ABSTRACT
        This report identifies ideas for educational change,
examines the efforts to establish these ideas, and rates the efforts
to apply them as successful or unsuccessful and to attribute that
success or failure to particular factors. The procedure involved
fixing the time period (1895-1970), selecting and describing the
changes, selecting the categories, classifying the changes, and
discussing the relationship between the changes and associated
factors. Each change has a reference to an authoritative source, and
an alphabetical glossary of the changes is included as an appendix.
The four categories used are a) a successful change that has
permeated the system, b) a successful change which is not so widely
used, c) a change not accepted but which has affected the system, and
d) a change which has not been implemented. Eleven tables give
details of these categories. Factors inside and outside the
educational system which affect change are identified as educational
research, school personnel, recommendations and committees,
professional and extra-legal agencies and organizations, the federal
government, the courts, and society. About 75 percent of the changes
were judged successful. Seventeen conclusions and recommendations are
listed as guides for those attempting to promote change. There is a
50-item bibliography and a final section on the induction and
management of change. (MBM)

ED 061166

A STUDY OF EDUCATIONAL CHANGE

By

Donald E. Orlosky and B. Othanel Smith

September, 1971

FORWORD

This study is a broad analysis of educational change, not the kind of specific analysis that a case study would have made possible. Consequently, the findings and conclusions lack the depth and refinement that the planner of educational innovations would most desire. But the project does open up the study of educational change empirically and gives approximations to the sort of information which change agents need.

The work has been carried on under the pressure of time during hours that would normally have been used to recuperate from the stress of regular activities. This report would not have been possible without the able assistance of Mrs. Joyce Wong, whose painstaking work made possible the compilation of educational changes used in the study and Mrs. Susan Reynolds-Greenlees, who typed and proofed the Manuscript and saw it through the mimeographing. Without their assistance, the work could not have been completed on schedule.

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CHAPTER ONE

THE TASK: ITS SCOPE AND DIFFICULTY

The purpose of this report is to identify ideas for educational

change, examine the efforts to establish these ideas in practice, rate

the efforts to apply them as successful or unsuccessful, and to attribute

that success or failure to particular factors. Specifically, we have

responded to the query:

> Over the past 30-70 years numerous   change oriented ideas have been
> advanced in the educational arena. Which of these did and did not
> result in educational change? What are the factors which can be
> identified as being related to the failure of an idea to become esta-
> blished practice? And conversely what are the factors which can be
> identified as being related to the success of an idea in becoming
> established practice?

In other words, our task is to determine why, given numerous

educational ideas--ideas in the form of words, in the form of committee

deliberations, in the form of individual pronouncements, etc.--some will

be accepted and spread widely while other will be forgotten?

School and Society Interact

The educational system is only one of many social institutions that

interact and affect each other. The religious, familial, political,

military, legal and industrial enterprises are other systems that make

a difference in the lives of people and in other institutions that serve

them. Other organizations and individuals also interact and influence

policies and programs that make a difference in the way people live and

the things they do. These additional organizations include unions,

professional organizations, lobbyists, private foundations, and individual spokesmen whose reputations and words command a following. Undergirding these visible influences are the mores of the nation and of the locale that wrestles with decisions about ideas for change. Any assessment of success or failure of change-ideas in the educational arena must allow for the influence of the web of relationships that provide the social context of the educational enterprise.

If the educational system "weighed" the same as any other institution, it would not be particularly important to single out the school as a crucial instrument of social change. Any other institution would do. However, education has historically enjoyed a special role in man's hopes for social improvement, and it continues to enjoy that same confidence today. Some may argue that the school does not receive the support of the public and point to the low salaries of teachers, the shortage of materials, the inadequate research and support funds, and the dissatisfaction (depending on locale) with integration, sex education, dress codes, curriculum, etc. These issues do bring conflict to the school. They are real problems, not to be taken lightly, and ought to be solved. But they cannot be taken as indications that the American public has lost faith in the schools so long as the schools are regarded as the proper place for these issues to be heard. The lack of support for public education may limit the effectiveness of the schools, but the questioner does not ask _if_ education should be supported, but _how_ _much_ support education should receive. Few critics of the public schools recommend their abolition. They recommend their improvement. And because of the central role of education in the continuation and improvement of the American society, schools continue to be viewed as the place

to learn how to solve society's problems.

The school cannot be regarded as autonomous in bringing about social change. It is an agent of society and reflects the perspectives of the society while charged with the task of shaping those very outlooks to which it is itself subjected; it is held responsible for the reform of the society and also held responsible for answering to that society. In this state of affairs, what is the source of ideas for change--the society or the school? What is the responsible group for installing new ideas-- the society or the school? Who is responsible for guarding society's interests--the society or the school? Who is responsible for continuing or eliminating existing practices--the society or the school? How can factors that cause change-ideas to be either implemented or denied be located--are they in the society or the school? And what do we mean by "society" and what do we mean by "school?"

In a very real sense there is no school and there is no society. Each consists of a mixture of factors (including each other). Neither school nor society can be described with an average as we might determine the mean of a column of digits. We can tally statistics about a school in terms of pupils, teachers, expenditures, and mobility just as we can tally data about a city's crime rates, property assessments, and pop- ulation: but neither compilation enables us to describe the school or the city as it relates to a given issue and neither profile provides us with information to predict either public or educators' responses to ideas for change. The factors that determine change are as likely to be in the voice of an influential spokesman, the strategies employed, legal mandates, emotional incidents, community mores, or a combination of

unpredictable factors. Thus, we must not only deal with the question of the source of power in managing school or society, but also the identification of crucial forces within the school and society.

Limitations

The effort to accomplish this analysis is fraught with factors that limit the precision of this report. The substance of this report is limited by the operational definitions employed and the ground rules utilized. These definitions and ground rules are adapted from the literature in the social sciences. But until a more viable theory of social and institutional change is developed, the techniques employed are somewhat arbitrary. It is an easier task to describe an instituion and to compare that institution with its former self or other institutions than it is to determine the factors that either caused or impeded change in it. Little research has been conducted to determine the instrumental factors associated with change in social institutions.

Another limitation arises in the attempt to identify significant ideas for change when the criteria for their selection is undetermined. During the last 75 years, ideas have been proposed that focused on school organization, curriculum, teacher education, facilities, materials, etc. These ideas have been aimed at changing local school systems, state departments of education, regional alignments, national support and international arrangements. The originators of these ideas have been individuals, small groups, professional organizations, legal bodies, accrediting associations, institutions of higher education, governmental agencies, private foundations, special commissions, and a host of other

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sources ranging from the boiler room discussions at a local high school to the Congress of the United States. Only a portion of the ideas that have been generated can be included in this report. Criteria for the selection of ideas will necessarily limit the scope of this presentation. Such a sampling is certain to eliminate some ideas the analysis of which might prove useful and important.

Another uncertainty develops around the question of success and failure. Success and failure are relative terms and shadings of success and failure may be based as much on the judgment of the reporter as on the event itself. The criteria used to judge success and failure are, at best, subject to debate. This problem is magnified when the consequences of a change include desirable and undesirable results at the same time. Should success be considered the mere installation of an idea or its installation and practice according to its intended purposes? Many instances of dual results are evident in the world of science and industry: automobiles transport people and goods conveniently while they also kill other people and pollute the air; automation increases production and provides comforts of life while the pride of the craftsman is lost in the transition; and electricity runs homes, hospitals, and factories while faulty wiring destroys homes and businesses. Do similar results, both positive and negative, come from changes and developments in the educational system and, if so, how can the labels "success" and "failure" be applied?

Difficulty of Linking Changes to Causes

Problems also arise in trying to link the success or failure of an idea to specific causes. The factors that eventually determine the outcome of an effort to change the school may be subtle elements that seldom surface. The obvious reasons may have little to do with the life or death of an idea. How do we fix blame or give credit in a society where editorials in the newpaper or on television, school board meetings, referendums, social and legal forces, backyard gossip, political trade-offs, and many other factors may all bear on a single idea for change. How do we determine the force or the main forces in such a social network? The difficulty of this task should not dissuade investigators from attempting the assignment, however. It simply emphasizes that the connection between causes and effects is complex and caution must be exercised as one relates results to the appropriate causal or instrumental factors.

Another consideration is the alteration of an idea from its original form to a revised form with new components that accompany it. Is such an evolution a new idea that should be assessed on its own merits (and thus, one should label the original idea a failure) or is it really a previous idea in disguise? It seems evident that many changes in practice are combinations of previous ideas--some of which were failures and some successes. To isolate changes as if they were discrete and separate is an oversimplified approach to sorting the literature and classifying the complex field of education.

Despite the above forewarnings of the difficulties and limitations of this task, it is quite clear that ideas are deliberately induced into

the educational mainstream and an analysis of the factors accompanying

their success and failure deserves attention. Change-ideas have been

expressed in the past and they have been diffused through and to people

who have been willing to implement them. The conditions that allow

change to occur have existed, and an examination of the circumstances

and factors that make a difference in the success or failure of an idea

is necessary if the improvement of education is to be carried on efficiently.

Limits of Deliberate Change

If we compared educational institutions today with their counterparts

of seventy-five years ago, numerous differences could readily be identified.

Major differences would be found in school facilities, the use of technol-

ogy, curricula, teacher behavior (both personal and professional), pupil

attrition rates, length of the school year, materials, extra-class

activities, organizational patterns, _ad infinitum_. To be sure, there

are many schools whose program today has not shifted drastically from past

years, but a comparison of up-to-date schools of today with up-to-date

schools of yesteryear would show considerable change. If similar contrasts

were drawn in other areas such as industry, law enforcement, hospital

administration and organization, housing, or transportation an equally

long list of differences could be compiled. Education, and all other

institutions have responded to the changing times. Each field of human

endeavor has also been affected by developments in technology, science,

social science, and the consequences of population increases, demographic

shifts, atomized families, shorter work weeks, and higher standards of

living. And, as we view changes in institutions such as educational,

religious, political, industrial, military, and legal establishments, it

seems reasonable to ask if these changes have come about through deliberate

efforts of man or if they were the results of chance. What are the impli-

cations of the answer to this question for any current course of action

that may change these same institutions during the next ten to fifty years?

If man can plan the changes he desires and promulgate those changes,

then he is in a position to shape his institutions to meet his needs. If

man can carry off such an order, then he can address himself to the

additional task of determining which changes he desires. But only if

he can manage planned change is it worth his efforts to puzzle about the

kind of changes he wants.

In the promotion of social change there are two opposing views. One

view holds that man is helpless in altering the direction and degree of

change that occurs in his society. At the other extreme are those who

subscribe to the belief that social variables can be manipulated to

create the society man wants.

The position that man can do very little or nothing to alter the

course of his own circumstances is a view that renders futile the will

of man to alter his future. One who holds this view accepts the assump-

tion that the forces that impel man into his future march forward, with

or without his effort to alter them; that huge mass and force represented

by the human race is comprised of complexities, uncontrollable forces,

and unidentifiable elements that are beyond the control of any planned

effort to alter the course of human events and the institutions they

create; that man cannot alter the chain of human events that have been set

off anymore than he can cause the sun to rise at an appointed hour or

guarantee immortality.

Contemporary problems and the issues that emerge from such a view suggest questions that challenge this negative perspective. Can man control his own population and restore ecological balance or has the timeline towards self-destruction passed the point of no return? Does medical research that eases suffering and prolongs life represent man's success in altering his circumstances or have medical advances merely been reflections of a society that created conditions for such gains - conditions that were not controlled or influenced by man? Is life itself, both its creation and its preservation, as conceived in advanced biological research, a result of man's tampering with his own future? Can our educational system provide the circumstances, the content, and the objectives that will re-direct human endeavor along productive efforts, or will the wheels of fortune and misfortune churn out a future that is beyond the grasp of the products of formal education? A plethora of troubling questions emerge whether one is optimistic or pessimistic about the control man has over himself. However, if one lacks confidence in man's ability to control at least some of the important factors in his own future, these questions become purely academic and man's joys are limited to an understanding of his condition rather than improving it.

Those who consider man to be in charge of his future and in control of all the important variables or potentially in control - when civilization matures sufficiently -abound with optimism about the power of man. Those who subscribe to this viewpoint move courageously into the ills of society with their intellectual weapons and measure, evaluate, recommend and implement ideas for change. As their ideas find fertile territory for trial and new problems arise, the new problems are approached

with equal fervor and optimism. The process continues until the problem
is "mapped" in its entirety, each deterrent to progress is analyzed and
brought under control, and more of man's behavior is controlled and
prescribed.

Although some theorists adhere strongly to the view that man is
helpless in his quest to improve his lot and others insist that social
control is possible, we take the position that the truth is somewhere
between them.

There are certain trends that appear to be irreversible by deliberate
effort. There is an increasing tendency toward concentration of economic
power, more and more sophisticated technology, larger and larger units
of political power, more and more specialization of labor and consequent
interdependence, more and more governmental mechanisms for rendering
welfare services, and more and more education for the masses. Of course,
it is theoretically possible to reverse deliberately any or all of these
trends but it is psychologically and politically impossible. They may in
time be reversed, but if they are, the reversal will result more from
social catastrophe than from purposeful efforts of men to do so.

It is not possible to return to the old order that existed prior
to the development of these trends, for the basis of that order was
destroyed by the trends themselves. Furthermore, these trends are even
today developing so swiftly that the slow process of automatic adjustment
is not a feasible alternative to complete disruption of the social system.
The only alternative is deliberate planning for social adjustment within
these inescapable tendencies. At the same time, the planning must be
made realistic by taking the trends into account, for these trends fix
the limits within which deliberate changes can be made. We follow plans

that come from uninformed dreams or intuitive hunches at our peril

whether we are planning for changes in education or in the broader society.

Only by taking full account of these inevitable trends and the factors

that a proposed change involves can our planning and actions become

intelligent and responsible. This fact points up the value of this

study, the purpose of which is to examine changes in the school to determine

the conditions that have had a significant relationship to success or

failure of these changes. The implied purpose is that after determining

factors that relate to a change that future changes will be managed more

effectively, that the risks in trying to produce such a change will be

reduced, or that changes with a high risk of installation will not be

attempted.

CHAPTER TWO

PROCEDURE

The procedure of this study consists of the following steps:
fixing the period of time this survey of changes is to cover, selecting
and describing the changes to be included in the analysis, deciding
upon the categories into which the changes are to be classified, class-
ifying the changes, and discussing the relationship between the changes
and the factors assoicated with them.

Period Covered By the Study

This study covers the seventy-five years from 1895 to 1970.
Eighteen and ninety-five is not a hard and fast date since some of the
changes we have included were in an incipient state prior to that date.
We have chosen 1895 as the beginning of the period under study for a
number of reasons. It was near the close of the century that a number
of developments that had been underway were gradually coming to a head.
For some time there had been a gradual shift in the source of immigrants
- a shift from northern Europe to southern Europe and the Orient. In
some respects these immigrants were quite different from the Scanda-
navians, Germans, and English who preceded them. They tended to settle
in the cities instead of moving out into the farmlands and they brought
with them a cultural tradition that was somewhat at variance with the
Anglo Saxon tradition. In the cities the new immigrants tended to keep

to themselves, to speak their own language, and to live in the new land
with the same habits and values they had brought from their homeland. They
thus created a new type of problem in American culture - how to assimi-
late people of diverse views into the American way of life. By the closing
years of the 1890's, and surely at the beginning of the new century, the
acculteration problem came to be seen as primarily a problem of education.
The public school system from the first to the twelth grade had only
recently been established and was even then seen as one of the primary
instruments through which the Americanization of immigrants and their
children could be effected.

Another reason for choosing this period is that the 1890's marked
the close of the Western frontier. The open country that could be
claimed by simply staking out one's portion was at last closed. Perhaps
this fact helped to keep the new immigrants in the cities. The closing
of the frontier had a tremendous effect upon American culture. It
symbolized the closing of an expansive period; it turned the country
back upon itself to develop its cities, its industries, and to exploit
its forests and cultivate its land. These facts tended to put greater
weight on the value of education as a means of increasing the means of
making a livelihood.

The rapid increase in school enrollments during this period also
forced the leaders in education to cope with new problems and issues in
school attendance, facilities, staffing, and educational materials.
The 1874 decision in the Kalamazoo Case that legalized general taxation
to support education beyond the rudiments of knowledge led to rapid
increases in secondary school enrollments. During the 1880 - 1930

period, secondary school enrollments increased fifty fold while the general population in the country only tripled. These increasing enrollments at the turn of the century contributed heavily to usher in a new era in public education.

Moreover, in the closing decade of the century two developments in education were just as important as the closing of the frontier, the impact of the new immigrants, and increasing enrollments. The first of these was the rise of graduate study in education. Before 1890, the University of the City of New York, now New York University, began giving graduate work in education and by 1890 it had developed a graduate program in pedagogy. Two years earlier the New York College for Teachers which later became Teacher's College was established and be the close of the century had developed a full-fledged program of graduate work in education leading to the Doctor's degree. The development of graduate study in education presented a transition from the training of teachers in institutes and normal schools to the study of education as a professional discipline with the emphasis, as James Earl Russel put it on general culture, professional knowledge, technical skill, discipline in the subject matter one was to teach. These areas have remained the primary emphasis in teacher education at both undergraduate and graduate levels.

The second of these educational developments was the rise of scientific educational study. The first significant objective studies in education were made by Joseph M. Rice, who in 1892 made an extensive survey of some 30 school system and published his reports in the Forum. Immediately thereafter he set out upon an extensive study of achievement in the schools. In 1897, he reported on his study of spelling which

showed that the amount of time spent in spelling was not related to the
amount of achievement. The rise of an objective study of education
together with the development of education as a graduate study set the
stage for the advancement of education.

