AN EVALUATION OF AN ORGANIZATIONAL PLAN
FOR THE INTERMEDIATE SCHOOL
OF EDINBURG, TEXAS

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CHAPTER I

INTRODUCTION

Statement of Problem

The problem of this thesis is to determine what implications a democratic society and the biological explanation of growth and learning make to an educational program and to measure the program planned for the Intermediate School of Edinburg, Texas, by these implications.

Reason for Making the Study

In the spring of 1941, when plans were being made to convert the eleven-grade system into a twelve-grade system, plans were made in Edinburg to organize on a 3, 3, 3, 3 plan, with two primary schools, an intermediate school, a junior school, and a senior school in the city. The changes in the other Edinburg schools have little or no importance to this study. At this time there were two four-grade primary schools, a three-grade junior school, and a four-grade senior school in the city. The fourth grades were taken from the primary schools and the fifth and sixth grades were taken from the junior school to make the intermediate school. Each of the primary, the junior, and the
senior schools had to effect alterations in their programs to meet the change. The intermediate school was a completely new unit, which fact made it necessary to effect complete plans for a school program. These plans were made before the end of the 1940-1941 school term. Though much thought was devoted to the organizational plans, it seemed desirable to evaluate the method employed in planning the program and the program itself in terms of the curricular possibilities within them. It is hoped that recommendations for changes which will result in improvement will come from this study.

Procedure

The flood of publications on the democratic philosophy furnished ample reading material. Lists were made of the different aspects of a democratic philosophy described by the authors. These lists were compared and consolidated. Publications on the biological view of growth and learning were ample also. Lists of the different aspects of growth and learning were compiled from the reading, and these lists were compared and consolidated. Then each of the aspects of the democratic philosophy and each of the aspects of growth and learning were examined for their implications for a school program. Then the different aspects of the school were examined and measured in terms of these implications.
Organization

Chapter I contains a brief statement of the problem, a discussion of the reason for making the study, a description of the procedure used in making the study, and a description of the organization of the study.

Chapter II contains a somewhat lengthy description of some of the aspects of a democratic philosophy and the biological explanation of growth and learning.

Chapter III describes some of the aspects of the plan for the school program, the possibilities it offers, and discusses these aspects in relation to a democratic philosophy and the biological explanation of growth and learning.

Chapter IV is a list of conclusions and recommendations based upon the findings made in Chapter III.
CHAPTER II

SOCIAL PHILOSOPHY AND CHILD PSYCHOLOGY

Introduction

The behavior of an individual, a group of people, or a society is determined by its philosophy. A Japanese who believes that he will become a saint if he is killed in battle is likely to behave differently toward war than an American who thinks that if he kills another with malice he will incur disfavor with God. A society that emphasizes the dignity and value of an individual is likely to have an educational practice far different to a society which minimizes the value of the individual.

A society which exalts force and violence will have one set of educational aims. A society which values reason, tranquility, and the paths of peace will have another and very different set. Again, a society which worships its ancestors and blindly reverences the past will have and does have different educational purposes from a society which recognizes the necessity for adjustment and change. The educational objectives in each case rest upon certain ideas of good and bad, but these ideas are different in each case and lead to aims for schools which differ one from another as the day from the night.¹

¹Educational Policies Commission, The Purpose of Education in American Democracy, p. 2.
needs to be justified in the United States. To secure and maintain democratic ideals has put the nation in war several times in its brief history. American people have championed the cause of freedom many times wherever it has been denied. A great democratic republic was the dream of Benjamin Franklin, Thomas Jefferson, and other outstanding American statesmen. In many respects the great dream has been transformed into actuality. Today, in our society, democracy has become so valuable that there is a tendency to judge a policy or practice by whether it is democratic. Disfavor can be brought to a policy or practice by labeling it undemocratic.

Our school policy is inextricably bound to a continued striving toward the democratic ideal. Thus the schools will justify their being only in so far as they develop citizens who have a real understanding of the meaning of the democratic ideal, who believe in this ideal as the highest form of social living known to man, and who are willing to make real sacrifice in their efforts to realize this goal.2

Thus, since the social faith of the society determines educational values, and since Americans are "inexorably bound to a continued striving toward the democratic ideal," it follows that the educational values in our society grow out of the democratic philosophy. Thus, it becomes important to examine the aspects of a democratic society to find the implications for an educational program.

Social Philosophy

Participation. -- A major characteristic of a democratic society is its insistence on the right and duty of its members to participate in its organizations and functions. Democracy is the first social philosophy to declare that the governor and the governed are the same. In a democracy the ultimate authority is retained by the members of the society, and they are unwilling to let the power to rule be placed in the hands of a person or group of persons.

Democracy introduced an entirely new principle into political science by holding that the governors and the governed should be regarded as synonymous. Democracy placed its confidence in the ability of its citizens to manage their own affairs and did not entrust the function of government or the power to rule to some super-authority. The Virginia Declaration expressed this principle in concise form: "That all power is vested in, and consequently from the people, that magistrates are their trustees and servants and at all times amenable to them." 3

This principle makes three assumptions: (1) citizens of a society have ability to manage their own affairs; (2) when a society of people manages its own affairs, it uses the power of management to promote the best interest of the group; and (3) a people of a society, given the management of their own affairs, will develop inner self-control which renders control from without by external power unnecessary.

3 Arthur D. Hollingshead, Guidance in Democratic Living, pp. 21-22.
Individual responsibility. -- In a democratic society the individual must practice responsibility to his group. Exercise of individual freedom without allegiance to the purpose and function of the group would soon lead to anarchy. To satisfy his own needs the individual must (1) ally himself with the group, (2) accept the goals of the group as his goals, (3) share in the effort to obtain the goals of the group, (4) specialize in an aspect of the function of the group, and (5) share the products of his efforts with others in return for a portion of the products of their efforts.

Society's responsibility to the individual. -- The common welfare is dependent on the production of the individuals in a society. This one fact makes it imperative that the society accept as one of its goals the creation of "opportunities for the fullest personality development of its members." The responsibility of society to individuals includes (1) an opportunity to specialize in some type of useful productive activity in the group effort to the limit of individual capacity, (2) freedom of thought, speech, religion, and action, (3) right to disagree with the majority decision and seek acceptance of one's own point of view, and (4) right to share products of others in return for the products of one's own efforts.

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4 Ibid., p. 35.
Individual's right to specialize and share. -- A democratic society has as its chief aim making it possible for its individuals to develop themselves to the limit of their capacity. Individuals in a democratic society must ally themselves with the functions and purposes of their society. These two statements are in no way contradictory. Society gets its existence from and through individuals; without them there would be no society. The greater the development of individuals, the greater the development of society. But in modern society an individual can be human only through his relationship with other human beings. To attempt to divide development into personal and social development is somewhat misleading because they can occur only in relationship to each other and they must occur at the same time.

Hence, the development of the individual becomes important to society as a means of perpetuating and improving itself and to the individual as a means of personality achievement which is possible only in a social medium.

In the final analysis the ultimate in true democracy in education is the equipping of every individual to do productive work in the field of endeavor for which he is by nature endowed, and in which he will be happy and successful. Further, each individual should receive training in this field up to the limit of his capacities. Then the opportunity should be presented to him to work and to produce up to his capacity. The
full development of his latent and potential abilities will then be realized.\textsuperscript{5}

Equality. -- The assertion that "all men are created equal" in the Declaration of Independence cannot be interpreted to mean that all individuals are born with the same potentialities. It means that all individuals are born with equal rights to conditions, or opportunities, which will make it possible for them to develop their best selves. To give all children the same courses would not be giving them equal opportunities. To give equal educational opportunities to all individuals it becomes necessary to provide each with opportunity to develop to the limit of his capacity in the field of his interest and greatest capability. The person whose interest and capability are in the field of art is given opportunity to develop his capacity in art. The person interested in mathematical science and capable to pursue the interest is given opportunity to do so.

