope is provided in the valuable suggestions provided for resolving differences.*

*While the body of the chapter refers most frequently to colleges and college teachers, implications can be discerned for schools and teachers at all levels. These are spelled out in the section on implications for industrial arts and industrial arts teacher education.*

EDITOR

In presenting material on the interaction of the college and the community it seems appropriate to begin by seeking agreement on basic terms. What constitutes a community?

Macdougall describes it as:

A community is that geographical area in which it is possible for one to satisfy many aspects of societal living: familial, economic, recreational and so forth.<sup>1</sup>

In the succeeding paragraph, however, he cautions the reader that:

Today to bound the limits of any community is becoming more and more difficult because to be a "complete" person it is necessary to range far afield from ones dwelling unit, both physically and mentally.<sup>2</sup>

A community is usually made up of one or more neighborhoods, which are differentiated from each other on ethnic, class or economic lines. The family and the clique are smaller sub-divisions of the neighborhood; the clique differs from the family only in the sense that it is a nonkin group. Both are informal, intimate group structures.

Almost every individual is born into a highly developed society. It is a society which has order and which prescribes a rough pattern of behavior. It is a society of many levels, of shifting transient individuals, and, if it is an old society, of relatively stable social norms. These social norms, while usually stable, are seldom uniform. Cantril describes these differences as:

As Americans, we may take for granted as permanent and unchangeable our natural resources, our form of government, our freedoms. As members of the white race in a society dominated by white men, we sometimes fail to realize that many of the advantages we enjoy are not available to others because they have black skins. As members of the middle or upper economic classes, we may glibly assume that ours is the best of all possible worlds with its high standard of living, its automobiles, its colleges, its substantial homes, its abundance of food, its recreational facilities, its security. Yet if we walked across the tracks and visited the slums we would see a world of poverty, of malnutrition, of insecurity and despair which, in many common aspects, might differ from our own environment much more than if we visited the better sections of Hong Kong, Moscow, Singapore, or Ankara. For not all the norms within a Western, or even American, culture are uniform. They are patterned in many ways. There are differences in the norms in various sections of the

<sup>1</sup>Curtis D. Macdougall, *Understanding Public Opinion* (New York: Macmillan Company, 1952), p. 12.

<sup>2</sup>*Ibid.*, p. 13.

country, in different communities, in different neighborhoods, in different economic classes, in different generations.<sup>3</sup>

It is within the context of these differences that this chapter is written. Much of the material will have significance in certain communities, but will be of no help in others. This heterogeneity of our communal life is both the shame and the promise of our American heritage.

Almost all of the studies of the American community have found evidence of a class structure in the lives of people who live in these communities. Warner and Lunt describe the discovery of a class system in "Yankee City" as:

By class is meant two or more orders of people who are believed to be, and are accordingly ranked by members of the community, in socially superior and inferior positions. Members of a class tend to marry within their own order, but the values of the society permit marriage up and down. A class system also provides that children are born into the same status as their parents. A class society distributes rights and privileges, duties and obligations, unequally among its inferior and superior grades.<sup>4</sup>

#### INFLUENCE IN THE COMMUNITY

While it is true that sharpness of delineation between class orders varies with communities, it is almost universally true that influence and power in the American community rests in the three upper classes—upper-upper, lower-upper, and upper-middle. It rests first in the individual and second in the associations in which the individual is a member. The role of the individual in directing community life is exemplified by the following account of a day's activity by an upper-upper class male:

Mr. Breckenridge had interrupted her with a few confirmatory remarks while she spoke. When they left the dinner table he took up the burden of conversation.

"The old families aren't as powerful as they used to be. The son don't follow in their father's foot-steps. New people keep coming in. They're the ones who get control. Not we. Old families used to run this town but not anymore."

<sup>3</sup>Hadley Cantril, *The Psychology of Social Movements* (New York: John Wiley and Sons, 1941), p. 4.

<sup>4</sup>W. Lloyd Warner, et.al., *Who Shall Be Educated* (New York: Harper and Brothers, 1944), p. 20.

Yet that very day, while walking to and from his office (where he had spent four hours saying "yes" and "no" to people who were attempting to translate their decisions into economic reality) Mr. Breckenridge had been stopped by five people, each with a question to submit to his judgement and authority.

What did Mr. Breckenridge think about the new schoolhouse?

"Well, the one we've got is good enough. This is no time to be spending our money on a new building."

That night the questioner advised his lodge brothers to work against the building of a new schoolhouse because "this is no time to be spending our money on a new building."

"Mr. Breckenridge," another asked, "what is your opinion about the Newtown real estate projects?"

"Much too high, and I can't see what they think they're doing down there. This town doesn't need new dwelling houses."

His inquisitor that evening called his friend in Newtown and informed him that he had postponed buying a lot out in Newtown. He thought prices ought to come down.

The president of one of the banks (UM), thinking of advising some of his local clients in their investments, inquired about the possibilities of certain new utilities offerings. He was told by Mr. Breckenridge that the investments were worthless. The next day the president of the bank informed his clients that after careful investigation he believed it unwise to put such stocks and bonds in their portfolios at that time.

As Mr. Breckenridge continued down the street he was stopped by a young Pole, Paul Stanley (UL), whose father had once worked for him as a yardboy. The young man tipped his hat and said "sir" when he started speaking.

"Mr. Breckenridge, I would like to get married, but I want to buy a house. Would you tell me what to do?"

"How much money have you saved, Paul?"

The young man told him.

"But that's not enough to get you a house, Paul."

"That's what I wanted to see you about, Mr. Breckenridge. I thought maybe you would tell the bank I was okay."

He looked down at Paul for a minute.

"Certainly, I will. You're a good risk."

...And finally, as he was turning into his gate, one of the ushers in his church (UU) stopped Mr. Breckenridge.

“What did you think of Rev. Ainsley’s (UM) sermon last Sunday?”

“I though it was no better and no worse than the first one he gave three years ago. I knew then he was muddleheaded. He doesn’t understand this town. James, we made a mistake in him. We should have waited until we could have found someone like Sutterfield (UU).”

They both agreed that the appointment of Rev. Mr. Ainsley had been a mistake. The Rev. Mr. Ainsley’s duties as shepherd of his flock became increasingly difficult. As the months passed, he had the uneasy feeling that the bishop did not seem quite so friendly as before. He and his wife discussed the advantages of taking a parish in a poor neighborhood of some large city where they could do more effective work.<sup>5</sup>

The role of the upper three classes in controlling the activities of the associations in which all the classes are represented is revealed by daily newspaper and other literature.<sup>6</sup>

This is the picture of class control in an Eastern city, a city which has changed little in the last fifty years. The pattern is modified somewhat in those parts of the nation which have undergone rapid changes.

This is not, of course, to suggest that the upper classes are all powerful in molding community life. In fact, there are numerous examples of unsuccessful efforts to do so.<sup>7</sup> But in its essence, the pattern of community control is quite clearly from the social elite downward. Whether or not social action programs originate among the upper classes, approval by these classes seems to be essential if the programs are to succeed.

At this juncture, it would appear that if one follows the traditional pattern, the upper classes are the control groups with which the educator must work. There is, however, an alternative: the college may choose to widen the base of its community contacts to include a complete cross-section of the community’s population. With increasing trends toward movement of people to new communities, and with the increasing social mobility that economic growth brings about, this approach promises much for the future.

<sup>5</sup>W. Lloyd Warner and Paul S. Lunt, *The Social Life Of A Modern Community* (New Haven: Yale University Press, 1941), p. 139.

<sup>6</sup>See, for example, *Ibid.*, pp. 168-173.

<sup>7</sup>See, for example, Solon T. Kimball, “Anthropology and Communication,” *Teachers College Record*, LVII (1955) pp. 64-71.

A noted example of this approach is The Montana Study, which was conducted in Montana in the Years 1944-47 by the Montana State University, with the aid of a grant from the Rockefeller Foundation. The study, from its first breath, was the target of much criticism bearing out our earlier conclusion and in 1947 the legislature failed to appropriate funds for its continuance:

And so, a dream to lift the level of living in the small communities throughout the State of Montana had been shelved in the files of memory.<sup>8</sup>

But the study had its successes, and its procedures and techniques live on in other community-college interactions. The following excerpt is typical of the study's influence on a community:

On November 1, 1945, a small group of people assembled with Baker Brownell to organize the Stephenville Study Group. There was one businessman, one school teacher, a nurse, a dentist, the Catholic priest, the Methodist minister, a forest ranger, and some of the community's housewives and leading farmers. Although it was a small group they were people who did not hesitate to speak out on any issue, and they were all anxious to gain a better understanding of their community.

One of the important conditions that Brownell had laid down for a successful study group was that it should represent a good cross-section of the entire community, and that it include people whose opinions differ. The Stephenville Study Group had nine Republicans and nine Democrats, so in one respect it had satisfied that condition. Yet most of those who participated were farmers, chiefly members of the Farmers Educational and Cooperative Union of America, known commonly as the Farmers Union. Townspeople were notably disinterested, an unfortunate situation, for the group's chances of achievement would have been much greater had it been more representative of town and country alike. But for this no one was to blame except those who refused to come.

Charlie McDonald, the forest ranger, who was one of the few people in Stephenville not content to sit while the old town slept, was the "leg man" who deserves credit for bringing the Montana Study to this community. . . . But when he went out to look for people to participate in the Montana Study, he figured, "After all, this is just a project in education—the school will be interested in that."

<sup>8</sup>Richard Waverly Poston, *Small Town Renaissance* (New York: Harper and Brothers, 1950), p. 186.

So he tried Stephenville's school superintendent. He wasn't interested. "Gosh, that's funny," thought Mac, "but the businessmen will be interested in improving Stephenville."

So he made the rounds.

You would have thought Mac was selling "hot" merchandise. "Sorry, can't spare the time."

"Sounds like a lot of trouble for nothing - better count me out."

"What's in it for me?"

"I don't see anything wrong with Stephenville like it is."

"Why," remarked one influential citizen, "it sounds downright Communistic!"

That's how it went up and down Main Street. So he tried the Farmers Union folks. From them the reception was different - but they wanted to make it a Farmers Union project.

"No," said Mac, "this is something for the whole community. We've got to have a cross section of the people."

Why, that would mean mixing up the Grange, the Farmers Union, rich farmers and poor farmers, country people, townpeople, corporation people and co-op people!

Even some of the Farmers Union folks decided to pass it up, but Mac wouldn't quit.<sup>9</sup>

The Study Group of Stephenville was finally formed and discussion began on community problems.

... Despite their sincerity, they suddenly realized their work was not being appreciated by the community at large. Each week a long story of their meeting and an invitation for the public to attend appeared in the local *Northwest Tribune*. Yet outside the group almost nobody knew what they were doing. And almost nobody cared. This inertia was sometimes discouraging even to the most ardent among them, but what really hurt was the opposition that grew up against them from certain businessmen and the superintendent of their local schools. For some reason they could not comprehend they were being called "intellectual communists." Then the "intellectual" was dropped. And the further they probed into fundamental community problems, the more vociferous the opposition became. The name callers had no idea what the Stephenville Study Group was all about. The presence in the group of such men as Father Jensen and the Reverend Mr. Horsell, and of such known conservatives as Charlie

<sup>9</sup>*Ibid.*, pp. 75-6.

Buck and Lawrence McFadgen, the "Wheat King" of Sunset Bench, made no difference. They were just naturally agin' it.<sup>10</sup>

Despite the lack of public support, the Study Group organized a pageant depicting the history of the community and its environs. This project united the community and produced quite exciting after effects.

Old timers say they had never seen anything like the spirit of community good will that prevailed in the weeks that followed. One Stephenville citizen, who had called the Study Group nonessential, made such a complete reversal that he was later instrumental in getting the Grange to endorse the Montana Study on a statewide basis. The Stephenville Study Group now found itself with a host of new friends. A permanent executive committee was appointed to make the pageant an annual event.

. . . But perhaps the greatest result of the Study Group was the creation of a demand in Stephenville for adult education. As a result of this new desire, the Study Group members, with Charlie MacDonald again acting as their representative, applied to Montana State University for a formal course entitled "The Conservation of Natural and Human Resources." Joseph W. Severy, head of the Natural Science Department, and Harold Tascher, sociologist, came in answer to that request and with the help of other University faculty members brought the University away from the campus and into Stephenville.<sup>11</sup>

Perhaps the final tribute to the success of the Study Group lies in this statement by a Stephenville woman:

"Before we started our Montana Study Group people in this town were so negative toward community progress you couldn't get them to an educational meeting to see George Washington ride a bicycle."

"But now," she said, "we're demanding that the University give us some courses in adult education to help solve our community needs."<sup>12</sup>

The solution to the problem of effective school-community relations that is really productive of progress may perhaps be a choice between the two approaches suggested thus far. Or, depending upon the community, the solution may be some combination of these two approaches.

<sup>10</sup>*Ibid.*, p. 77.

<sup>11</sup>*Ibid.*, p. 86.

<sup>12</sup>*Loc. cit.*



## THE ROLE OF COLLEGES

Perhaps the most significant aspect of colleges and community integration has been the growth in the post-war decade of the Community College. Among the most cogent remarks on the need for such an institution are those of Baker Brownell:

Higher education in America is more a matter of "cut out and get out" than generally is supposed. What the lumber baron did to the forests, making waste lands across the lake states, the South, and the West, the college system in its way is doing to the rural areas and America's little places. Higher education has become increasingly an extractive industry, like mining or oil. It "processes" young people, gives them degrees; it also removes them from their native places and markets them elsewhere. It is an extractive industry without safeguards. It takes young people from their home communities, but no protections are provided, no severance taxes, no instruments are drawn up to compensate the community for its loss in native wealth and men.

This aspect of the educational problem rarely is considered. Few recognize even its existence. Those who gain by the migration are confident and articulate. Those who lose, and they are many, do not know what is happening, know it too late, or by force of circumstances are inarticulate and dumb. Says the college student "I am young and on the make. Where I am going there is opportunity. I shall be more productive there than at home." Says the college administrator and teacher, trained, in cosmopolitan indifference to the little places: "Our small communities are culturally backward. Where among them can our graduates find the music, the art, the opera, the lectures, and libraries that we have taught them to crave?" Says the city businessman: "The hick towns will die anyhow, college or no. Modern technology and economic efficiency have doomed them. Why prolong the agony? If we can draw good men from them, so much the better." This is the chorus, sung together with massive authority by the ambitious young, the intellectuals, and the business and professional folk of America. Only a small voice here and there, a rural, unheard Amos, denies them. Meanwhile, America rocks on from crisis to crisis, from war to boom, on to economic crash and war again.

The chorus is confident and powerful, but wrong. For some young men there is indeed opportunity in migration to the city. But opportunity here is defined mostly in terms of the individual career. For the intellectual there is, indeed, more music, art, opera, lectures,

libraries, sport, and refined circuses. But "cultural" life here usually refers to the spectator who buys the professional output of virtuosi. It is true, as the urban businessman says, that mechanization and mass efficiencies are extinguishing the small community, but not true in all respects. Recent trends in technology, such as electric power, the gasoline engine, or for that matter, the atomic bomb, favor decentralization, if they do not enforce it.

The modern general college is partly a cause, partly a consequence, of this drift toward city life and customs. It is central in that drift, and what was founded to foster and maintain some of the more permanent values of western democratic culture helps lead away from them. Many a teacher, a scholar, an administrator, holds contemporary city life is the norm toward which we should educate our people; or if he does not say so, he behaves that way. He forgets, by choice or inadvertence, the small communities from which college youths traditionally have come. He ignores the vast areas of culturally cut-over lands in rural America, impoverished, degraded, with an income the lowest in the country. In view of the relatively large number of rural people who receive college education it might be supposed that the life and culture of our rural regions over three centuries would have been enriched and stabilized. Thousands of educated country boys and girls returning to their homes should lift their communities to higher and higher levels. That at least was the supposition of many of the founding fathers: of Jefferson, for example, when he founded the University of Virginia, and of those who set up the landgrant colleges. But these suppositions were wrong.

The country boys and girls who went to college did not, and do not, return to their home communities. Quite the contrary. They got out for good. They were drained off by the college, or were pumped off, into urban districts where their family life and culture soon became extinct. Not more than one in ten college students, in the opinion of Arthur E. Morgan, distinguished former president of Antioch, has returned to the small community whence he came. They leave forever their community and—in much of the West and South—they also leave their state when they graduate. College women seek marriage elsewhere or follow the men to distant places for careers. A college, it has been said, is one of the best ways to kill a small town, if the college has no community orientation. By fostering urban, suburban, and career values focused in individual ambition, it becomes a drainage ditch down which many of the more energetic youngsters of the community float never to return.<sup>13</sup>

<sup>13</sup>Baker Brownell, *The College and the Community* (New York: Harper and Brothers, 1952), pp. 18-20.