Moreover, the efficiency movement in industry had gained considerable
momentum by 1895 and was beginning to express itself in educational terms.
By the early 1900's, the testing movement had begun in earnest and in the
'teens an intensive drive was on to eliminate deadwood from the curri-
culum, a drive that continued throughout the period under consideration -
witness the emphasis upon New Math, New Physics, New Biology, New Chemistry,
New Social Studies, etc., in the fifties and sixties.

Selecting and Describing Changes

In the sevety-five year period many changes in the public school
have been attempted or actually made for which there is no record.
Schools have made changes in their curriculum, in methods of teaching,
in ways of reporting pupil progress to parents, or even changes in
administrative procedures and school policies, to mention only a few,
as part of the ordinary operation of the school. No record has been
made of some of these efforts to change the school, even though they
were probably of general significance. The changes which make up the
list for analysis in this study are those for which reference is made in
such sources as the history of education, dictionaries of education, and
encyclopedias of education. Some of these changes might have been of
no greater value than those which were made but not recorded in the
authoritative accounts. But on the whole it may be assumed that those

changes which are reported in these accounts are of general significance.

The list of changes which have been compiled is neither exhaustive nor randomly selected. But it is believed that the list is so nearly exhaustive that the addition of other instances that might have been overlooked will make no appreciable difference in the findings. The authors followed an informal procedure in working out the list of changes. They made a list first from their own knowledge of the history of education and then added changes as they turned up in memory or in the authoritative references. Except in the case of teacher education, changes in institutions of higher learning were not included since this report is concerned with the question of how changes are brought about in the public elementary and secondary schools.

When the list was compiled, each change was then described by reference to an authoritative source. These descriptions make up the glossary of changes which is included in this report.

Deciding on the Categories

The categories were worked out partly intuitively and partly empirically. We approached the list of changes with a few conceptions in mind as to how they might be classified. These conceptions were then tested by reference to the nature of the changes themselves. The character of the changes then indicated additional categories which were added to those which had been initially determined. In this way, a set of categories for classifying the data were developed.

It became apparent on inspection of the changes that some originated outside the school system while others emerged within the system itself.

The first general set of categories therefore consisted of an inside-
outside dichotomy. A second dichotomy was arrived at by assuming that
changes that have occurred since 1950 have not been tested over a long
period of time. The second dichotomy consisted of post 1950 and pre 1950
changes.

Once these four major categories were established, and the changes
classified in accordance with them, it was then possible to set up
success-failure categories into which the changes in these major categories
could be classified. It was possible from inspection of the changes and
the authoritative literature to decide whether a change had been continued,
continued and grown, discontinued entirely, or discontinued with a residual
effect.

Five elements within the school system were listed as potential
recipients of the proposed change. These five facotrs were: Instuction,
Curriculum, Organization and Administration, facilities, and materials.
We then classified the changes according to the element that the change
was planned to alter.

Classifying the Changes

With the foregoing categories in mind, the authors independently
classified the list of changes in accordance with their criteria. They
classified the changes independently and then compared the results of their
work. They used a simple method of agreement and disagreement and calcu-
lated percent of agreement. The coefficient of agreement on the inside-
outside dichotomy was .88; for the post-pre 1950, it was .98; for the
success- failure categories, .68 for each of the four categories, and
? for the focus of the change.

CHAPTER THREE

FINDINGS

The changes and the data that depict the characteristics of these changes are presented in this section. Changes are presented in alphabetical order and, therefore, no special significance is attached to the order of presentation of the changes.

In many instances a change is quite broad in scope and includes numerous sub-changes that comprise the total. These sub-changes do not all meet with success or failure to the same degree as the total change. These differences in success might arise from particular circumstances where change has been attempted or because segments of the total change may differ from each other.

The different degrees of success or failure are evident, for example, in the classification of desegregation as a successful or unsuccessful change. The rating depends partly on local conditions since some communities have desegregated their schools with little difficulty, some have met with resistance and the hostility remains, some have faced relatively simple situations, and others have encountered circumstances that included unmanageable conflicts. The classification in this study is based on broad, overall results rather than on isolated cases that may not represent the typical state of the change.

Another difficulty arises when a program for change includes some elements that have failed and some that have succeeded. For instance, in the field of media and technology one can point to the failure of the

wire recorder, opaque projectors, stereoscopic slides, and silent films
to remain as a significant part of the equipment and materials in the
schools. On the other hand, media and technology are obviously present
in the form of 16 mm sound film, overhead projectors, video tape recorders,
and casettes in their various forms. To do justice to the changes in
media and technology would require an extensive and separate document
that was addressed exclusively to the topic. The same elaboration of
changes would be possible in regard to special education, standardized
testing, vocational and technical education, reading instruction, and
many other broad changes listed in this study.

These two examples illustrate the macro-level of many of the changes
included in this report. The failure to classify success or failure with
more refined distinctions is a deliberate choice. Given the time and
limits of this study, it would not have been possible to investigate
broad changes at their micro-level. To have done this would have been
tantamount to doing a case study of each micro-change. A review of
the research literature on each and every change would have been entailed
and this task would have gone far beyond the scope of this study. A list
of macro-changes rather than micro-changes is adequate to determine the
factors associated with success or failure so long as some of the changes
have met with success, others have met with failure, and the changes
represent a cross-section of the educational enterprise.

Four classifications have been used to categorize changes according
to the degree of success or failure attributed to the changes. The symbols
used and the descriptions for degrees of success are:

4 - A change that has successfully been installed and has permeated the educational system.

3 - A change that has successfully been installed and is sufficiently present that instances of the change are obviously present.

2 - A change that has not been accepted as a frequent characteristic of schools but has left a residue that influences educational practice.

1 - A change that has not been implemented in the schools and would be difficult to locate in any school system today.

For purposes of ordering data, changes that were rated 3 and 4 were regarded as successes and changes that were rated 1 and 2 were regarded as failures. ;The data were interpreted according to this same division, although finer distinctions between ratings of 3 and 4 were made and distinctions and contrasts between those changes rated 1 or 2 were provided.

The changes were also classified according to the element in the educational system that was the focus of change. Although five possible targets for change were included in the initial processing of data, three categories were adequate to classify the changes selected. These three categories were, Instruction, Curriculum, Organization and Administration.

In one sense, all changes in education are recommended for the purpose of altering Curriculum or Instruction. The final result of all changes is found in these two areas if the proposed change is an educational change. However, if all changes were dividied into these two categories, and even these two involve considerable overlap, the very important considerations of the organization and administration of education would have been deleted. Therefore, we have classified all changes as efforts to change Curriculum, Instruction, or Organization and Administration. The classification of changes is not always an obvious choice. One might

argue that changes in materials such as the software in media or the development of standardized tests are really changes in curriculum rather than efforts to change instruction. The writers have taken the position that if a change is planned to improve instruction directly, such as micro-teaching, or indirectly, such as new teaching materials, that the eventual target for such change in both instances is Instruction. If the content or learning experiences are the focus of change, then the change is classified as a curriculum change. A similar issue arises in the classification of changes in Administration and Organization as opposed to Curriculum or Instruction. The organizational structure is determined by the curricular or instructional goals that are to be met, but we have regarded changes that required a new unit in the educational system, such as kindergarten or junior college, or changes that required re-organization, such as the non-graded schools, as changes in Organization and Administration.

The three categories and their symbols as employed in this section are as follows:

A - Instruction

B - Curriculum

C - Organization and Administration

Each idea for change was also classified according to the source of origin of its inception. Some ideas for change originated outside of the school setting and other changes arose within the school setting.

We have regarded an origin outside of education as an agency or individual whose responsibilities include other duties and concerns in addition to educational matters. For instance, many governmental agencies

influence education but a body such as the Congress of the United States
is classified as an outside source because it must be concerned with many
factors in addition to education. A state department of education, a
public school system or an institution of higher education is within the
field of education because its primary purpose is educational. On the
basis of this delineation, the changes are classified as Internal or
External in origin and the following symbols are used:

I — Internal origin, within the education field.

EX — External origin, outside the educational field.

The fourth distinction made between ideas for change was a division
between those that were recently proposed and those that began over
twenty years ago. Recent changes were regarded as those initiated after
1950 and all other changes were listed in the pre 1950 era.

The information in Table 1 provides a description of changes that
were successfully incorporated or were accepted and expanded beyond
their original intent. These changes were successfully implemented,
were rated 3 or 4, and their presence in today's educational system provides
proof of their acceptance.

TABLE 1. CHARACTERISTICS OF CHANGES THAT WERE SUCCESSFULLY MADE IN THE
SCHOOLS

Changes	Source	Rating	Focus
Ability Grouping	I	3	A
Adult Education	Ex	4	C
British Infant School	I	3	B
Carnegie Unit	I	4	C
Compensatory Education	Ex	3	B
Compulsory School Attendance	Ex	4	C
Conservation Education	Ex	3	B
Consolidation of Schools	I	4	C
Desegregation	Ex	3	C
Driver Education	Ex	4	B
Elective System	I	4	B
Environmental Education	Ex	3	B
Equalization Procedures	I	4	C
Extra-Class Activities	I	4	B
Guidance	I	4	A
Head Start	Ex	3	C
Home Economics	Ex	3	B
Individually Prescribed Instruction	I	3	A
International Education	I	3	B
Junior College	I	4	C
Junior High School	I	4	C
Kindergarten	I	4	C
Linguistics	I	3	A
Look-and-Say Method	I	3	A
Media and Technology	I	4	A
Micro-Teaching	I	3	A
Middle School	I	3	C
New Leadership Roles	I	4	C
Non-Graded Schools	I	3	C
Nursery School	Ex	3	C

TABLE 1 (Continued)

Change	Source	Rating	Focus
Open Classroom	I	3	A
Phonics Method	I	3	A
Physical Education	Ex	4	B
Programmed Instruction	I	3	A
Safety Education	I	4	B
School Psychologist	I	3	C
Self-Contained Classroom	I	3	C
Silent Reading	I	4	A
Social Promotion	I	4	C
Special Education	I	4	B
Store Front Schools	Ex	3	C
Student Teaching	I	4	A
Testing Movement	I	4	C
Tests and Measurement	I	4	A
Updating Curriculum Content	I	3	B
Vocational and Technical Education	Ex	4	B

It can be seen from Table 1 that changes were successfully implanted
that altered Instruction, Curriculum, and Organization and Administration.
None of these three categories were exempt from or immune to change. Ideas
that were used to change or improve Instruction were fewer in number (13)
than those ideas that changed Curriculum (14), or those that affected
Organization and Administration (19). The changes listed in Table 1
originated within the educational system two-and-one-half times as
frequently as they originated from outside the field of education. All
of the changes in Instruction originated within the field of education,

one-half of the curricular changes came from inside and approximately

two-thirds of the changes in Organization and Administration also came

from within the field. Changes that originated outside of education

tended to involve specific objectives such as Driver Training, Compulsory

School Attendance, and Desegregation. Changes from within the educational

field included some general changes such as Equalization Procedures, but

on the whole they tended to be more specific such as Micro-Teaching, or

required the knowledge of trained professionals who promoted changes such

as the Phonics Method or Non-Graded School on the basis of their know-

ledge, research, and experience.

Governmental influence was evident in such programs as Head Start

that required massive financial support or in Compulsory Attendance or

Desegregation that received the support of the legal branch of the govern-

ment with laws or court cases that required changes in previous procedures.

Table 2 includes information about ideas that failed to become

established and are no longer present in the educational system or ideas

whose original impact and scope have been diluted so that only a residue

remains. All of the changes in Table 2 were rated 1 or 2.

TABLE 2. CHARACTERISTICS OF CHANGES THAT WERE NOT SUCCESSFULLY MADE IN
THE SCHOOLS

Change	Source	Rating	Focus
Activity Curriculum	I	2	B
Community School	I	2	B
Core Curriculum	I	1	B
Creative Education	I	2	B
Dalton Plan	I	1	A
Flexible Scheduling	I	2	C
Mid-Year Promotions	I	1	C
Platoon System	I	1	C
Project Method	I	2	A
Sensitivity Training	I	2	A
Sex Education	Ex	2	B
Team Teaching	I	2	C
Thirty-Schools Experiment	I	1	B
Unit Method	I	2	B
Unit Plan	I	2	A
Visiting Teacher	I	2	A
Winnetka Plan	I	1	A

Changes in Table 2 include ideas that were used to alter all three
categories of education--Curriculum, Instruction, and Organization and
Administration. Failures in all three areas suggest that each area
has resisted changes or was unable to accommodate some changes that were
proposed. It is especially noteworthy to observe that 16 of the 17
failures included in Table 1 originated from within the field of education.

It is likely that more ideas are conceived by those whose primary task is education and it is not surprising that failures, as well as successes, are dominated by ideas from within the educational field. It is also probable that ideas generated outside of education did not have sufficient support to be tried in the schools or to be documented in the literature and a list of failures gleaned from the literature would be dominated by Internal origins. Of the 17 failures listed in Table 2, only 4 were efforts to alter the Organization and Administration of schools. These four changes were characterized by efforts to alter the entire school, or a considerable part of it, rather than a modification, addition, or minor change. Flexible Scheduling or modular scheduling required total change in the organization of the school. This is in sharp contrast to changes in Table 1, such as Kindergarten or Standardized Testing, which were adjunct or supportive changes that did not require overhaul of the school. The almost complete absence of failures from External sources in Table 2 suggests that when an external idea is sufficiently supported to reach the educational audience that it tends to be successful. The only failure from an external source in Table 2--Sex Education--is a change idea that has dubious public support and is also a controversial issue within the schools. A majority of the failures in Table 2 (11) left a residue, however, and either exist to a limited extent or have influenced subsequent changes. Those changes that have completely disappeared, tended to be programs that were tried on a limited scale, such as the Winnetka Plan and the Dalton Plan, and were not universally copied by other school systems.

Table 3 brings together the changes to show a contrast between
those ideas that originated outside of the school system and those
ideas that came from within.

TABLE 3. CHANGES LISTED ACCORDING TO INTERNAL OR EXTERNAL ORIGIN

Change	Source	Rating	Focus
Ability Grouping	I	3	A
Activity Curriculum	I	2	B
Adult Education	Ex	4	C
British Infant School	I	3	B
Carnegie Unit	I	4	C
Community School	I	2	B
Compensatory Education	Ex	3	B
Compulsory Attendance	Ex	4	C
Conservation Education	Ex	3	B
Consolidation of Schools	I	4	C
Core Curriculum	I	1	B
Creative Education	I	2	B
Dalton Plan	I	1	A
Desegregation	Ex	3	C
Driver Education	Ex	4	B
Elective System	I	4	B
Environmental Education	Ex	3	B
Equalization Procedures	I	4	C
Extra-Class Activities	I	4	B
Flexible Scheduling	I	2	C
Guidance	I	4	A
Head Start	Ex	3	C
Home Economics	Ex	3	B
Individually Prescribed Instruction	I	3	A
International Education	I	3	B

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TABLE 3 (Continued)

Change	Source	Rating	Focus
Junior College	I	4	C
Junior High School	I	4	C
Kindergarten	I	4	C
Linguistics	I	3	A
Look-and-Say Method	I	3	A
Media and Technology	I	4	A
Micro-Teaching	I	3	A
Middle School	I	3	C
Mid-Year Promotion	I	1	C
New Leadership Roles	I	4	C
Non-Graded Schools	I	3	C
Nursery School	Ex	3	C
Open Classroom	I	3	A
Phonics Method	I	3	A
Physical Education	Ex	4	B
Platoon System	I	1	C
Programmed Instruction	I	3	A
Project Method	I	2	A
Safety Education	I	4	B
School Psychologist	I	3	C
Self-Contained Classroom	I	3	C
Sensitivity Training	I	2	A
Sex Education	Ex	2	B
Silent Reading	I	4	A
Social Promotion	I	4	C
Special Education	I	4	B
Store Front Schools	Ex	3	C
Student Teaching	I	4	A
Team Teaching	I	2	C
Testing Movement	I	4	C
Tests and Measurements	I	4	A
Thirty-Schools Experiment	I	1	B
Unit Method	I	2	B
Unit Plan	I	2	A
Updating Curriculum Content	I	3	B

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TABLE 3 (Continued)

Change	Source	Rating	Focus
Visiting Teacher	I	2	A
Vocational and Technical Education	Ex	4	B
Winnetka Plan	I	1	A

The most obvious observation in Table 3 is the large number of changes that originated within the school system (49) in comparison to the relatively small number from external sources (14). The nature and purposes of these changes has been discussed in reference to Tables 1 and 2, but Table 3 provides evidence that the schools participate in changing themselves at a ratio of 3:1/2 to 1 compared to individuals or agencies outside of the schools.

The external ideas had a higher success percentage (93%) than the internal ideas (64%). These data suggest that when an idea has the support of outside groups _and_ school support as well, then the success probability is high. When an idea is initiated in a school, it seems to have less chance for success.

The lower success rate of ideas that originated within the field of education should not be construed to mean that such ideas are necessarily doomed to failure _because_ of their origin. The lower percentage is most likely due to the larger number of attempts to change or the fact that successes and failures within the field of education are reported in the literature. Failures that originate outside of education are less likely

to remain long enough to be recorded as an effort at change at the macro-level that we have used. Most of the ideas within education were efforts to alter Instruction while none of the changes that originated outside of the schools were attempts to change Instruction. The outside sources were slightly more concerned with Curriculum (8 instances) than with Organization and Administration (6 instances).

Table 4 provides a list of ideas that have been most successfully implanted in the educational system and have stood the test of time since all of them originated prior to 1950.