The same opportunities for different individuals cannot be regarded as equal opportunities. Each person must be regarded as a distinctive individual and opportunities provided for his particular development.\textsuperscript{6}

Equality of opportunity in a democratic society gives each individual equality of opportunity to use his personal

\textsuperscript{5}Dan C. Root, "Democracy in Education," Sierra Educational News, XXXVII (April, 1941), 38.

\textsuperscript{6}Hollingshead, op. cit., p. 14.
assets to influence society's selection of policies and
determination of means to place them into operation. This
does not mean that each will exercise the same influence,
but it does mean that each will have the opportunity to ex-
ercise the influence his personality development warrants.
It is inevitable that some individuals will develop per-
sonal assets which enable them to lead the group in isolat-
ing and selecting their goals and pointing the way to
achieve them.

The democratic concept of equality must also
guarantee to each individual, according to his
ability and achievement, an equal share in determin-
ing the purposes of social action and in planning
the means of obtaining these common objectives. 7

Another aspect to the equality of individuals is the
equality of the individuals' obligations to their society.
Here again equality must be interpreted in terms of in-
dividual differences and capacities. The individual has
the obligation to develop himself in the field of his in-
terest and capacity so that his production will be a worthy
contribution to his group and so he will have a product to
exchange for the products of the labor of the other members
of the group. The status of a person in his society de-
pends upon his value to it.

Extended to all human associations. -- Democracy is a
way of living -- a method -- a way of doing, being, acting.

7Ibid.
As a philosophy, it acts as a determiner of ways of doing, being, acting. A society with some of its functions democratic and some of them undemocratic is grossly inconsistent, and its members will be confused and bewildered in their reactions. In so far as democracy is not extended to all human associations, the society is short of the great American dream.

If a youngsters meets outside the school coercive and authoritarian pressures -- at home, in the community, or on the streets, he will never become a good democratic citizen, no matter how evenly the scales of democracy may weigh when he is among his contemporaries.8

Extension of freedom to all. -- Political freedom from bondage has been a fact in the United States since the Civil War, but freedom is far more than freedom from bondage. Freedom cannot be interpreted as freedom from restraint or the right to do as one pleases because a social order without restraint on individual initiative would be anarchy. Also it is a misconception to consider freedom as innate or as an inheritance from the society.

One aspect of freedom is described in terms of "personal achievement."9 Negatively, this implies freedom from superstition, fears, unwholesome habits and attitudes, and economic handicaps. Positively, this means ability to choose

9Hollingshead, op. cit., p. 15.
purposes, to foresee consequences, to control means, and to evaluate results.

Another aspect of freedom is explained in terms of "freedom from necessity of external control."\(^{10}\)

It is freedom from restraint that results from the ability of the individual to control himself in harmony with the best interests of the group. The individual has liberated himself from social restrictions because he has achieved self-control that raises him above the need of social control. This freedom is gained through an obedience to the laws and regulations which society regards as essential to the solution of its problems.\(^{11}\)

Granting that freedom is personal achievement, it becomes apparent that all society can do toward extending freedom to its members is to provide opportunities for them to attain freedom through their own efforts.

Democracy must be learned by every generation. -- Democracy has been defined as a way of living. Ways of living, behavior, have to be learned. Therefore, democratic ways of living have to be learned. Then, with each generation the individuals have to develop the habits, attitudes, and skills of democratic processes before they can become effective in using them.

Cooperation. -- Behind the organization of any institution is the need for cooperation. Environmental factors and individual differences have made it necessary to the survival of society that individuals specialize in different

\(^{10}\)Tbid., p. 16.  
\(^{11}\)Tbid.
kinds of activities and share the products with each other. Modern industrialization has accentuated the need for cooperation. Modern man would find himself in an almost helpless condition if it suddenly became necessary for him through his own activities to supply his own needs. There is no conflict between the welfare of society and the welfare of the individual. Applying the principle of cooperation means that (1) individuals must seek the common good and (2) the group must have as its goal the welfare of individuals.

There are no individuals who are not social individuals, and society is nothing more than individuals associated and organized. Society has no life but the life of its members, and no fulfilment beyond theirs. There is no conflict between society and the individual, between the welfare of society and the welfare of the individual. The quality of a society is the quality of its members. . . .

Interdependence. -- The need for cooperation emphasizes the aspect of interdependence. In the early colonial days dependence of individuals on others was a fact, but not as much as it is today. Interdependence increased with the passing from agrarianism to industrialization. In the early days of our history each family was practically an independent unit, building its own house and furniture, producing its own food, producing and making its own clothes, furnishing its own training for the young, and furnishing

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12R. M. MacIver, Community, p. 69.
its own worship services. Where these services were not rendered by the home, a few homes would form a small unit for securing them.

With the advent of industrialization and specialization, instead of a home being a complete economic unit, individuals specialized in special functions and shared the products of their specialized labor. The economic unit increased from home to community and to ever larger and larger bounds. Through the advent of specialization and machinery, many more goods and services can now be rendered per person, and the goods are of much superior quality and are produced in less time. Our state of civilization based upon this efficiency in performing services is necessarily accompanied by interdependence. It should be noted, however, that interdependence is an aspect of all industrialized societies, and that it is not a distinguishing characteristic of a democratic society. It is just as essential to Nazism and Communism as it is to democracy.

Change. -- The right to change is a fundamental characteristic of American democracy and is recognized in the national Constitution in Article V, which describes a method for changing the form of government. Social agencies are created by society to serve the needs of society. If and when the government or an institution fails to serve human needs, or if the needs change, the society which created it
has the right to alter or to abolish it at will.

The need for change is ever existent. Commensurate with discovery, invention, and creation are changes in the ways people live and in the ways of making a living. Changes in living create new needs and eliminate some former needs. This makes necessary changes in social agencies organized for the purpose of supplying human needs.

Evolving and continuous. — As experience in democratic living is extended, the functioning of democratic principles becomes of higher quality. Government by law was established in 1789 with the adoption of the Constitution. This document was an expression of the best thinking of the group at the time. During the years that have followed, from time to time, changes have been made in the original document as the need for them revealed by practice became evident in the light of the best thinking of the group at the time. Practice is based on philosophy, but practice improves philosophy. The improvement of philosophy, then, improves practice. In the course of years there is a gradual though constant change in practice based upon improved philosophy obtained by previous practice.

As educators continue to allow their ideas to be leavened by new and better experiences, their beliefs are broadened and clarified. This makes them dissatisfied with the existing practices. They change their existing practice to harmonize with their improved beliefs. But the improvement
of practice soon indicates limitations in the philosophy, so that this is revised to be in harmony with the new conception of practice. During the revision of the philosophy some persons conceive new ways of putting it into operation with the result that the better practice is developed. This process of improved philosophy building better practice, thereby obtaining new evidence with which to rebuild the philosophy and resulting in better practices, continues on indefinitely. . . . 13

All culture is cumulative. It is a continuously growing, changing affair. Each generation transmits the various parts to succeeding generations. Some of these are more or less in the form in which it received them, and some are with modifications. Since each generation attempts to adapt the inherited things to its needs in novel situations, people must contrive ways of using them, or make heretofore unrecognized changes in them, or develop quite new things and processes when the old things cannot be modified to their use. All of these inherited things plus the modified and added behaviors of a generation represent the cultural continuity which is the essential factor in the perpetuation of any civilization. . . . 14

Social life -- that is, the association of human beings in the pursuit of their varied purposes -- is an evolutionary process. All human beings act within a given environment, which by its nature and limitations profoundly affects their individual activities. As these individuals seek to carry out their purposes within the ecological limitations of the environment and within their own biological limitations, their relationships gradually fall into patterns -- patterns which ultimately become the family, the police force, the trade union, the occupational group, the social class, etc. These patterns, because they grow in natural and unpredictable ways out of the needs, the experiences, and the behavior of the various individuals constituting the society, are functional and organic. . . . New ways of acting in groups emerge naturally and constantly from experiments, failures, successes, and emotional


14Ibid., pp. 101-102.
attitudes toward cooperations and exchanges among individuals. The most elaborate social institution was foreshadowed in the first pair of hunters sharing the weight of a freshly killed animal.\textsuperscript{15}

**Expanding.** -- The principles of change and of the process of evolving predetermine the principle of expanding. Inadequate philosophy admits limitations upon the scope of democratic practice. As philosophy improves, practice is expanded to new fields. In our society personal freedom was extended the Negroes 241 years after the first Negro slaves were brought to America. Women were extended the right to vote in 1920 in the Nineteenth Amendment. Not all expansion of democracy has been through law. Women's right to engage in business and professions is a recent innovation without legal action.