A committee of the Association for Higher Education, in responding to the challenge in the preceding quotation had this to say:

Since the close of the war, educational literature has been replete with discussions of the relation of the college to the community. These have served to stimulate unusual interest in our topic. Among the many items, four books seem to me to have made the greatest contributions and to have had the strongest impacts. I shall mention them briefly.

The report of the President's Commission on Higher Education urged that American higher education render a much wider service than it traditionally has done. It recommended the adoption of the term "community college" for certain programs beyond the high school and defined more explicitly the community college concept. It advocated that adult education should be extensively reorganized in order to meet more genuinely and fully the needs of adults, rather than merely serving them with courses designed for college age youth.

A second book is one authored by our chairman, Jesse Bogue, entitled *The Community College*. This is an exposition of the two-year college. The community college in one sense is a conversion of the older junior college, but it is much more than that because it gets away from a program that was composed largely of the first two years of a senior college program in favor of a philosophy of education and an array of offerings designed to meet the needs of the people of a community.

Another book that I have liked very much is John Diekhoff's *Democracy's College*. This is an unusually well written discussion of the job of a municipal or metropolitan institution serving the people of the community beyond the high school. Mr. Diekhoff speaks mainly of the four-year college, but his theme is the same—the relation of the college to the community.

Then there is Baker Brownell's *The College and the Community*. Mr. Brownell, in his plea to the colleges to concern themselves with the people of the community and of the state, accuses the colleges of ignoring the community. Indeed, he charges the colleges virtually with being the cause of certain deterioration in our American society through taking the best youth of our small communities and funneling them into the urban centers. He believes strongly that a considerable reorientation in outlook and reorganization of program in higher education are needed.

Were it not my own, I would commend a fifth and earlier book, *Vitalizing Liberal Education*—the name describes the theme of the book. It shows how the community can be utilized in giving greater vitality to college education.

All of these views show a reaction against the ivywalled, cloistered institution, smugly concerning itself only with the transmission of the cultural heritage to the intellectually elite segment of our youth. Not all of the literature is in this vein, however. The Report of the Commission on Financing Higher Education, just out, takes a bold stand in favor of having higher education chiefly concern itself with the upper 25 per cent of our high school graduates. It also pretty much says that any program that does not have high intellectual content is not higher education. The report sharply challenges that of the President's Commission in a number of other ways, including its recommendations for adult education. It says that adult education "designates a clientele and not a function."

These books provide an excellent frame of reference for our discussion. I shall begin the discussion by commenting upon three points, as follows:

1. A particular institution cannot do everything for everybody, but every college can render some service to its community.
2. The community college fills a void in American education and will have further dynamic growth.
3. Any college can make considerable use of the community as a laboratory of learning for its students.

To start out by saying that a particular institution cannot do everything for everybody may be a negative approach to our subject, but I do not want my later remarks to be interpreted to mean that I advocate that every college should undertake a full program of community education.

Any institution must define its purposes and functions and then live by them. Clarity of purpose is essential in organizing a program, in creating a faculty, in evaluating the results. The purpose does not have to be narrow. It does have to be in harmony with the resources that are available or attainable.

It is clear, perhaps, that a dental school does not have as its purpose the training of stenographers. It is not so clear that a small liberal arts college whose president has suddenly become community conscious or perhaps hard pinched financially should not train dentists—well, perhaps not dentists, but stenographers and sales clerks and traffic cops.

This raises the issue: What can the typical arts college offer of value to the people of its community? If it is a private college with limited resources, average tuition charges, and a liberal arts faculty, its offerings may have to be rather limited. Certainly there are some

things that it should not do. It should not offer work at tuition charges below cost or other subsidization because that will drain the resources behind the regular program. It should not demand that the faculty offer courses in the community as an extra chore because that will sap their energies. It should not adulterate the regular program by watering down the courses because that will mean deterioration in the quality of courses offered to its regular student body. Another way of making my point is to say that when a college undertakes a program in the community merely for the sake of producing an income to help it carry its regular program, this is not a worthy effort and is apt not to be terribly successful. If the liberal arts college does these things, it will not only injure itself, but worse than that, it will forestall any effort on the part of the community to initiate a genuine community college of its own.

A liberal arts college can, of course, offer some of its regular courses to off-campus students. That is, it can give comparative literature or the American novel to a group of teachers, or a refresher course in mathematics or organic chemistry to an industrial group. It can work community members into choruses or dramatic productions and these are worth-while cultural contributions. But these things are incidental to the main program.

I have been speaking primarily, of course, of the typical liberal arts college with a job of its own to do, with a faculty ill-prepared for community service, and with its motivation stemming either from a need to earn more money or from a desire to "do good" to the community. If this college tries to do everything for everybody, it will quickly degenerate into a superficial operation without much value to anyone.

Let me hasten to add that there are some liberal arts colleges and many universities, both private and public, that are meeting the real community needs. But these are institutions where the leadership is able to mobilize the community people and resources, where the faculty is in tune with these purposes, and where the total energies are so organized as to do a good job for both the regular students and the community students.

There *are* colleges that publicize that they will teach anything to anybody, any time and any place, provided enough students of college or post-college age enroll. But these are neither dental schools nor liberal arts colleges, although some of them may have a liberal arts program as a part of their offerings. The colleges that so

publicize themselves are the bolder of the new type of community college.

This brings me to my second point: the community college fills a void in American education and will have further dynamic growth.

Let me pose some criteria of what constitutes a community college:

1. It is one that is community centered and for which the community assumes the major responsibility.
2. It is one that studies the needs for education beyond the high school in the community and builds its program on the basis of such needs.
3. It is one that caters to the needs of all persons who desire its services and to whom it can offer appropriate courses. This means college age youth and others beyond. It means college parallel courses and many other kinds of courses. It means full-time students and part-time students. It means persons with intellectual talents and persons with other talents as well.
4. It is one that serves as an additional cultural center for the community.

In thus defining a community college, I am concerned with its functions. Most commonly it has a two-year program but it is not always so limited. It may or it may not be a part of the local school system.

Certain characteristics usually stand out. One is that the college serves those individuals who prefer or need to live at home, thus greatly reducing the cost to them and extending the opportunity for education, especially for persons whose families are in the lower income brackets. Thus in the midst of steadily rising costs there is preserved for these young people the opportunity to work their way through college — a good old American tradition.

Second, the college normally has a large enrollment of adults and of part-time students and keeps its plant busy fourteen or more hours a day.

Third, the community college has discovered a level of occupations in between the trades and the professions for which some college education is good preparation. These are sometimes called the technologies or the semiprofessions. Our educational system heretofore has largely ignored them, but industry and other employers are now hungry for such employees.

Fourth, the community college draws the community in on its own planning. It establishes many joint faculty-citizen committees to study the program. It gets the cooperation of industry in making

surveys of the needs for educated personnel. It devises courses and curriculums that meet the local needs regardless of whether or not they are in accord with the traditional programs of colleges.

A by-product of these efforts is an arousal of interest within the community in the work of the college, which normally leads to good community support, including financial support.

I believe that it can be demonstrated that a college program that serves the needs of a community is a genuine investment for that community. Such a program can make many contributions: an improvement in the discharge of the responsibilities of citizenship, a gain in the vocational skills of many individuals, a solution to some problems of idleness and of delinquency, an upgrading of many persons in the responsibilities, civic, vocational, and otherwise, that they can undertake, a rise in the general standard of living within the community, and a rise in its cultural level.

With this description of the community college, it becomes clear why it is not a liberal arts college or at least why it is considerably more than a liberal arts college with a few appended features. There may be a program of liberal education at the heart of the institution; more likely the basic program will be a combination of general education and of vocational education, the distinction being that this curriculum is built up as a result of an analysis of individual and social needs.

My third point is that any college can and should make considerable use of the community as a laboratory of learning for its students. This is using the community to educate the students rather than using the college to educate the community; but it is an important phase of our topic, the relation of the college to the community.

I believe that there are a number of principles of education that must be followed if the colleges are to give to their students an education that genuinely prepares them for living in our democratic society.

These principles can be stated as follows:

1. As John Dewey said, the only way to learn how to live successfully in the future is to experiment and practice with such living while learning.

2. Just as the theory of chemical reactions becomes most clear to the student when he has carried through some laboratory experiments, so in the study of all theory, the student will grasp most fully the meaning and significance of the theory if he sees its applications and gets some experience in practice relating to it.

3. Learning how to assume and carry responsibility is a skill that comes gradually through the practice of carrying responsibility.

4. Since people spend most of their intellectual and physical energies and also make their greatest social contributions through the occupation they undertake in life, it is essential that the college student should have an opportunity to discover the vocation for which he is best fitted and get some realistic preparation for it.

5. A student will derive the best understanding of the wisdom of men's past experience and of its usefulness in relation to his life in the present and in the future if he has the opportunity to come to understand well our contemporary society.

6. A student's environment is a primary factor in influencing and molding his personal and social development and hence this environment should be the natural one of the community in which he will live and the larger national and world community. The environmental influences and experiences should not be limited to the somewhat artificial ones found on a college campus.

Each one of these principles, it seems to me, requires that the community shall be used in one way or another as an educational laboratory for the college students.

I am not overlooking the fact that the college in a sense constitutes a community itself. That is, it is a group of people, teachers and students, who are working and living in certain community relationships. I believe, however, that most colleges fail to use effectively even this community for educational purposes. The campus activities grow up more or less like weeds. They provide experiences for the students, but these experiences are not used in any constructive way in an attempt to derive good educational value from them. The result may be good education but it may as easily be miseducation.

In contrast with this, I believe it is possible so to organize the college community as to get some educational values from these activities and to extend the scope of responsibilities assumed by the students so as greatly to enlarge the education opportunities. Some participation by faculty, I believe, is an essential element, not on a paternalistic basis, but on a basis of shared experiences. I would call this larger concept of student government by the name "community government". Community government is being tried by a few institutions with results that have demonstrated the educational advantages of giving some attention to this phase of the student's growth while in college. Skills in social planning and organization



have been acquired. The techniques of group leadership and group participation have been studied. Many aspects of personnel and financial administration have been learned. Realistic problems of morals and social ethics in this laboratory have become the basis for education growth, for greater maturity in thinking about human relationships, for interpretations of the meaning of moral principles and ethical concepts as applied to the problems that arise in daily living.

It is probably apparent, however, that the principles I have enunciated receive their best application when the student is given some experience in the community beyond the college campus. Here again, any off-campus experience, such as that derived by a student who is earning part of his way through a job down town, will have certain educational values; but the educational growth best occurs when a college or its faculty provides some thoughtful direction for the experiences that the student will have.

The cooperative work-study plan of education, toward which I am partial, offers excellent possibilities for the institution to plan the program around certain educational objectives and to administer it with substantial faculty guidance and participation. Then, too, if the faculty of the institution has accepted the plan as an integral part of the whole program, considerable use will be made in the academic courses of the experiences had by the students off campus. At Antioch College we thought of the work element in the work-study program as contributing in the application of each of the principles stated above. Some of these applications will be obvious, such as those having to do with the personal development of the student or with his vocational adjustment and preparation. But we thought that the intertwining of theory and practice was tremendously important in promoting a full understanding of the theory. We thought that a conscious exploration of the community in which a student lived while he was on his job gave the student a background from which to interpret the wisdom of the past, thus contributing greatly to the genuineness of his liberal education. It is this sort of thing that I mean when I speak of vitalizing liberal education.

Job experience on a purely apprenticeship basis will not accomplish all of these results. The job experiences must be planned in relation to desired objectives. If the student is to be taught how to observe, analyze, and study the community of which he is a part, he must be given direction by the faculty toward this end. For some such purposes, the job is merely the bridge by which to enter this enlarged laboratory for the college.

While the work-study plan offers superior advantages, it is possible to use other means in assisting the student to get experiences of educational value. Teachers are accustomed to doing this in certain subject areas, such as in teacher training, where students are given the opportunity to observe and to participate in the teaching in the public schools of the community. Instructors of sociology sometimes have their students make intensive field studies or broad community surveys. Teachers of English sometimes require the students to write themes or essays based upon some study of the community. Some colleges encourage the students to participate in local charity drives and in the promotion of local musical events. These are but a few examples of the many that can be found suggestive of the possibilities that exist for an alert faculty in the utilization of its community.

No one of these devices may serve fully to overcome the criticism made of the colleges by Baker Brownell. The graduate still may drift to the urban center or seek the green pastures. I would not contend that it is either possible or desirable that all students should build their future lives in their home communities. The aim is not provincialism. But there is something wrong with the set of values and skills we give to the students if they can find happiness in living only by seeking a minor position in a major city. If the student is to remain in the smaller community, however, and stake out his life there, he must somehow acquire roots in the community. This probably will happen only if he studies his community and through study and experience comes to understand and appreciate it, and if he actively explores for vocational and avocational activities that may continue as post-college interests.

The basic objective of utilizing the community as a laboratory for learning, of course, is that of giving the student the best possible personal, vocational, and social development, and the fullest possible growth in knowledge and in personal philosophy. If, as a result, he finds a creative life in a small or moderate sized community rather than drifting to the large city, I would applaud.

I have been discussing separately the three statements that I posed at the beginning. They can be discussed easily in this manner because one can think of illustrations that fit each case. That is, there are many liberal arts colleges and universities that are rendering educational and cultural services in their communities; there are many community colleges, especially on the two-year basis, that have sprung into life; and there are some institutions that make ex-

tensive use of their communities in creating learning situations for their students. But a college that genuinely integrated itself with its community would have all of these characteristics. In these instances the various phases of the program would cross-fertilize and vitalize one another to everyone's benefit.<sup>14</sup>

It is very important to realize at this point that the very existence of a college in a community tends to set that community apart. The college, in going about its normal activities has a profound influence upon the community of which it is a part. This phenomenon is evidenced by a study of a medium sized Middle Western city; the city studied was given the name of "Middletown".

The field work for the original "Middletown study" was completed in 1925 and was followed by three and one-half years of compilation and revision before the study was published. A total of five years was spent developing the study. Ten years later, "Middletown" was revisited and a comparison study was completed. It is this study which provides the material on Middletown's college and its relation to the community.

Middletown's college has not stood still, however, in the years since 1925. Some local people call the spectacular growth of the college "the biggest thing of a constructive sort that has happened to the city over the past decade". Middletown has become "a college town". The capital of Middletown's state has for many decades enjoyed referring to itself as "the Athens of the West". A small city not far from Middletown revels in the prestige of its excellent Quaker college. And Middletown, too, has had the fever intermittently since the early 1890's. A newspaper editor who had come to town with the gas boom, noting presence of a small teacher-training school in an outlying village in the county, began to preach Middletown as "an ideal location for a college or normal school." In 1896 a group of local businessmen promoters bought up a tract of farm land west of town, then "heavily overgrown with a thicket," incorporated The Eastern State Normal University, and began a drive to sell building lots at \$300 each on part of the site to finance the building of the "university" on the remainder. The campaign failed, was renewed in 1898, succeeded, and the "university and a new outlying suburb "Normal City", were born simultaneously.<sup>15</sup>

<sup>14</sup>Algo D. Henderson, *Current Issues in Higher Education: What Should Be The Relation Of The College To The Community* (Washington: National Education Association, 1953), pp. 84-90.

<sup>15</sup>Robert S. Lynd and Helen Merrell Lynd, *Middletown In Transition* (New York: Harcourt, Brace and Company, 1937), p. 213.

After a succession of bankruptcies the school grew until in 1925 at the time of the original study it graduated 192 students. Its summer enrollment was 1,103 students. The college's effect on the community at this time was slight.

Had Middletown been a "college town" in any observable sense in the fall of 1923 when the city was selected for study, the study would not have been made there. Despite the rapid growth of the college, however, even in the spring of 1925 its impact on the town, other than its increment to local trade, was practically nil. It was an inconspicuous institution out in the age of the cornfields, on the margin of the city's consciousness. <sup>16</sup>

A considerable change in the college's role in community affairs was noted in 1935.

"...In the summer of 1936 nearly a thousand students were registered for each of its two summer sessions, and a local editor expressed the hope that "before too long this institution will be known as X State University, with a normal school merely one important department."

Today, the most generally expressed attitude in Middletown toward the college is one of outspoken and enthusiastic pride. The faculty and the college are penetrating constantly further into the city's life. Businessmen hail the presence of a thousand students in the city throughout the year, whose local spending is said according to a local newspaper, perhaps over-optimistically, to aggregate \$1,000,000 a year. <sup>17</sup>

Further, the college has affected the intellectual climate of the city.

"...A further significant influence derives from the presence in the culture of a somewhat independent group of people whose business it is to maintain intellectual contact with a wider world than that of Middletown.

.....

One of the problems of the Middletowns of the country, organized centripetally about the major concern with making their living, is resistance to new ideas from without that interfere with the smoothly gliding process of their own living, an intuned concentration on the

<sup>16</sup>*Ibid.*, p. 215.

<sup>17</sup>*Loc. cit.*

local, the familiar, the habitual, in an era when the larger national culture is confronted with new issues and is restating some of its fundamental assumptions. And it is at this point that the fresh leaven of a college faculty becomes important—important both in its fortification and nourishing of a spirit of inquiry among the young, the ministers, the high school teachers, and the isolated “lonely intellectuals” in Middletown’s own population, and important as an outright originating agency.