TABLE 4. PRE-1950 CHANGES THAT WERE SUCCESSFULLY MADE IN THE SCHOOLS

Change	Source	Rating	Focus
Ability Grouping	I	3	A
Adult Education	Ex	4	C
Carnegie Unit	I	4	C
Compulsory Attendance	Ex	4	C
Conservation Education	Ex	3	B
Consolidation of Schools	I	4	C
Driver Education	Ex	4	B
Elective System	I	4	B
Equalization of Education	I	4	C
Extra-Class Activities	I	4	B
Guidance	I	4	A
Home Economics	Ex	3	B
International Education	I	3	B
Junior College	I	4	C
Junior High School	I	4	C
Kindergarten	I	4	C
Look-and-Say Method	I	3	A
Media and Technology	I	4	A
New Leadership Roles	I	4	C
Nursery School	Ex	3	C
Phonics Method	I	3	A
Physical Education	Ex	4	B
Programmed Instruction	I	3	A
Safety Education	I	4	B
Self-Contained Classroom	I	3	C
Silent Reading	I	4	A
Social Promotion	I	4	C
Student Teaching	I	4	A
Testing Movement	I	4	C
Tests and Measurement	I	4	A
Updating Curriculum Content	I	3	B

These "permanent" or well-established changes are most often a part

of the Organization and Administration of the schools. Of the thirty one

changes listed in Table 4, thirteen of them changed or added to the area

of school Organization and Administration. The other two categories,

Curriculum and Instruction, were equally divided between the remaining

changes. It appears that a change in the Organization and Administration

of the school is more likely to be permanent. It appears easier for Curri-

culum or Instruction changes to be tried and discarded, but once the Organ-

izational and Administrative machinery is modified, a higher degree of

permanence occurs. External factors that gave rise to Curriculum changes

were evident in 44% of the instances given. External origins were present

in 23% of the changes in Organization and Administration and were totally

absent from changes in Instruction. Thus, it appears that societal support

is most noticeable in Curricular change, is evident in Organizational and

Administrative changes, but changes in Instruction are left to the educator.

Table 5 includes the changes that have been classified as successful

and rated either 3 or 4. However, all of these changes were proposed

within the last twenty years and have not been subjected to the fluctuations

and cycles that have affected the pre-1950 changes.

TABLE 5.   POST-1950 CHANGES THAT WERE SUCCESSFULLY IMPLANTED IN THE SCHOOLS

Change	Source	Rating	Focus
British Infant School	I	3	B
Compensatory Education	Ex	3	B
Desegregation	Ex	3	C
Environmental Education	Ex	3	B
Head Start	Ex	3	C
Individually Prescribed Instruction	I	3	A
Linguistics	I	3	A
Micro-Teaching	I	3	A
Middle School	I	3	C
Non-Graded Schools	I	3	C
Open Classroom	I	3	A
School Psychologist	I	3	C
Special Education	I	4	B
Store Front Schools	Ex	3	C

It is premature to classify these changes as successful since they all have been initiated within the last twenty years and have not been subjected to a sufficient trial period.   However, these changes tend to show the same characteristics as the pre-1950 changes that were successful. These characteristics include changes in Instruction that originate within the profession, changes in Curriculum that come from outside as well as inside the field of education, changes in Administration and Organization that can be accomodated without dismantling the existing structure.   One

exception to these generalizations is the Non-Graded School. If past

experience is a reliable predictor, this change is not likely to remain

because major alteration of the structure of the school is difficult to

induce and maintain. The only change included in Table 5 that is rated

a 4 is Special Education. All other changes are rated 3 and could either

rise or fall depending on their impact on the schools over a longer period

of time.

The pre-1950 changes that failed to become a part of the educational

enterprise are presented in Table 6. It is probable that other ideas

were proposed but when changes that have failed do not appear in the

literature, it is not possible to document their existence.

TABLE 6. PRE-1950 CHANGES THAT WERE NOT SUCCESSFULLY IMPLANTED IN THE SCHOOLS

Change	Source	Rating	Focus
Activity Curriculum	I	2	B
Community School	I	2	B
Core Curriculum	I	1	B
Dalton Plan	I	1	A
Mid-year Promotion	I	1	C
Platoon System	I	1	C
Project Method	I	2	A
Thirty-Schools Experiment	I	1	B
Unit Method	I	2	B
Unit Plan	I	2	A
Visiting Teacher	I	2	A
Winnetka Plan	I	1	A

None of the failures originated external to the school and only two of the failures were efforts to alter the school's Administration and Organization. Eighty-three percent of the failures were attempts to change Instruction or Curriculum and they were promoted in specific schools or in a limited number of schools. It appears that other schools do not copy a prototype. Whether the refusal to emulate other schools is due to professional jealousy, lack of leadership in other schools, or the weaknesses in the changes is uncertain. It does appear that a single school or a small group of schools that are trying to alter Instruction or Curriculum are not likely to generate universal application of their ideas.

The post-1950 changes that have failed to become included in the educational enterprise are proportional in number to the pre-1950 successes and failures, but the absolute number is only 5. Generalizations from so few instances is risky. Thus Table 7, which includes information on these recent changes, should be read with this limitation in mind.

TABLE 7. POST-1950 CHANGES THAT WERE NOT SUCCESSFULLY IMPLANTED IN THE SCHOOLS

Change	Source	Rating	Focus
Creative Education	I	2	B
Flexible Scheduling	I	2	C
Sensitivity Training	I	2	A
Sex Education	Ex	2	B
Team Teaching	I	2	C

The changes in Table 7 are all present to a limited extent as indicated
by the classification of 2, but they cannot be regarded as successes. They
have all been reduced in scope or purpose or have been modified and
absorbed rather than continued in their original form. The common charae-
teristics of each item is that they have been proposed as separate ideas,
but each can be accomodated by blending them with existing practices. Thus
it appears that these ideas have provided some new approach to an existing
element and have not replaced existing practice.

Table 8 presents those ideas that have succeeded and even grown in
importance or acceptance. These are the ideas that are firmly a part
of the educational field and are least likely to be removed or replaced.

TABLE 8.   CHANGES THAT WERE HIGHLY SUCCESSFUL AND ARE FIRMLY IMBEDDED IN THE
SCHOOLS

Change	Source	Rating	Focus
Adult Education	EX	4	C
Carnegie Unit	I	4	C
Compulsory Attendance	Ex	4	C
Consolidation of Schools	I	4	C
Driver Education	Ex	4	B
Elective System	I	4	B
Equalization of Education	I	4	C
Extra-Class Activities	I	4	B
Guidance	I	4	A
Junior High School	I	4	C
Kindergarten	I	4	C
Media and Technology	I	4	A
New Leadership Roles	I	4	C
Physical Education	Ex	4	B
Safety Education	I	4	B
Silent Reading	I	4	A
Social Promotion	I	4	C
Standardized Testing	I	4	C
Student Teaching	I	4	A
Tests and Measurements	I	4	A
Vocational and Technical Education	Ex	4	B

Of the twenty one ideas included in Table 8, the largest number (10) have been changes in Administration and Organization. These suggest that after an idea for change is built into the administrative framework of the school, that a bedrock or a foundation for its continuation is established. The two changes in instruction do not directly impinge on the classroom teacher, but provide help to the preservice trainee or give the student a

different kind of instruction from a new source (a guidance counselor).
The Curriculum changes all provide an expansion of the curriculum and
are in response to the need to increase the choices for the student
(electives and extra-class activities) or to assure that students will
develop their physical potential in addition to their mental competence.

Table 9 provides information about those ideas that have become a
part of education in approximately the same form and impact as intended.
These ideas are classified as successes and have served the purpose
for which they were developed. The initiators of these ideas probably
expected them to be more universally employed than is the case, but the
form and nature of these changes has remained intact and the ideas are
very much alive. Instances of each idea listed in Table 9 can be found
in sufficient numbers to classify the idea as a success.

TABLE 9. CHANGES THAT WERE SUCCESSFULLY INSTALLED AND EASILY IDENTIFIED
IN THE SCHOOLS

Change	Source	Rating	Focus
Pre-1950			
Ability Grouping	I	3	A
Conservation Education	Ex	3	B
Home Economics	Ex	3	B
International Understanding	I	3	B
Look-And-Say Method	I	3	A
Nursery School	Ex	3	C
Phonics Method	I	3	A
Programmed Instruction	I	3	A
Self-Contained Classroom	I	3	C
Updating Curriculum Content	I	3	B
Post-1950			
British Infant School	I	3	B
Compensatory Education	Ex	3	B
Desegregation	Ex	3	C
Environmental Education	Ex	3	B
Head Start	Ex	3	C
Individually Prescribed Instruction	I	3	A
Linguistics	I	3	A
Micro-Teaching	I	3	A
Middle School	I	3	C
Non-Graded Schools	I	3	C
Open Classroom	I	3	A
School Psychologist	I	3	C
Store Front Schools	Ex	3	C

Of the 24 ideas presented in Table 9, 14 of them are post 1950 and it is too early to classify the 14 changes in this category and the 10 pre-1950 ideas with the same confidence. The ideas set forth in Table 9 cover the 3 categories of Instruction, Curriculum, and Organization and Administration. This suggests that all three of these elements do undergo change, and that change ideas directed at all levels of the educational field can survive if the combination of forces that enable a change to occur are present.

Table 10 lists the changes that were rejected or only had a residue that remained.

TABLE 10. CHANGES THAT DID NOT BECOME A PART OF THE EDUCATIONAL SYSTEM BUT
LEFT A RESIDUE

Change	Source	Rating	Focus
Pre-1950			
Activity Curriculum	I	2	B
Community School	I	2	B
Project Method	I	2	A
Unit Method	I	2	B
Unit Plan	I	2	A
Visiting Teacher	I	2	A
Post-1950			
Creative Education	I	2	B
Flexible Scheduling	I	2	C
Sensitivity Training	I	2	A
Sex Education	Ex	2	B
Team Teaching	I	2	C

Nine of the eleven changes in Table 10 were efforts to change Instruction or Curriculum. These changes are characterized by an "all or none" characteristic. For example, sensitivity training is not something that one accomplishes to a minor degree. One either submits to and engages in sensitivity training or he does not - there is no in between. The same generalization could be made about the other changes in Curriculum and Instruction included in Table 10. It appears that changes that require the removal of an existing approach in order to provide for a change have a high risk for installation. Wholesale changes in Instruction and Curriculum are not likely to succeed.

Table 11 presents ideas that have fallen by the way side. It is not fair to say that all the ideas in Table 11 disappeared completely, but they are not evident in sufficient numbers to classify them as successful in comparison to other ideas included in this report.

TABLE 11. CHANGES THAT FAILED TO BECOME A PART OF THE EDUCATIONAL SYSTEM

Change	Source	Rating	Focus
Pre-1950			
Core Curriculum	I	1	B
Dalton Plan	I	1	A
Mid Year Promotion	I	1	C
Platoon System	I	1	C
Thirty Schools Experiment	I	1	B
Winnetka Plan	I	1	A
Post-1950			
None			

The information in Table 11 makes it evident that changes in cur-
riculum or Instruction that are employed at the local level or with a
limited number of schools are not likely to be spread widely throughout
the field of education. The Winnetka Plan, Dalton Plan, Platoon System and
Thirty Schools Experiment all support this interpretation. A single school
or limited number of schools in this instance did not provide a prototype
which others chose to copy. Though some elements of each of these ideas
remain, the schools have made their own adaptions to include or exclude
elements of the change ideas listed in Table 11. Core Curriculum required
a number of changes such as teacher preparation, materials, facilities,
administration and organization, and thus too many factors had to be over-
come. Whether the idea was a good one or not seemed less important than
the fact that a large number of educational practices had to be overturned
and there was insufficient evidence that the core approach justified such
an extensive displacement of the components of the educational system.

Summary

Educational changes have been proposed during the past 75 years that
were planned to alter Instruction, Curriculum, and Organization and Admin-
istration. Most of the changes came from educators but slightly over 20
percent of the ideas came from outside the field of education. Changes
that came from outside the educational field were directed at the Curric-
ulum or the Organization and Administration of the schools. Changes in
Classroom Instruction always came from within the field of education.
Changes that depended upon outside initiation and support and acceptance

from within the educational enterprise had a higher record of success
than ideas that came from the educational field alone. Changes were
also more permanent if they were a part of the Organization and Admin-
istration of the school.

Lasting changes were characterized by support in the legal, social,
financial, and educational realms. Cumpulsory Attendance, Media and
Technology, Guidance, and School Consolidation are all instances in which
the legal, social, financial, and educational factors were either strongly
supportive, or opposition was weak, and these changes became a character-
istic part of the educational system. When changes originated within the
school system but were diffused to only a small number of schools in pro-
portion to the total educational enterprise, it was unlikely that the
change would become permanent. The Winnetka Plan, Dalton Plan, and Platoon
System are cases in point.

One of the most important elements in the presentation of these
change ideas is the fact that a large number of changes have been proposed
and that many of these changes have been promulgated. Whether changes
have been made as rapidly as social conditions required or whether the
changes were the most appropriate ones to make can be debated. But changes
have taken place in all segments of the educational system. Considering
the massiveness of the educational enterprise in terms of enrollments,
number of teachers, buildings and facilities, relationships to complex
legal and legislative bodies, and the required relationships between
institutions of higher education and the elementary and secondary schools,
the public school is perhaps far more responsive to change than is
generally conceded.

CHAPTER FOUR

OTHER CONSIDERATIONS

Behind every educational change, or decision not to change, is a complex assortment of variables. Some of these variables are within the field of education, some are outside of the educational field, and all of them have the potential to support change, resist change, or remain neutral about change. Because of the frequency of proposals for change and their successful or attempted implementation, the educational field is constantly in transition. At any given moment educators receive information from research, are under the influence of local, state, and federal governments, are subject to pressures from organized groups, and confront issues and solve problems that must be settled to maintain the educational system.

Since it was not within the scope of this study to account for the multitude of minor and major factors that relate to the numerous changes in education, we selected broad categories which included these variables and classified macro-changes within them. The selection of broad changes and designation of general categories enabled us to quantify factors that related to educational change. This decision ruled out consideration of factors typically studied in educational research. For example, the addition of special education has been counted as a change, but this broad category ignores the score or more of changes that have been made as a result of research in special education itself. Consequently, the role

of research in educational change is blurred in this report. Our approach
also obscured other changes such as the elements that comprise the educa-
tional system, the influence of professional and extra-legal organizations,
court decisions, the role of the federal government, and the role of society.
Though an analysis of educational change that provided details about these
additional elements is far beyond the scope of this study, we cannot ignore
these additional elements completely. Before recommendations made on the
basis of our findings can be given, we need to supply further clarification
and finer distinctions of the categories we employed. The purpose of this
chapter is to provide that clarification and to make the necessary distinc-
tions.

Factors Within Education

The entire question of why changes are undertaken is raised when
an analysis of changes is undertaken. If the social context within which
the school functions remained constant and the students, teachers, and
other educational personnel did not change, then changes would be unnece-
ssary if the schools were fulfilling their obligations. Such stagnation
is not the case and, therefore, change is a necessary part of the educational
system if it is going to keep pace with the changing times. The issues
about change within the school raise such questions as: Why do we need
to change, what factors should be changed, what basis for change should
we turn to, who should determine the best changes, what are the restrictions
that prevent change, and what are the requirements and regulations that
mandate change?

There are four areas within the field of education that bear on the
answers to these questions and are especially influential in the deter-
mination of educational practice. These four areas also cut across changes
and cannot be regarded as the basis for any particular change, but are
factors that affect the entire spectrum of educational practice. These
four areas are: (1) Educational Research; (2) School Personnel;
(3) Educational Commissions and Committees, and (4) Professional and Extra-
Legal Organizations.

Educational Research   The contributions of research to educational
progress is indisputable. Educational changes may be stimulated by social
needs, school problems, constitutional enactments, or court orders as well
as by research, but those who promote changes frequently take into account
the information provided by educational research. Research in education
has not been as spectacular as the research in some other fields but
notable advances have been made. George Mouly summarized the developments
in educational research over the last few decades by stating that "We
have attained a much better understanding of the child as a developing
organism and as a learner, of his learning process, and of the role of
education in promoting his maximum growth." (P. 387) He continues
his comments with additional praise about gains in curriculum, teaching
methods, classroom organization, knowledge about the effects of exper-
ience, knowledge about motivation, and awareness of pupil's interests,
needs, goals, and purposes. We simply cannot overlook the educational
research that has increased the knowledge base on which changes and devel-
opments in the school have relied for solutions to school problems.

The Encyclopedia of Educational Research, Handbook of Research on Teaching, Review of Educational Research, and Education Index list numerous titles and descriptions of research that have been reported in the literature. The large number of investigations revealed in these and other sources illustrate that education is active in conducting research and testing the assumptions on which educational practice is based. Of course, some of the research is inadequate, inconclusive, or contradictory which suggest conditions and problems calling for further research. More research is necessary if the progress in education demanded of the educational profession is to be made. By reflecting on the research that has been conducted and the changes that have been successful, a long list of research contributions can be provided. For example, the measurement of intelligence by Simon and Binet has contributed to the standardized testing procedures of the schools, the development of ability grouping, the behavior of guidance counselors, and the ways schools are organized and administered. The measurement instruments developed under the supervision of Ralph Tyler, that grew out of the Eight Year Study and the study of Experimental and Traditional School practices made by Wrightstone in New York City raised questions about the adequacy of the schools and means of measuring that adequacy. The Genetic Studies by Gesell, Ilg, and Ames, the concept of Developmental Tasks by Havighurst, and studies of the Organismic age by Olson have centered on growth and development and provided educators with a basis for action in dealing with educational concerns. The early work of Thorndike and Rice that started educational research as an influential force, the experimentation of Kurt Lewin and his associates with social climates and their influence on learning, and the Genetic Studies of Genius

by Terman represent a small sample of the abundance of research in education.
One would be hard pressed to list a school practice or educational change
that did not include some reference to research findings as an influential
force in the decisions made in regard to that school practice or change.