**Interactive.** -- One of the distinguishing characteristics of a democratic society is the principle of interaction. Through the exercise of civil liberties issues can be debated pro and con. Individuals are on all sides of the camp. The issue is determined by the will of the majority. The minority accepts the will of the majority and cooperates in the function without sacrificing its point of view and need not cease seeking acceptance of same.

Interaction is possible only in a society where there is freedom in the interchange of ideas. Censorship of the

\textsuperscript{15Dix, op. cit., p. 29.}
medium of the exchange of ideas will limit the possibility of interaction. Freedom to express ideas without fear of persecution is essential to the maintenance of a democratic society.

As reasonably as an organism may be viewed as a society of interdependent but partially autonomous cells, a society may be viewed as not fundamentally dissimilar from an organism. As living creatures are conditioned by the activities of their constituent cells, all groups and societies are conditioned by the psychological patterns of their constituent members. . . . 16

Belief in the interactive process is basic to the democratic way of life. Interaction is a word used to describe the relation between a people and the existing culture, inherited or in the process of becoming. It applies to a people as a whole, to various groups, and to individuals. In other words, it governs all relations among individuals or groups of individuals, young or old, in their contacts with each other. It means that in all problems arising among groups or individuals each party shall be free to study the conditions, state the issues as he sees them, and propose his solution without fear of ridicule, violence, or suppression. This means, of course, freedom of movement, freedom of inquiry, freedom of assemblage, freedom of speech, freedom of press, for without them groups and individuals would be unable to express their beliefs and conclusions adequately. It means also that no individual or group of individuals can gain control of any aspects of the culture and thereby remove them from the interactive process. Individuals within institutions such as the church, the school, the family, the economic system, cannot isolate themselves from critical appraisal by the entire people whose needs they are to serve. Individuals or a minority group may not by a coup d'etat or other violent means gain control of institutions and suppress all persons who do not submit to the rule of their authority. It means, further,

16Ibid.
that every problem arising among individuals or
groups is an opportunity for educating each person
better in how the interactive process works. Thus
each may grow in interactive behavior throughout
his life. It means, finally, that there is no end
of inquiry fixed in advance by any thing or person --
the inherited customs, institutions, or persons in
responsible positions. The end is in the process
and is the operational principle that all individuals
concerned will, to the best of their ability, act
on thinking. The civil liberties are not ends in
themselves. They are guaranteed that inquiry and
thoughtful behavior may result. When they are sup-
pressed, thinking disappears. When thinking as an
operational concept disappears, the civil liberties
are doomed. The interactive process is, then, a
way of relating an individual to his world in order
that he may build his creative individuality while
adding some increment to the improvement of the
culture. Mutual, cooperative, intelligent inter-
action is the core of the democratic process.17

Democracy employs reason and intelligence. -- In a
democratic society it is inevitable that conflicts between
persons and groups will arise with the exercise of ini-
tiative and civil liberties. The principle that "might
makes right" is discarded. The facts of the situation are
examined objectively. The issue is settled in the light of
the best interest of all persons concerned, bringing to
bear the rights and dignity of individual personality.

Child Psychology

Another pertinent factor which influences educational
practice is the nature of the learner. In the evolution
of educational psychology there have been many and varied

beliefs about growth and learning, many of which have been based on fallacious reasoning. It is not expedient here to compare the psychological systems and indicate the absurdities and apparent truths. It is sufficient to examine the biological facts concerning growth and learning which influence educational practice.

A formation of educational objectives must give consideration to the changing social setting in which they are to function, the values which the social group consider good, and the nature of the learner. The whole teaching process also needs to be considered in relation to these factors. They are equally important in helping to determine the changes to be made, the means by which they will be made, and the materials and experience that will be used in making the changes. . . .

Biological conception of growth

Function of the whole. -- Growth is a function of the whole organism. In the course of the development of the individual the first activity is mass activity. The local reflexes come later and grow out of the activity of the whole organism.

Some general principles can be drawn from the observations of fetal development in lower animals and man. The most important of these is the generalization stressed by Coghill, that mass activity precedes specific behavior in the course of development. Initially, the responses of the fetus are diffuse and non-specific. It reacts as a whole, and in an integrated manner from the beginning. As maturation progresses, local activities appear by a process of differentiation or of individuation, as Coghill calls it. The

\[J. \text{ Murray Lee and Dorris May Lee, The Child and His Curriculum, p. 8.}\]
parts of behavior thus develop from the whole, rather than the whole by the combination of parts, as was at one time believed. ... 19

In a discussion of the value of research on growth of the pre-school child to school people, J. Murray Lee and Dorris May Lee in The Child and His Curriculum expressed the same point of view:

Aside from these generalities, this pre-school study does give some valuable principles. One of these is that mass activity precedes specific behavior. Learning is a process of differentiating and selecting certain activities from larger units of behavior. This differentiation or specification leads to building a new pattern, acquiring a new concept, a new integration, certain particular concepts from a general one. 20

This same point of view is given a scientific description by Gray in Psychological Foundations of Education. 21

Interactive. -- The growth of the organism is influenced jointly by heredity and environment and what it becomes is the result of the interaction of these two influences. "The characteristics of an organism are determined jointly by the material from which it is formed and by the conditions under which it develops. ... " 22

The influence of heredity is exerted by the genes which appear in the chromosomes of both the sperm and the

19 Fowler D. Brooks, Child Psychology, p. 43.
22 Brooks, op. cit., p. 20.
ovum. In the process of fertilization each of the chromosomes of the sperm pairs with a chromosome of the ovum. What the individual is to become is determined largely by the influence of these paired chromosomes through the assertion of the genes which compose them.

In the process of fertilization the maternal and fraternal chromosomes join to form the normal paired arrangement. The characteristics of the individual are determined by the combined effects of these paired chromosomes.\(^23\)

The developing organism is greatly influenced by conditions under which it develops. Laboratory research has established that if the conditions in which the organism is developing are changed in certain ways, the organismic structure will be changed.

... The same genes which under one set of conditions will produce one type of an organism will produce another type of an organism under other conditions. Likewise, the conditions which will produce one type of organism from one set of genes will produce another type of organism from another set of genes. The structure of an organism at birth, or at any other time in life, is due both to its inheritance (the particular set of genes which it has received from its parents) and to its environment (the conditions which control the behavior of these genes). In other words, inheritance is determined by environment.\(^24\)

The interaction of environment and heredity in determination of the organism is described by Gray in a discussion of original nature:

\(^{23}\)bid., p. 22.

\(^{24}\)Gray, op. cit., p. 64.
No trait, physical or otherwise, is exclusively inherited. Inheritance and environment become amalgamated in organic life and each loses its identity. The influence of environment begins long before birth, in fact at the very moment of fertilization. The mother herself is only an environmental factor after conception. Her hereditary influence ceases (with the father's) when the ovum and spermatozoon unite. After that, she is merely a host to a distinct and organically separate individual. After birth, that host-parasite relationship is altered but not fundamentally changed.\footnote{Tbid., p. 68.}

**Dynamic.** — The organism is sensitive to changes in its environment. The protoplasmic content of the individual cells of an organism is in a constant state of change. The component parts of the cells are usually separated by semi-permeable membranes which permit passage of solubles from one portion to another. This means that each portion of a cell is sensitive to changes that may occur in either of its portions. Likewise, the cells of an organ are separated by semi-permeable membranes which allow passage of components from cell to cell. Thus a given cell is sensitive to changes in other cells in the organism.