.....  
 Thus the Globe Shakespeare Theatre company from London would probably not have been brought to Middletown from the Chicago Century of Progress if the college had not brought them; Engelbrecht, co-author of *Merchants of Death*, would not have been brought to Middletown in the winter of 1934-35 to say things about military armament that Middletown’s D.A.R. and the American Legion try to keep from being said in Middletown; and if it had not been for strong leadership in the social studies department in the college, the National Secretary of the Socialist Party would never have been brought to Middletown to speak in the winter of 1933-34. Middletown is uneasy about “radicalism out at the college”; the X family may keep an eye on their college and interfere from time to time; but “intellectual freedom” in a “college” in the United States still carries a traditional value far stronger than “intellectual freedom” in a high school, and the tether of the X State Teachers College faculty, though limited, is still longer than that of the high school faculty and that of any Middletown minister of the three numerically largest churches. If the businessmen see the in presence of the college “a million dollar’s worth of business a year” and the clubwomen “a fine cultural influence for the city,” many public-school teachers and ministers look upon the college faculty as a powerful ally in trying to make Middletown extend its awareness and in keeping themselves intellectually alert. As one of the latter remarked fervently; “The college is the finest thing that’s happened to the city! There are some people out there who speak my language. We lend books back and forth to each other and it helps to keep one intellectually fresh.”<sup>18</sup>

The presence of the college has also had its effect on public-school education in the community:

<sup>18</sup>*Ibid.*, 217-18.

An important by-product of the growth of the college is the opening in 1929 in the West End of the city adjoining the campus of a handsome modern laboratory school operated by the college. This formidable new internal measuring stick imported into the Middletown public schools bids fair to affect fundamentally the qualitative side of public-school education, while its new \$300,000 plant . . . sets a difficult standard for most of the city's school buildings, some of them fifty years old.

The college laboratory is giving new impetus to a tendency already under way in Middletown's schools, namely, the emphasis upon smaller classes and individual differences as over mass education and conformity.<sup>19</sup>

The college has had a powerful cultural role in the shaping of the leisure time activities of some of the city's inhabitants. This is evidenced by:

"...At present the college conducts a lyceum offering a wider array of speakers than Middletown's own citizens were able to bring to town in 1924-25. The students provide the attendance backlog, and the loyal citizens fill the rest of the needed ticket purchasers to make the lyceum pay its way.

At other points the college is stimulating the artistic activities of the city through its leadership.

.....  
 In 1935 a handsome Arts Building was being completed at the college.

.....  
 Today this dignified building, with its workrooms, auditorium, and an exhibition hall housing a permanent exhibition of the art treasures of several members of the X family and other excellent occasional exhibitions brought to the city, is the most conspicuous manifestation of the art life of Middletown.<sup>20</sup>

The college also was active in the associational and religious pattern of the city:

The increasing participation of members of the faculty of the local college in the club life of the city bids fair to increase the range and the vitality of discussion in the clubs.<sup>21</sup>

"...One minister attributes what he regards as the more liberal attitude of the churches today largely to the influence of the leaven of

<sup>19</sup>*Ibid.*, p. 218

<sup>20</sup>*Ibid.*, p. 286-288

<sup>21</sup>*Ibid.*, p. 283

new minds brought to Middletown through the growth of the local college.<sup>22</sup>

In summary, several aspects of the control groups actively engaged in regulating community life have been investigated. It has been shown that in most communities, a small social class based on wealth and family position have the dominant role in directing our communal society. An attempt has also been made to indicate approaches to community action which include a greater cross section of that community's population. In addition, the role of the college in community life has been explored.

### PROFESSIONAL RELATIONS

The second portion of this chapter is concerned with the area of professional relations, and to be more specific, with relationships within the teaching profession. When the outline of this chapter was first conceived, it was anticipated that considerable literature devoted to the relations between distinct and separate professional areas could be discovered. This was not the case. The professions, in America at least, have accomplished their mission with a very minimum of interaction. Thus the "learned professions" of the law, medicine and theology have had little to say to each other within their respective realms, however, discussion, criticism and even open rebellion are not uncommon. Much the same pattern is found among those who teach.

#### Diversities Exist

We must therefore concern ourselves first with those relations which exist *within* the teaching profession. Barzun outlines the area quite succinctly as:

The whole mass of recrimination, disappointment, and dissatisfaction which this country is now suffering about its schools comes from using the ritual word "Education" so loosely and so frequently. It covers abysses of emptiness. Everybody cheats by using it, cheats others and cheats himself. The idea abets false ambitions. The educator wants to do a big job in the world, so he takes on the task of reorienting Germany and improving human relations. The public at large, bedeviled as it is with these "problems," is only too glad to farm them out, reserving the right of indignant complaint when the educator breaks down or the institute for Human Relations fails to reduce appreciably the amount of wife beating.

<sup>22</sup>*ibid.*, p. 308.

Disatisfaction remains, and not unmixed with ill will. For in this vast sideshow of illusions and misplaced effort, educators find an opportunity to belabor one another in clans: College teachers cry out, "Why can't high school boys write decent English?" The Deans exclaim, "Why can't our college graduates speak foreign languages and be ready to serve in wartime? Look at what the Army is doing!" Up and down the line others say, "Discipline is the thing--the Navy knows more about training boys than we do." And the rhetorical questions continue, answered by the askers themselves: "Why is there so much juvenile delinquency"--"It's the schools." "Why did army doctors find so many neurotics?"--"It's the colleges." "Educators are Confused," read one front-page headline a couple of years ago, and down below the explanation was: "It's the fault of our Higher Education."

This is certainly looping the loop. Like the jurymen in *Alice in Wonderland*, the parents, the children in high schools, the men and women in colleges, are bewildered by claims and counterclaims. They are stunned by solicitations to follow this or that course, for this or that imperative reason. And like the jurymen, they repeat "Important," "Unimportant," while making futile motions with their forefingers. Inside the academic precincts, plans, curriculums, and methods whirl by with newsreel speed. Labels change; the Progressives become Conservative, the Conservatives Progressive, while the classicals form a Third Party with Adherents and Attackers in every camp. From a distance the academic grove looks remarkably like Chaos and Old Night.<sup>23</sup>

But the "academic grove", whatever its difficulties in communication among its members is a profession and must act as such. A fine comparative statement of professional responsibility and an introduction to the basic dichotomy in the teaching profession is provided by Best or:

What then is the professional responsibility which a teacher assumes? Essentially it is the same kind of obligation that every professional man and woman accepts. There are two parts to such an obligation. The professional man or woman, in the first place, is bound to work toward the achievement of the *purposes* or *ends* which society has prescribed for the profession in question. "Into whatever houses I enter," reads the Hippocratic Oath of the physician, "I

<sup>23</sup>Jacques Barzun, *Teacher In America* (Boston: Atlantic Monthly Press, 1945), pp. 8-9.



will go for the advantage of the sick." This is the purpose for which the medical profession exists. It is the end defined by society itself. No physician has freedom to define his purpose in any manner inconsistent with this. The first part of any professional obligation is to carry out sincerely and conscientiously the fundamental task which society has assigned to the profession, accepting as part of the contract society's definition of purposes or ends.

But there is a second part to every professional obligation. This is a responsibility to the standards of the profession itself. The Hippocratic Oath again provides an illustration of this: "I will follow that system of regimen which, according to my best judgement, I consider best for my patients, and abstain from whatever is injurious." This is not an obligation to follow the behest of the patient or public opinion, where *methods* or *means* are concerned. Quite the reverse. The physician swears that he will resist every effort by persons who are not professionally trained to dictate to him the methods to be used. Society expects--nay demands--that he use his own best professional judgement. There would be no point whatever in having a medical profession, if the physician were obliged to prescribe what the patient or the bystander wanted him to prescribe. So it is with every profession. The civil engineer does not build bridges wherever he pleases. He expects to be told where to build them. But he must use his best professional judgement in designing a bridge that will be useful and safe. If someone undertakes to tell him that a lesser factor of safety will suffice, it is his professional obligation to refuse to build the bridge.<sup>24</sup>

In discussing the matter of who is competent to make basic educational decisions, Bestor states the position more strongly in another source as:

...The first twelve years of formal schooling (from the elementary grades through high school) have fallen under the policy-making control of educators who have no real place in--who do not respect, and who are not respected by--the world of science, of scholarship, and of the learned professions.<sup>25</sup>

Another phase of the internal controversy is outlined by Lynd:

<sup>24</sup>Arthur E. Bestor, *Educational Wastelands* (Urbana: University of Illinois Press, 1953), p. 180.

<sup>25</sup>Arthur E. Bestor, "Aimlessness in Education." *Scientific Monthly*, vol LXXV, No. 2 (August, 1952).

One of the fashions in Educationism today is to eliminate or reduce the importance of grades, report card marks, discriminatory promotions, and the rest of the traditional apparatus for classifying pupils. According to the advocates of the new trend, conventional grades become ends in themselves; they set up false values for children, and are, therefore, obstructive of more desirable "outcomes" in education.

Whatever the merits of this reform, there is astonishing inconsistency in what the Educationists regard as good for the pupils and in what they hold to be good for themselves. Teachers are constantly pressured, cajoled, and bribed to scramble for degrees, certificates, competitive grades, and all the traditional paper tokens of academic standing. No professional group anywhere engages in such meticulous counting of "units," "grade points," "semester-hours," and the like. Nowhere else is the status of a person so seriously judged in terms of his collection of academic gimcracks.<sup>26</sup>

With the fires of dissention fed by extremists, subject-matter specialists and education personnel in the colleges often have great difficulty in working together:

Four significantly different viewpoints on general education came to expression in the deliberations of these teachers colleges. It should be added that all of them were based on an acceptance of student needs as the guide to curriculum planning. In the first place, there were individuals--usually in the subject-matter departments--who interpreted the needs of undergraduates in terms of revealed gaps in their preparation. They were often shocked and aroused by the poor showing of the students who came to them with respect to such basic skills as reading ability, speaking and writing English, arithmetic, and the like. Since state regulations usually prevented them from drawing up very far-reaching standards of selective admission, such persons gave much of their attention to remedial programs, the tightening of academic standards, and strictness in requirements for graduation.

Then there were other individuals, many of them likewise subject-matter specialists, who started by trying to define the extent and content of human knowledge which they thought it essential for all citizens to possess in common. They were looking to general education to suggest the unifying elements--facts, principles,

<sup>26</sup>Albert Lynd, *Quackery in the Public Schools* (Boston: Little, Brown and Company, 1950), p. 115.

values--needed in a world confused by excessive specialization. Such persons recognized the impossibility of organizing the great variety and range of modern scientific and humanistic knowledge, in any adequate or representative manner, through the pattern of traditional courses. They saw the task before them as that of selecting three or four broad areas as indispensable and working out for each comprehensive survey courses, or course syntheses, to cover the minimum essentials. Their bent was thus in line with those intergrating drives of modern scholarship which have, in protest against the fragmentation of human intellectual achievement, produced ecologists in biology, cultural anthropologists in the social sciences, and organismic schools in psychology.

A third category of persons were primarily concerned with what they called the life interests of their students. Their approach was similar to that of the synthesizers just described except that they derived their organizing principles from needs relating to home and family life, earning a living, the requirements of citizenship, and the like, rather than broad fields of human knowledge like the humanities or the physical sciences. These individuals gave attention to careful study of the social backgrounds of the undergraduates and to identifying the dominant problem areas of their normal existence.

The fourth and last group of faculty members to be mentioned in this connection was not very large in the teachers colleges of the cooperative study. They looked to the requirements of the teaching profession as encountered in actual experience to define student needs, and went at outlining both general and professional education with this practical application in mind.

...The viewpoints here briefly described will be familiar to practically every reader. They are found throughout the educational world and reflect the essential rudderlessness of much of present-day existence. While they are not necessarily incompatible and often did combine or crossfertilize in the course of the discussions to be reported, they are clearly sufficiently diverse to make initial agreement about experimentation difficult.<sup>27</sup>

The position of the educational specialist, in defense of his area of knowledge has been stated many times. Most of these defenses emphasize the differences between the scholar and the educationist. The following source is indicative of this approach:

<sup>27</sup>W. Earl Armstrong et.al., *The College and Teacher Education* (Washington: American Council on Education, 1944), pp. 62-3.

The professional field of Education, *nee* Pedagogy, is still a relatively young entrant into the academic circle. Like all the other numerous additions to the big four of the medieval university professional curriculum, Theology, Civil Law, Canon Law, and Medicine, it has had a hard struggle to win acceptance. Education has been confronted with more than the usual resistance because of the manner of its introduction into many of our liberal arts colleges and because its content cuts across so many of the traditional fields. What many have failed to realize is that the liberal arts colleges of this country up to about the period of the First World War had, on the average, approximately 45 per cent of their graduates entering teaching either with a career objective or for temporary employment to clear up college debts. Most of this teaching was done in public secondary schools.

When state laws and state Department of Education regulations requiring the completion of certain education courses as a prerequisite to the granting of teaching licenses were put into operation, these colleges were confronted with a problem. Courses in education had to be offered so that the liberal arts graduates would not be at a disadvantage in seeking teaching positions. All too often the college president would scrutinize his faculty personnel and select a victim who could be easily, even gladly, spared by his departmental colleagues to meet the emergency. This worthy would be told that thenceforth, willy-nilly, he was to be a Department of Education and teach whatever courses were required for teaching licenses. His students were usually from the lower half of their respective classes and had as little enthusiasm for these required courses as he did. For materials the instructor frequently had to turn to texts originally designed for the old two-year normal schools and wholly unsuited for senior college use. The dismal results of this combination of untoward elements were inevitable.

In the period following the First World War, however, there emerged a corps of educationists with adequate general background and demonstrated competence in their professional spheres, and today any school board or institutional president wishing such professional service has available a wide choice among personnel who have excellent cultural backgrounds, first-rate professional training, and adequate, successful public school experience. They are capable of preparing teachers, conducting serious research, organizing surveys, administering educational programs and providing a wealth of specialized staff skills.

There has also been a commensurate improvement in the quality of content in education courses. Besides, to qualify for a teaching license in most states, the liberal arts college student actually does not have to take very many education courses. This requirement has been grossly misrepresented to the public by those trying to lay the blame for such shortcomings as our public schools may have upon the educationists. Ordinarily four one-semester courses out of the typical forty-course undergraduate curriculum suffice. History of Education, Philosophy (or Principles) of Education, Educational Psychology, and Methods of Teaching constitute the usual requirement. Of these, at least three can be so organized and taught as to be no "dilution" whatsoever of a bona fide liberal arts program. Surely the History of Education, as now taught in first-rank institutions, represents a much more significant aspect of historical background than much of the array of splintered courses currently offered in many Departments of History. A similar argument may be offered in support of the Philosophy of Education and Educational Psychology. Naturally, the quality of these courses is dependent upon the backgrounds and abilities of the instructors. There is also a trend toward the requirement of a graduate period of practice teaching or internship under close supervision (usually part time for a year), but the practicality involved in this requirement is so obviously related to the protection of school children as to need no defense.<sup>28</sup>

#### TOWARD A UNITED PROFESSION

A sound approach to the relationship of the subject-matter specialist to the educational specialist is provided in the following quotation:

In view of the low esteem in which institutions devoted to the preparation of teachers are held, it may be difficult to establish the claim that education as an academic discipline can be considered a bridge for cultural understanding. But education is fundamentally something far richer and more extensive than the study of methods of instruction with which it is unfortunately too often confused. It is only necessary to recall that when Plato undertook to discuss the foundations of the just state, *The Republic* became a treatise on education, still one of the most vital discussions of the subject. Education, as Plato showed, cannot be discussed in a vacuum; its

<sup>28</sup>Gilbert E. Case, "Quackery In The Public Schools, An Answer," *The Atlantic Monthly*, (June 1950), pp. 59-60.

character is determined by theories of psychology, politics, ethics, culture, sociology, and economics. In the *Laws* Plato made the Minister of the Education of Youth the most important of the state officials, because "if young men have been or are well brought up, all things go swimmingly" in the state.

The history of education is more than the study of school practices-- what to teach and how to teach; it is the study of the relation between education and cultural backgrounds, in the fullest sense of the term, and is as much concerned with the history of culture as with political history. It is in this sense that John Dewey, in an article on "Education" in Monroe's *Cyclopedia of Education* (Vol. II, p. 398, the Macmillan Co.) writes, "Speaking generally, education signifies the sum total of the processes by means of which a community or social group, whether small or large, transmits its acquired power and aims with a view to securing its own continued existence and growth." Accordingly, the essential phases of education "are the socioethical, the biological, and the psychological" (p. 300). In his introduction to the *Twenty-fifth Yearbook* of the National Society of College Teachers of Education on *The Use of Background in the Interpretation of Education Issues* (1937), Professor Charles F. Arrowood wrote, "Introductory texts in education contain, quite as the usual thing, statements respecting the necessity of wide acquaintance with various fields of knowledge as a basis for any understanding of educational issues. Quite as a usual thing, too, texts, treatises, and courses in the field of education assume a certain familiarity on the part of readers and students with economics, government, ethics, theory of knowledge, the biological and physical sciences, literature, history, and sociology."