School Personnel Individuals who manage the daily responsibilities
of operating the public schools are instrumental in determining what should
be done, what will be done, and how it will be accomplished. The school
personnel is crucial in the initiation of change and essential in promoting
change. Whereas the educational researcher addresses his efforts to the
solution of such empirical problems as the educational progress of younger
vs. older students in a given grade or demographic factors as they relate
to learning, the person who solves molar school problems usually settles
on questions that must be answered to enable the school system to function.
When these problems are solved, they often result in changes in schools,
and thus represent a source of change within the educational arena.

The school personnel includes classroom teachers, supervisory and
administrative officials who service specific schools, superintendent of
schools and his staff who assume responsibility for district-wide decisions,
and officials in the state departments of education whose primary function
is the management and leadership of the state system of public education.
All of these levels of educational personnel must be taken into account in
the analysis and diffusion of change.

The problems that face the public schools must be solved within legal
and constitutional constraints and in such ways as to organize resources
to maximize learning. Problems must be solved at the state level in such
areas as school finanace, state-wide testing programs, or universal gradu-

ation requirements for high schools. A school district faces questions about school boundaries, placement of teachers, local tax rates, and curricular issues. A given school must arrange the daily schedule, operating procedures, attendance reports, and use of supplies and materials. An extensive list of issues and their solutions could be developed by any school administrator or experienced teacher that would contrast the different ways these problems have been handled over a period of time. Though these problems and their solutions might be regarded by some as no more than "housekeeping" chores, they are critical factors in the operation of the schools and make a major impact on the learning that takes place.

Consider the difference in evaluation of students in a school that is ues letter grades each six weeks, another that issues grades each nine weeks, another that handles reports on pupil progress through parent conferences, and another that uses a pass-fail evaluation of each subject that is graded. The decision to evaluate pupils according to one procedure instead of another makes a difference in the nature of the report, the nature of the work assigned to pupils, the kind of records the teacher collects, and the amount of time devoted to the evaluation of pupils. The solution to the problem of student evaluation has broad implications for the educational program and the behavior of teachers. And the decision of the procedure used will be made by the personnel in the school and that responsibility places them in a significant role in the determination of school practice.

Similar illustration can be provided that relate to textbook selection, non-teaching duties, frequency and substance of faculty meetings, extra-

class activities, bus schedules, sponsorship of activities, length of class periods, supervisory arrangements, procedures for handling discipline problems, and content of cumulative records.

New ways of doing old tasks or new tasks that are suggested for the schools often pose a threat to school personnel. The personnel is not infrequently hesitant to change and skeptical of innovation. Their feelings are understandable since changes cast doubt on the new roles of personnel, suggest that previous methods of dealing with the issues at hand were inadequate or failures, and may not offer a guarantee that the new idea is any better than the old. The personnel is similar in attitude toward change to personnel in any other social institution, and their reluctance serves as a safeguard against useless or dangerous change. Considering the important role educators assume in carrying out change and their hesitancy to accept and promote change, the difficulty of managing deliberate change is obvious. Without belaboring the point, it is apparent that (1) changes in school practice require the support of school practitioners, (2) the personnel represent a wide variety of views, levels of responsibility, and degrees of influence in a complex system, and (3) changes in school practice tend to be viewed with skepticism and resistance.

The task of changing the school rests on the ability of those who promote change to convince the educational personnel that the change is desirable and deserves their support. Despite the tendency to resist change, the extensive list of changes provided in this report attests to the plausibility of identifying changes and successfully implanting them in the schools.

Recommendations from Commissions and Committees   When the Committee
f Ten issued its report in 1893, the report represented the first major
ffort to influence the public schools through a national committee.
ollowing that report, a series of recommendations arose from newly formed
ommittees dealing with such matters as articulation of high schools and
olleges, correlation of studies in elementary education, and economy in
ducation. During the period included in this study, a number of national
ommittees and commissions initiated changes in the public schools. Among
he most significant of these committees have been the Educational Policies
ommission and the Commission on Reorganization of Secondary Education. A
ultitude of major committees have issued statements about education after
eliberation over given issues, but these two commissions typify the
ffort within the field of education to influence change from the national
ersepctive.

The Commission on Reorganization of Secondary Education issued its
eport in 1918 and is best known for its statement of the 7 Cardinal
rinciples. These principles gave public schools impetus to broaden the
urriculum and create educational opportunities that spread beyond the
undamentals of academic learning. This report had as much to do with
he broadening of the schools' role, frequently into areas that the schools
ould not possibly expect to have much success, as any other single
eport. Even today, newly published books include an account of this
ommittee and it is not uncommon for educators to use the exact words or
ynonyms for the 7 Cardinal Principles in describing the mission of the
chools. These principles included attention to health, fundamental pro-
esses, worthy home membership, vocational efficiency, civic participation,

worthy use of leisure time, and ethical character.

The Educational Policies Commission of the National Educational Associa-
tion, formed in 1936, issued its first report in 1937, and terminated as a
commission in the 1960's. During the 32 years of its existence reports
were issued that included Education and Economic Well Being in American
Democracy (1940), The Education of Free Men in American Democracy (1941),
Education for All American Youth (1944), American Education and Inter-
national Tensions (1949), Higher Education in a Decade of Decision (1957),
Contemporary Issues in Elementary Education (1960), Education and the
Disadvantaged American (1962), and Education and the Search for Equal
Opportunity (1965).

Whether one views the influence of the National Commission on Re-
organization, the Educational Policies Commission, or the hundreds of
other committee reports that have been issued, it is not possible to dis-
count the relevance and influence on the schools when the changes in
curriculum, national priorities, school organization, methods of teaching,
preparation of teachers, and school purposes are compared to the substance
of the reports that have come from these commissions and committees. They
represent large groups of educators and, though they speak for themselves,
they speak to the issues that concern the educational field, make recom-
mendations that receive a public hearing, and provide leadership to the
decision-makers in the public schools.

Professional and Extra-Legal Agencies. Within the field of educa-
tion there are groups or agencies whose influence is most often felt in
a specialized area of knowledge or in a particular aspect of the operation
of the schools. Professional organizations with specialized concerns, for

example, are represented by the departments of the National Education

Association. The Association of Teacher Educators has been concerned

about the quality of the student teaching experience and the relationship

between public schools and higher education in the arrangement of this

experience since 1920. And organizations devoted to the study and dis-

semination of information about selected issues are represented by Phi

Delta Kappa and Pi Lambda Theta. The sum total of the impact of these

organizations is not easily assessed if a relationship between their

efforts and school practice is drawn. In some instances the relationship

is obvious as in the case of the National Council of the Teachers of

Mathematics and the emergence of New Mathematics in the elementary schools.

Support for the movement from this group constituted an important part of

the success of changes in elementary school mathematics. Similar changes

could be traced to the teachers of social studies in the development of

the inductive method and the teachers of English in the spread of the

linguistics approach. The weight that swings the balance between success

and failure in the inducement of change may never be accurately assessed

when many elements are adding their position to the issue. But if the

success of an idea requires support from several sources, then the support

that can be provided from the specific professional body that is aligned

with the element that is the target of change should not be overlooked.

It is inconceivable, for example, that specialists in media and technology

would promote the use of language laboratories without obtaining the

support of the teachers of foreign languages and seeking help from organ-

izations that represent the teachers of foreign languages. Specialized

professional organizations hold annual meetings, publish research and

reports that relate to their speciality, and influence decisions in education; their role and power is sufficiently obvious to urge that they be taken into account in the promotion of change and that they be listened to when they recommend changes.

Extra-Legal Organizations.   Extra-legal voluntary organizations are the accrediting bodies that classify institutions according to their ability to meet selected standards. The Evaluative Criteria applied to high schools, the Evaluative Criteria that are being used for Junior High Schools and Middle Schools, and the criteria applied by the National Council for the Accreditation of Teacher Education are illustrations of documents that specify standards required for accreditation. The criteria applied to accreditation decisions are revised periodically and constitute a response to change that is forced on those schools that wish to seek or retain accreditation. Accreditation has become sufficiently important to bring pressure on institutions to seek accreditation as a means of satisfying their supporters, whether they be taxpayers or alumni, to qualify for the privileges of accreditation, and to force changes that might otherwise be difficult to promote. The standards for NCATE accreditation have recently been revised to measure products as well as processes and this represents a change from the previous standards that based accreditation, primarily, on the process employed in the preparation of teachers. The 4th edition of the Evaluative Criteria for the Evaluation of Secondary Schools, published in 1969, deleted "Core Program" because little use was made of this section in the 1960 edition; it no longer lists classical and modern languages as separate areas, and has added an additional section on "Special Education." These changes represent changes in the high

school program or represent changes that have come about from other
sources and are now reflected in the revision of the criteria. Accredit-
ing bodies are in a privileged position to alter school programs because
their status is sufficiently secure that schools voluntarily submit to
the regulations they impose and yet they are free from the restrictions
that come from the usual public pressures that elementary and secondary
schools experience.

Specialized professional organizations and accrediting agencies
represent another dimension of the components that exist within the edu-
cational realm. They both serve large portions of the educational field
and are both instrumental in the establishment of changes in the fields
they represent.

Factors Outside the Educational Field

The school must satisfy the elements within the educational arena but
it must also respond to elements that are outside of its domain. One of
the most obvious external restrictions on the school is the requirement
that it adhere to state and federal constitutional requirements. Another
important factor that determines school practice is found in the court
decisions that rule on educational practice. The third external element
included in this section refers to the pressures that society brings to
the school to respond to its interests. These three elements are closely
related to each other and, at times, it appears that the school serves as
the vehicle to test the relationships among the people, the constitution,
and the courts. Whether the school is the intended target for contro-
versial matters or an innocent bystander who happens to provide a

convenient location for issues to be settled seems to vary with the issue

at stake. The intertwining of these three elements and their effect on

the school serves to emphasize the importance of the educational system

in this country and the interlocking relationship the public school has

with the society and the rules and regulations that govern that society.

The specific role of the federal government, the courts, and society in

the promotion of change has not been made clear in the analysis of the

changes in this report. It is the intention of this section to clarify

this relationship and to explicate the category "External Origin".

The Role of the Federal Government. Prior to 1900, federal leg-

islation responded to the needs of the educational system with ordinances

and acts that provided land for the establishment of educational institu-

tions. And no direct control was exercised over the use of these lands.

In more recent times the government has expanded its role and the issue

of direct or indirect participation has become a central issue. The role

of the federal government in education has traditionally been a role of

non-intervention. The states have viewed the responsibility for the edu-

cational system to be theirs and we have had a decentralized system of

public education. As differences between state systems became more

obvious, as the population became more mobile, as problems for a given

state burst the limits of its ability to cope with its burden, and as

questions arose about state constitutions and school regulations violating

federal guarantees to individuals, the entire issue of federal and state

roles in the educational system became murky and controversial.

Direct relationships and controls by the federal government includes

those schools established for native Indian children, dependents of mili-

tary personnel stationed overseas, federally controlled schools in territories such as the Panama Canal Zone, or in federal programs that bypass state departments of education and provide for contracts with local educational agencies.

Indirect support and shared control can include the allocation of funds on the basis of some formula for shared costs, the granting of funds under a given set of guidelines or stipulations, or issuing of funds for the school to use according to its own local needs. We have numerous examples of the federal government alloting funds with the requirement that the state provide some form of matching support. For example, the Smith-Hughes Act of 1917 extended the study of agriculture, home economics, and industrial subjects to the secondary school. All buildings and equipment under this Act were to be provided by funds from the state or local level. The George-Barden Act of 1946 expanded the Smith-Hughes Act and required a 50 percent matching of state funds.

The government has also provided emergency funds to enable local school districts to cope with problems that were not their own creation. These funds do not require specific matching of federal funds as, for example, provided in the Federal Assistance Laws of 1950. Serious financial problems troubled communities where a large increase of federal employees, as in the case of military bases or federally dependent industries, increased school enrollments without increasing the tax base. Laws were passed that provided for financial assistance to these communities to offset the lack of tax money to support their increased school enrollments.

Another possibility, known as revenue sharing, removes federal

restrictions from financial support and is comparable to unrestricted
alumni donations to their alma mater. Without attempting to discuss the
issues in revenue sharing, the point made here is simply that the finan-
cial influence of the federal government can be managed in a variety of
ways, direct, indirect, and unrestricted and the recipients can be state
departments of education, local schools systems, institutions of higher
education, or specific programs such as vocational educat: .

The consideration in this report is not so much what the federal
government can do to affect school practice but what the federal govern-
ment has done. In this respect, it is quite clear that the federal
government has been an influential and strong force in the determination
of school practice and programs. Most of the support of public education
by the federal government has come about in more recent times and a brief
recounting of this support underscores the strong role the government has
played. In higher education the major support from the federal govern-
ment has been offered through the following acts: Bankhead-Jones Act
(1935), National Defense Education Act (1958), Higher Education Facilities
Act (1963), and Higher Education Act (1965). Vocational Education has
received support for over a century in various forms, but legislation
within the time period of this report included: Smith-Lever Act (1914),
Smith-Hughes Act (1917), Vocational Education Act (1946), Federal Civil
Defense Act (1950), National Defense Education Act, Title VIII (1958),
Manpower Training and Development Act (1962), and Vocational Education
Act (1963).

Elementary and Secondary schools have recently been singled out as
deserving special assistance to enable them to help the nation assume

certain responsibilities. Some of this legislation has included: Lanham
Act (1940), Federal Assistance Laws, P.L. 874 and P.L. 815 (1950), National
Science Foundation (1950), National Defense Education Act (1958), Clubs
for Boys and Girls Interested in Science (1951), National Foundation on
the Arts and the Humanities Act (1965), Elementary and Secondary Educa-
tion Act (1965) and Elementary and Secondary Education Act Amendments
(1967).

Additional programs in Adult Education, Teacher Education, special
services such as the school lunch program, and assistance to individuals
through G.I. Bills add to the role that the federal government has assumed
in support of education. A series of questions could be raised in regard
to the administrative machinery for the management of federal support,
the question of general versus categorical support, and the issues of
temporary or continuing grants, but if we look at the changes in the
schools and the nature of school programs today, the federal government
has made a major difference throughout the entire educational system.

The Role of the Courts.   Laws have been passed and educational
policies have been established that eventually have come to the courts to
be challenged. Because of the complex arrangements of state and federal
laws, and the variety of policies that have been employed in the school,
it is not surprising that the courts have played a central role in deter-
mining the actions of the school. Though courts may not be regarded as
forces for change in the educational arena, the decisions handed down by
the courts have far-reaching impact on whether the school will continue
certain practices or must alter them. A brief review of the areas in
which legal decisions have been rendered and examples of some of the

changes in the school will serve to illustrate the role of the courts in relation to school practice.

Laws have been passed or court decisions have been given in such areas as the constitutional and legislative establishment of education, the scope and quality of education, the responsibilities and rights of teachers, school administration, responsibilities of state educational agencies, freedom of religion and separation of church and state, public financing of nonpublic schools, and equal opportunity and protection under the law.

Constitutional and legislative establishment of education has led to the individuality of each state in establishing its educational system. All states have made provision for education in their state constitutions; they have made laws in regard to the financial support of schools, and have established school districts and their reorganization. The states have been established as the unit on which our educational system is based. The states see their role as autonomous to the federal government and view the school districts within the state as agencies of the legislature that have only the powers granted to them by statute.

The improvement of education has been generated through laws that deal with minimum requirements for schools in such areas as facilities, curriculum, textbooks, and libraries. State laws require minimums in regard to facilities such as the site, buildings and their construction, lighting, heating, ventilation, and equipment. They also cover teacher qualifications, organizational requirements (length of school year or school day), hygiene, safety, and community responsibilities. Laws in the field of curriculum in some states require the teaching of the ill effects of alcohol and narcotics, and courses in U. S. Constitution,

physical education, U. S. History, physiology and hygiene, geography,
reading, and spelling to mention a few.

Issues about textbooks center on questions about the provision of
free textbooks, the selection of books, and the frequency of changing
textbooks. Laws and court actions have dealt with the establishment of
school libraries and relationship between school libraries and libraries
that might be of general benefit to the community at large.

The responsibilities and rights of teachers have focused on teacher
certification, employment conditions, laws for minimal salaries, collec-
tive negotiations for public employees, competition among organizations,
and liability for negligence.

The administrative services that schools provide have been the
target of laws and court actions as they apply to compulsory attendance,
transportation, school food services, school finance, policies, rules,
regulations, and legal services.

Laws have been tested in the courts about the separation of church
and state in education on the issues of rights of parents, rights of
students, released time, morning exercises, religious dress, and the use
and rental of buildings.

Equal opportunity and protection under the laws in education has
led to court cases involving charges of discrimination, segregation, and
civil rights.

Laws and court cases can be documented that have made a difference
in consolidation of schools, attendance regulations, transportation of
pupils, required subjects, and teacher qualifications and most other
aspects of the school program. Before advocating any changes that may
tread on constitutional, legislative, or court statutes and rulings,

advocates of change would do well to ascertain the legality of their pro-
posals or the probability that the courts will support their proposals
if the changes are likely to be challenged in a court of law.