 Portions of protoplasmic mass within the cell are of gel-like consistency while other portions are of high fluidity. These portions are usually separated by ultra-microscopic films or membranes of varying permanency. They are semi-permeable, readily permitting the passage of water and inorganic salts but retaining most of the proteins and lipoids within their limits. The walls of the cell are of similar permeable membranes which permit an exchange of components with the surrounding medium. Thus the cell is extremely sensitive to changes in its environment. Its chemical and physical stability are easily affected by changes in the surrounding medium.\footnote{Tbid., pp. 90-91.}
Salisbury expressed somewhat the same point of view in a discussion of basic principles of growth:

There is the factor of relatedness of part to part within the whole. It is obvious that the development and activity of the different organs and tissues can take place normally only in relation to other organs and tissues. Both during their development and during their continued activity, living cells are related to other cells. Individual cells, tissues, and organs grow and live and do their work, not in isolation, but as integral parts of a complex organism maintaining life relations with its environment. They arise as parts of a larger whole, and they function as parts of a larger whole.\(^{27}\)

Continuous. -- Growth is a continuous process, beginning at conception and continuing until maturity, birth being only an event in the course of development. The rate of growth varies but the processes of metabolism do not cease as long as there is life in the organism.

Another general principle which research has shown is that growth is a continuous development. As has been said, some factors develop faster or earlier than others, but during the period of development the growth is continuous. It may be gradually accelerating or retarding, but there is little of the spurt-stop type. Physical and mental growth are continuous from before birth to maturity. A child's attention span grows gradually from a few seconds at birth to an hour or more by the time he reaches adulthood. Other factors show in general the same type of development.\(^{28}\)

A second valuable contribution of the embryological approach is the stress placed on the continuity of development. Birth is no longer regarded as the zero point in human conduct, but only an incident occurring in a continuous process of growth and

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\(^{28}\) Lee and Lee, *op. cit.*, pp. 24-25.
differentiation. This concept breaks down the barrier between reflex and habit, and between "native" and "acquired." 29

**Evolving.** -- Growth is an evolving process. Reactions to stimulation effect structural change in the organism. This change is affected throughout the whole organism because of the dynamic relationship existing in cell structure. When an organism reacts to stimulation, the effect is a changed organism. It will never be the same again, and cannot react the same way to the same stimulation again.

While attending to the details of analyzing the factors involved in learning one should not forget what was pointed out earlier, namely, that development, including learning, is characterized by integration and organization. Learning does not proceed by simple addition of separate responses. The responses do not remain separate; instead they influence the total response, so that the latter, far from becoming less unified, becomes more unified. The particular muscle contractions, movements, or ideas which are involved in the learning process may drop out and the same adjustment of the individual to his environment remain, or an even better adjustment result. The thing that is learned is the total response to a total situation. 30

In describing the dynamic relationship existing between the cells of an organism, Gray says: "An organism is never structurally the same for two successive moments. Chemical changes, which always mean structural alteration, are constantly taking place." 31

**Biological conception of learning**


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29 Brooks, *op. cit.*, p. 47.


localized in any part of the body. The former belief that
the brain is the seat of all learning cannot be substantiated.
The brain plays an important part in learning, but there is
no one learning which is the function of just one single
part of the brain. Contrasting the organismal explanation
of learning with the stimulus-response explanation, Gray
has the following to say about the learning process:

... In contrast with this position, the organismal
explanation of behavior is that organic parts are
never functionally independent; the organism be-
haves only as a whole. Functionally, it defies
further analysis. It is only structurally that it
can be studied in lesser units.32

In a discussion of the transfer of training, Gray
gives further explanation of the learning process:

We have learned that an organism always functions
as a whole and can be understood only when it is studied
as a whole. The parts are all modified by the whole and
in no sense is the whole controlled by the parts. We
must conclude, therefore, that learning is likewise
body-wide or organismal. A structural alteration oc-
curring in any part of the body affects the function
of all other parts. Learning must not be restricted
to changes in the nervous system only. Lashley's ex-
periences with the right and left hand learning of
the Cebus monkey prove that learning is an organismal-
whole affair. Some parts of the body (for example,
the central neural system) may be more easily altered
than other parts, but whatever parts are altered, the
effect is body-wide. All parts of an organic machine
are involved in any organic behavior, and learning
must concern the alteration of the mechanical whole.33

Hopkins explains the organismal view of learning in a
discussion of the mind:

32Ibid., p. 82. 33Ibid., p. 204.
The present evidence seems to indicate that there is no localization of mental functions in specific parts of the brain. While the brain operates throughout most of the learnings of individuals, it cannot be stated that any one learning utilizes one section or one point of the brain to the exclusion of all others. The experiments of Lashley with rats indicate that learning is not affected by the location of the section of the brain destroyed, but rather by the total amount of the brain structure removed. Since mind represents a unified organization of learnings, mind is not developed solely through the brain but through the entire organism, and mind is not held solely in the brain, but in the entire organism. . . . 34

Interactive. -- Learning occurs through the interaction of the individual with his environment. The individual must do the learning, but he must have a stimulus to action. This stimulus must be provided by the environment and may arise inside of the organism or in the social media.

The organism and environment must build together. There must be something in the environment that appeals to the organism in order that the organism may react. There must be a stimulation of some sort to call out, to call into play -- to call first into action and then to give direction to the action. 35

The word "interaction" . . . expresses the second chief principle for interpreting an experience in its educational function and force. It assigns equal rights to both factors in experience -- objective and internal conditions. Any normal experience is an interplay of these two sets of conditions. Taken together, or in their interaction, they form what we call a situation. The trouble with the traditional educational system was not that it emphasized the external conditions that enter into the control of the experiences but that it paid so little attention to

34 Hopkins, op. cit., p. 150.

the internal factors which also decide what kind of experience is had. . . . 36

In A Reconstructed Theory of the Educative Process Kilpatrick gives added description to the interaction of the individual with the environment:

. . . Not only is the whole organism thus involved in each learning experience, the environment also is involved. Indeed, the relationship between organism and environment is uniquely close. According to Haldane, "an organism and its environment are one, just as the parts and activities of the organism are one, in the sense that though we can distinguish them we can not separate them unaltered, and consequently can not understand or investigate one part from the rest." These are strong words, but they appear to represent the trend of competent thought. Learning, from this consideration, joins the organism -- here the human self -- with the environment in a new and intimate fashion. Any "organic" activity is as much an affair of the environment as it is of the organism. Any habit of the child belongs as truly to the situation as to the child, for it joins both together. And "the situation" is the actual total situation in all its particular manifestations to which the child is in fact sensitive. In a true sense any significant instance of learning thus joins up in a new way for the child indefinitely many parts of the situation at the same time that it remakes the child in indefinitely many aspects. . . . 37

Purposive. -- One of the most significant aspects of learning is that it is purposive. The organism finds itself in a situation which is stimulating. It may be a novel situation or it may be within the category of the commonplace and hence be a situation with only a few new aspects. Whether novel or not, there is a body mobilization for


activity. The organism chooses a course of action on the basis of past experience, choosing the course that gives greatest promise of satisfying felt needs. The stimulation usually directs or determines the purpose of the behavior. Hunger stimulates one to seek food, while anger stimulates another kind of activity.

Kilpatrick explains this factor of learning in a discussion of the organismic conception:

... Behavior movements that typically continue and vary until an end is attained are properly called goal-seeking. This goal-seeking is one of the outstanding features in the organismic conception. All thinking, all feeling, all emotion, all impulse, all physical movement is -- at least in the typical case -- characterized by goal-seeking. 38

Continuous. -- Continuity is an important aspect of learning. It is continuous from conception until death. The organism is placed in a stimulating situation. There is an immediate body mobilization for activity. Activity causes structural alteration called learning. This means that the organism is a changed organism. This changed organism reacts to stimulation now on the basis of its changed status. Thus a learning is based upon the previous learnings. Each new learning is a part of the basis for each subsequent learning.