The late Sir Michael Sadler in a lecture on *The Study of Comparative Education* (1900), cogently pointed out that "A national system of education is a living thing, the outcome of forgotten struggles and difficulties and 'of battles long ago'. It has in it some of the secret workings of national life. It reflects, while seeking to remedy, the failings of national character. By instinct it often lays special emphasis on those parts of training which the national character particularly needs." The study of education, in other words, should be concerned not primarily with mechanisms and techniques, with administration and curricula, with time-schedules and school organization, or with methods of instruction, but with the forces that give them meaning and life. It was with this point of view in mind that the present writer devored a chapter of his *Comparative Educa-*

tion to a discussion of "Education and National Character" and the *Educational Yearbook*, 1929, of the International Institute of Teachers College, Columbia University, to a series of articles, prepared by educators in different countries, on "The Philosophies Underlying National Systems of Education," which dealt not with the organization of national systems of education but with the forces that determine the peculiar character of each. The position may well be reversed and the statement made that the study of the educational system of a nation may reveal a great deal of information about its hopes, aspirations, and culture.

It does not detract from the importance of education that it is in many respects a derivative discipline, drawing its contributions from a number of other disciplines. Indeed, from the point of view of the present Conference, it is this multidisciplinary character which entitles the study of education to the claim that it is a bridge to understanding. There have, of course, been attempts to establish education as an independent science; these attempts, although short-lived, came from ardent enthusiasts in the fields of psychology and statistics. Of these it may be said, paraphrasing Virgil's "*Memini numeros, si verba tenerem*"-- "I've got the figures, if I only knew what they meant." For the meanings and values it is essential to draw on other disciplines.

A more detailed analysis of the issues with which education must concern itself will help to clarify the wide range of its reach into other disciplines. At one end the process of education is devoted to the induction of the immature into the culture of their community, society, nation, and the world; at the other the process must also be concerned with the growth and advancement of that culture. Not only must the past be explored in order to understand the present, but the present must be so analyzed that intellectual preparation can be provided for the immediate needs that can be foreseen. The first data of education, then, are the person to be educated and the culture through which and for which he is to be educated. Hence the educator must draw on biology and physiology if he is to understand the meaning of heredity, of growth, and the relation between health and education. Since all people have already been exposed to certain influences before coming to school and since those influences continue during the years of schooling, the educator does not start with a *tabula rasa* but must increasingly take these influences into account-- family, neighborhood, community, and other backgrounds-- which lead him into the field of sociology and social

economics. A knowledge of these backgrounds is also beginning to be recognized as essential if equality of educational opportunities is to become a reality and not remain dependent on the accidents of residence and the economic conditions of parents.

When the actual and organized process of education begins, psychology must be drawn upon for the contributions that it offers to an understanding of the intellectual, moral, and emotional development of the pupil, of the meaning of intelligence, of the learning process, and of growth from immaturity to maturity. Since the development and growth of the pupil does not take place in a vacuum, the educator must understand the culture in and for which the pupil is being educated in order to select those aspects in it which have meaning and relevance both for the pupil and for the society which creates the facilities for education. That selection is determined, indeed, not by the immediate interests of the pupil, which may serve as a starting point, but by the aims to be attained. Here the educator must turn to philosophy to obtain an appreciation of values and to the particular culture which education serves in order to select those values which are most appropriate and pertinent. Educators the world over may agree that the end of education is the good life; what the good life means will be determined by so many contradictory factors that there may be no unanimity as to its interpretation. The good life has one meaning for totalitarians, another for those whose faith is rooted in the ideals of democracy.

Whether for good or for ill, values are not wholly determined either by philosophical or cultural considerations. For the past one hundred and fifty years education has been used as an instrument of national policy, and political considerations have often outweighed philosophical and cultural values. The relation between the state and the individual, and consequently between the state and education, were already considered as paramount questions by Plato and Aristotle. It remained for the nineteenth and twentieth centuries to give full meaning to the principle, "As is the state, so is education," a principle which also governs education in a democracy and which is sometimes forgotten by those who would use the schools to build a new social order. Hence the educator in determining values must draw not only on philosophy and culture but also on political theory to get his bearings. For here the educator has a peculiar responsibility in reconciling the aims of education which Professor W. E. Hocking has tersely defined as reproduction of the type and the promotion of growth beyond the type. Public opinion, even in a



democracy dedicated to the ideals of freedom of opinion and freedom of expression, is sensitive to what it may regard as threats to its security and stability.

In a society which seeks to extend equality of educational opportunities and in which the support and control of its schools are in a real sense vested in the public, educators must familiarize themselves with the sciences of public finance, administration, and taxation. To this they must add a knowledge of methods of publicity by which the needs of the schools will be kept constantly before the public. Further, since the school is now called upon to provide not only general but vocational education, a knowledge of the economic organization of the local or national community becomes essential as the basis of vocational guidance and training. In general, since education both reflects and must be responsive to the society which it serves, the study of education must include within its purview the study of trends--social, political, economic, and cultural--not only to meet current demands but also to meet new needs.

The choice is not always easy and the principle of adaptation to current demands or to new needs may at times be exaggerated and convert schools into curricular department stores. How much adaptation should be made can be decided only by a discriminating judgment of values, by a due balance of the permanent and the changing.

The list of disciplines upon which the all-round study of education must draw may appear formidable but is not exhaustive. The importance of some understanding of school architecture, hygiene, the mental and physical health of children, social psychology, and anthropology can only be mentioned. Their relevance for school practice must be obvious. Finally, in the crisis which confronts the world a new responsibility is beginning to be recognized by educators for the promotion of international understanding and co-operation. This is one of the functions which comparative education seeks to perform. The purpose of comparative education is to discuss the meaning of education in the light of the forces--political, social, economic, and cultural--which determine the character of various national systems.

This picture of the range and scope of education as a discipline may appear visionary. Nevertheless, a study of textbooks on the various phases of the subject--history of education, philosophy of education, comparative education, educational psychology, theory and principles of education, educational sociology, and educational administration--will indicate the extent to which education draws

upon other disciplines and the degree to which other disciplines contribute to a fuller and richer understanding of its scope. That scope, however, is becoming so wide that education, like many other disciplines, has become broken up into so many areas of specialization that only the few have either the interest or the time to study it as a whole. Here, as in other areas, fragmentation and proliferation have led to the organization of general orientation or survey courses, in order that the specialist, whether in the classroom or in administration, may not lose sight of the relations of the special field of interest to the whole. The task of developing an appreciation of the relations of the parts to the whole, and of the whole to the concerns of all men, is neither simple nor easy even in the case of students of education. It is still more difficult to carry this conviction either to the public or to those who are cultivating other disciplines. For both the public and the academic world in general tend to look upon school education as the concerns of a lower order-- lower in remuneration and status, and lower in scholarly preparation. In a vague sort of way the public understands the importance of providing the financial support for education although it too often takes more pride in impressive buildings than in good teachers, but it does not realize that education is something more than imparting and transmitting knowledge and is the most important agency for fostering that understanding and co-operation which are the essential guarantee of social security and progress. Nor does the public realize as clearly as it should that social conditions, prejudices, and bias may frequently undermine the best efforts of the school. Bias and prejudice are not engendered by the school; they are brought into the school by pupils who reflect the opinions of adults. Here at any rate is one point at which the public should be encouraged to understand the objectives of education.

The academic specialist has too long tended to regard the work of his colleagues in education, usually referred to as "on the other side of the street," with some contempt. That this chasm should have developed is unfortunate; it is unfortunate for the educator who is beholden to other specialists for such contributions as make the study of education richer and more fruitful; it is unfortunate for the academic specialist if he refrains from co-operating with educators, for, as the chasm grows wider, even the scholar who disclaims any interest in "pedagogy" may in time find that school education has drifted so far away from his special field that he may be hard put to it to find students who will continue his interest.

Finally, educators themselves need to take a broader view of education than is too frequently the case as a consequence of intense specialization in one of the many branches into which the study of education has proliferated. If they themselves are unable to see the wood for the trees, it is hardly to be expected that teachers who devote themselves to some small part of the educative process should have that breadth of vision which looks beyond the immediate task to the main purpose for which society establishes schools. The situation is gradually changing from the days when teachers attended normal schools to receive a modicum of secondary education and to be trained in methods of teaching. Higher requirements and longer preparation for teaching provide the opportunity to raise teaching to the level of a profession. But extended preparation will in the long run fail to achieve the desired result unless it is so organized as to furnish to the future teachers a richer and broader insight into the meaning of education as an instrument for developing understanding and co-operation for the promotion of which each teacher has both opportunity and obligation. On the other hand, the public and colleagues in other branches of the educational profession must cease to look upon teachers as a race apart, and must recognize that all as members of the same society should be equally concerned about the quality of education that is provided.<sup>29</sup>

The plea for an academic community based on common factors in academic life is expressed by Wright as:

Before we can hope to develop a very secure academic community, we not only must delineate our basic common interests and grow in our belief in the values to be derived from inter-disciplinary thought, but we must have a basic regard and respect for each individual fellow member of the faculty. Faculties torn by jealousy, distrust, insecurity, power complex, and the like are sick. Until such sickness can be treated, a true academic community which is also based upon a feeling of human community can hardly be hoped for.

There may be ways and means of working together that are better than others. Let us set down a few of these that we can add to later.

1. It should be clearly defined that the faculty has the responsibility of determining the educational policies and programs of the institution of higher education. The faculty has not only that responsibility, but also the responsibility of accepting the results of such

<sup>29</sup>I. L. Kandel, *Approaches To Group Understanding*, ed. Bryson and Others (New York: Conference On Science, Philosophy And Religion in Their Relation To The Democratic Way Of Life, Inc., 1947), pp. 18-24.

policies and programs. This means that if the results are satisfying, the faculty should have the credit; if they backfire, the faculty should accept the blame. Academic freedom carries academic responsibility.

2. The business of administration--the carrying out of policies--is not the business of those administratively charged with carrying out the policies.

3. Large group functioning of the faculty should seldom be used. When a faculty of thirty or more meets, the group is, generally speaking, useless as a working body.

4. The major basic work on policy problems should be done by representative groups, small enough to have a face-to-face relationship, with provision for interaction with other groups, and should eventually involve the whole faculty.

5. Some of the common-sense methods of group operation found to be worth while by those studying group dynamics should be employed when working together.

6. Working groups must learn to deal with significant matter.

Let us now take a look at student participation in the development of a real academic community. I believe that all of us would agree that we should give students the widest possible autonomy for the handling of student affairs; that we should use joint student-faculty operation in the areas of policy formation insofar as student maturity of experience and judgement will permit; and that we should constantly keep in operation as many techniques as possible for the reflection of student opinion concerning the total operation of the institution. If we gained only the growth of the student through this participation, we would be well repaid for our efforts. I have a deep and sincere belief that students have more to contribute to the academic community than we have generally acknowledged or given them opportunity to contribute. I am sorry that, because of the differences in maturity of students and faculty, the faculty today often tends to shy away from taking students into partnership on matters that really count in the formulation of an academic community. Many institutions, however, are working on this problem and no doubt ways will be suggested by which progress can be made in this aspect of developing an academic community.<sup>30</sup>

<sup>30</sup>Wendell W. Wright, *Current Issues In Higher Education: How Does An Institution Of Higher Education Establish A Real Academic Community* (Washington: Association for Higher Education, 1953), pp. 136 - 39.

The potentialities of the role strong professional organizations can play in matters relating to the profession is well stated in the following quotation:

The history of educational progress can be traced, in large part, to the cooperative work of professional organizations of school employees and their allied groups, particularly on the community front. For about a century and a half they have been concerned with the welfare of free schools, the rights of children, and the betterment of teaching conditions. In public relations these groups call attention to unmet educational needs and promote action at local, state, and national levels to protect the educational welfare of children, youth, and adults. They are as responsible for the educational health of the nation as the medical profession is for the nation's physical and mental health. To the public at large they interpret education with conviction and unanimity.

Since cooperation is the way of democracy, the superintendent of schools, as director of the public relations programs, will carefully consider the potential help of professional organizations in the program of interpretation. Working hand in hand with other forces--administrators, teachers, parents, lay citizens, and students--professional organizations can do much to build up essential public understanding and support of schools. Whatever these organizations do, effective teamwork on the part of all individuals and groups is one of the prerequisites of a successful program, as is true for all public relations efforts.<sup>31</sup>

The American Association of School Administrators<sup>32</sup> lists the following characteristics of dynamic professional organizations:

- Operates under a constitution.
- Recognizes the interests and needs of its members.
- Adopts specific policies.
- Is constantly aware of the publics it serves.
- Follows a definite program of action.
- Sponsors projects and activities in the public interest.
- Takes the people with it as it moves forward.
- Participates in various drives and campaigns in the general interest.

<sup>31</sup>*Public Relations For America's Schools* (Washington: American Association Of School Administrators, 1950), p. 175.

<sup>32</sup>*Ibid.*, pp. 176-199.

Schedules its activities thruout the year.

Studies its achievements seriously.

Gives attention to research on important needs and problems.

Is vitally interested in education on the local, state, national, and world-wide levels.

## IMPLICATIONS FOR INDUSTRIAL ARTS AND INDUSTRIAL ARTS TEACHER EDUCATION

Up to now, the portion of this chapter devoted to community relations has attempted to bring to the reader's attention some of the ways in which a college or school can interact with a community structure. What has been said of the college is equally applicable to the secondary school. In addition, the area of professional relationships has been investigated. No attempt will be made further to summarize this material, nor to digest it. Instead, let us examine some of the ways in which the Industrial Arts educator can prepare himself to become a full partner in such interactions:

1. The Industrial Arts teacher must insist that he participate in community affairs in his professional role. If he is a woodworking instructor, he should participate as an instructor, not as a carpenter.

2. The Industrial Arts teacher must know his community, through study and through contact with persons in the community.

3. The Industrial Arts teacher must be conversant with trends within his field and with developments in the whole area of higher education.

4. The personnel of Industrial Arts departments of many colleges and schools should be selected on the basis of dress, speech, and general cultural development as well as on the basis of their craft skills.

5. The Industrial Arts teacher should have community interests outside his area of specialization.

Briefly, the Industrial Arts teacher must behave and function in ways accepted by the leaders of the community if he is to be a full partner in relations between the college or school and the community. Individuals who behave in ways which differ markedly from these groups are scorned and avoided, or assigned menial tasks.

In the area of professional relations, the Industrial Arts teacher must rise above the often petty misunderstandings and jealousies of inter and intra-professional strife. He must encourage the coordination of educational interests in his college or school, in his state and in

the nation. He must learn to work effectively with colleagues representing other disciplines *and with those in his own field*. The Industrial Arts teacher educator must by example and by instruction inculcate these qualities in his students. Vigorous professional activity by the products of our teacher education institutions is a desired objective in any curriculum.

Since the almost exact conclusions of this author, are contained in another source, the area of professional relations will be closed with a quotation. The reader is encouraged to substitute group names in the appropriate places.

If the foregoing assumptions are correct the following normative principles appear to follow:

1. *Individuals tend to seek self-enhancement through identifying themselves with and winning the approval of groups or individuals they believe to be important.*

This principle, which forms the chief stock in trade of the advertising industry, is one of our most effective means of social control. If it is to be used effectively, it must be recognized that it is a phenomenological principle and not an objective one and that its effectiveness depends upon the individual customer's system of values. Millions of children, but almost no adults, have eaten spinach to be like Popeye. Popeye can be a hero to a child but he is only an amusing character to most adults.

While the above principle is widely accepted and used in efforts to control behavior, its converse is less well recognized.

2. *People tend to withdraw from groups whose approval they are unable to win and from groups which no longer satisfy their need.*

Toynbee points out that new civilizations arise when the previous civilization is abandoned by its proletariat. The origin of western civilization, for instance, came in the adoption of Christianity by the oppressed proletariat of the Roman world. The principle functions as accurately, however, on the levels of the family, the social club, or the casual conversational group.

We now have two principles which describe the conditions under which individuals seek or reject group membership. The next principles describe the attitudes of an individual who has identified himself with a group.

3. *Identification of an individual with a group leads him to adopt and defend the standards and behavior of the group.*

To think well of himself it is necessary for him to think well of his group, thus introducing distortion into the individual's phenomenal field. An attack upon the group is an attack upon himself, aggrandizement for the group is aggrandizement for himself.