Society.   Society is sometimes regarded as the body for whom the
programs and policies of the school are designed. But the term "society",
used here, is not meaningful unless it is defined in terms of the spokes-
men or organizations that claim to speak for it. We consider "society"
to be all agencies or individuals, except those within the field of edu-
cation, and the constitutional or legal determinants of school practice.
Such a definition includes organizations like the labor unions, the
Council for Basic Education, professional organizations that represent
other professions such as law or medicine, service clubs, foundations,
and individual spokesmen who marshall sufficient backing to make inroads
into the educational field. We do not regard society, in this sense,
necessarily to be hostile or friendly to education; it is simply another
factor that must be recognized if planners are to be realistic about
factors that determine the success or failure of ideas for change. Some
changes, such as compulsory education and driver training, have been in-
corporated into the school with the active support of some element of
society. Other changes have been attempted but have failed to become
firmly established, such as sex education, when society did not give
strong approval.

During transitional periods when the school considers changes that
directly affect a large part of society, pressure groups may arise to
influence the decision which the schools are attempting to make. The
progressive education movement stimulated reaction from society that

questioned the permissiveness of schools, some elements of society
opposed German as a foreign language in the schools during and following
World War I, the look-and-say advocates were bombarded with phonics pro-
ponents. in the early 1950's, courses about communism met with public
resistance when efforts to include such courses were made, the intrusion
of vocational education on the apprenticeship procedure was opposed by
labor unions, and the pressure groups that have formed to combat or sup-
port the variations of desegregation policies are legion.

It is difficult to predict when society will rise in support or
opposition to a proposed change, or if it will rise at all. It appears
from the changes that have been attempted that moral indignation, financial
stress, and personal inconvenience, are most likely to stimulate groups
within society to react to changes in the public school.

Chapter 5

Conclusions

These conclusions are based on information derived from the data on changes, the realities of the field of education, and from theories of change. Planned change should be based on a combination of past experiences, current theories, and careful analysis of all aspects of the proposed change in relation to the characteristics of the field of education. Our conclusions and recommendations encourage such an approach.

No major aspect of the educational system has been exempt from change during the past 75 years. Curriculum, Instruction, and Organization and Administration have all changed during this period of time. Whether changes have been sufficiently rapid to meet the problems they were designed to solve or whether they were premature is another matter, but there is ample evidence that no element of the educational system is too sacred to be altered.

About 75 percent of the changes studied in this report were successfully implanted. The 25 percent of the ideas that failed, and other failures that were thwarted before they received recognition in the literature, suggests that enough ideas for change have succeeded and enough have failed to cast doubt on our current ability to predict success or failure. At the present time there is no "sure thing" in planning educational change. Regardless of how optimistically the planners of change may be about their plan, they should anticipate resistance. And resistance

arises regardless of the strong support an idea for change may have.
Changes mandated by courts, changes supported heavily by financial
investment, and changes supported by influential groups have, under some
conditions, failed to become part of the educational system.

The nature of the school system requires that those who must implement
changes be persuaded to lend their support. The educational system
includes classroom teachers, school administrators, officials in state
departments of education, and many others who represent different degrees
of power and influence. They must be recognized and included in efforts
to bring about educational change. The school system also includes
financial support, legal backing, constitutional provisions, existing
facilities, buildings, sites, and a large investment in other necessary
elements. Because of these many factors, changes that harness this massive
educational enterprise, rather than conflict with it, are more likely to
succeed. The existing school system, rather than alternatives, is the
best place to attempt change if the effects are to be widespread.

Major changes in education are too complex to reduce all efforts to
produce and diffuse change to a single formula. But the conclusions and
recommendations that follow should serve as guides to those who attempt
to promote change.

On the basis of the data obtained in this study, the following
statements seem warranted:

1. Changes in methods of Instruction are apparently more difficult
to make successfully than changes in Curriculum or Administration.

2. Changes in Instruction are most likely to originate within the
educational profession. In no case in the past did a successful change

in Instruction come from outside of education. Changes in ways of teach-
ing and organizing instruction are neither the result of legislation nor
social pressure, but rather the outcome of professional wisdom and
research. This is attributable partly to the fact that the teacher's
behavior in the classroom is shaped by factors considerably removed from
social concerns, partly to the stability of teaching patterns, and partly
to the intellectual character of teaching about which the public has little,
if any, information.

3. A change that requires the teacher to abandon an existing practice
and to displace it with a new practice is a high risk. If the teacher
can follow the innovation without giving up his accustomed ways, the
innovation is likely to succeed. If teachers must be retrained in order
for a change to be made, as in team-teaching or non-graded schools, the
chances for success are much reduced unless incentives to be retrained
are provided as in the case of NSF support and certification requirements
for the teaching of new mathematics.

4. General curricular expectations by society are most likely to
center on broad needs such as environmental education or safety.

5. Specific curricular changes such as the establishment of the
elective system or extra-curricular activities are initiated often from
within the field of education. Successful changes in Curriculum can
originate from within education or outside of education. Neither point
of origin monopolizes ideas for curricular change.

6. Curricular changes that represent addition of subjects or up-
dating the content of subjects are more permanent than changes in the
organization and structure of the curriculum. Efforts to change the

curriculum by integrating or correlating the content, or creating new category systems into which to organize the content, are taken at great risk. Complete or considerable displacement of an existing curriculum pattern is not likely to be permanent even if the faculty initially supports the change. This can be attributed partly to cognitive strain on the faculty, partly to upsetting the expectations of pupils and consequent parental distrust, and partly to the mores of the faculty which tend to become stronger when threatened by change.

7. Changes in the curriculum that represent additions such as new subjects or changes in the substance of subjects can be made most securely with social support such as legislation or organized interest groups. The failure of curricular changes to be permanent is to be attributed either to lack of social support or displacement of the existing curriculum pattern. If school authorities are successful in finding social backing for the addition of a subject to the curriculum, for example, the change can be made with little risk of failure. On the other hand, if social opposition is pronounced, the probability of the change not being made is very high, or if it is made, it is likely not to persist.

8. Efforts to alter the total administrative structure, or any considerable part of it, or to make changes that entail such reorganization are likely to be unsuccessful. Plans to make such changes are made at considerable risk of failure.

9. Changes that represent additions or extensions of the educational ladder such as junior college or nursery school are more likely to be fast than changes that entail general modifications of the administrative organization such as flexible scheduling.

10. The lack of a diffusion system will lead to abortive change. A change initiated in a particular school, in the absence of a plan for diffusion, no matter how loudly it may be acclaimed, is not likely to become widespread or to be permanently entrenched in the school in which it originated. The Winnetka Plan, Dalton Plan and creative education are examplars of this principle.

11. Changes that have the support of more than one critical element are more likely to succeed. Compulaory education with legal, social and educational support did not have to overcome as much resistance as it would have if educators alone had given support to the change.

12. Changes will be resisted that require educational personnel to relinquish power or changes that cast doubt on their roles, as in the case of consolidation and redistricting of schools. Accompanying legislative, legal, and fianacial impetus increases the probability of success in such changes.

13. Changes that appeal to the democratic principle of "worth of the individual" tend to be well received. Guidance programs and indvidualized instruction exemplify this principle.

14. The weight of the cognitive burden is one of the significant factors that helps to determine the permanence of a change. If the cognitive load is light, other things being equal, a change is more likely to persist than if the burden is heavy. The weight of the burden in proportional to the number of factors entailed by the change. For example, if the total administrative structure or any considerable part of it is the object of change, the chances for successful innovation will be vary low. The same observation can be made about changes in methods of instruction of curricular changes.

15. The initiation of change in a school may come from a number of sources -- professionals, social groups, governments, and so on -- and they may arise from research as in the case of ability grouping and programmed instruction or from ideologies as, for example, the core curriculum, and from professional wisdom, as in the platoon system. The source of the change appears to have far less to do with its staying power than the kind of support the change receives and the strain it places upon the school personnel. The core curriculum and creative education are constant drains on the time and energy of a faculty and they consequently tend to disappear even though each one has enjoyed faculty support. On the other hand, international understanding tends to be more persistent as a curricular change. It requires far less time and energy of the teacher and has enjoyed no greater support from the faculty than either the core curriculum or creative education.

16. The federal government, as a change agent, will have optimum success if it takes certain facts into account. In the first place, the government acts in two ways. It passes enabling legislation empowering various federal agencies to do specified things to attain certain goals. In the second place, it acts through the courts to interpret laws, to establish norms, and to order certain actions by school officials. The programs of the USOE are based largely on enabling legislation. In the development, inauguration, and supervision of its programs USOE is subject to the same conditions of success -- set forth above -- as any other change agent--foundation, pressure group, commission, individual, or what not. For example, its efforts to induce changes in methods of teaching are

likely to be less successful than efforts to change the content of the curriculum or to extend or modify the educational ladder; its efforts are likely to be more successful if it has the support of commission recommendations, organized groups, and professional personnel.

17. The data set forth in this report are too gross to provide insight into the sort of situational analysis that successful change entails. More refined data can be secured by intensive case studies made along the lines suggested in appendix B. It is recommended that a few well chosen case studies be made to explore the underlying variables whose manipulation and control can give a change agent greater assurance of success.

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APPENDIX

Appendix A

Glossary of Changes

<u>Ability Grouping</u>   The practice of separating the more intellectually
gifted from the less gifted so each group can proceed at its own rate.   A
wide variety of ability grouping plans designated "XYZ ability grouping,"
gained momentum after World War I when the psychological testing movement
gave educators fresh confidence in their ability to classify students
according to ability.   To alleviate the problem of retardation caused by
extensive heterogeneity in the graded classroom, the "XYZ" plans centered
on curriculum readjustment; children in a given grade were separated into
ability groupings to match a curriculum with a child's ability to progress.
Criticism was leveled at the undemocratic nature of divisions based on IQ
and achievement measures alone.   A few educators proposed insightfully,
that no true homogeneity existed across abilities in any group because
no individual child was homogeneous in all abilities;   hence, group homo-
geneity could only be achieved through regrouping as activities changed.
As a result of much criticism, ability grouping based primarily on IQ, and
popular from 1920-1940, is currently viewed as obsolete.   Cognizance of
the heterogeneity in each child's abilities eventuated in what is currently
considered "ideal" ability grouping and is sometimes termed "individualized
instruction":   a plan whereby learners are grouped homogeneously for skill
acquisition determined by measured competence in each skill.   Such a
plan is intended to ensure learning success for each child in all academic
skills irrespective of measured IQ. (4: 378   )

<u>Activity Curriculum</u>   A child-centered curriculum developed around
1900 which had as its theoretical base the idea that the important thing
in learning was not so much the content learned as the general mental
power developed. It was based on the dynamic or functional psychology of
William James and E.L. Thorndike which stated positively, as a matter of
empirical observation rather than philosophical speculation, that the
child at birth was organically possessed of a sizable list of instincts
and impulses. The logical conclusion was that curriculum should be
designed to give expression to these assertive capacities, and should be
organized in terms of the activities of children themselves. An early
advocate of activity curriculum in America was Colonel Francis W. Parker.
Later, at the turn of the century, John Dewey implemented an activity
based curriculum in his experimental school at the University of Chicago.
Thus a traditional subject matter such as reading was not taught as an
independent subject but as a means of acquiring information. Dewey's
curriculum gave a central position to activities such as cooking, sewing
and carpentry. All subject matter was taught in conjunction with the
activities. The activity curriculum clashed vigorously with the traditional,
logically organized subject matter curriculum. Dewey responded to the
controversy in a brochure entitled <u>The Child and the Curriculum</u> published
in 1902 in which he stated that the child-centered or activity curriculum
and the subject-matter curriculum had a common denominator: experience.
Both were essentially activity curricula; the point was how to organize
it. The subject matter had to be incorporated in an appropriate form
into the child's experience at a given stage and phase of his development.

To date the romanticists, who hold a sentimental regard for children's
needs and the essentialists, who insist that logically organized subject
matter should reign supreme, remain at opposite poles while the moderate
educators have heeded Dewey's analysis. (5: 343)

Adult Education   The purposeful effort toward the self-development
of adults, conducted by public or private agencies such as adult schools,
extension centers, settlements, churches, clubs, and Chautauqua associations.
Included is the provision of any kind of general, cultural, or practical
education directed toward such special subjects as the following:
citizenship, child welfare, farming, health, industrial relations, art,
literature, and science. Participants are usually beyond compulsory school
age and attend classes on a part-time basis. Adult Education is considered
to be the fifth level of the American Educational system--the natural
culmination of pre-school, elementary, secondary and higher education.
(10: 232)

British Infant School Movement   The Infant School is the lower
division of the primary school in England which serves pupils from 5 to
8 years of age. The BIS movement is an outgrowth of a "tradition of
revolution" in these infant schools since 1950. The main feature of the
movement is a genuine commitment to informal, child-centered. education.
Concepts of organization and instruction which characterize the movement
are the integrated day (no class lesson based on presecribed time allot-
ments, rather, organized learning centers are arranged for general activity,
science and mathematics, visual arts and reading and language arts);

(b) vertical grouping - across ages; (c) education for thought process development - based on Piaget's concepts of cognitive development. Progress of the movement has been facilitated by, (1) freedom of school personnel, particularly teachers, to determine curriculum; (2) government educational officials' role changing from "inspector-evaluator" to "advisor" and (3) insights from Piagetian psychology in the shaping of English educators' concepts of children's learning and motivation. Additional characteristics of the schools are deemphasis of traditional pupil evaluation, a dedication of school facilities to self analysis and continued improvement, encouragement of teacher initiative and judgment, greater value on development of problem solving strategies, and a general emphasis on process rather than product. A government sponsored study of early education in England known as the Plowden Report (1967) has since directed the attention of a number of American educators to the BIS movement. Evidence of open education in the United States based on BIS is symbolized by the Vermont Design for Education and the Head Start follow through plan for "Continuing Growth" presented by the Education Development Center (Newton, Massachusetts). Both plans have developed since 1960. (15:263)

Carnegie Unit   The system of units or credits, begun in 1900 by the Carnegie Foundation for the Advancement of Teaching, the definition of which formed the basis of practically all academic bookkeeping in the twentieth century. This defined a unit as a course of five periods a week throughout an academic year. The Carnegie Unit is basically a standard of measurement for describing the secondary school subject matter pattern that comprises the entrance requirements of a college. Assuming

16 units of work in a four year secondary school pattern enables secondary
schools organized on any other than a four year basis to estimate their
work in terms of the unit. Based on the Committee on College Entrance
Requirements report in 1899 which recommended that "any piece of work
comprehended within the studies included in this report that has covered
atleast one year of four periods a week in a well-equipped secondary school,
under competent instruction, should be considered worthy to count toward
admission to college." (18: 587)

The Community School The idea of a community school has been
current since the beginning of the century. It was Dewey who said the
school was, or should be, an "embryonic typical community." It was a
wide-spread concept in the 1930's and has recently been revived through
the work of the Mott Foundation in Flint, Michigan, and on the international
front through the Fifty-Eighth Yearbook of the National Society for the
Study of Education. The conception of the Community School consists in
the use of the school to promote community life as well as using the
community activities and problems to educate the youth. (30: Part II)

Compensatory Education A term coined by President John Fischer
of Columbia University to refer to those educational programs which attempt
to improve the educational opportunities and eliminate the deficiencies
that some students bring to the classroom. Some programs, such as speech
correction, consist of a single activity while others, such as Head Start,
encompass a sequence of experiences and constitute an entire program.
Compensatory education implies that schools shall provide necessary

stimuli to make up for differences in pupils' experiences and opportun-
ities. Federal and state funding of compensatory education projects
such as Great Cities Project, Speech Improvement Project, Listening Skills,
Head Start and others has been an attempt at eliminating educational
deficiencies. The greatest impetus for growth of such programs from
1960 to 1970 grew out of the Civil Rights legislation and the accom-
panying changes and demands wrought on the American public system of
education. (13: 994   )

Compulsory Attendance   The first state committment to universal
schooling was evidenced in 1852 by Massachusetts, the first to pass a
compulsory attendance measure. New York followed suit in 1853. Extension
of compulsory attendance laws was held in abeyance until at the end of
the Civil War, but by 1900 thirty two states, in most of the North
and West, had passed such laws. In 1918, Mississippi's acceptance of the
principle rendered the idea of compulsory elementary education universal.
Variations from state to state and region to region involved length of
annual attendance, the compulsory age period and means of enforcement.
The burden of compulsory attendance tended to force differentiation of
school purposes and curricula in order that the diverse educational needs
of a heterogeneous population might be met. (5: 415   )

Conservation Education   Conservation education has traditionally
stressed ways to counteract the bad effects of the misuses of natural
resources as well as ways to preserve resources. The period of 1960 to
the present has given rise to a national movement toward conservation

education, often referred to as ecology, for the purpose of educating

the American public to awareness of the elements of our culture and

civilization which have brought about misuse of resources and abuse

of the environment resulting in water, air, land, and noise pollution.

Because additional conservation education fell short in making people

aware that conserving the environment is every person's job, it has been

proposed that conservation education efforts expand in the following ways:

(1) emphasize outdooor education and nature study; (2) acquire natural

areas for schools and communities; and (3) educate for higher values

(i.e., conserve resources through establishment of a stable population

and rigid efficiency in the use of non-renewable materials). Presently, little

of an organized nature is done in the public schools to educate the young

learners to the new concept of conservation or ecology and their role

in its success. Future development of such a course appears eminent

in light of the crisis we now face of survival in a polluted environment.