38 Kilpatrick, "Some Basic Considerations Affecting Success in Teaching Art," Teachers College Record, XXXII (1931), 495-496.
The two principles of continuity and interaction are not separated from each other. They intercept and unite. They are, so to speak, the longitudinal and lateral aspects of experience. Different situations succeed one another. But because of the principle of continuity something is carried over from the earlier to the later ones. As an individual passes from one situation to another, his world, his environment, expands or contracts. He does not find himself living in another world but in a different part or aspect of one and the same world. What he has learned in the way of knowledge and skill in one situation becomes an instrument of understanding and dealing effectively with the situations which follow. The process goes on as long as life and learning continue.

Evolving. -- A concept of learning that is close to the principle of continuity is that learning is an evolving process. The organism is stimulated to behave, behavior results in learning, learning becomes integrated and the organism undergoes a change. The organism now can react to stimulation in new or improved ways. Hence learning is more than continuous. Given more and more learning experiences, the organism becomes more capable of reacting to a wider variety of situations. The reaction becomes of higher and higher quality. The process of evolution is what Hopkins says is derived by integration:

These two conceptions of the relationship of wholes and parts give us the two conceptions of learning which have been previously presented. When the parts are primary, learning is considered as a summation of parts or a kind of adding to or filling in the spots where the whole structure seems to indicate certain weakness to an outside observer. Under the organic conception learning is not addition at all.

It is modification of the organism in the direction of new insights or meanings, new elaboration of functions, new refinement and precision of parts. The new insights, the new functions, the new refinement of parts spring from a revision or a modification of the old. They are not superimposed upon what is already in existence. Neither are the old and the new put together in such a form that their identity can be reconstructed at some future time. What was in existence has undergone change. This modification of the old into the new is the essence of all learning. Thus an organism achieves a new wholeness concomitant with the new parts. The process by which the new wholeness is derived is integration. . . . 40

Deterministic. -- The aspect of learning that gives it value and reliability is that it is deterministic. It is deterministic in that it determines the kind of behavior that will result in a given situation. The young immature is likely to behave in a variety of ways to a given situation because the organism has not learned the kind of behavior which best serves its needs. On the other hand, the behavior of an educated person, one who has had many and varied learning experiences, is fairly predictable. This concept does not limit variability of things to which one can respond, but it increases the number of ways one can respond to specific situations.

Education is the more or less formal technique of controlling the learning process. It is a selected environment for the determination of learning. The process of learning or maturation takes place in any sort of environment, but its nature and therefore

40 Hopkins, op. cit., pp. 155-156.
the type of subsequent behavior, is dependent on the nature of the environment during learning. In other words, the way an individual behaves tomorrow is determined by his environment today. Education is merely a technique for selecting and administering this environment. Therefore, the first important fact in defining education is that it is deterministic. How children will later behave is determined by how they are now educated.  

Maturation. -- Maturation is a potent factor in ability to behave in certain patterns. Until the organism is capable, in its continuous, evolving growth processes, of reaching certain stages in development, certain differentiated behavior patterns are impossible for the organism. This principle is exhibited in the fact that when a child reaches proper maturity, he walks whether he has practiced the elementary behavior patterns utilized in walking or not. Commins has the following to say about maturation:

There is good reason to believe that the mental development of a child may be largely a matter of some principle of regulation internal to the child himself. We often find that the environment may vary a great deal without inducing any appreciable change in his rate of developing . . .  

In a discussion of growth as a key concept to an understanding of the pre-school child, Gesell says:

Growth, therefore, becomes a key concept for the interpretation of individual differences. There are laws of sequence and of maturation which account for the general similarities and basic trends of child development.  

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41 Gray, op. cit., p. 306.

42 W. D. Commins, Principles of Educational Psychology, p. 276.

43 Arnold Gesell, The First Five Years of Life, p. 7.
CHAPTER III

ASPECTS OF THE INTERMEDIATE SCHOOL PROGRAM

The content of this chapter will consist of a discussion of the curricular organization of the Intermediate School in respect to how it was developed and of what it consists, with an evaluation of its different aspects in terms of the democratic philosophy and the biological explanations of growth and learning.

In the spring of 1941, when plans were made to create a new school unit to be composed of grades four, five, and six, the need for effecting an organization before September, 1941, appeared imperative.

General Aims

The general aims of the school were named by the superintendent of schools and the principal of the Intermediate School as (1) adequate teaching of the tools to learning; (2) development of social skills, knowledge, and attitudes; and (3) creative-recreative activities essential to wholesome living. A statement of the aims was handed to the teachers without elaboration, discussion, or request for comment.
This procedure for naming the general aims seems to be in conflict with the democratic principle of the right and duty to participate. Only the superintendent of schools and the principal participated in naming them. It is entirely possible that the same ones would have been selected had the teachers participated, and it is not unlikely that a better statement of the general aims would have been formulated had the teachers concerned participated in the formulation. This procedure is also at variance with interaction as a process for planning action. The experiences of differentiating, selecting, trying out by language trial and error, modifying, re-selecting, and trying again were not shared by the teachers whose job it will be to achieve the aims. This predetermined a lack of understanding of the general aims and of the significance of the omissions. Under the authoritarian conception of school administration, this method of naming the general aims would be consistent. The school board sets up the policies and invests the superintendent with the responsibility for carrying them out with speed and efficiency. Means for carrying out the policies are worked out and the responsibility for achieving the means is delegated to the staff members who in turn delegate part of the responsibility to the teachers.¹

¹Hopkins, op. cit., pp. 399-406.
educational objectives named by competent authorities. Those named by the Educational Policies Commission are (1) objectives of self-realization, (2) objectives of human relationships, (3) objectives of economic efficiency, and (4) objectives of civic responsibility. Upon comparing the two lists, one discovers that, by liberal interpretation, aims (1) and (3) could be understood to mean the same as the first objective, and aim (2) could be understood to mean the same as the fourth objective. Social knowledge, skills, and attitudes might be interpreted to include most of the objectives of human relationships, but neither of the aims can be interpreted to include the objectives of economic efficiency. It should be noted, however, that the objectives of economic efficiency are more significant for more mature students than for students on the elementary school level. It is true, though, that the elementary school should recognize the importance of these objectives, and that the elementary-school child should be forming some concepts of some of these objectives.

Another factor concerning the general aims is that they make no implication of the method to be employed in achieving them. While a person could pursue the aims and be just as traditional as possible, one could also pursue them and be as progressive as he could want to be. So far as the

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2Educational Policies Commission, op. cit., pp. 7-37.
aims are concerned, the teacher will be left to decide the method she will employ.

Another factor about the general aims which should be noted is that they are stated partially in terms of achievement in subject matter and partially in terms of social behavior. The first aim suggests acquisition of skill in specific subject-matter areas, and the third aim suggests behavior in specialized activities, while the second aim suggests growth in social behavior. This fact indicates a lack of consistency of perspective, and results in limiting the scope of the program. Lane described the purpose of education in terms of growth: (1) physical, (2) intellectual, (3) social, and (4) emotional. If the aims are to be the perspective through which the objectives of the program are envisioned, an inadequate expression of the aims will result in an inadequate vision of the objectives.

General Objectives of Curricular Organization

The general objectives of curricular organization are listed as follows: (1) grouping students for optimum learning situations, (2) individual progress at maximum rate in skill subjects through parallel classes, (3) maximum guidance possibilities in personal and social behavior through long periods of contact with the same teacher, (4) opportunities

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3Robert Hill Lane, The Teacher in the Modern Elementary School, pp. 4-7.
for integration of learning through long periods in which students apply tools to learning in units of work designed for better living, and (5) experiences in play, singing, folk dancing, dramatization, art, and natural science which appeal to the active and creative spirit of boys and girls. These objectives were named by a committee composed of the principals of the Intermediate, Junior, and Senior Schools, and the vice-principal of the Senior School. They were submitted to the teachers in a bulletin containing the organizational plans for the following year. In casual conversation with teachers the relationship of the objectives to the organizational plan was discussed. The discussions took the form of an explanation or interpretation rather than cooperative evaluation.