4. *Having adopted the standards of one group, the individual has adopted a set of standards by which he evaluates the behavior of other people and the importance of other groups.*

Since each individual accepts the reality of his own phenomenal field, the customs and attitudes of his own group are judged as objectively superior and other people and other groups are judged by these standards. Americans, for instance, commonly place a high value upon houses with modern plumbing. As a result, many American soldiers consider that the Germans are superior to the French, who are less able to afford such luxuries. The boy who has identified himself with the predelinquent gang has a different system of prestige values from the boy who has identified himself with the Boy Scouts or who thinks of himself as a responsible citizen. They admire not only different institutions but different individuals and types of success. As a consequence they are not responsive to the same social controls. Each must think well of his group. According to the second of our principles the attitude of an individual toward a group is, to a great extent, determined by the attitude of the group toward him. The group, however, is made up of individuals and the attitudes of those individuals toward any aspirant toward group membership is determined by the effect his membership would have on their own self-concepts.

5. *Members of a group accept and approve those individuals who seem to them to be important.*

That is, an individual who is able to behave in ways admired by the members of the group will be sought as an associate providing his acceptance will enhance the self-concepts of the members. Individuals who behave in ways condemned by the group are avoided and rejected. Contrary to popular opinion, money does not automatically give advancement to a higher social class. It merely makes it possible with training to behave in the ways that are admired by such a class. In Yankee City, for instance, the upper-uppers were almost exclusively members of families which had had two or three generations to perfect and master the class behavior. The wealthiest man in town was upper-middle class because he did not wish to change his behavior and insisted that his children conform to middle class standards as well.



... Conflict between groups must, in the long run, end in the assimilation of the two groups, with each giving up its claim to exclusive right and superiority and modifying its institutions. For example, with the amalgamation of the Irish culture into the old American culture, St. Patrick's Day and the idealization of Ireland have become American traditions. As soon as the Irish were accorded a respected status amalgamation could take place without loss of self-esteem on either side. In such an amalgamation the smaller group will ordinarily move farther and make more modifications of culture than the larger group.

The only other way in which group conflict can end is by the destruction or reduction to impotence of one group culture by the other. This is what wars have attempted since time immemorial. It is what Hitler attempted with the Jewish minorities and is basic to the concept of "divide and conquer."

This is a hard alternative to contemplate and it may appear to some that there might be an intermediate stage of continued separation with avoidance of conflict through mutual respect and confidence. This is a desirable goal and one we should strive to achieve. Such a condition can be only temporary, however, since mutual respect encourages and makes possible the movement of individuals from one group to the other and thus results in eventual assimilation of the two groups. For this reason there is a tendency for the cultural leaders of a minority group, who have a vested interest in the preservation of its institutions, to demand tolerance and good will from the members of the majority group in ways that subtly lead to intolerance and ill will by their own group toward the majority.

... Fortunately, while group conflict and suspicion are inevitable in some degree as long as the groups exist, there do appear to be means by which the intensity of the conflict may be greatly reduced and eventual assimilation speeded. Conflict between groups is, in some degree, the result of aggressive and dominating behavior within one or both of the groups, since there is a strong tendency for individuals who are unable to secure adequate satisfaction by dominating and aggressive behavior against members of weaker groups. It is quite possible that the most effective way of reducing group conflict would be the reduction of domination and aggression within the groups themselves.

Since conflict between groups is always carried on by individuals who think of themselves and their antagonists as group members rather than as individuals, group conflict can be prevented by in-

creasing the opportunities for the members of the two groups to differentiate one another as individuals. One way to do this, as we have already suggested, is by encouraging members of the minority to scatter themselves as widely as possible among the members of the majority. This is, of course, impractical where group feelings are already strong since it is a step toward abandonment of the minority group institutions and cannot, therefore, be taken under threat.

Another way of fostering the differentiation of members of the conflicting groups as individuals is by increasing the possibilities for communication between them. Communication is possible only when there is an overlapping of cultural fields so that there is a common area of meanings. From this point of view the practice by which books and motion pictures about foreign countries emphasize the strange and exotic features can be expected to achieve little or nothing toward promoting tolerance and good will. The "Man Bites Dog" concept of "news" frequently contributes to just this end. The emphasis of news gathering agencies upon the bizarre and the different may even contribute to the intensification of group conflict.

On the other hand a motion picture or story which shows the people at their daily work and children at their games promotes fellow-feeling, if the work and games are those familiar to the audience. An interesting and effective means of promoting fellow-feeling among members of different groups is that used by Rachel Davis-DuBois. Instead of talking about the problems on which they suspect differences they are asked to talk about their childhood memories-- "talk about bread, for example." As soon as members of both groups have told about coming home to eat fresh, hot, crusty bread that their mothers had baked they feel as if they have spent their childhood together and are members of a common group. Common experiences make possible a common feeling and citizens of the same state, who would not stop to speak if they met at home, have a feeling of close kinship when they meet in a foreign land. A common language is a great advantage, especially if it is spoken with a common accent.

Another way of reducing conflict between groups is to provide them with a common objective or enemy. The need for action in the common cause makes all individuals in the previously conflicting groups important to one another and identification with one another comes as a result of their identification with the common cause. This technique of providing a common enemy is, as we have said before, often used more or less consciously by political groups and nations as a means of reducing tensions in their own ranks. Threat prevents

disintegration of the group relationship since all threatened individuals seek shelter and support from one another.<sup>33</sup>

<sup>33</sup>Donald Snygg and Arthur W. Combs, *Individual Behavior* (New York; Harper and Brothers, 1949), pp. 187-195.

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## VII

# Educational Evaluation

William J. Micheels  
University of Minnesota

*Evaluation--whether conceived as a process or as a field of study--is receiving more and more attention among educators. Some important things are happening in education as a result of this attention. Among industrial arts people, concern over evaluation is being reflected by the articles, books and convention topics devoted to the subject.*

*Author Micheels is eminently qualified to deal with this subject. The book *Measuring Educational Achievement*, which Micheels co-authored with M. Ray Karnes, has been widely accepted as the most authoritative statement in our field.*

*This chapter opens with a quick look at basic concepts of what evaluation is, together with brief, timely notes on historical development. This is followed by some critical comments on current evaluation practices. Of special interest here is the caution that "objectivity" in evaluation should be humbly approached and gingerly handled -- a caution particularly pertinent to those of us who assign virtue to the "practicality" of the type of activity in which we are engaged. Next, the important inter-relationships between evaluation and educational objectives are discussed. This is the area to which the greatest emphasis is being presently given by many industrial arts groups across the country. Techniques of evaluation are then discussed and pertinent comments are made with respect to evaluation in teacher education. A most stimulating section follows, outlining some areas of needed research in the field. Finally, in the section on emerging trends and in the concluding statement can be found many ideas which industrial arts teachers and teacher educators will find very useful indeed.*

EDITOR

## INTRODUCTION

Evaluation is a vital part of living. It is likewise an integral part of teaching and learning. The placing of value judgments on things and happenings is a continuing process in and out of a schoolroom.

The topic of evaluation is a broad one with numerous ramifications. On the few pages here available it will be possible to consider only a few of the concepts and practices encompassed by the term. The writer has tried to select writings which will aid in the development of a positive attitude toward evaluation. This may be discouraging to those who prefer the "cook-book" approach to educational problems. If the reader is looking for a capsule summary of everything that ought to be done about evaluation in the classroom or shop, he will not find it here. The intent has been to try and set the stage whereby the reader can do some thinking and acting for himself as he surveys the evaluation going on apace in his own teaching-learning environment.

It should be pointed out further that the following pages do not contain a complete review of the literature on evaluation. No claim is made that the selections presented are the best ones. Rather, they have been selected with the intent of presenting points of view which the writer hopes will aid in the professional growth of industrial arts personnel at all levels. Other excerpts might have served equally well.

## WHAT IS EVALUATION?

Teachers, generally, are test-conscious. Because of the emphasis our schools put on marks and marking most teachers have learned to give tests of some kind as a prelude to putting a mark on a report card. This is not necessarily bad, but neither is it altogether good, as many teachers have pointed out for a long time. This is another way of saying that there has been discontent with our methods of assessing the outcomes of learning experiences in the school. Things have been happening. New concepts have been developing. One of the leaders in this movement has been Dr. Ralph W. Tyler, who describes the trend in these words:

In appraising the effects of the learning experiences today we not only test but also evaluate. "Evaluation" designates a process of appraisal which involves the acceptance of specific values and the use of a variety of instruments of observation, including measurement, as the bases of value-judgments. From the point of view of its functions it involves the identification and formulation of a

comprehensive range of major objectives of a curriculum, their definition in terms of pupil behavior, and the construction of valid, reliable, and practical instruments for observing the specific phases of pupil behavior such as knowledges, information, skills, attitudes, appreciations, personal-social adaptability, interests, and work habits. Any learning situation has multiple outcomes. While the child is acquiring information, knowledges and, skills, there are also taking place concomitant learnings in attitudes, appreciation, and interests. This view indicates a shift from a narrow conception of subject-matter outcomes to a broader conception of growth and development of individuals.<sup>1</sup>

Evaluation, then, has come to mean the placing of value judgments on many aspects of the educational program. Burton and Brueckner, writing about supervision, describe this concept further by stating that evaluation is concerned with:

I. The scope and quality of the goals, purposes, and functions of the total educational program and the extent to which they meet the needs of the various individuals and are in the line with the desires and needs of the community as a whole.

II. The progress being made in the achievement of these goals as measured not only by the present status of the achievement, characteristics, and behavior of the learners, but primarily by the *growth* that they have made in attaining socially desirable objectives both as individuals and as members of the larger social group.

III. The appraisal of all elements of the total teaching-learning situation that contribute to effective and economical learning, with a view to their improvement, including:

1. The organization and administration of the school.
2. The school curriculum and the undirected experience of the learners.
3. The teaching-learning process.
4. The instructional materials, equipment, and facilities.
5. Community life and school-community relations.<sup>2</sup>

<sup>1</sup>Ralph W. Tyler, "The Functions of Measurement in Improving Instruction," *Educational Measurement*, ed. by E. F. Lindquist (Washington, D. C.: American Council on Education, 1951), p. 48.

<sup>2</sup>William H. Burton and Leo J. Brueckner, *Supervision, A Social Process* (3rd ed.; New York: Appleton-Century-Crofts, Inc., 1955) p. 210.

Travers emphasizes a similar concept in summary fashion:

Evaluation is the process whereby the values inherent in an event are determined. The term event is used here in a broad sense. Thus, in education, the events evaluated may be an entire institutional program, a part of the program, the planning which resulted in the program, the consequences of the program such as the achievement of the pupils, or any matter related to the program.<sup>3</sup>

Anderson, Grim and Gruhn provide a similar description of an evaluation program while pointing out its comprehensive nature:

Evaluation is the process of gathering and interpreting evidence regarding the progress and problems of pupils in achieving desirable education objectives. An evaluation program is far more comprehensive than a "measurement" or "testing" program, since it is based upon the assumption that the values of the curricular experiences are to be determined. Various types of tests are but one of the many kinds of appraisal instruments and techniques used to secure data in evaluating the curriculum of a modern school.<sup>4</sup>

Travers warns us that:

Evaluation procedures are often thought of as trimmings on the educational process or as something which occurs in the last few hours of a course. Nothing could be further from the truth, for evaluation is an inescapable and continuous process.<sup>5</sup>

Jacobson, Reavis and Logsdon, writing on the work of the school principal, reiterate a previously mentioned fact that:

. . . evaluation is a much more comprehensive process than is implied in the appraisal of school progress. Despite the great amount of study given to marks and marking systems it should be clear that no amount of tinkering with marking systems will ever adequately solve the education problems involved in evaluation. The process of evaluation is an integral part of learning and teaching. Merely re-

<sup>3</sup>Robert M. W. Travers, *Educational Measurement* (New York: The Macmillan Co., 1955) p. 6.

<sup>4</sup>Vernon Anderson, Paul Grim and William T. Gruhn, *Principles and Practices of Secondary Education* (New York: The Ronald Press Co., 1951) p. 264.

<sup>5</sup>Robert M. W. Travers, *How to make Achievement Tests* (New York: The Odyssey Press, 1950), p. 3.



ording judgments of progress in written reports or in symbols does not suffice for evaluation.<sup>6</sup>

Since the word "measurement" has been used several times in the above excerpts, it seems well to pause and examine the concepts implied by this term. Cook writes that:

Instruments of educational measurement are simply the means by which quantitative aspects of human behavior are observed with greater accuracy. To the extent that such instruments conform to the principles of quantitative logic, it becomes possible to know with greater exactness the relationships among the various aspects of educational procedure, the aptitudes of learners, and changes in human behavior. The purpose of this is to make possible more accurate prediction and control in the educational process. The value of measurement depends upon the extent to which the relationships established are crucial from the social point of view. The central questions are: What changes in behavior are desirable? How can these changes be measured? What aptitudes are essential to the development of a given form and level of behavior? What are the crucial elements in the educational process? The value of educational measurement depends upon the validity of the answers to these questions.<sup>7</sup>

At this point it may be profitable to review briefly the historical setting within which evaluation has become a part of modern educational practice. Thomas points out that:

The term *evaluation* and the tools that it includes are relatively new in education. Before 1900, teachers had very limited methods for determining how well children were succeeding. Instructors apparently judged students' progress primarily on the basis of formal recitation in front of the class or on compositions the students wrote. The kinds of objective tests used today, which include types of items like completion or multiple-choice, did not become common until well into the 1900's.

From about 1910 through the 1920's objective-type tests became very popular. Many standardized achievement and intelligence tests

<sup>6</sup>Paul B. Jacobson, William C. Reavis, and James D. Logsdon, *The Effective School Principal* (New York: Prentice-Hall, Inc., 1954) p. 215.

<sup>7</sup>Walter W. Cook, "The Functions of Measurement in the Facilitation of Learning," *Educational Measurement, op. cit.*, p. 3.

were produced during this period, which has been termed the *gold-rush era* of standardized tests. This rapid growth in kinds of tests has been called the *testing movement* or *measurement movement* of education.

During the 1930's and 1940's educators were disturbed about the overuse of tests in many schools. They pointed out that many of the modern objectives in education cannot be measured properly by formal tests. A test is not an effective means of judging how well a child is accepted by his classmates or whether he likes music. Therefore, since the late 1920's and early 1930's a variety of different techniques for judging children's progress has been evolving to supplement the use of tests.

The term *evaluation* (or *appraisal*) is commonly used today to describe not only testing devices but also the many other techniques needed for a many-sided picture of how well children are reaching the goals. These techniques developed during this evaluation movement include such devices as anecdotal records, sociograms, rating scales, participation charts, case studies, contents of cumulative records, personal interviews, check sheets, and varieties of report cards.<sup>8</sup>

Burton and Brueckner provide additional historical perspective while describing the three basic methods of securing information about the status and growth of the learner:

1. Observation of his behavior and reactions.
2. Testing his knowledge, skills, abilities, attitudes, and character traits by informal procedures.
3. Measuring his characteristics and behavior by means of standardized devices and testing procedures.

The evaluation of observed behavior is largely a subjective procedure in which value-judgments are used. Tests are measures which are simply more exact ways of observing behavior. By means of standard tests we can measure growth. Measurement as such does not involve value-judgments. Measurement is a process of determining the amount or relative amount of something, such as level of achievement, general intelligence, reading ability, amount of functional knowledge, readiness for new work, and ability to solve problems. Judgments as to the quality or merit of behavior as re-

<sup>8</sup>R. Murray Thomas, *Judging Student Progress* (New York: Longmans, Green and Co., 1954), pp. 11-12.

vealed by measurement are based on comparison of test results to established standards or norms, with due consideration of all factors that are significantly related to the outcomes and that may affect their rate of development.

In its early stages, the standard testing movement was largely devoted to the development of paper-and-pencil devices that afforded standardized measures of specific and relatively easily appraised academic knowledges, skills, and abilities by which the status of learners in restricted areas of subject matter could be determined. Efforts also were made to increase the quality and reliability of teacher-made examinations. Considerable emphasis was placed on the development of objective or new type tests.

The interpretation of the results of standard tests became increasingly difficult due to the evident undesirability of applying uniform standards to individuals who differed widely in intellectual ability, rate of learning, physical development, background of experience, interests, and needs. The widespread use of intelligence tests, aptitudes and readiness tests, physiological tests, personality and character tests, and tests of social development emphasized the wide range of individual differences that were revealed by achievement tests.

It also became clear that many outcomes of learning that were being increasingly stressed, such as interests, attitudes, appreciations, ability to deal effectively with problems of daily life, and social sensitivity, could not be measured directly by paper-and-pencil procedures.