(21:187)

<u>Consolidation of School Districts</u>   The reorganization or consoli-

dation of redistricting, as it is sometimes called, of school districts

involves the rearrangment of school district boundaries in order to

construct larger, more efficient units or to consolidate resources so as

to provide special services, such as area vocational-technical schools

and community colleges. At the close of World War II, there were about

103,000 school districts in the United States. Through reorganization

this number has been reduced to about 23,000. The number of districts

too small to operate their own schools had been reduced by more than

two-thirds since the war. (10:100)

<u>Core Curriculum</u>   The most popular form of curriculum design from 1930 to 1950. Although it had no uniform pattern, the core tried to avoid the atomistic quality of the elective curriculum by pulling together such subject matters as were cognate to it. As the core was usually larger than any single subject-matter area, it often required longer than one class hour to encompass it. The core curriculum could be so braad and diverse no teacher could handle it alone. Hence the growth of "team teaching"to attempt a cooperative solution to the problem. (1) subjects or a common body of experiences required of everyone, but with variability of content and activities to meet the varying needs of individuals. For example, part of senior high work may be a basic core running through grades 10, 11, and 12 with variable time allotments. A certain portion of each day may be devoted to the core, or common learnings. (2) an integration of traditional subject matter into forms taking fuller account of the development of children and the changing needs of adult life. Units of work such as "man and his environment", "living in contemporary America" are such examples of core projects around which required and elective activities are made available. Each unit allows for (a) the expression of individual interests; (b) widely diverse student activities and (c) study in depth of some crucial aspect of contemporary civilization. Traditional subjects are taught using the materials and activities developed within the core project. (4: 300   )

Creative Education   Since 1950 interest in creativity in education

has stemmed from J.P. Guilford's investigations in the domain of creative

thinking. Guilford stressed the intellectual operation of divergent

thinking as part of his model of the structure-of-the-intellect and he

closely tied divergent thinking to the creative process. According to

Guilford, divergent thinking rather than high IQ is the intellectual sub-

stratum of creative performance. Several strategies developed for liberating

creative thinking in the classroom are: (a) brainstorming (production of

large quantities of ideas under nonjudgemental conditions; (b) provision

of a permissive atmosphere accompanied by reinforcement of original

behavior; (c) laboratory training of originality; (d) auto-instructional

programs of story material and (e) low degree of controlling behavior by

teachers. Efforts toward facilitation of creativity through education are

just beginning with the primary difficulty being one of establishing

criterion or an index of creativity. The progressive movement in education

emphasized creative education. (11:268)

Dalton Laboratory Plan   A laboratory plan for individualized learning

developed by Helen Parkhurst in 1910 and adopted in Dalton, Massachusetts,

in 1920. The plan of curriculum organization was as follows: each pupil

was given monthly assignments known as jobs, in each school subject; each

job was divided into about 20 units; workbooks and instruction sheets

enabled the pupil to work individuallly at his job, while a job card enabled

him to record his progress; pupil-teacher conferences were held whenever

necessary to take the place of recitations; classrooms were known as

laboratories; pupils were free to plan their own work schedules but were

obliged to finish each monthly job before proceeding to the job for the

succeeding month; cooperation and group work were encouraged. Under this plan children were put on their own initiative and resources in a way which altered from the old recitation method of the nineteenth century. (41:71)

Desegregation   In 1954 the Supreme Court ruled directly on the issue of racial segregation in schools. This decision declared that segregation by races in public schools violates constitutional rights guaranteed by the fourteenth amendment. This ruling reversed previous Supreme Court decisions that "separate but equal" schools were permissible. Seventeen years after the decision progress toward desegregation of schools remains slow. School attendance areas based upon residential patterns, new mixtures of populations in rapidly growing urban areas, migration of population within metropolitan areas, resistance to federal authority, and continuing hard cores of prejudice and emotional attitudes have complicated enforcement of the decree. (18:496).

Driver Education   In an effort to prevent traffic accidents a program of driver education in the U.S. schools was organized by the AAA in the mid-1930's and by the late 1960's more than 1.8 million high school students had been trained. Driver Education is required in many states and courses are currently taught in more than half of the nation's high schools. An accredited Driver Education course includes a minimum of 30 hours of classwork, 6 hours of on the road instruct... and 12 to 18 hours as an observer in a dual-control car. Driving simulators, model traffic boards, and driving ranges are used for instructional purposes. Many states have passed legislation providing for state financial aid to

high school driver education. Policies and guidelines for teacher pre-
paration and certification in driver and traffic safety education were
developed in 1965 at a national conference sponsored by the National
Commission of Safety Education, NEA. (12: 849)

Elective System   Curriculum built around the nature of the child,
based on the idea proposed by Froebel and earlier by Kant that the child
has an a priori self-active nature that is constantly striving to assert
itself. At the theoretical level, it is the latter half of the prescription-
election controversy which reached its height from 1825-1850 and which had
as its base the question of whether to conceive the curriculum as composed
of activities or subject matter. By 1900, it reached the height of its
development and acceptance at colleges like Harvard, and in the report
of the NEA's Committee of Ten, in which all secondary school subjects were
declared of equal worth if pursued for an equal length of time under equally
competent instruction. By 1910, liberal minded conservatives felt it wise
to allow each learner to map out his own course of study, provided this
course contained certain essential subjects in each of the important fields
of knowledge. (4: 287)

Environmental Education   The Environmental Quality Education Act,
authorized $45 million over the next three years for environmental education
programs in elementary and secondary schools, became federal law in
November, 1970. An Office of Environmental Education is to be established
within the United States Office of Education to administer and coordinate
the program. According to legislation, activities may include curriculum
improvement, dissemination of materials, pre and in-service programs for teachers

other personnel, support for environmental education programs in the
schools, etc. (39)

Equalization Procedures   Local school districts have been the main
determinent of the educational product since the inception of compulsory
public education. A drawback to equal educational opportunity across
districts is reflected in the fact that a small district can often only
afford a meager elementary school system with inadequate facilities and
poorly trained and paid staff. In an attempt to equalize the tax burden
of residents in small districts as well as to improve the educational
program, through a reduction in disproportionate monies across districts,
consolidation of school districts into larger units has been encouraged.
By 1965 there were still 28,814 local school districts in the U.S., a
drop of 52% from the previous decade. (12:611)

Extra-Class Activities   That area of the total curriculum which
includes experiences carried on outside the regular classroom and which
often receive no formal credit. Examples of common extra-class activities
are work experiences, out-of-school experiences, camp experiences, clubs,
assembly programs, interscholastic programs, intramural athletics,
student participation in government and other activities under the guidance
of the school. Some purposes of such activities are to: (a) foster
democratic human relationships, (b) develop self reliance, (c) promote
school morale, (d) develop respect for authority, (e) provide for
individual needs and differences and (f) promote physical and mental
health. Responsibility for activities is shared by students and faculty.
(4)

<u>Flexible Scheduling</u>   Flexible scheduling includes a modification
in the conventional schedules (characterized by one-day cycling, standard
length periods, and high level control over students) that facilitate
a greater variety of activities in school than are possible under con-
ventional scheduling condition. Double periods, rotating periods, multiple
classes and block time are often referred to as flexible scheduling,
though they more closely resemble traditional scheduling. The only
complete break from these plans is the more experimental variable class
schedule called modular scheduling. Two popular types of modular scheduling
are the Stanford School Scheduling System (SSSS) and the Indiana Flexible
Schedule (IniFlex S). Both systems have a short time period (20 to 30
minutes) called modules as their unit. Class periods are built on a
combination of modules to obtain the legth of time necessary for a parti-
cular activity. Through the use of flexible modular scheduling, students
can be scheduled into four instructional activities: large group, small
group, laboratory and independent study. Its success depends on a high
degree of responsibility on the part of teachers and students. Computer
aid in scheduling is necessary. The primary aim of flexible modular
scheduling is to give students more time to learn independently at an
individual rate. (45: 118   )

<u>Guidance</u>   Guidance had its inception in the mind of Frank Parsons
(1854-1908) who first installed a couseling bureau in a Boston settlement
house in 1908. Guidance at this time was solely vocational involving
only dispensation of personal advice on vocations. From this limited
beginning, guidance was greatly improved through the improvement of a

scientific measurement of individual differences. The beginning of

educational guidance: (1) guidance concerned primarily with matters

relating to schools, courses, curricula and school life, became visible

around 1910 through a series of "How-To-Study" books. The enlargement

of the scope of vocational guidance into educational guidance has been

augmented by its further enlargement to include (a) social and (b) personal

guidance, i.e., (a) the phase of guidance that attempts to assist persons

or groups in their adjustments to the mores and practices of society and

helps them to develop satisfactory interpersonal relationships and

(b) the phase of guidance which aims to assist an individual in respect

to personal habits, attitudes, and intimate personal problems. School

guidance services today range from help with course selection and scheduling,

orientation, compilation and group testing, to personal and group counseling.

Some innovative guidance programs are complex systems of services which

involve highly trained and specialized personnel: counselors, psycholo-

gists, social workers, etc. Passage of the NDEA Act of 1958 and Conant's

suggestion that there should be one full-time counselor or guidance officer

for every 250-300 pupils in the high school in 1959, helped to expand

the view of guidance as a crucial service provided in the schools.

(45:132)

Head Start   A program first sponsored by the U.S. federal govern-

ment in 1964 which provides compensatory preschool education for children

who are the product of economically handicapping conditions. The programs

encompass the full academic year prior to formal school entrance. The

broad conceptual foundation of the project rests on the notion that the

quality of children's intellectual development depends upon their early
experience and that the achievement of intellectual potential is often
impeded by an impoverished environment. Project Head Start is broadly
conceived as an seven-component multi-disciplinary enterprise including
education, medical-dental care, nutrition, social services, psychological
services, parent education, and the involvement of community volunteers.
(10:518)

    <u>Home Economics</u>   Endorsement of home economics as a subject in
American public school curriculum has occurred since 1900. A group of
leaders met to broaden the concept of home life instruction in 1899 in
a series of meetings known as the Lake Placid Conferences. The American
Home Economics Association was formed as an outgrowth of ten subsequent
Lake Placid Conferences. The objective of home economics education was to
focus primarily on strengthening the home by developing in students the
ability to live constructively at home and with the family. By 1914
home economics programs were available in some schools in all states,
though a broader plan was not implemented until 1920. The 1917 Smith-Hughes
Vocational Education Act provided subsidies to states for instruction below
the college level and for teacher preparation. The Smith-Lever Act provided
for expansion of programs carried on by the land-grant institutions, which by
1914 offered four-year courses in home economics to 12,000 students. The
Vocational Education Act of 1963 had as one purpose that of directing home
economics toward education for gainful employment that will qualify indi-
viduals to engage in occupations involving knowledge and skills in home
economics subject matter. The issue of whether to train for gainful employ-
ment or continue traditional preparation for home and family life now confronts
home economics education. (18:607)

Individually Prescribed Instruction   Individually Prescribed Instruc-
tion (IPI) was conceived at the University of Pittsburgh's Learning Research
and Development Center by Robert Glaser in the early 1960's. Basically it
is a plan by which programmed materials and tests can be prescribed for
a child by a teacher as needed to facilitate independent study and accom-
odate individual differences within and across pupils. As of 1969, its
principal features include a continuum of behavioral objectives in mathematics
and language arts, instructional materials and aids appropriate for self-
directed study, procedures for the assessment of continuous progress, and
guidelines for teachers in reference to learning prescriptions for in-
dividual children. At present, academic continua are available for the
entire kindergarten-sixth-grade span. In its "pure" form, IPI is one of
nineteen Project Follow Through programs originally authorized for
implementation in 1968 under the Economic Opportunity Act of 1964.
(15: 118   )

International Education   A movement to foster the teaching of
International Understanding through adaptation of materials in the various
content fields and at all levels of the educational ladder. The movement
was launched by a yearbook of the National Society for the Study of
Education; published in 1937, but launched in 1935 under the editorship
of James T. Shotwell. The movement was reinforced in the Sixty-Eighth
Yearbook of the Society, published in 1969.   (29)

Junior College   An idea generated by William Rainey Harper (1856-
1906), president of the University of Chicago, that a distinction be
drawn between the first two and the last two years of college. He
called the first two years the "academic college:" the last two "university
college." A change of terms to "junior" and "senior" college did not
reflect his distinction in the kind of work done in each. The idea had
ample European precedent and it had originated previously in an upward
extension of the common school called the "people's college." Junior
colleges were expected to be terminal institutions for most students though
it was summarily believed that it could serve three groups through its
separate two year course of liberal studies, i.e., it would provide a
natural break for the departure of learners who could not afford to
continue; and it would meet the needs of many who for varied reasons
could not take a longer term of residence. Though development of the
junior college was slow, by 1940 hundreds of junior colleges had been
established primarily in the middle and far Western states, particularly
in California and Missouri. (5: 397   )

Junior High School   The result of a reorganization of the high
school in the early 1900's to include 7th and 8th grades as a junior high
school within which some secondary subjects such as algebra, science, and
foreign language would be taught. The idea of a junior high school stemmed
from thoughts presented in 1888, by Charles W. Eliot (1834-1926) before the
National Education Association in a speech entitled "Can School Programs
be Shortened and Enriched?" Eliot made the proposition later taken up
and approved by the Committee of Ten and the Committee on College Entrance

Requirements that secondary education commence two years earlier than
had been customary. Eliot argued that the elementary school wasted
much time on endless repetition, that a break after six rather than eight
years more closely paralleled mental and physical changes of adolescence
and that a shortening of the elementary program would allow for more
vocational differentiation and preparation in the last two years of the
secondary school. In 1909 and 1910 both Berkeley, California and
Columbus, Ohio claimed the first high schools, though Richmond, Indiana
is reported to have begun one in 1893. (4:417)

Kindergarten   An educational setup or section of a school system
devoted to the education of small children from 4 to 6 years of age.
Based on the theories and practices of Froebel and brought to the United
States around 1850 by German intellectuals, it was first tried in 1873
in the St. Louis school system. The experiment recommended by Superin-
tendent William Harris and successfully directed by Miss Susan Blow,
attracted nation-wide interest. By 1918, the kindergarten had been
commonly accepted as the first rung of the American ladder system.
Kindergarten is usually characterized by organized play activities having
educational and socializing values, by opportunities for self-expression
and training in how to work and live together harmoniously, and by an
environment, materials curriculum and program carefully selected to
provide for child growth and development. Modern kindergarten is based
less on Froebel's principles and theories and more on recent findings of
studies in child growth and development. (4:307)

Linguistic Method   The term linguistics has only recently appeared
in the literature devoted to the teaching of reading. Linguistics deals
with the origin, nature, modification, and structure of language. The
advocates of linguistic methods of teaching reading place strong
emphasis upon the study of patterns of speech, vocal habits, and systems
of sound symbols such as the arrangement of words in sentences, and the
variation of function of meaning when the same word occurs in different
locations in a sentence. (44:10)

Look-And-Say-Method   Disappointment with the results obtained from
artificial phonics led to emphasis on the Look-and-Say method in which
teachers discarded all forms of word analysis. From about 1910, the
Look-and-Say method was employed for non-phonetic words. (44:10)

Media and Technology   The entire spectrum of materials and equip-
ment that provides the teacher with the means to make information available
to the learner. Though media have been available since the inception of
the American Educational System, the first two-thirds of the present
century witnessed more changes in educational materials than the three
and two-thirds centuries that elapsed since the first Latin grammar
school was founded in 1635. The expanding resources and media include:
systems approaches to using media, new printed and graphic materials,
programmed textbooks, new "write-on" surfaces, audio and video recording
equipment, telephone and telelecture, language and audio laboratories,
sound slides and filmstrips, single-concept films, film cartridge projectors,
airborne distribution systems, computer-assisted instruction, simulation
techniques, and information storage and retrieval. (3:7)

Microteaching - Teacher Education   Micro-teaching was developed

by Professors Dwight Allen and Robert Bush in the teacher preparation

program at Stanford University between 1960 and 1967. It is an exten-

sion of the development of feedback techniques in the field of human

relations training, but it is distinguished by several innovations including

video tape recording teaching, and then reteaching micro-lessons, and the

rotation of groups of school pupils for each teaching episode. Micro-

teaching is based on the assumption that there are strategies which are

crucial to effective classroom instruction. By moving from simple to

more complex miniature teaching encounters it is hoped these strategies

are improved. At each step, a particular teaching strategy is discussed

and then incorporated into a short (5 minute) teaching lesson. The

trainee teaches this lesson to a group of four to six pupils in front

of a video camera, a superviosr, and often, trainee peers. Pupils fill

out a rating form and are then dismissed. The video recording is replayed

and criticized. The trainee makes one or two changes based on the criticism.

A new group of pupils is taught the revised lesson and comparisons are

made between the two lessons. A single teach-reteach cycle can be completed

in 30 minutes or less. It is the reteach cycle, which gives an opportunity

for additional practice, to which micro-teaching owes its success.

(16: 2   )

Middle School   Instituted in some schools after 1950, an experi-

mental form of secondary school reorganization which included the sixth

grade in the junior high school, thus making the junior high school a

four year school which included grades 6, 7, 8, 9. In only some cases

was this modified session of junior high school called a "middle school." Technically, the term has come to refer to the administrative unit on the secondary level containing the grades that follow the elementary school and precede the last unit in the school system. (18:346)

Mid-year Promotions   The practice of promoting pupils at all levels at mid-year, involving two promotion and two graduation periods per year. It was inagurated to help deal with the problem of retardation and social promotions. (4:378)

New Leadership Roles - Staff Differentiation   This category refers to new leadership positions opened in schools as represented by curriculum director, general supervisor, special education teachers etc. One result of this expansion of new personnel to take over responsibilities traditionally assumed by teachers or administrative staff was an alteration in school organization. Though individuals varied in the specific role or function they served, all were a part of a general effort to help the classroom teacher and to more efficiently share in administrative responsibilities of managing and improving the school system. (39)

Nongraded School   A nongraded school is one in which grade labels are removed from some or all classes. When grade labels are removed from kindergarten and the first three grades, the arrangement is known as a nongraded primary unit. A similar vertical arrangement for the grades four, five, and six is a nongraded intermediate unit. In pure nongrading, the sequence of content is determined by the inherent difficulty of the subject matter and the learner's demonstrated ability to cope with it; materials are selected to match the spread of individual differences existing within

the instructional group and the learners move upward according to their readiness to proceed. Promotion or non-promotion does not exist as such. An important goal is to provide continuous progress for each child. Nongrading is intended to facilitate curricular and instructional provisions for the individual differences present in a class group.