The same things can be said about the procedure for naming the objectives for curricular organization as were said of the procedure for naming the general aims in that teacher participation did not enter into it and interaction was operative only in a limited sense with only staff members participating. The procedure followed is consistent with the authoritarian conception of school administration; the democratic conception of school administration would have surely included the teachers both in planning the objectives and in deciding the manner of carrying them out. Since the teachers did not participate through an interactive process in forming the objectives, they may be
inferior to a list that would have been produced with teacher assistance. It is likely that a lack of uniformity of interpretation will exist with respect to each objective; the possibilities and implications lying within them may be overlooked; and the teachers may not give allegiance to the program, not having shared in the formulation of its policies and in determining the means for carrying them out.

Grouping for Optimum Learning Situations

Major groups. -- The heterogeneity of the students in terms of age, achievement, and attendance characteristics is so great in the Edinburg School that detailed plans for grouping were made. In the school the chronological ages ranged from eight to fifteen years, the achievement in terms of a standard achievement test ranged from second grade to tenth grade, and, while some students attend school regularly, some attend irregularly and some attend spasmodically. Some attend school as few as forty days a year, and many attend school as few as a hundred days. The factor of two races, Anglo-American and Latin-American, was not considered in grouping except it was thought desirable to have not less than one fourth of any class membership of either of the races. In three instances it became necessary to have a class composed altogether of Latin-Americans.
The 535 students were nearly equally divided among grades four, five, and six. The students in each grade were divided into five classes for instruction in English-social studies. The division was made on the basis of chronological age and achievement in the tool subjects. In each grade there was one class each that was younger and weak in achievement, younger and advanced in achievement, median in age, older and weak in achievement, and older and advanced in achievement. Then classes fourth grade, younger and weak; fourth grade, younger and advanced; fifth grade, younger and weak; fifth grade, younger and advanced; and sixth grade, younger and weak, were scheduled to have similar educational activities at the same times throughout the day, and were designated as major group "A." Classes fourth grade, older and advanced; fourth grade, median; fifth grade, median; sixth grade, median; and sixth grade, older and advanced, were scheduled for a program of similar educational activities at the same times, and were designated as major group "B." Classes fourth grade, older and weak; fifth grade, older and weak; fifth grade, older and advanced; sixth grade, older and weak; and sixth grade, older and advanced, were scheduled for similar educational activities at the same times, and were designated as major group "C."

This grouping resulted in getting (1) the children
who were young for their grade placement and who attended school regularly in major group "A," (2) the children who made normal and almost normal school progress and who attended school fairly regularly in major group "B," and (3) children who at the time were two or more years retarded and who attended school spasmodically in major group "C."

It would be difficult to give this grouping scheme one of the names of the common grouping schemes, since it is not exactly like either the chronological-age grouping, the mental-age grouping, the intelligence-quotients grouping, the achievement grouping, the social-maturity grouping, or the special-abilities or disabilities grouping. It has one of the aspects of the achievement grouping in that the two classes of the younger children and the two classes of the older children in each of the grades were grouped on the basis of achievement; however, in such a grouping there would be a great degree of heterogeneity. One of the aspects of social-maturity grouping also can be claimed in that one of the bases for grouping was chronological age. It is conceivable that this grouping scheme could be modified to effect social-maturity grouping by using social-maturity tests and teacher observations to determine better placement for students who are obviously
misplaced. Lane makes a good argument for social-maturity grouping in The Teacher in the Modern Elementary School.\(^4\)

**English-social studies.** -- The grouping for English-social studies was described and discussed in the discussion of major groups in as much as the major groups were formed by grouping certain of the classes of English-social studies together. In these classes the children were nearly equal in chronological age, were more nearly equal in achievement than they would be in a chance grouping, had been in school nearly the same length of time, and had similar attendance characteristics. No claim can be made to homogeneous grouping, but this scheme of grouping decreases heterogeneity in respect to social maturity, achievement, and attendance, and will to this extent make it more readily possible to fit the instruction to the needs of the children.

To the extent that this grouping is by social maturity it can be justified in terms of the biological explanation of growth and learning in that learning is organismal, the result of the reaction of the whole organism to the total of the factors in a situation. Growth in specific skills or subject matter cannot occur in isolation to growth in all of its aspects. Any growth or learning is growth in all of its aspects or in the whole organism. Grouping for instructional purposes, then, should be determined by taking

\(^4\)Lane, *op. cit.*, pp. 73-98.
the whole child into consideration instead of just one or two of the aspects of his personality. Lane had the following to say concerning grouping by social maturity:

This method is based on the idea that children grow in many directions and at various rates of growth -- physically, intellectually, socially, and emotionally -- and that segregation on the basis of social adjustment is likely to be accompanied by a close correlation in growth along other lines. To put it another way, since the major end to be sought in the classroom is the organizing of a group of children likely to be capable of working and playing together happily and successfully, and likely to possess many common interests and needs, social grouping will more probably reach this objective than classification on any other basis. Further, organizing a school on the basis of social maturity tends to make differences in other types of growth of slight significance.\(^5\)

**Skill subjects.** -- For instructional purposes the students in either of the major groups were divided into five classes on the basis of achievement in reading for instruction in reading, writing, and spelling, and on the basis of achievement in arithmetic for instruction in arithmetic.

Grouping by achievement does not take into account the whole child; it is concerned only with one aspect of his personality development. Since growth can occur only in all of its aspects and to only the total organism, grouping by achievement is unsound.

Grouping by achievement emphasizes teaching material

\(^5\)Ibid., pp. 79-80.
to children. Teaching material to students is at variance with the belief that learning is enhanced by proceeding from whole-to-part relationships. This implies that the learning activities should be differentiating and selecting activities from large, significant units of behavior. Grouping by achievement is consistent with atomistic viewpoints to the effect that learning consists of part-to-whole relationship.

Grouping by achievement has as its purpose the acceleration of teaching by mass education methods, accomplished by grouping together the children who are at the same place in progress in a given subject. The fact is that it is impossible to get a class of students who are homogeneous in a single subject. Students who make the same score on an achievement test will not have exactly the same learning about each of the items tested. They will vary in their responses to the items within the test. Students who make the same score on an achievement test will each learn at his individual rate, and what was theoretically a homogeneous grouping ceases to be such in a very short time.

Creative-recreative arts. -- For instructional purposes the students were divided into two groups, older and younger, and subdivided into two groups by sex for instruction in health and physical education. While either the older or younger students are having health and physical education,
the other group is divided into three groups by achievement in reading for instruction in either art, auditorium, or science. Each of the students is scheduled for art twelve weeks, auditorium twelve weeks, and science twelve weeks, and for health and physical education the full term. It should be noted here that the students in either of the three major groups are similar (1) in respect to the relationship of their age to their grade placement, (2) in respect to the length of their school attendance and experience, and (3) in respect to their attendance characteristics.

When the students are again divided into groups by age, the students in the younger group are close to the same age and so are the children in the older group. Chronological age is one of the major factors in grouping for social maturity, though claim can be made for only partial social grouping. When the children are divided into three classes by achievement in reading, this effects an achievement grouping of a partial social group. In as much as the grouping is by social maturity, it can be justified by the same reasons given previously in the discussion of such a grouping for English-social studies. The further division by achievement for art, auditorium, and science seems to have little value in that it has no reference to the students' interests, needs, special abilities and disabilities, or behavior characteristics.
Individual Progress at Maximum Rate in the Skills through Parallel Classes

The grouping scheme was discussed and appraised in the discussion of grouping for optimum learning situations. It is unnecessary to discuss it again, but it seems desirable to go farther into the aspect of individual progress. According to the grouping scheme, there are five classes of reading, writing, and spelling grouped by achievement in reading, and five classes of arithmetic grouped by achievement in arithmetic for each of the major groups. The plan is to regroup the children periodically as individuals advance ahead of the class they are in and as other individuals lag behind the class.