Research in child development also emphasized the importance of considering more fully the growth made by the individual rather than only his present status. Recognition of the fact that learning is not merely reaction to stimuli, but rather a process of interaction between the learner and the environment in which learning takes place, led to the development of methods of studying and appraising pupil behavior observable in learning situations. Methods of recording pupil behavior in problem situations were devised; behavior records were developed; inventories to secure data as to interests, activities, and problems were constructed; sets of criteria were prepared by which behavior, a performance, or some creative product could be evaluated; sociometric methods of studying interaction among the members of a group were devised. Educational literature contains hundreds of descriptions of the use that has been made of

these and similar procedures for studying the behavior of children. In general, the evaluation of behavior consists largely of the analysis of information about the performance of the learner in controlled and uncontrolled situations and the making of value-judgments as to the quality of the behavior in terms of subjective criteria set up by those making the appraisal.<sup>9</sup>

It is well to keep in mind that it is not a question of whether or not teachers should evaluate. Eckert, writing on "Evaluation in General Education," adds some general historical information, but also reminds us that:

All teachers and students engage in some informal evaluation, for whatever is learned is usually accompanied by some appraisal of it. But it is only within the past twenty years or so that educators have used the term "evaluation" to refer to a fairly systematic and careful process for investigating the worth of an activity or program. In general, the concept is a more inclusive one than those with which it is frequently confused, such as "testing," "measurement," and "grading." For it signifies a deliberate effort to match the purposes of an activity against various evidences which suggest how far these have been attained, resulting in certain conclusions regarding the adequacy of the means used and, even in some instances, of the ends themselves. Though tests and statistics provide invaluable help in gathering, refining, analyzing, and synthesizing evidences, the emphasis shifts in evaluation from tools and techniques to the formation of sound judgments concerning the discovered outcomes.<sup>10</sup>

Kelley and Rasey accent the pervasiveness of evaluation while pointing out the need for new thinking on the part of educators generally:

To evaluate is an integral part of life itself. It is inherent in everything we do. It is a process by which we judge what we perceive and what we do in relation to our purposes and in relation to progress toward what we hold to be worth doing. Evaluation is a continuous guide toward action or further action.

<sup>9</sup>Burton and Brueckner, *op.cit.*, pp. 212-13.

<sup>10</sup>Ruth E. Eckert, "Evaluation in General Education," *General Education*, Fifty-first Yearbook of the National Society for the Study of Education Part I (Chicago, Illinois: The University of Chicago Press, 1952), pp. 250-251.

New concepts concerning evaluation are forced upon us by recent discoveries in the nature of perception. These discoveries show that life is almost completely subjective, for each one brings unique experience and purpose to the perceptive process. Each of us perceives a phenomenon differently from others because we bring different experience and purpose to it. What we perceive is uniquely our own, and the value of it is unique to each of us. Evaluation, then, is unique, is subjective, and is continuous.<sup>11</sup>

Cantor helps us to understand why the emerging concepts of evaluation, with the implied changes in education practices, do not portend an easy out for the teacher:

. . . knowledge is not to be confused with learning. Information cannot have import unless it is assimilated into the "being" of the pupil. Education is a process which emphasizes bringing into existence that which does not yet exist. It is primarily concerned not with what one knows but with what one becomes.

Individual pupils acquire insight on different levels. The rate, quality, and range of learning, and the rate of assimilation of facts, will differ for every pupil. Facts, to be meaningful, must be seen in relation to the problems of the pupil and to his behavior. Teachers, who accept this orientation will find evaluation no easy task. The change-over from the traditional examination, which covers pre-arranged goals and predigested materials, to an evaluation of the experience that the pupil is undergoing requires that the examiner believe in a different set of education outcomes.<sup>12</sup>

### SOME CRITICAL COMMENTS CONCERNING EVALUATION PRACTICES

It is easy for most of us to criticize the tests and testing practices to which we have been subjected as learners in our schools. But there is a danger in criticizing just to criticize. The narrow thinker seldom goes farther than this and thus forms generalizations that tend to inhibit progressive development. Such an attitude is typified by the industrial arts teachers or other teacher, who throws up his hands and

<sup>11</sup>Earl C. Kelley and Marie I. Rasey, *Education and the Nature of Man* (New York: Harper and Brother, 1952), p. 98.

<sup>12</sup>Nathaniel Cantor, *The Teaching-Learning Process* (New York: The Dryden Press, 1953), pp. 200-201.

exclaims, "Tests are no good anyway, we all know that. Why kid ourselves? Let's spend our time doing something else."

The following criticisms of evaluation are not intended to add fuel to such a fire. The several selections have been chosen in the belief that criticisms can be useful for purposes of stimulation — starting points for improvement. Some of the comments may seem extreme. They do not necessarily represent the consensus of present educational thinking. The least they might do is to help us avoid hiding our heads in the sands of complacency.

Kelley and Rasey set the stage with some comments that call for critical thinking on the part of all teachers:

Most people will concede that the over-all purpose of the school is to develop people who are adequate to meet life. While we spend the vast majority of our schooltime evaluating, we rarely evaluate in terms of our purpose. Rather, we evaluate in order to see how much of a specific area of subject matter has been remembered, although scarcely anyone would say that the remembering of this material is the purpose of the school.

.....

So much time is spent in recitation, quiz, and examination that there is little left for learning. So it has come about that the institution designed for learning has become one which spends much of its time in testing that has been learned somewhere else. This is mostly done at home, in what has come to be known as homework. A shift has taken place so that we no longer send our children to school in order to learn but learning has been transferred to the home, and the role of the school has become one of measuring what has been learned at home and of issuing credits and credentials which certify that the learning has been done.

If learners spent six hours a day during one hundred eighty days a year in real learning situations where the evaluation was inherent in what was being learned, there would be no need for homework except for that which was self-imposed. There would be some of this because the learners would become so interested in the solution of what they were involved in that they could not resist such activity.<sup>13</sup>

Melvin advances this same point by offering some general statements about the purpose of evaluation in the total educational scheme of things:

<sup>13</sup>Kelley and Rasey, *op.cit.*, pp. 130-132.

From the point of view of education, it is clear that the function of all evaluation is to further learning. Whenever evaluation is made for any other purpose, it is distorted by extraneous value. Thus one of the most pernicious effects of an elaborate examination system, such as that which prevails in many states and in many high schools and colleges, is a major injury to teaching. Whenever examinations become a supervisory device, tending to exert force on teachers to distort their methods of teaching, those systems are a social evil and should be abolished. When they are maintained, they are maintained by the exertion of private power and force, which is exercised by the few at the expense of the many. It is true that this power hides behind the most eminent appearance of respectability. This is true in high places of government systems and in universities of dignified architecture and academic prestige. Yet these systems should not deceive because they present a grand front. Their operations are evil, and their result is socially destructive. If they must continue to exist, they should discover methods of evaluation which will allow full freedom to schools and teachers to make teaching and learning the goal of their efforts, and let all evaluation come as an aid to learning and fulfillment of teaching. Teachers should learn to teach right, and let evaluation look after itself when the time comes.<sup>14</sup>

Such criticisms are not new. A decade ago an entire yearbook was directed to *The Measurement of Understanding*. It will be helpful here to review a brief statement about the need for such a yearbook.

In spite of their demonstrable values, understandings have been neglected in the school—and they still are too often neglected—in favor of other learning outcomes, such as verbalism, barren factual information, and mechanical skills. . . . several factors. . . have produced this relative neglect, among them: an inadequate psychology of learning, over-reliance on textbooks, the tendency to teach by telling, the tremendous expansion of the curriculum, etc. This discussion is intended partly to account for failure to stress understandings adequately and partly to warn teachers against these continuing factors and so to check their influence.<sup>15</sup>

<sup>14</sup>A. Gordon Melvin, *General Methods of Teaching* (New York: McGraw-Hill Book Co., Inc., 1952), p. 232.

<sup>15</sup>Harl R. Douglass and Herbert F. Spitzer, "The Importance of Teaching for Understanding," *The Measurement of Understanding*, Forth-fifth Yearbook of the National Society for the Study of Education, Part I (Chicago, Illinois: The University of Chicago Press, 1946), p. 25.

Perhaps a part of the trouble is an inadequate understanding of the very concepts that have played such an important part in the rise of the testing movement, for example, objective tests. The following statements by Kelly and Rasey, with an interspersed paragraph from Barr, Davis and Johnson, may be helpful in the development of understanding on this point:

A great deal has been written and said about objective evaluation. This is the attempt on the part of one person to evaluate or to measure another person or thing. It occupies an important place in life, especially in the measurement of things. The objective measurement or evaluation, however, is always subjectively held and interpreted by the person doing the evaluating. We know that there is no such thing as an exact measurement, although materials are measured within an effective range. That is, they are measured accurately enough so that they can be operated in action. When people set out to measure other people, however, the measurements are so rough and the subjective element so strong that the measurement loses most, if not all, of its meaning. Experiments have been carried out where a number of teachers have read and graded the same examination paper, resulting in such wide disparity in grades that the results, one or all, could not be taken seriously.<sup>16</sup>

.....

It is sometimes assumed that achievement exists in determinable or finite amounts. Even in the case of informational content, it is rarely possible to determine quantitatively the amount of information which the learner possesses. Learning material is not capable of being measured by any fundamental process of measurement. Measurement based on the mastery of certain chapters of a textbook or of specific items of information is not true quantification but rather qualitative description of amount. The practice of regarding learning material as units of measurement for purposes of quantifying achievement can result only in rough estimates.<sup>17</sup>

.....

This means that most of the so-called objective evaluation, especially when applied to other people rather than to materials, is

<sup>16</sup>Kelley and Rasey, *op. cit.*, p. 129.

<sup>17</sup>Arvil S. Barr, Robert A. Davis and Palmer O. Johnson, *Educational Research and Appraisal* (Chicago, Illinois: J. B. Lippincott Co., 1953), p. 83.



found to be subjective, after all. If we are measuring a person we rationalize our results in terms of what we believed about the person before we started. When a "good" student does poorly, we say he was not feeling well that day. When a "poor" one does well, we say he was lucky.

There is no reason why we should not indulge in objective evaluation to the degree that we can do it. It is an error, however, to think such evaluation is something which it is not. If we know that our measures are inaccurate, particularly when applied to persons, we may be able, nevertheless, to get "straws in the wind" which will help us in making decisions. Immense harm can be done, however, if we are not aware of the limitations and so use our inaccurate and subjectively interpreted measurements wrongly in making decisions which affect the lives of others. At times decisions have to be made, but in making them many clues need to be accumulated and our own feelings need to be kept in check to the degree that it is possible. Then the decisions should be made with humility and with the realization that we may still be mistaken, rather than with arrogance and coxsureness.<sup>18</sup>

A generation ago Newkirk and Greene reported on the difficulties of objective evaluation with respect to the marking of projects and drawings by industrial arts teachers. It seems pertinent to review certain of their findings here because not too much progress has been achieved in the intervening years:

The results of this study indicate that shop and drawing teachers are highly unreliable in their ratings of the same group of projects or drawings. Furthermore, they do not agree on the relative importance of the factors to be considered in making such ratings. There are probably not enough cases to warrant the generalization that teachers of shop work and drawing are any more or less subjective in their markings than are teachers of the academic subjects. Yet the study does indicate that there is sufficient variation in the estimation of quality in these specimens to introduce serious errors in measurement based on such a procedure. (The following table summarizes the range in rating and the corresponding letter marks for the nine projects included in the study).

<sup>18</sup>Kelley and Rasey, *op. cit.*, p. 129.

<i>Project</i>	<i>Range of Ratings (on three samples)</i>	<i>Corresponding Letter Marks</i>
Woodwork	41; 26; 23	C-F; A-D; A-D
Drawing	69; 58; 24	A-F; B-F; A-D
Sheet Metal	50; 25; 38	B-F; A-F; A-F

19

A statement by Green and Jorgensen may help in developing a meaningful perspective with respect to this matter of objectivity.

There are certain aspects of ability, accomplishment, skill, aptitude, character, and personality which unquestionably lend themselves to reasonably objective measurement. The emphasis which is given to these measurable qualities frequently gives the impression that they represent the major elements in the total understanding of the individual. Such is far from the case however, for many of the intangibles of the child's personality are almost certainly of greater importance, although in many cases they are practically impossible to measure objectively. This merely means that the teacher must be made keenly aware of the fact that something lies beyond objective measurement. He must see that appraisals of the child's total personality are basic to effective classroom teaching. He must recognize that many (probably most) of these vital appraisals must be made on the basis of keen observation and sympathetic analysis of the pupils.<sup>20</sup>

Cantor continues in a similar vein by pointing out the external nature of our examination practices and the need for revised thinking in the direction of internal evaluations on the part of individual learners.

... , most school examinations emphasize discrete data which authorities in a subject consider to be significant. The authorities in any given field have assimilated a common body of knowledge. There is agreement on the facts. The criterion for judging what one knows, the amount or accumulation of data, is external to the learner. One knows or does not know the agreed-upon facts. An objective test reveals the pupil's knowledge of what are the agreed-upon facts.

<sup>19</sup>Louis V. Newkirk and Harry A. Greene, *Tests and Measurements in Industrial Education* (New York: John Wiley & Sons, Inc., 1935), pp. 6-8.

<sup>20</sup>Harry A. Greene and Albert N. Jorgensen, *The Use and Interpretation of High School Tests* (New York: Longmans, Green and Co., 1936), p. 581.

If, on the other hand, learning and education consist in some respects of the development of meaning contexts of data in the pupils' own lives, then different criteria seem to be required. At the extreme, if individuals are immutably different, if each one learns what he wants to learn, what he can afford to learn, or what he needs to learn, no general criteria can be applied. The performance of a specific pupil cannot be compared and ranked according to the performance of other pupils. The meaning of any course to each individual can be determined only by that individual. If we ask, "What did the course or the facts mean to you?" we see clearly the difficulty in judging performance by external standards. Inevitably, the evaluation must rest on the achievement of the student in accord with his capacities, needs, and interest.<sup>21</sup>

Kelley and Rasey summarize this type of criticism by reminding us that:

We pay attention to what the boy does to the algebra problem, rather than to what the algebra problem does to the boy. It has to do with what the teacher thinks about the boy rather than with what the boy thinks about his own effort, efficiency, and effectiveness. What the teacher thinks about the boy is of passing moment, soon forgotten when he moves into another room. But what the boy thinks about himself is built into his structure and is permanent as long as he lives.<sup>22</sup>

As stated at the outset, these few criticisms of our evaluation efforts have been selected to indicate that educators generally are not satisfied with the *status quo*. Professional test-makers are no exception. John E. Dobbin of the Educational Testing Service helps us to bring this whole discussion into proper perspective while pointing the way toward what lies ahead.

Tests, like some of the wonder drugs of medical science, have been *overused*. The friends of testing (often they are almost apostles) in the schools have welcomed and used each new testing instrument as it appeared, until many of them found themselves operating testing programs that were costly, unwieldy, and not too rewarding in terms of useful results. As a consequence, those educators who had not been bitten by the testing bug began to resist the whole idea of testing, particularly the concept of "objective" or

<sup>21</sup>Cantor, *op.cit.*, p. 201.

<sup>22</sup>Kelley and Rasey, *op.cit.*, p. 131.

standardized measurement. This situation, in which the most avid pro-testers were overusing tests and the anti-testers would have nothing to do with them, was brought about initially by the idea that educational tests were something to be *added* to the instructional program as a final perfection.

Tests have also been misused in the schools. At different times and in varying situations they have been the club a supervisor held over the heads of his teacher, the teacher's goad for slow learning pupils, the substitute for insight and sympathy in counseling, the means for blind comparisons between children and between schools, and the weapon of those who for selfish reasons attack public education.

Time moves along, however, and the trend that indicates the permanent and the most useful role of measurement in education is now discernible. That trend is toward integration of scientific testing in a program of continuous evaluation which includes many other means for assessing pupil growth, and which is itself an integral part of the instructional program.<sup>23</sup>

## EDUCATIONAL OBJECTIVES AND EVALUATION

"If we could first know where we are and whither we are tending, we could better judge what to do and how to do it."

This famous epigram, uttered by Abraham Lincoln in his celebrated "House Divided Against Itself" speech, summarizes and sets the stage for our brief consideration of educational objectives and their relation to evaluation.

Seventy-five years ago, the aims of public education could be spelled out in precise and explicit fashion—readin', ritin' and 'rithmetic. Since that time they have become progressively more complex and intricate. This has brought problems, confusion and much debate. All of this has been reflected in our evaluation practices.

At the risk of leaving a gap in the developmental picture it seems best to use the allotted space to accent present thinking in this area. Dobbin, whose statement summarized the previous section, describes how the modern school relates its evaluation practices to carefully defined educational goals:

It is characteristic of schools that use measurement most profitably that before they plan either instruction or evaluation they

<sup>23</sup>John E. Dobbin, "What's New in Testing?" *Educational Trend*, Issue No. 353 (Washington, D. C.: Arthur C. Croft Publications, 1953), p. 1.

work out a statement of the educational goals toward which they will direct the learning of their students. Often the parents and other interested citizens of the community will take part in this setting up of general goals. Then the teachers and other school staff members will translate these general goals into statements of observable behavior; that is, they will state their objectives in terms of specifically what the student will do or how he will act as a consequence of his learning experience. Will he read more books? Will he "make change" correctly? Will he lead a group meeting effectively? Will he read with appropriate speed? Will he figure interest correctly? Will he know how his local government operates?