(31: Part I)

Nursery School   A school for children between the ages of 2 and 4 years, concerned with optimum development and adjustment of the individual child as a member of a group. First introduced around 1910 for the purpose of attending to the physical and mental health of the children in a preventive manner i.e., medical inspection was held upon arrival each day, diet and eating habits at lunch were carefully supervised and the nursery school teacher paid close attention to see what attitudes and habits were being formed during free play activities. The view that the first four years were critical to the future development of the child, a view based on Arnold Gesell's (1880-1961) and J.B. Watson's (among others) investigations of child development, was the impetus behind the movement to provide nursery schools to supplement the home as the main educational agency. The primary supplement was provision of an adequately equipped place where the prekindergarten child could play with others of his own age under skilled supervision. Though the Lanham Act of 1940 gave some federal funds to aid in the financing of public nursery schools, the nursery school started as a private enterprise and is still largely in that phase.

(4: 385   )

<u>Open Classroom</u>   The term "open education" refers to an approach
to elementary school teaching which has spread widely throughout the
British Infant schools - enrolling children aged 5 through 7 since
World War II and which has been cropping up in a variety of American
classrooms since 1965.   The approach discards the usual elementary class-
room set-up and the traditional roles of teacher and student for a freer,
more informal, and highly indivdiualized learning experience.   Charac-
teristics of classrooms using the approach are: (a) classrooms are
decentralized and rows of desks and chairs are replaced with spparate
"learning areas";   (b) children are free to move about the room, talk
to each other, and choose their own activities;   (c) teachers work mostly
with individual children or groups of two or three;   (d) heavy stress
is placed on designing a classroom environment wich in learning resources.
(10)

<u>Phonic Method</u>   The first phonic era began about 1870 and continued
to be emphasized until about 1920.   Several elaborate systems for the
use of phonics in word analysis were developed.   Pupils were kept so
busy sounding out words that they became slow laborious readers who lost
sight of meanings.   In time, the folly of this artificial method was
recognized and it was abandoned.   Today, descendents of these early
phonetic systems have returned phonics to the teaching of reading and
promote the teaching of reading through the phonics system.   (44: 9)

Physical Education   The American Association for the Advancement

of Physical Education was influential in the recognition of physical

education as an essential part of the educational curriculum. A critical

evaluation of the field from 1885-1889 culminated in the Boston Conference

of 1889 which enabled leaders in the field to compare the value of various

systems of physical education and determine what kind of program would

best meet the needs of American youth. Traditional gymnastics, favored

by leaders at the Boston Conference gave way to Wood and Hetherington's

new physical education of sports and games which forms the core of

present day physical education programs. With state legislation came

state physical education directorships to be administered by state

departments of public education. The aims of physical education are:

(1) organic education for vital vigor, (2) psycho-motor education for

power and skill in neuro-muscular activities, (3) character education for

moral and social growth and (4) intellectual education acquired through

free play as development of social thinking reflect a more wholistic

goal of physical education to provide American youth with a program for

total fitness. (34)

Platoon Plan or Gary Plan   The first permanent plan of platoon

school organization initiated in 1908 in Gary, Indiana, by Superintendent

William Wirt, based on the following scheme of organization: the school

was divided into two platoons, each platoon containing half of the classes

of each grade; continuous utilization of all school facilities was

secured by having one platoon do classroom work while the other engaged

in activities involving the use of the auditoriums, shops, gymnasiums

and playfield, the two platoons alternated throughout the day; all

teaching was departmentalized by subject field. The most significant

feature of the plan - that no facilities were ever idle - was specifi-
cally its attraction to less wealthy communities who found it difficult
to keep their school building programs abreast of the population increase.
(18:244)

Programmed Instruction   Programmed instruction (PI) is a form of
individualized instruction which has as its primary precursors the work of
Pressey in 1915 (first development of machines to automate testing and
teaching) and the work of Skinner in the mid-thirties (development of
operant conditioning with animals and related concepts to the problem
of teaching people). The appearance of PI in the 1950's was thus an
outgrowth of continuous developments in both education and psychology.
PI is characterized by the following: (1) student's attention focused
on a limited amount of materials (called a frame or step) at a time:
(2) a required response to each segment; (3) immediate knowledge of
results (feedback) after each response: and (4) individual pacing.
PI materials can be verbal or printed, pictorial, or conveyed by any
medium. They include both software and hardware. Though two types of
instructional programming, linear and branching, have been extensively
used, current trends suggest that linear teaching materials and machines
are used less than the branching type. (11:1021)

Project Method   A reconstruction of Dewey's problem method
developed by William H. Kilpatrick after World War I for the purpose of
rescuing the problem method from conservatives who used it to teach the
old problems of the traditional curriculum. The project method was
first used in agricultural courses to solve a problem in a concrete natural

setting using it as principles learned in school. The method required that
the learner (a) assess the situation, (b) conceive of a plan for what
was to be accomplished, (c) devise ways and means of manipulating
materials to execute the plan, and (d) to check results. Kilpatrick
saw the problem method gain vitality in the form of a project. He thus
conceived of the project method as a much more general method for teaching.
In addition to extending its scope he added a motivational character which
became dominant in the method. He described the project as "any unit
of purposeful experience, any instance of purposeful activity where the
dominiating purpose, as an inner urge, (1) fixes the aim of the action,
(2) guides its process and (3) furnishes its drive, its inner motivation."
(4:233)

Safety Education   In the United States, formal safety lessons
were taught as early as 1845. Safety concepts were integrated with
other subject matter in the McGuffey readers. The emphasis was remedial
rather than preventive instruction. In 1919 a full-time supervisory
instructor of safety education was appointed to serve the Detroit school
system. The earliest safety patrol project began in 1922. The 25th
Yearbook of the National Society for the Study of Education in 1926
was the first discussion of the status of safety education in United
States schools. Safety education research began in the 1920's. A survey
in 1938 showed that 23 state departments of education provided courses
of study in general safety. The safety education break through in
school administration came in 1940 with the publication of the yearbook
Safety Education of the American Association of School Administrators. The
period of World War II saw only limited advances. During the years follow-
ing World War II, numerous nonschool safety agencies provided workshops

and short courses for teachers and college professors, particularly in
driver and traffic safety education. Today safety education is made
an intergral part of each basic area of learning in the elementary schools.
In junior high it involves water safety, fire safety and first aid. In
senior high, experiences lead into lifesaving, firearm safety, civil
defense and traffic safety. (11: 1160)

School Psychologist   A school staff member with specialized training
in psychological procedures and techniques (preferably holding at least
an M.A. degree in psychology) who is responsible for conducting case
studies of indvidual pupils and for assisting other school staff members
in interpreting the behavior of pupils; primarily concerned with individual
measurement and diagnosis but does not engage as a rule in counseling or
therapy. He functions as a clinician, coordinator, and consultant and
is responsible for making referrals to private and public agencies.
The school psycholgist promotes the over-all mental health of the school,
including in-service training of teachers, consultation with administrators
and teachers on the school mental health program and individual casework
dealing with student-teacher-parent interaction as it affects the student
in school. His services - whether dignified by the title or not - are
as old as schools themselves. (4)

Self-Contained Classrooms   A form of horizonaal organization whereby
one teacher teaches all academic subjects to the same pupils of the same
age and grade in one room, with perhaps a music or art teacher or physical
education teacher teaching at special times; either in different rooms
or in the self-contained room, the opposite of departmentalization, and
traditionally found in the early primary grades in the United States. (10: 165)

<u>Sensitivity Training</u>   Sensitivity training is the currently popular
name for a method of experience-based learning originally known as T-Group
training. Variations of sensitivity training are encounter groups, personal
growth groups and marathons.   The purpose of sensitivity training is to
strengthen the individual's desires to experience people and events more
fully, to know himself more intimately and accurately, to find a more
significant meaning for his life, and to initiate or sustain a process
of individual growth toward ever-increasing personal adequacy.   At most
teacher education institutions, encounter situations are usually reserved
for graduate students who are studying psychology or counsel or education.
However, there is some inconclusive evidence that sensitivity training
in a teacher preparation curriculum has an impact on teacher sensitivity.
In spite of an acknowledged need for sensitive teachers and teacher
educators who can improve classroom group processes, initially expressed
in a statement by Carl Rogers in 1969 in <u>Freedom to Learn</u>, the conduct of
sensitivity training in teacher preparation at the undergraduate level
in most educational institutions is, where practiced, distinctly experi-
mental. (8: 141   )

<u>Sex Education</u>   The White House Conference on Children and Youth in
1950, gave impetus to the demand for consultation in the area of human
growth and development and sex education in American schools.   In 1964
the Sex Information and Education Council of the United States (SIECUS)
was formed to act as a catalyst between the professions and the general
society regarding human sexuality.   The primary objective of SIECUS was
to provide guidance in aiding communities in assuming responsibility for
sex education.   During 1960 the rise of venereal disease in epidemic

proportions and the clear need for children to understand more clearly
the role of sex in their lives led to beginning efforts at development of
sex education curricula across the country. Concerted and concentrated
efforts from several religious and political groups have seriously hampered
progress in the development of sex education programs. Although there is
a great need for effective sex education, either through the educational,
medical, or religious professions, the questions of what to teach, how
and by whom remain unresolved. (6:674)

Silent Reading   Just prior to 1920, the method of silent reading
was launched. It was given a big play in the 1920's, while oral reading
was neglected. During the following decades particularly from 1940 to
the present, authorities have advoated the teaching of both oral and
silent reading. (44:10)

Social Promotion   Sometimes called automatic promotion, the practice
of advancing learners to the next academic grade level on the basis of age,
social group, or factors other than scholarship. The problem of retar-
dation in heterogeneous graded classrooms first stressed by Charles W.
Eliot in 1892 resulted in several plans by which an age-grade match could
be maintained. Among these were semi-annual promotion, variation in
curriculum or promotion plans. Promotion in Quincy, Massachusetts and
St. Louis, Missouri, was placed on a semi-annual basis. The Batavia
Plan in New York recognized two groups in a classroom, normal and slow,
and special help was given the slow group so both groups could be promoted
together. The Cambridge Plan, based on the same principle as the Batavia
emphasized pushing the bright ahead rather than bringing the dull up to

standard. Multiple tracking methods also developed whereby all students in a given grade were promoted at the same time, but with varying accomplishments. The philosophy behind these programs derived from the belief that retention of a pupil was deleterious to his academic progress as well as his social-emotional adjustment. Abundant experimental research findings from the investigation of the question of retention versus social promotion has substantiated the truth of earlier beliefs. Currently social promotion, or age-grade placements provide auxiliary classes on a non-permanent basis. Such a device relieves the regular grade of the burden of carrying wither a retarded or gifted pupil. (4: 377)

Special Education   Special education is the education of exceptional children who are handicapped by mental retardation, exceptional mental ability, visual impairment, hearing impairment, emotional and social maladjustment, speech problems, and learning disabilities. The field of special education had important beginnings in the nineteenth century represented in the work of Itard, Seguin, Montessori, Braille and others. Residential schools established for deaf, blind and retarded children during the late nineteenth century set the pattern for special education in the United States. In the United States only modest efforts occurred in the field from 1900-1950. Since 1950 special education programs in many states have doubled and redoubled. By 1963 about one-half the school systems in the United States were thought to be providing some special education services. Each of the 50 states how has some form of special legislative provision for special education programs. Since 1956, the United States Office of Education has become a strong influence in

a combined effort of federal, state and local agency support of special
education programs. In 1967 U.S.O.E. created a new Bureau of Education
for the Handicapped to oversee the funding of research and development
projects. Beginning in 1957, Congress authorized increasing support
of training programs for teachers and other personnel needed to conduct
special education programs. Current trends in programs for the Handi-
capped are: (a) a movement toward greater use of local day-school
programs over residential schools; (b) services provided at an earlier
age, and (c) more specialized school provisions for multiple-handicapped
children. (11: 1254)

Storefront Schools   During the 1960's, criticism of public education
shifted from attacking outdated curricula and ineffective teaching methods
to criticism of schools themselves. Alternatives to traditional schools, have bee
developed by an estimated 2,000 groups across the country. Many store-
front centers or schools developed in inner cities have as their purpose
to enrich the lives of neighborhood children and expand their educational
opportunities in cooperation with the public school system. Others,
separate from the public school system, hope to replace traditional schools
with a more flexible approach to education on a community-centered and
permanent basis. (18)

Student Teaching   Student teaching is the observation, participation
and teaching done by a student preparing for teaching under the direction
of a supervising teacher or general supervisor. Until after World War
I, student teaching consisted of imitation and practice of a particular
method taught by a professor and demonstrated by a model teacher in the

classroom. After 1920, student teaching was viewed as a means to

illuminate the theory of the college course. It was directed to introduce

the neophyte into the full-range of teacher activities. New concepts about

the nature and purposes of student teaching have evolved from research

on teaching conducted in the 1960's. Student teaching is now viewed by

some in the field as providing an opportunity for the student teacher to

learn to analyze, criticize and control his teaching behavior. Clearly,

new concepts of student teaching have developed out of a re-examiniation

of the relationship between preservice and inservice education. The

new student teaching, as viewed by the Joint Committee on State Responsi-

bility for student teaching in 1967, would offer a creative and fulfilling

teaching experience as well as an opportunity for critical analysis. It

is not confined to a block of time at the end of the senior year and it

included a wide range of activities from simple observation to development

of skills in discrete elements of the teaching act. (11: 1378)

Team Teaching   Team teaching is a form of organization of the

instructional staff at the elementary and secondary levels. Teams

of teachers may work "vertically," i.e., at several grade levels in a

single subject or closely related subjects, or they may work "horizontally,"

i.e., at one grade level but in several subjects. Such organization allows

for more flexibility for planning, organizing, presenting, and evaluating

the educational experiences of the students. Each team has a leader,

variously named "team leader," "master teacher," etc. Each team member

assumes major responsibility for his specialization, but works always as

a member of the team. Sometimes paraprofessional teaching or clerical aides

assist the team. Some purposes of this form of organization are to :

(a) capitalize on particular strengths of individual teachers, (b)
facilitate more efficient use of teacher time and talent, (c) promote
cooperation and learning among teachers by breaking down the isolation
of the typical classroom, (d) widen the influence of good teachers, and
(e) improve teacher morale. (10: 164)

The Testing Movement   The period of time from 1915 to 1930 often
referred to as the "boom" period in test development. The movement had
at its base E.L. Thorndike's conviction that objective measurement in
education was possible. The work of other test-developers such as Binet,
Terman, Cattell, and Otis, laid the groundwork for the inevitable develop-
ment of standardized tests for all the school skills and content areas
for the school program. Achievement batteries appeared during this time
and starting with Army Alpha of World War I, group intelligence tests were
produced in great numbers. Following another wartime product, the Wood-
worth Personal data sheet, a myriad of personality questionnaires and
inventories were developed. Tests of intelligence and achievement were
subsequently administered widely and somewhat indiscriminately. In their
enthusiasm for objective measurement, some advocates were critical neither
of their instruments nor the interpretation of results from them. Thus,
the pendulum swung back from 1930 to 1945 to a period of criticism where
issues such as heredity-environment, use of test scores for classroom
grouping, and the use of numbers to express psychological qualities, were
reviewed. (43: 6)

Tests and Measurement in Education   In the United States, prominent
figures in the development of educational measurement were Horace Mann,
J.M. Rice, E.L. Thorndike, and Ben D. Wood. In 1845 Mann persuaded school

committees in Massachusetts to shift from oral to written examinations.
Joseph M. Rice campaigned (1891) for educational reform on the basis of
data gathered by wide-scale objective tests. E.L. Thorndike (1918)
developed the techniques of objective testing and popularized the use of
such tests. Wood began cooperative test development, statewide surveys
of tested achievement, cooperative testing programs and electrical test
scoring equipment. Educational aptitudes are measured to help give purpose
and direction to educational efforts and to report the degree of success
in learning. Though public and professional attitudes toward measurement
in education are divided, the widespread and growing use of tests in the
schools would suggest that a majority of educators feel they are necessary
and useful. Most school systems today have established and used some kind
of local testing program. (43)

Thirty-Schools Studies   A series of investigations sponsored by
the Progressive Education Association during the 1930's of the effects of
a variety of plans of curriculum experimentation on various aspects of
pupil growth and on later achievement in college. (18:571)

Unit Method-Subject Matter   (1) a selection of subject matter, materials
and educative experiences built around a central subject-matter area; to be
studied by pupils for the purpose of achieving learning and assimilation
outcomes that can be derived from experiences with subject matter.
(2) Unit - a major sub-division of a course of study, a textbook, or a
subject field, particularly a subdivision in the social studies, practical
arts, and sciences; (3) an organization of various activities, experiences,

and types of learning around a central problem, as purpose, developed

cooperatively by a group of pupils under teacher leadership; involves

planning, execution of plans, and evaluation of results. John Dewey's

and Johann Friedrick Herbart's thinking has been seen as the basis for

unit work, first developed in the 1920's. Dewey's book "How We Think"

was especially influential in which the use of a problem, performing

its analysis and solution, were suggested as profitable learning activities.