Together with the objections to grouping by achievement, the operation of this objective has some desirable aspects in a system of mass education. In the first place, the child is placed with a group of children with whom he has about equal status in respect to knowledge of subject matter. He is not expected to learn material that he cannot learn because of lack of school experience or biological maturation.

In the second place, a student is not held back if and when he develops ahead of his class. If and when such a case develops, the child is placed in a class more equal to his status. If a child gets behind his group, he is not
kept where the work is too difficult for him, but is placed in a group more equal to his status.

It should be noted, however, that individual progress at maximum rate can be achieved in a social-maturity grouping in that such a grouping permits the activities to be numerous enough and varied enough that they can be adjusted to the educational status of the learner. Also, the class can easily be divided into two or three groups to satisfy varying needs of individuals, and students can be changed from class to class as easily with social-maturity grouping as with any other.

Maximum Guidance Possibilities in Personal and Social Behavior through Long Periods of Contact with the Same Teacher

The English-social studies class period is two hours in length. The teacher has three such periods each day. In this period the method of teaching is to be of the type that allows the teacher to know the students in many situations. The plan was based on the belief that the teacher should know the students well, make observations of growth in each of its aspects, physical, intellectual, social, and emotional; and that learning experiences will be planned which are developmental of individuals' needs in respect to growth in all of its phases.

The objective to provide guidance possibilities in
personal and social behavior is in keeping with the idea that instruction should provide for the needs of individuals. Provision of the two-hour period reduces the number of children the teacher has to get acquainted with, and gives her more time with each class, thus more time to each child. The increased length of period allows a greater variety of activities which take more time. It should be noted, however, that the objective would be more possible by making the teacher responsible for a larger number of the educational experiences for a class, thereby making the period still longer. This plan would place a group of children with a teacher for a longer period of time, reduce still more the number of children the teacher would have to know well, making possible more personal contact which would result in the teacher's observing the children in more experiences and knowing them still better, making it easier to fit the instruction to the needs of the children.

This objective would have little possibility for operating in the other educational activities in that the students are with a teacher so short a period of time that the teacher has too little opportunity to know each child well.

Opportunities for Integration

The opportunities for integration are existent chiefly in the English-social studies. The educational experiences
are to consist of many and varied activities which employ
the tools to learning. There are to be many opportunities
to read, write, speak, discuss, draw, debate, listen, use
mathematics, act, and so on. Having a two-hour period makes
it possible to provide many of these kinds of experiences.

Provision for this objective has its justification in
(1) the idea that learning is enhanced through experiences
which consist of differentiating and selecting activities
from larger units of behavior, and in (2) the idea that
the purpose of education is well-rounded personality devel-
opment. Learning of parts out of relationship to the
whole has little significance.

It should be noted that opportunity for the integra-
tion of studies is limited by the amount of time in the
school day during which integration is possible. One third
of the school day is devoted to activities in which there
can be integration. During the remainder of the day the
activities are confined to the narrow limits of a subject-
matter field. Instruction limited to subject-matter fields
makes it almost impossible for the activities to consist of
differentiating and selecting from larger units of be-
havior. It would seem, then, that this objective could be
better accomplished by having longer class periods and by
making the teacher responsible for more and more of the edu-
cational activities for a class group.
Activities Which Appeal to the Active
and Creative Spirit

Educational experiences which appeal to the active and
creative spirit of boys and girls are provided for chiefly
in the creative-recreational arts classes. To the extent that
all learning is creative this objective can be realized in
any of the classes, and to the extent that the English-
social studies work provides significant units of behavior
this objective can be realized in this instructional period.
For the present purpose the discussion will be limited to
the activities designated as art, auditorium, science, and
health and physical education.

Experiences in singing, acting, listening, modeling,
constructing, designing, collecting, observing, generaliz-
ing, folk dancing, practicing health habits, and participat-
ing in active games can be justified in that these activi-
ties can contribute to physical, mental, social, and emo-
tional growth. These activities offer opportunity for chil-
dren to pursue special interests while working with a
group to achieve group goals.

It should be observed here that these classes have no
connection with the English-social studies or with the
skills subjects. The activities in each of these subjects
can be identified as belonging specifically to the subject-
matter field. If the units in English-social studies are
significant units of behavior, there should be many art, auditorium, science, and health and physical-education activities which fit logically into them. Then it would seem that the teacher teaching the English-social studies for a class should also teach the creative-recreative activities, and that the teacher teaching the creative-recreative arts should also teach the English-social studies. This arrangement would better satisfy the objectives of making integration and guidance possible, and at the same time make the creative-recreative activities a part of a larger unit of behavior.

Courses of Study

In planning for the twelve-grade system it became necessary to give consideration to what would be taught to the students in the different grade levels. In the spring of 1941 the teachers, who had been meeting regularly, assumed the job of planning courses of study for the following year. There were three committees for the Intermediate School: English-Social Studies, Skill Subjects, and Creative-Recreative arts.

English-social studies. -- Each of the units to be used in the English-social studies should be limited by the one qualification: "Is this the most significant unit for these children at this time?" Each of the English-social
studies teachers participated in selecting possible units for each of the three grades. Then each of the teachers assumed the responsibility for developing the units she would possibly teach. It was understood that all of the units selected and developed would not necessarily be taught, and that in the teaching of the units the students would build a list of activities, the teacher's list being only suggestive.

This procedure for building the courses of study in the English-social studies employed the democratic philosophy and the biological description of growth and learning in that (1) it gave the teachers opportunity to participate in making it; (2) it gave the students opportunity to participate in selecting and managing their educational activities; (3) it utilized interaction as a means of planning action in that the teachers concerned planned together and in that the students aided in selecting the activities; (4) it provided a flexible course of study so that the varying needs of the students might be cared for through long lists of varied activities built jointly by the teacher and the students; (5) it provides opportunity for teachers to make experimental efforts to improve teaching in that they built the original units and in that other units not in the course of study may be substituted; (6) it provides opportunity for educational experiences which
consist of differentiating and selecting activities from larger units of behavior by the limitation on the units of the principle, "Is this the most significant unit to be taught to these children at this time?" (7) it provides opportunity for every child to develop his special interest and at the same time contribute to the goal of the group through long lists of activities each of which contributes to the development of the unit; (8) it provides opportunity for educational experiences which are suitable to the educational status and biological maturity of the learner through long lists of activities and through student participation in selecting them; and (9) it provides educational activities which necessitate students working in groups to achieve group goals through activities which require the cooperation of two or more students.

Skill subjects. -- The course of study in arithmetic was constructed by the teachers who are to teach arithmetic, and consists of a sequence of arithmetical processes with possible drill procedures for teaching each. Grouped by achievement, the studies are to progress from one item on the sequence to the next.

The course of study in reading consisted of drills for improvement in the basic reading abilities. The students were grouped for instruction on the basis of achievement in reading. There were five classes of reading meeting at
the same time, and students were regrouped from time to time throughout the year to keep them grouped as nearly homogeneous as possible.

The courses of study for writing and spelling consisted of sequential arrangements of subject matter and daily drills for teaching it. The sequences in the state-adopted textbooks for writing and spelling were used and the drills suggested by them were generally followed.

This method of building the courses of study employed the principles of teacher participation and interaction as a process of planning action. However, the students were excluded from participation in selecting the learning experiences, and from this fact it may be concluded that the value of interaction with the students was lost. This procedure is consistent with the authoritarian procedure which assumes to be able to select the most significant learning experiences for children, and which imposes minimum essentials for all children.

This procedure for teaching the skills has the advantage of placing the child with other children who are about equal in respect to achievement in subject matter. Learning material which is not too difficult or too easy can be selected. A second advantage is that the children can be changed from group to group to adjust the cases where a child may develop ahead of his class, or as a child
may for some reason get behind his group. A third advantage is that the children will not be placed in groups where the material of instruction will be in advance of their biological maturity. Yet at the same time, a child who is young and at the same time advanced in maturity will not be held back from more advanced instruction.