Only after such a list of behavioral objectives has been developed—objectives toward which the student's instruction is aimed—can tests be built or chosen with any assurance that they will measure desired aspects of growth. Teachers use such a list to block out the sections of tests they build and to suggest items or tasks that go into the tests. They also use the list of objectives in selecting standardized tests, by ordering specimen copies from several publishers and comparing each test, item by item, with their stated objectives. They will buy only that test which covers adequately the objectives toward which *they* are working with *their* students. <sup>24</sup>

Ralph W. Tyler, whose earlier statement on the nature of evaluation reflected the thinking of a leader in this field, adds further meaning to this need for an explicit and precise definition of objectives.

The relationship between achievement testing and instruction can be seen more clearly by noting the nature of the instructional process. Basically, instruction is the process by which desirable changes are made in the behavior of students, using "behavior" in broad sense to include thinking, feeling, and acting. Instruction is not effective, therefore, unless some changes in the behavior of students have actually taken place. Thus, in a certain English course one purpose of instruction may be to develop increased skill in writing clearly and in well-organized fashion; another purpose may be to develop increased ability to read and to interpret novels. English instruction in such courses will not have been effective unless these kinds of behavior changes have actually taken place in

<sup>24</sup>*ibid.*, p. 4.

the pupils--unless the students do become more skillful in writing and are better able to read and interpret novels. To take a second illustration, instruction in a certain science course may be aimed at developing an understanding of certain important science principles, an ability to utilize these principles in explaining common scientific phenomena, and some skill in analyzing scientific questions to see the kinds of data needed to solve them. Instruction in this science course will not have been effective unless changes of these kinds actually take place in the student.

.....

The selection and clarification of objectives can be facilitated by carrying on a program of educational measurement. It is not possible to construct a valid achievement test, or to use one properly, without clarifying the objectives which the test is supposed to measure. One cannot measure the outcomes of a course in English without knowing what particular changes in behavior are sought in the English course since the test is a device for determining whether or not these changes have actually occurred. If the English course seeks to develop skill in organizing written material, then it takes a different kind of test than does a course which is aiming at developing a knowledge of certain types of literary materials or certain skills, in reading, or certain feeling responses to novels. The necessity of having objectives clearly formulated, that is, stated in specific terms rather than in terms of vague generalities, stimulates the instructional staff to attack the problem of objectives and to carry the analyses to a degree of definiteness and clarity that would not be likely to occur if the testing problem were not uppermost in mind. Hence, educational measurement can help in selecting and clarifying educational objectives by stimulating the faculty to formulate their objectives and to express them clearly in terms of behavior.<sup>25</sup>

The following statement from Anderson, Grim and Gruhn describes in general terms how evaluation practices are related to the total pattern of school experience.

The program of evaluation in a modern school functions within the framework of the educational philosophy of the particular school. It derives its guidance from the statement of purpose, which determines the curriculum of the school. These educational objectives are

<sup>25</sup>Tyler, *op.cit.*, pp. 47-50.

cooperatively determined by pupils, teachers, and community adults. Objectives represent the kind of changes in the behavior of the pupils which these groups have deemed desirable. Evaluation, therefore, must determine the degree to which the school is fulfilling its responsibility in changing society through modifying the behavior of its pupils. Hence, evaluation operates as an integral part of the process of purposeful learning, and not in isolation from it.<sup>26</sup>

Cantor is somewhat more specific in describing how a careful consideration of educational outcomes must logically lead to an improvement of our evaluation practices:

The orientation of the teacher and pupil regarding educational objectives is the important factor in evaluation.

The educational outcome will vary for every pupil. It is the qualitative aspect of an ongoing experience which needs evaluation by both pupil and teacher. The evaluation itself becomes an important experience, perhaps the most important one, to enrich the growth experience of the pupil--and of the teacher. With such evaluation the learner is inside his most important learning experience, participating, with the guidance of his teacher, in interpreting what is happening to him. Together they contribute to the improvement of the learning process by exploring how to make the pupil's experience richer and, eventually, more satisfying. Here is an excellent opportunity for the teacher to help the pupil learn how to improve learning, how to assume responsibility for his decisions, and how to select and manage his own affairs. Here is a total situation involving knowledge or the absence of it, psychological blocks, resistances, interests, needs, skills, and a teacher willing to help. In the evaluation conference, the pupil's purpose and motivation can be crystallized. There is no threat, disesteem, humiliation, or competitiveness. There is an opportunity to participate in redirecting one's experience so that a more satisfying integration may be experienced.<sup>27</sup>

Most areas of education are now engaged in a reexamination of their objectives. In most instances a determined effort is being made to describe these outcomes in behavioral terms, as specific as possible. This is usually followed by an enumeration of possible learning activities that will help in bringing about the desired behavior changes. Earlier Chapters in this Yearbook have considered these approaches

<sup>26</sup>Anderson, Grim and Gruhn, *op.cit.*, p. 264.

<sup>27</sup>Cantor, *op.cit.*, p. 203-204.

in some detail. We turn now to a statement from *A Guide to Improving Instruction in Industrial Arts* for a description of the next step, after the behavior changes have been listed, and the learning activities enumerated:

The *third* step in the process is to study the desired behavioral changes from the point of view of what evidence should be gathered about pupil learning and behavior to determine whether the desired changes have occurred. In short, a plan of evaluation should be anticipated for each objective. The evidence which a teacher seeks concerning the pupil's progress has a tremendous influence on both content and method and also on the pupil's performance. If the teachers claims to be teaching for four or six broad objectives but rewards or punishes, praises or criticizes, promotes or fails, on the basis of one or two objectives, then, in a short while, these limited objectives will come to dominate the program.

Each behavioral change and each learning activity suggests appropriate evaluation procedures. If the teacher, for example, desires to develop high level inter-class cooperation, then socio-metric devices are in order. If youngsters are urged to develop hobby or leisure-time pursuits, then evidence must be gathered in terms of such items as home workshops. If pupils are expected to learn to design their projects and plan the working procedures then reliable measures of competence in design and planning must be employed.<sup>28</sup>

## TECHNIQUES OF EVALUATION

In outlining the approach to this section the writer first attempted to classify the numerous techniques of evaluation with the intent of selecting readings that would describe the various techniques in over-view fashion. This plan was abandoned, at least partially, in keeping with the more basic aim of helping to develop a proper attitude toward evaluation rather than trying to tell all about it.

This is somewhat in keeping with the following idea expressed by Melvin:

Evaluation is useful because it brings to the learner satisfaction and a consciousness of effort well spent. When one has spent much time and strength in any enterprise, he likes to assess his gain. Has the result been worth the struggle? Is what has been learned personally and socially valuable? It is the fulfilling of this need

<sup>28</sup> *A Guide to Improving Instruction in Industrial Arts* (Washington, D. C.: American Vocational Association, 1953), pp. 15-16.



which should guide the teacher in all attempts at measuring the results of teaching. Thus evaluation becomes not a bugbear, but an actual part of teaching itself. Thus it can be satisfactory and frequently very enjoyable. When it is carried on in this fashion, evaluation may be a true aid and support to learning. It may take many . . . forms . . . <sup>29</sup>

For those readers who would not feel right without some attempt at classification, it was decided to include the following statement by Hull and Cummings wherein they describe the general means of evaluation that might be used in assessing five areas of behavior:

1. The health and physical status of the individual can be appraised by means of periodic physical examinations, tests of physical fitness, observations, nurse follow-ups of attendance records, and family consultations.
2. The intellectual development of the individual can be gauged by considering school marks earned and the results of intelligence (scholastic aptitude) and achievement tests. Tests of critical thinking and general educational development are examples of instruments which may be used in this area.
3. While the emotional and social development of the individual is extremely difficult to measure, estimates can be made through the indices secured through self-rating scales, problem check lists, adjustment inventories, and student questionnaires. Helpful in making such estimates are themes, auto-biographies, observations, anecdotes, interviews, reports from employers and parent conferences.
4. The personal interests and plans of the individual can be assessed by means of the records of previous achievement, interest inventories or tests, auto-biographies, interviews, and a record of such out-of-school activities as leisure pastimes and work experience.
5. Special abilities of the individual can be appraised through special aptitude tests, products made by the individual, interviews, and a consideration of previous achievement or performance. <sup>30</sup>

<sup>29</sup>Melvin, *op. cit.*, pp. 232-233.

<sup>30</sup>J. Dan Hull and Howard Cummings, "Discovering the Extent to Which Youth Needs Are Being Met," *Adapting the Secondary-School Program to the Needs of Youth*, Fifty-second Yearbook of the National Society for the Study of Education, Part I (Chicago, Illinois: The University of Chicago Press, 1953), p. 64.

We return now to some stimulating thoughts from Cantor as he describes things that will have to come:

If the education of pupils rather than the teaching of content becomes the proper concern of teachers, more attention will be given to students' motivation, to the kind of effort they make in class participation and in written work, to the degree of initiative, the intensity of curiosity, and the willingness to assume responsibility. Teachers will, consequently, encourage students to think critically, to use data in their own way, and to give import to what they know. For these purposes we need new types of examinations which will elicit not inert ideas and specious "facts" but meaningful contexts. *What* a student has learned cannot then be separated from what *he* has learned.

Many new devices will have to be discovered to help in this kind of evaluation. A cumulative record of the pupil's performance will be basic. It will contain a description of how interest arose, how it was pursued and developed, the relations of the pupil to others, the record of contributions to the group, new ideas or projects proposed, specific instances of self-assumed responsibility and self-discipline.

A class of pupils would gain much from devising their own examinations with the guidance of the teacher and participation in their evaluations of one another. Working through this kind of experience would involve the vital participation of every pupil. The spirit would be not one of jealous competition for status but one of mutual help toward one another to understand what each has been doing and what each needs to do.

Specious grades and hollow examinations will, in time, be considered educational monstrosities (as, in the judgment of anyone familiar with genuine growth of personality, they are).

.....

The writer was visiting a high school in South Carolina at the close of the first semester and was present at the algebra examination. The instructor was explaining to me the significance of the students' moving about the room, huddling together in groups of two, three and four. The pupils were helping one another to understand and to solve the examination questions. The instructor explained that he was certain that, after an hour or so, every one of the thirty pupils would understand the principles involved in the solutions of the problems. He added that most teachers would consider what was happening as outlandish cheating. He thought it was a form of highly

desirable cooperation. Learning to work together, to cooperate, to achieve self-esteem, he felt, was the important outcome of the elementary algebra class. The tool of algebra was a means of helping the pupils develop as people and, incidentally, become genuinely interested in mathematics, because it meant more to them than the risk and fear of "flunking" the teacher's or school's examination. Algebra became associated with friendliness, helpfulness, opportunities to express creativity, freedom to make mistakes without penalty or disapproval. In this atmosphere, pupil responsibility for perseverance and working through to an understanding of the problems is self-imposed. Algebra becomes a challenge, not a threat.<sup>31</sup>

A natural question at this point is to ask what all this might mean for the industrial arts teacher in his day-to-day work in the shop and to the teacher educator preparing that teacher. The following characterization, adapted (freely) from a mimeographed statement by Dr. J. Wayne Wrightstone, suggests at least some of the directions which an industrial arts teacher's appraisal efforts might take:

1. He will learn as much as he can about each new class before meeting them. To this end, he will:
  - a. Inspect the cumulative records and the health record cards.
  - b. Inspect any special reports on individuals.
  - c. Confer with the supervisor and the pupils' previous teachers.
2. He will observe the pupils to become better acquainted with them. He will notice such things as:
  - a. The spirit of the class; signs of friendship groupings.
  - b. Individuals who are outstanding, for one reason or another.
  - c. Apparent interests; apparent levels of maturity.
3. To find out where the pupils are in relation to their work in the shop, he will:
  - a. Consult office records to see what major experiences the class may have had in previous years.
  - b. Give formal or informal tests to find group and individual ability in skill areas. (If recent data exist, this step may be omitted.)
  - c. Be alert to evidence of competence and knowledge apparent from pupils' informal talk, in work habits, in their sharing of responsibilities, etc.

<sup>31</sup>Cantor, *op. cit.*, pp. 204-206.

4. To discover how his pupils are responding to the program being developed with them, he will:

- a. Observe carefully the activities in which the pupils take part; how they go about a task, how they work together, how they do research, how they discuss and share information and ideas, how they report, how well they manage the transition from one activity to another, etc.
- b. Watch for evidences of the quality of the pupil's thinking.
- c. Give brief and fairly frequent tests by which the pupils may be kept informed of their progress in skills and in facts which they need to remember.
- d. Give special attention to those having exceptional needs, and advise ways by which they can test their own progress.
- e. Interpret the results of testing programs in such a way as to:
  - (1) Adjust his instructional program to serve group and/or individual needs, revealed by the results.
  - (2) Consider the standing of his class in relation to the given norms with due allowance for all the factors involved—the pupils' background, recent community changes, individual problems, etc.
  - (3) Give the scores their rightful place in the total picture of each pupil. Experienced teachers know that young people may grow by spurts and lags, rather than steadily. Children may appear to stand still in one area while speeding ahead in another. They may seem to be regressing in all aspects at once. Much must be known about the individual to account for these changes and lack of changes. Teachers must take the whole child into consideration in evaluating any score and are not discouraged by occasional lapses.

5. To enlist the pupils' optimum participation in the evaluation program, the teacher will:

- a. Provide opportunities according to the pupils' maturity for them to carry on evaluations frequently and in relation to their plans, their goals, their activities, the tools and materials they use, and the results of group efforts.
- b. Explain to them as much as they can understand of the purpose of testing and other evaluations; permit them to apply evaluation to the tests used.

6. To gain information that will aid him in understanding all aspects of the pupil's life, and in guiding him wisely, the teacher will:

- a. Confer with parents, when possible, in a manner as informal and unhurried as can be arranged and in a spirit of co-operation and common interest, when necessary or desirable.
- b. Confer with others in a position to know about various aspects of the pupil's life such as representatives of community agencies or of child guidance services and experts in any appropriate field.
- c. Observe his behavior in supervised and unsupervised situations and make such notes as will be useful in estimating his personal social growth and needs. The notes may be in the form of anecdotal records, ratings on a scale, checks on a check-list, or any other kind of notation the teacher prefers. These notes will prove helpful when the teacher is called upon to enter personality ratings on the Cumulative Record Card.

As the teacher evaluates the growth of the pupils in his class, he also makes an evaluation of himself as a teacher. He studies his teaching techniques in order to discover whether they are effective or whether better ones are needed. The way in which materials are being used and the manner in which routines are taken care of, help the teacher to evaluate his effectiveness. Some teachers keep diaries for purposes of record and in order to be able to appraise their own effectiveness. A diary may take any one of many forms and may focus on a variety of points. It may be a running account of the progress of a unit, a narrative showing how the class has learned new ways of getting along together, a report of incidents that required attention and of plans for meeting the problems revealed, or a behavior journal following the development of a particular student (often one who needs special help and understanding).<sup>32</sup>

## EVALUATION IN THE TEACHER EDUCATION PROGRAM

The logical place to look for first developments in the improvement of evaluation practices is in the teacher education programs. In too many instances, of course, we find teacher-educators talking about what should be done, evaluation-wise, without doing it themselves.

<sup>32</sup>Adapted from mimeographed statement by J. W. Wrightstone, New York Board of Education, Brooklyn, New York.

The recent publication, *Teacher Education for a Free People*, contains some pertinent suggestions concerning the development of understandings and competencies in the area of evaluation. Since this publication grew out of the extensive self-study program of the American Association of Colleges for Teacher Education it seemed timely to include the following excerpts from the statement by Stratemeyer:

Evaluation, as the process of judging the effectiveness of the educational experience, can be valid only when it is made with reference to the ends and values sought. In the concept of teacher education developed in this volume, the real test of growth lies in the quality of thought and action of students as they face the problems and situations which make up their lives as citizen-teachers. Not only what a student knows and understands, but his ability to use that knowledge functionally in a range of situations provides the basis of evaluation.

.....

If the quality of thought and action of students as they meet life situations is the goal, then the behavior of students in actual situations must be evaluated. This goal places first importance upon direct observation of the student in his college life and in his relationships and activities with pupils and teachers in student teaching and other laboratory experiences. Anecdotal records in which situations and behavior responses are noted afford one helpful way to secure data for evaluation. Written from time to time by the student himself, they reveal his perception of his behavior. Written also by staff members working with him in the same situation, they provide comparison of interpretations. Such comparisons may be suggestive for the guidance of his further experiences. These records may be supported by tape recordings of small group situations and conferences which show the student at work on a problem in an actual group situation. To these may be added the plans, notes or other materials prepared and used by the student on these occasions. Records of these varied kinds, augmented over a period of time, help the student as well as his teachers and advisers to know the nature of his progress and to suggest next steps.

Not all learning, however, can be evaluated through observation and recording of direct behavior. The actual situations may not be at hand, although colleges are finding more such opportunities as they accept a wider interpretation of the curriculum and include more

direct action and use of community resources as part of classwork. There will, however, always be need to evaluate growth in dealing with ideas verbally, with or without reference to a particular situation.