A significant observation to make at this point is that the advantages of ease of changing from class to class to effect adjustments and of ease of adjusting instructional material to the maturity of the child can be as logically claimed for the method of teaching which teaches the skill subjects as a function to large units of behavior as for the method which teaches the skills sequentially by a formal drill procedure. Another factor that should not be overlooked is that the instructional material can also be adjusted to groups that are not homogeneous in respect to achievement by organizing the students within a class on the basis of educational needs.

There are several objections to the plan for teaching the skill subjects. In the first place, the emphasis is placed upon teaching subject-matter material to children. This is in contrast to the democratic philosophy which defines the job of the school to seek maximum personality development of the child. The point of departure, then, should be the child, not subject matter.
A second objection to the plan for teaching the skills is that they are to be taught separate and apart from each other and from other courses. It is based on the assumption that if a child is taught to perform the skills pertaining to arithmetic, reading, spelling, and writing, he will then use these skills as he has need for them as he meets life problems. This removes the functional aspect of the learning experience; the skill is learned for the sake of the skill. The child does not see the need for learning the skill; his purpose, if any, is slight. He lacks motivation. Learning is slow.

A third objection to this procedure is that it employs the atomistic idea that the whole is equal to the sum of its parts. It assumes that if a child is taught the separate skills, he will be able to integrate these skills into a well-balanced individual. It disregards the more recent concept of learning as being organismal; each thing learned is in relationship to all that the learner already knows; each thing learned effects change in the organism, thereby changing its way of behaving. Learning to repeat answers or to get sums does not necessarily mean that these skills have been assimilated and integrated to the point that it changes the individual's behavior.

A fourth objection to this plan is that it does not offer opportunity for experiences in which students work
together in groups to achieve group goals. Individuals are not necessarily working on problems which they regard as their problems. Learning to acquire skills apart from their function seldom becomes a problem to a child. The special socializing influence of students working on individual problems which contribute to goals of the group is not present.

A fifth objection to the plan is that it provides for little or no flexibility to adjust to meet the needs of children. In arithmetic one process is learned and the next one on the sequence is taken next regardless of the immediate need for learning it next.

Equality of opportunity is denied when all are required to do the same things. Herein lies a sixth objection. In as much as children's needs and interests vary so greatly, equality of opportunity would have to be interpreted to mean equality of opportunity to develop individual interests.

Creative-recreative arts. -- The courses of study in the creative-recreative arts classes consisted of work with activities peculiar to the subject-matter field. The art activities each could be easily and definitely recognized as art, and the same is true of auditorium, science, and health and physical education. The classes were each one hour in length each day. All the students have health and
physical education every day, and each student has either art, auditorium, or science every day. For scheduling purposes each student was scheduled for art twelve weeks, auditorium twelve weeks, and science twelve weeks. Deviation from this rigidity is allowed when it is evident that such deviation is needed. The units for these classes are selected and developed by the teachers with the understanding that they are only probable units, that substitutions and alterations are sometimes desirable, and that students will build lists of activities in addition to the teachers' lists and help to select the ones they will engage in.

This method of building the courses of study in the creative-recreative arts allows for teacher and pupil participation in selecting and managing the educational experiences in that the teachers build the units with the aid of the students in building and selecting the activities, and in that the units planned are only possible units. New ones can be included; the original ones can be altered as the needs of the occasion demand. The principle of interaction is allowed to operate in the program, since the plan provides for the teachers to plan the activities with the children.

This plan for teaching the creative-recreative arts makes it possible to fit the instruction to the needs of the children by making it possible to include new units
and by planning to build the activities with the help of the students. The students will tend to name and select activities which serve their needs and which are on their educational and biological maturation level.

This method of teaching the creative-recreational arts makes it possible to provide socializing situations in which students work on jobs which contribute to their interests and at the same time contribute to the goals of the group. Also there can be many occasions for the students to work together in groups of two, three, four, or more.

An important objection to this plan for teaching the creative-recreational arts is that the learning experiences in each of the classes are pertaining specifically to the subject-matter field. Few, if any, significant units of behavior are just art, auditorium, science, or health and physical education. Few, if any, significant units of behavior do not have activities which are art, auditorium, science, and health and physical education. It would seem better, then, to teach these activities in connection with the larger units of behavior to which they logically belong than to isolate them and teach them as a separate entity.
CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

From the preceding study these conclusions are evident:

1. The procedure used in deciding on the general aims and the procedure used in naming the objectives of curricular organization are inconsistent with the democratic philosophy. The teachers whose job it is to achieve the aims and the objectives should have an important role in deciding on the aims and objectives and on the means of carrying them out.

2. The general aims listed are incomplete when measured by the objectives of education listed by the Educational Policies Commission. By liberal interpretation the general aims of self-realization, human relationships, and civic responsibility are included, but the objectives of economic efficiency are completely omitted.

3. The grouping of students for instruction in English-social studies and for instruction in creative-recreative arts can be justified to the extent that the grouping is on the basis of social maturity. Social maturity
can be effected in these courses by using social maturity tests and teacher observations to regroup the children who are not already in their proper social group.

4. Grouping students by achievement for instruction in the skills cannot be justified because (1) it does not consider the whole child, being concerned with only one aspect of his personality; (2) it assumes the part-to-whole process in learning instead of the whole-to-part process; and (3) it is impossible to get a homogeneous group, and, if it were possible, it would not be possible to keep it that way.

5. Individual progress at maximum rate can be achieved more readily in classes grouped on the basis of social maturity than in classes grouped by achievement.

6. The objective of providing for guidance possibilities could be achieved more readily through keeping a class with a teacher for a longer period of time, making a teacher responsible for more of the educational experiences of a given class.

7. The objective of opportunity for integration could be achieved more readily in situations where teachers have students for long periods of time, where teachers are responsible for a large portion of the child's educational activities, and where units of behavior are utilized instead of units confined to the narrow limits of a subject-matter area.
8. The plan to provide for activities which appeal to the active and creative spirit of boys and girls could be improved by making these activities a part of a larger unit of behavior to which they logically belong instead of isolating them into subject-matter fields.

9. The method employed for getting the course of study in the skill subjects is inconsistent with the democratic philosophy in that participation through an interactive process was denied the students, and in that it assumed ability to decide the most significant experiences for children and established a sequence and minimum essentials.

10. The plan for teaching English-social studies seems to be consistent with the democratic philosophy and the biological description of growth and learning.

11. The advantages of the plan for teaching the skill subjects could be more readily achieved by teaching them as a function in larger units of behavior, and the objections to the plan would thereby be corrected.

12. The advantages claimed for the plan for teaching the creative-recreative arts would be enhanced by teaching them in connection with larger units of behavior to which they logically belong.

Recommendations

The following recommendations seem to grow out of the findings of this study:
1. The teachers should be enlisted in a study program in which a philosophy of education is formulated and the growth and learning processes are described.

2. The teachers should then be led to formulate a statement of the objectives of the Intermediate School, said objectives growing out of and being consistent with their philosophy and description of growth and learning.

3. The teachers then should be led to make immediate changes in respect to courses of study and methods of teaching within the present school organization to conform to their statement of objectives.

4. Eventually changes in the school organization should be effected which will facilitate achievement of the objectives.
BIBLIOGRAPHY

Books


Gesell, Arnold, The First Five Years of Life, New York, Harper and Brothers, 1940.


Haldane, John Scott, Organism and Environment, New Haven, Yale University Press, 1917.


Articles

Burgess, Helen Steers, "Democracy Begins in the Home," *Child Study*, XVIII (April, 1941), 77-78.


Ernst, Frederic, "New Faiths for America," *Child Study*, XVIII (April, 1941), 75-76.


Root, Dan C., "Democracy in Education," *Sierra Educational News*, XXXVII (April, 1941), 38.