The most common method used is the examination, which frequently is primarily a "telling back" of information and ideas. The limitations of this type of examination are generally recognized. It provides little evidence on which to base an evaluation other than the student's immediate retention of the specific concepts. There is little or no evidence by which the instructor can tell whether this retention is temporary learning "for examination purposes," whether the ideas can be recalled at some later time, or whether they can be used in meeting new situations. The preparation of examinations that will provide significant evaluative evidence is obviously a science to which colleges are giving increasing attention.

Two major efforts characterize current practices of individual teachers and special college units whose major responsibility is to assist teachers with problems of evaluation. The first is the development and use of more functional types of examinations. One promising lead is the "situation examination" in which the student is asked to respond to a situation similar to those he will meet in carrying out his responsibilities as a citizen and teacher.

.....

A second development with which teachers are experimenting is the use of reactions other than examinations. Among the various evaluative instruments reported in current literature are student diaries and logs, brief "reaction" papers, special oral or written reports, critical reviews of books or events, self-evaluation statements, reports on long-term projects, small group discussion of a given problem, and the individual oral conference or examination. Every college teacher should develop several soundly conceived instruments which will best serve to determine growth.

Evaluation is an essential part of the student's learning. It is important that he build attitudes toward, and habits of, evaluation that help him to become his own best critic. Often he may be the only person to commend or to criticize his action in a particular situation. To be able to evaluate one's present status, to know how to appraise one's needs, to be able to propose next steps, are important aspects of growth. The ability to evaluate soundly is taught and learned as is any other part of the curriculum. Provision must be

made for students to share in setting up and applying standards for the evaluation of group and individual activities and as guides for the evaluation of their growth.

Attitudes and skills needed in evaluation develop as teachers and students together discuss proposals for a new study and plan classwork. Long-view planning by the student and his adviser helps to increase these skills. The conference of student and teacher adds new insights as individually prepared analyses of progress are compared and a common judgment determined. These, and the many informal situations in which decisions are made – deciding to rewrite a report, wondering why a contribution was disregarded by the group, finding a better way to express a point of view – all contribute to growth of the student in using evaluation effectively.<sup>33</sup>

#### NEEDED RESEARCH AND DEVELOPMENT –

It is obvious, from the foregoing discussions, that much remains to be learned and much remains to be done about educational evaluation. This statement is made without any intent to belittle the giant strides that have been taken in the last several decades. Educational evaluation, like education itself, is a dynamic, on-going process in need of constant improvement.

It is with this thought in mind that we reiterate briefly certain criticisms of our evaluation practices as a means of pointing up the developments that ought to be forthcoming, together with the research that is necessary to get at the facts. Cantor states one position in these words:

The dilemma of evaluation can now be formulated: are we to evaluate what the pupil knows or what and how he learns? Actually, of course, both types of evaluation are important, and they are interrelated. Testing the what is the general objective of examinations in our schools. These are social realities, commonly accepted data, values, meanings, which everyone must acquire for orderly community living. Critical thinking cannot be achieved without data. Content cannot be disregarded.

The danger, however, is that we become ritualistic in evaluating knowledge, disregarding and failing in humanity and wisdom. There

<sup>33</sup>Florence B. Stratemeyer, "College Teaching and Teacher Education," *Teacher Education for a Free People*, ed. by Donald P. Cottrell (Oneonta, New York: The American Association of Colleges for Teacher Education, 1956) pp. 299-303.



is a spurious sense of comfort and convenience in having everyone "learn" the same data in the same way at the same time, in everyone's acquiring the mechanical ability to insert the correct coins of information into mental slot machines. This sense of comfort is all the more spurious when lip service is paid to the goal of giving every child the opportunity to develop his capacities, his needs. The individual needs to assimilate social realities, but not at too great a cost to self-motivation, self-education, and self-responsibility. These values are denied in school practice as often as they are affirmed in educational theory.

There is need for balance, a better balance, to reconcile the clashing goals of education. We need to develop more effective methods of encouraging "organic" learning and growth and new ways of evaluating such developments. The kind of evaluation we have in mind, interestingly enough, is employed most frequently in the conferring of graduate degrees. Under ideal conditions, the candidate for a higher degree defines a problem, gathers data, makes his interpretations, and then discusses what he has learned with the committee in charge of the examination. The committee members discuss the candidate's record and performance. They accredit him for the degree or they do not. In the reputable graduate schools it is the quality of the work and the quality of the candidate's "Performance" that is judged. Graduate students are assumed to be a special kind of people who warrant more individual attention. Students in secondary schools and in colleges tend to be regarded as ciphers, to be lectured at en masse and then tested by statistical devices — appropriate for "masses."<sup>34</sup>

Kelly and Rasey waste few words in stating that:

The greatest undeveloped frontier in education today is evaluation. There is no other field about which so much has been done and concerning which so little is known. This is because our efforts have been spent in extrinsic evaluation — somebody measuring somebody else — when it comes about that the only evaluation that really has much to do with growth and with the building of structure is intrinsic and subjective. We have literally mountains of tests, nearly all extrinsic. We would be appalled if we could see all of them in one heap.

It is true that a few of our tests are intended to bring about self-evaluation. Also, some of our examinations are designed with

<sup>34</sup>Cantor, *op. cit.*, p. 202.

that end in mind, but this is not true of most of them. We need to invent new ways of securing self-evaluation. There may be instruments not yet designed which will serve this purpose.

We can teach problem solving if we put our minds to it. There are logical steps which can be taught and can be followed. There is logical order in going about the business of doing what one wants to do. It can best be taught by putting people into problem-solving situations which constitute real problems, not examples. For that matter, it is hard to see how we have become so involved in evaluation, because it is simply a matter of asking ourselves how we are doing. Asking ourselves does not mean asking somebody else or having some other person tell us.

.....

We can invent more and better ways of throwing the responsibility for learning on the learner instead of carrying it ourselves. When the learner is responsible he has to ask himself, from time to time, how he is doing.

We can come to grips with the marking system and, instead of complaining about it, can work out some sensible action to take its place. The marking system has been under fire from many sides for a long time. It has been about thirty years since most schools abandoned percentage grades and substituted letter grades. This change was recognition of the fallibility of the percentage grades. This was a minor reform, but it showed the beginning of dissatisfaction with our early methods. We can isolate the purposes of the grades and can substitute better methods for them after we see what they are for. If the purpose is to report to parents, better ways for doing that can surely be devised. If it is to send to colleges or to an employer, we can invent better ways of telling these officials what they want to know. If grades are for the purpose of making people work, admit that fact and let us see if we cannot find more wholesome reasons for human activity.

One objective measure that might do us all good is to decide what the school is for, and then, through follow-up studies, to see how our products are living. Examination of the success or failure of our students as adequate, competent citizens is probably the best measure of the success of a school. We must, however, be careful to do it well so that our failures as well as our successes will be identified, and we must have some agreement as to what constitutes success.

The problems of revamping our practices and our attitudes in the area of evaluation are enormous. They call for a whole new approach to learning and to teaching. At present we know so little about evaluation that we scarcely know where to begin. That is why we say that it is education's great untouched frontier.<sup>35</sup>

If the approach to evaluation is to develop it will require the close cooperation of teacher, pupil and parent. This is in keeping with the emerging trend of identifying pupils and parents more closely with the goals as well as the learning activities of the school. Such an approach will require better trained teachers along with expert assistance. Space does not permit a further exploration of such possibilities, although a statement by Sims does this partially as he discusses the need for a new "faculty" approach.

Adequate appraisal will demand, too, a co-operative (or faculty) approach, rather than the individual (or teacher) approach which is presently customary. Although each teacher will almost certainly be seeking some learnings which are his concern alone, many learnings will be common concern of several teachers, and approaching evaluation individually is wasteful. Take, for example, ability to do straight thinking, the habit of assuming responsibility, skill in expressing one's self effectively, or understanding of the scientific method. These are outcomes which we would surely find not one but several teachers concerned with. Moreover, better evidence of learning can often be collected by teachers other than the one directly responsible for the teaching. Many of the so-called "tool" subjects are of this sort. Habits of using acceptable English and the transfer of mathematical skills to fields not primarily mathematical are good illustrations. Actually, one's fellow-teachers are often in the best position to collect evidence of the extent of transfer of any learning. A co-operative, give-and-take arrangement would seem to be the sensible means for appraisal of this learning.<sup>36</sup>

A further statement by Sims summarizes the research approach called for by the criticisms and development needs heretofore mentioned:

<sup>35</sup>Kelley and Rasey, *op. cit.*, pp. 138-139.

<sup>36</sup>Verner M. Sims, "Evaluating Progress Toward The Satisfaction of Needs," *Adapting the Secondary School Program to the Needs of Youth*, *op. cit.*, p. 272.

. . . satisfactory implementation of a sound evaluation program will require a reorientation on the part of many researchers in the field of measurement and evaluation. There are any number of problems crying for investigation. The possibilities of projective techniques (both disguised and free-response testing) for getting evidence of achievement, adaptations of rating techniques to the testing of school learnings, the influence of the medium of testing (both the medium of impression and of expression) on observed achievement in varied fields of learning and for youth of varying psychological make-ups, the possibility of developing "situation" tests which will yield evidence of the learning of varied types of outcome, the implications of factor analysis for more efficient measurement of learning outcomes of the type the secondary school is concerned with, the development of satisfactory means for interpreting school learning in terms of the "profile" rather than the "summation" concept, and the educational effects of pupil and patron participation in evaluation . . . . If one would criticize current research in the field it would be in terms of the fact that too much of it seems to be directed toward getting more and more refined measures of more and more limited outcomes of learning. In the meantime, teachers even now work diligently to develop many learnings for the appraisal of which they get little or no help.<sup>37</sup>

### EMERGING TRENDS

Two excerpts will be helpful in drawing these numerous, and sometimes conflicting, statements into proper perspective. The first is a summarizing comment by Cook:

In summary, it may be said that educational measurement has taken a leading role in analyzing and refining educational objectives with reference both to their ultimate importance and to the most efficient and appropriate learning experiences. It has furnished the means of clarifying these objectives to both the teacher and the learner. It affords the means of determining the status of the learner in each learning area, suggesting appropriate experiences. It has emphasized the importance of the *how* in learning as well as the *what*, placing study habits and intellectual skills in proper perspective. It has focused attention on child development and intellectual growth, diverting it from the subject-matter-to-be-covered point of

<sup>37</sup>*Ibid.* p. 273.

view. It not only motivates the learner but also directs his efforts into effective channels. It furnishes the school official with a more adequate conception of his responsibility and serves as a guide to a more effective school organization and the selection of educational materials and facilities. Truly, educational measurement has outrun educational practice, but its leadership is wholesome and effective.<sup>38</sup>

The above statement helps us to realize again that many things have been accomplished in the realm of educational evaluation, though much remains to be done. Dobbin points toward the future as he lists ten characteristics of the evaluation program one will be finding in the years ahead.

1. The only purpose in using tests of any kind will be that of helping the teacher, the school, and the community to give each individual pupil better instruction and better guidance.

2. The teacher, as the pupil's friend and guide in the learning process, will be the central figure in the selection, administration, and interpretation of tests.

3. The pupil will be brought to recognize tests as materials for the learning process, just as textbooks are not administratively imposed barriers that he must surmount to escape punishment or stigma.

4. Tests of all kinds will be used: standardized tests where they suit the instructional purposes, teacher-made tests of essay and objective kinds, informal quizzes and discussion types of oral examination.

5. Assessment of pupil growth will include many other means of measurement than direct testing of the pupil: records of progress through collection of anecdotal notes, observations of pupil behavior while learning his opinions as to his progress.

6. Assessment of growth, including testing, will be a part of a continuous process of evaluation, rather than a periodic check.

7. Evaluation will be a built-in feature of the school's curriculum, planned at the same time and by the same people who build the curriculum, regarded as just as important for the teacher as lesson planning, and included in the instructional budget.

8. Evaluation involves professional skills and insights for which every teacher, counselor, and administrator will receive training equal to that required in instructional methods.

<sup>38</sup>Walter W. Cook, *op.cit.*, pp. 44-45.

9. Evaluation will be based directly upon the specific objectives of community, school, and teacher in educating each individual child.

10. The outcomes of evaluation will be shared with pupils, parents, and community.<sup>39</sup>

### CONCLUDING STATEMENT

At this point it seems appropriate to attempt a recapitulation by shifting into the second person and directing some general statements toward the day-to-day efforts of the industrial arts teacher. The following comments, adapted from Micheels and Karnes, may be helpful in starting the task of bridging the gap between "what is" and "what ought to be" as reflected in the previous writings.

On previous pages you have read many suggestions about new developments needed to improve the evaluating efforts of the industrial arts teacher as well as other teachers. In your college courses you have studied various kinds and types of measuring instruments. You have read dozens of suggestions for constructing tests. In your experience as a student you have viewed many illustrations of good and poor practices.

All of these experiences will have been successful to the extent that your teaching becomes more effective. That is another way of repeating that tests are not ends in themselves. They have little value unless the results are used to improve teaching and learning that take place. This is likewise true for any other evaluating instruments you may utilize.

What does this mean as far as your daily teaching activities are concerned? In brief, it means that you must study the nature and results of your evaluating efforts. Use these results to bring about better student growth. Make them a basis for improving your instruction. Be critical of your teaching efforts, but do not stop there. Start to build. Do it by asking questions such as the following:

1. Who is achieving as well as I had hoped?
2. In what ways can he be encouraged to make even greater progress?
3. Who is having trouble?
4. Where is he having trouble?
5. Why is he having trouble?
6. What methods might aid in improvement?
7. How can the methods best be carried out?

<sup>39</sup>Dobbin, *op. cit.*, p. 1.

Perhaps you can think of other questions that might be even more helpful. The important point is that such questions need to be asked as a guide to your thinking, if you are really interested in doing a better job of teaching.

Do not make the mistake of thinking that test results will supply all the answers to all these questions. You will want to consult other sources — accumulative record folder, data from the counselor, marks in other courses, and so on. But a study of your own test scores can start you on the way in a systematic organized manner.

All your evaluation efforts should be systematic and continuous. They are not something to be tacked on about report card time and then forgotten. Most teachers know this, but too many do very little about it.

What can be done to combat this weakness? When you plan your teaching, plan your testing. Remember that it is an integral part of the teaching process. Knowing what you want to evaluate will be an invaluable help in knowing what and how to teach. This is another way of saying that your evaluation program must be closely related to the objectives you are striving to achieve. In other words, as you describe your objectives, you should also be asking yourself how their attainment will be evaluated. This will help to put meaning into your objectives, and in turn your evaluation efforts will be more effective.

As reported in many of the preceding excerpts, the years ahead will witness significant improvements in detailing exactly what we are trying to measure. You can contribute to this improvement process by developing precise characterizations of the changes you want your students to make. Effort spent in this direction will make your teaching not only easier but much more effective. Such an approach also will help you to develop test items that measure application, insight and understanding of things learned. It will be a useful means of keeping your measuring instruments practical and realistic rather than academic and farfetched. These thoughts are among the most important to carry with you in your teaching efforts.

With this in mind you will keep telling yourself that pencil-and-paper tests cannot do the whole job. Observation will probably be your most important evaluating tool. You will be observing every day. Make the process objective. Know what you are observing and why. Develop the simplest possible means for recording your observation.

Perhaps the above statement implies that written tests should be used little, if at all. This is not the case. The point to remember is

that pencil-and-paper tests can be devised to measure much more than the mere knowledge of facts. We have just begun to scratch the surface of possibilities in this direction. With some ingenuity and hard work you can make significant contributions to this process. To the greatest extent possible use actual objects in devising evaluation items. Experiment with actual objects in various ways and for measuring different outcomes. Well prepared object tests are one of the best means of bringing real life situations into your evaluation efforts.

In some instances you will be developing manipulative performance tests. Remember, all tests should be tests of performance, but we are thinking here of instruments for measuring the attainment of manipulative skills. Like all tests they demand careful organization and development. Whatever the type of device, it should be constructed in terms of the two basic questions that serve well to set the stage.

1. Exactly what am I trying to evaluate?
2. How can I best do the evaluating?

This brings us back to the matter of objectives. That is as it should be. In all phases of teaching, including evaluation, there is constant need to refer back to the goals that have been established. Perhaps it is better to say that the objectives should be before one at all times. Naturally, they must be stated in such a manner as to have real meaning. Once again this is a phase of evaluation in which a great deal of work needs to be done and in which each teacher has a part to play.

Finally, do not lose sight of the fact that evaluation is based on reflective judgment, using all the pertinent data that can be gathered. Tests and testing are only a means to an end. They will be useful only in so far as they bring about better teaching and thus better student growth.<sup>40</sup>

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<sup>40</sup>William J. Micheels and M. Ray Karnes, *Measuring Educational Achievement* (New York: McGraw-Hill Book Company, Inc., 1950) pp. 485-488.



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