A unit is an organization of objectives, activities, and resources, with

its focus on a purpose or problem, prepared for use in a teaching-learning

situation. A unit can be viewed as (a) the act of planning evidenced

in a written plan or (b) the teaching-learning activity engaged in by

pupils and teachers which is the implementation of that plan. The unit

method is currently viewed by subject matter experts as a way of bringing

order to the many concepts, generalizations, skills, and attitudes that

are available to be taught. Unit planning is viewed by others as a means

of transforming classroom practice from textbook oriented lessons to the

use of a problem of topic orientation, from single subject to a crossing

of several subject areas and from the use of a single test to using a

wide variety of resources. (18: 587)

Unit Plan   A plan propsed by Henry Morrison (1871-1945) after

World War I as an alternative to both the recitation method and problem

method. The plan was a move away from dependence on Kilpatrick's

proposed "inner urge" which lay at the heart of the project method. It

emphasized the mastery of subject matter through the formula of pretest,

teach, test the result, adapt procedure, teach and test again to the point

of actual learning. Morrison's tactics of teaching had five Herbartian
steps: (1) exploration (teacher obtains apperceptive base class possesses
for the work); (2) presentation (teacher gives main outline of the unit);
(3) assimilation (studen collects data for learning); (4) organization
(steps two and three are developed to a logical point: statement of
conclusions); (5) recitation (student presents in oral or written form
the final results of his work on unit). The method was an improvement on
the former repetition-recitation method of learning, while still ensuring
mastery of subject matter. (4: 235)

Updating Curriculum Content   There have been two movements to
update the content of the educational program in this century. The first
was begun in the second decade and was based on the principle of utility
and the techniques of activity or job analysis. The second was carried
on in the fifties and sixties. Its primary principle was that theoretical
knowledge and the structure of the disciplines was superior to practical
and technological knowledge. The first resulted in the elimination of
many words from the spelling lists, outmoded arithmatical knowledge and
skills, and the like. The second produced the New Math, New Physics, etc.
(39)

Visiting Teacher   A school staff member, usually with training in
social work procedures and techniques, who is assigned responsibility for
assisting in the solution of individual adjustment problems through work
with homes and community agencies and organizations. Visiting teacher
services were first established in urban settings in the early 1940's.
Currently, the visiting teacher's functions have largely been assumed by
a school social worker. (4)

<u>Vocational and Technical Education</u>   In 1914 a commission on national
aid to vocational education recommended federal grants to the states for
occupational training in agriculture, home economics, and trade and
industrial education.   The successful federal-state partnership in
vocational and technical training by land-grant colleges was cited as a
precedent for extending such programs to secondary schools.   In 1917 the
National Vocational Education Act (Smith-Hughes) was passed.   From 1917
to 1956 federally supported vocational education programs continued in
agriculture, home economics, trade and industrial and distributive
occupations.   In response to a recommendation that technical training at
post-high school levels was a critical need, Congress enacted the Vocational
Education Act of 1963 - the first revamping of the original Act of 1917.
The occupational fields included new and emerging occupations and brought
focus to a new role of vocational and technical education - to train highly
skilled technicians.   More basic to the new role than the generous
provisions of contemporary legislation are the basic social, political
and economic changes which combined to make up a new way of life for
persons at all levels of the world of work and for institutions which are
educating them for it.   (11: 1508)

<u>Winnetka Plan</u>   A curriculum plan organized on the principle of
individual learning rates and developed in 1919 by Carlton W. Washburne
in the public elementary and junior high schools of Winnetka, Illinois.
The Winnetka Plan recognized not only that children proceed at different
rates but also that the same child proceeds at different rates in differ-
ent subjects.   Therefore, diagnostic tests were administered to each child
to determine what goals and tasks he should undertake.   When, after working

at his own rate of speed (usually in workbooks) the child thought he had

accomplished his goals, he took a self-administered test to see if he was

ready for testing by the teacher and for undertaking new goals and tasks.

Group activities were emphasized too in that both half the morning and

the afternoon were devoted to such activities as plays, music, self-

government and open forums.   (4: 236   )

Appendix B

The Induction and Management of Change

THE INDUCTION AND MANAGEMENT OF CHANGE

Changes in schools and how they were induced and sustained can
be understood in terms of data and their interpretation, but these data
and interpretations take on deeper significance when viewed from the
vantage point of a conceptual network about social change. Theories of
social change are controversial and many of their concepts are vague
and ambiguous. Nevertheless, there is a distillation of ideas which
can be of help as we attempt to provide a broad context for the recommen-
cations called for by this report.

The School As A Quasi-Closed System

Turning to the induction of change in the school system, it is
useful to think of the school in terms of the degree to which it can
be considered as a closed system. Any system may be considered as
closed, quasi-closed, or open. A closed system is one which is not
dependent upon external influences. An electric motor and the battery
on which it operates is such a system. It is not dependent upon the
atmosphere, nor is it affected by light or sound. It has its own source
of energy, and is governed in its performance by its own internal
principles. An open system is one which is influenced entirely by
forces outside of itself, as an electronically controlled mechanical
man.

Between an open and a closed system is one that is quasi-closed.
This is a system which is partly influenced by forces outside of itself,

but is to a large measure controlled by its own inner logic. The school

is a quasi-closed system. It functions to produce educated individuals.

The kind and level of education that is produced by the system is influ-

enced by external as well as internal forces. As an illustration of

internal forces, the teacher carries on instruction from day to day by

planning and making decisions from moment to moment. The decisions he

makes and what he does in the classroom affects the quality of the

school's product. He may, for example, select particular instructional

materials and decide to use them in a specific way. These decisions are

made internally and in terms of the logic of the situation as it develops.

Such countless decisions made by thousands of teachers from classroom

to classroom affect and in a sense directly control the product of the

system.[1]

In other regards, the school is not a closed system. The financing

of the school is determined by the society to which it belongs. The

amount of financial support and its distribution within the system will

influence the educational program as well as the morale of the faculty.

Furthermore, pressures from organized groups may influence the curricular

content and sometimes these forces may impinge on the methods of instruction.

Then, too, there are legal prescriptions of what is to be taught. Court

decisions often prescribe the kind and amount of punishment that may be

1. The term "school" or "school system" is typically used here to refer
to the entire educational establishment from nursery school through
the university, although it will be implicit from the text that the
term is sometimes used to refer to a segment of the system such
as elementary, high school, public school, university and so on.

given to pupils and even the question of who shall attend particular

schools as in the case of desegregation.

The fact that the school is a quasi-closed system throws considerable

light upon the problem of changing the school. For one thing, it gives

some indication of the kinds of influences that will modify the system.

There are two classes of influences: those that originate from outside

the system and those that originate wihtin the system itself.

Those influences that originate outside of the system are usually

rooted in some socio-economic state of affairs. For example, during the

first World War, it was discovered that a large proportion of the male

population of the United States, some twenty-five persent, was physically

unfit for military service. This was a situation that had existed all

along and was made known by the military need for able-bodied men to fill

the ranks of the service . The question of how to deal with the situation

is one that could have been answered in a number of ways: by establishing

recreational centers that offered inducements to young people to build

their bodies, by encouraging greater participation in such community agencies

as the Boy Scouts and the YMCA and by encouraging summer camping activi-

ties. The reader can think of other ways the public aould have reacted

to this social need. But the fact of the case is that the public turned

to the school as the instrument through which to make improvements.

Accordingly, laws were passed in state after state requiring that a certain

amount of time be devoted to physical education in the public high schools.

At about the same time the colleges and universities began to require work

in hygiene and physical education to meet the need at a more advanced

level.

To take a more recent illustration, the mounting death toll and injuries on the highways highlighted the need for instruction in safety. This instruction again could have been given by a number of agencies or by new instruments created by the state. The fact of the case, however, is that the public turned to the school as an instrument by which to teach safety rules and regulations and to give training in the driving of automobiles. The tendency to turn to the school in this case was reinforced by the fact that a disproportionate number of accidents were among the youth. Any number of examples of the way in which influences outside the school have brought about changes within the school itself can be cited. These two examples are sufficient however to indicate the quasi-closed nature of the school system.

Turning now to the system itself, it is fairly easy to find case after case where changes were made by the working of the school's own internal principles and logic. For example, in the early beginnings of educational study as a field of research, Thorndike and Woodruff discovered that the training of one faculty had no effect upon other faculties. They found that training in the ability to estimate weights made no difference in the ability to estimate the length of lines. From these research investigations, they concluded that learning was specific and that what was learned in one situation carried over to another only to the extent that there were elements common to both.

Thorndike's research together with similar studies in various subject matter fields supported the view that no subject was in itself more important than any other subject. This conclusion helped to upset the misconception that for decades had maintained a curriculum in which some

subjects such as Latin and mathematics were held to be superior to others because they disciplined the mind. Partly as a result of these investigations the curriculum became a flexible program containing many more courses and a greater range of electives.

Intellectual Antecedents of Deliberate Change

Whether the impetus for change comes from inside or outside the system, the conditions of change must be analyzed if they are to be understood. In general these conditions are the state of affairs that give rise to the need for change, the factors that cause the state of affairs, and the tolerance for inaction.

Consider automobile accidents. The state of affairs is comprised of such dramatic facts as an annual death rate of approximately 150 persons per day or 55,000 per year. This is almost equal to the death rate attributable to all other types of accidents. The question of how severe a state of affairs must become before some element of the public becomes aroused enough to do something about it has been given little attention. The degree of severity appears to be related to the level of tolerance. The initial state of affairs will typically be shrugged off unless it occurs suddenly and with disasterous results as in a severe earth quake or typhoon. If a state of affairs develops gradually, a point will finally be reached at which the level of tolerance is exceeded and men are moved to do something about it. For example, early in this century the death rate from automobile accidents led to the installation of highway signs and stop signals at intersections.

By 1930 the level of tolerance had been so severely breached that a
movement developed to give driver training in the high schools, and
now a drive is on to develop safer automobiles and highways.

However, it should be noted that not all efforts to change a state
of affairs arise from intolerance toward the situation. Often efforts
to make changes are rooted in ideologies and bandwagon mentalities. The
introduction of programs of creative education in the 1920's and again
in the 1950's did not result from frustration over the failure of
existing programs to develop creative ability nor lack of creative talent
in the society. In fact few nations, if any, have experienced such an
extensive blossoming of creative talent in the sciences as the United
States in the period from 1940 to 1960. While the Nobel Prize awards
leave much to be desired as an ultimate criterion, they are nevertheless
indicative of a nation's creative capacity. From 1901 to 1940 the nation
produced 21 Nobel Prize winners. In the period from 1940 to 1969 it
produced 72 or more than three times an many as in the preceding forty
years. The nation held its own in the categories of literature and
peace. Its most extensive gains were in medicine and physiology, physics,
and chemistry in that order. In the seventy year period from 1901 to
1970, the nation produced approximately twenty-five per cent of the Nobel
Prize winners of the world, the greatest proportion falling in the period
after 1940. Yet, in the face of this rapid expansion of creative talent
and magnificent achievements in all fields of human endeavor, some school
systems invested extensive funds in attempts to develop creative talent.
Surely this effort did not stem from any breach of the level of tolerance
with respect to lack of creative capacity in the nation. In all probability

its perennial occurrence is attributable to the heuristic ideology that

flowers from time to time, and not to any external demand or impatience

with creativity as a social lag. Similar observations can be made about

perennial attempts to change the form of reports to parents, vacillating

emphasis upon different methods of teaching, and emphasis upon permissive-

ness in one period and control in another to mention only a few cases.

In general it can be said that changes which originate largely from

outside the school stem from social lags that have exceeded the limits

of tolerance. While changes that are rooted internally originate frequently

from ideologies.

Unfortunately the emotional drive generated by a state of affairs

does not provide a rational basis for dealing with the conditions. To

develop a rational basis of action, the state of affairs must be analyzed

into the factors that give rise to it. These factors should be taken

into account when plans for dealing with the situation are being worked

out. Often the adequacy of the plan is contingent on the thoroughness

of the analysis. For example, studies have been made to determine the

cause of automobile accidents, juvenile delinquency, reading failures,

school dropouts, and misconduct in the classroom. In each of these areas

of study it has been possible to identify factors that relate to certain

consequences and to list solutions that have been derived from findings.

Analysis of the records of automobile accidents show that these

accidents relate to the condition of the car, the condition of the driver,

improperly marked roads, etc. When relationships between factors that

relate to accidents and the accidents themselves are identified, then action

is taken that establishes regulations in the manufacturing of cars,
annual automobile inspection, stipulations that speed must be reduced
when the pavement is wet or warnings that a curve appears ahead. All
of these changes are clearly related to the relationship between certain
factors and automobile accidents.

An examination of the history of juvenile law offenders suggest
characteristics about intelligence, home background, social relationships,
education etc. As a result of these findings, efforts to combat juvenile
crime are undertaken which include home visits, provision for "big
brothers," curfews and counseling. Even though the juvenile crime rate
and its relationship to particular factors in the individual's background
can be related, the rate of crime is increasing. It is evident that the
disparity between analyzing crime and preventing it is a difficult chasm
to cross.

When we proceed to the field of education, the task of analyzing
the conditions that give rise to a demand for change are approximately
the same as in other areas of human endeavors. Consider ability grouping.
What was the state of affairs? Classrooms were crowded with pupils. The
results of instruction were unsatisfactory; pupil learning was not in
keeping with hopes and aims. The time honored doctrine of individual
differences and its accompanying principle of adjusting curriculum and
instruction to these differences were prominent features in the picture.
Then the testing movement with its instruments and techniques for ident-
ifying differences became available. The opportunity was ripe for a new
approach to the organization of instruction.

An analysis of this state of affairs was made by instruments for

measurement. It showed not only that individuals differ in intelligence

and achievement but also in what amount they vary, making it possible

to match pupils as to intelligence and achievement. Furthermore, it

was assumed that pupils of the same intelligence and achievement learned

at the same rate and encountered similar problems of learning. The change

consisted in the formation of homogeneous groups and the adjustment of

instruction to the group. Since individuals comprising the groups were

said to be similar, adjustment of materials and methods to the group was

considered tantamount to adjusting to each individual.

The introduction of driver education which originated outside the

school can be analyzed in the same way. The state of affairs included

a high incidence of fatal accidents and injuries, entailing extensive

financial losses and extensive human suffering. The sort of analysis

will influence what is done. If it is found, as is apparently the case,

that about forty percent of the accidents are caused by four percent

of the drivers, and that they are under the influence of alcohol, then

the question arises as to what to do about the intoxicated driver. But

suppose an analysis shows that an overwhelming number of accidents involve

violations of traffic rules; that these accidents take place in situations

where it is reasonable to assume that one would risk his life only if

he were ignorant of the rules or deficient in driving skill. If these

suppositions are seriously entertained, it would be reasonable to accept

the view that driver ed. would reduce the rate of traffic accidents. Natur-

ally the school would be seen as the proper place for such training since

that is where the beginning drivers are and the school can most easily

develop training programs.

It should be kept in mind, however, that the recognition of a state
of affairs, an analysis of it, and the action taken are not steps in a
process to be necesaarily taken in that order. They are phases that
can and do occur in a variety of sequences. Sometimes an idea for change
occurs before one is fully aware of the state of affairs. At other times
one is first aware of the state of affairs and then decides what to do
before making an analysis. Then again one may make an analysis of a.
recognized situation and then decide what to do about it. Indeed it is
possible, and is often the case, that the analytic phase is omitted or
at best slurred over. But this is always done at considerable risk of
adapting a course of action that will end in failure. The analytic phase
is not essential to action, but it is essential if one is to safeguard
his actions against bankruptcy. Analysis does not dictate what course of
action one's hunches may suggest, but it does help him to select among his
hunches and gives him his only protection against placing his confidence
in unwise courses of action. It cannot guarantee success, but it can
increase its possiblity.

Induction and Maintenance Of Change

Deciding what changes to make and inducing the changes are two
quite different things. Attempts to induce change typically confront
the status quo which is constructed of a set of forces the resultant
of which is zero. Such an equilibrium of forces must be upset and a
new equilibrium established if a change is to be made successfully.
Unless a new equilibrium is established, the system in which the change
has been induced will drift back to the old balance of forces. To

engineer a social change is to know which old forces to weaken, strengthen, or to ignore, and which new forces to weaken and to initiate or strengthen.

An attempt to change a system that leaves the equilibrium intact is doomed, unless the change consists merely in an acretion to an existing organization as in the case of adding a kindergarten or a junior college to the elementary-high school structure. In such cases the structure absorbs the addition without the equilibrium of forces being upset. The failure of the Institute Program to change conventional teacher education is attributable to the fact that the Institute in no way upset the balance of forces that determine the program of teacher education. Institutes modified neither the centers of power not the conventional programs. Instead they merely tacked on a veneer of instruction, a superficial layer which was easily sloughed off when outside funds were no longer available. The same observation can be made about the Teacher Corp, Early Start, Triple T, Upward Bound, Core Curriculum, and a number of other efforts to modify, supplement, or circumvent conventional programs of one sort or another. They, too, are apt to perish and leave little, if any, residue.

To upset the equilibrium one must know the opposing forces - those which support it and those that would destroy it. These forces can be known in particular instances only by analyzing the equilibrium itself. This is one of the reasons, perhaps the chief reason, why some programs which are germinated and planned in the United States Office of Education and advanced through federal funds are apt to come to nought. There is little, if any, chance for USOE personnel to learn about the forces which will be encountered and whose interaction will determine the success or failure of a particular venture.

To analyze the forces involved in a specified equilbrium would require facts about a particular case and these obviously cannot be available apart from an actual study of the case at hand. It is therefore necessary to be content at this point with a discussion of a few categories of forces typically involved in an equilibrium. One of these categories is vested interest. It takes many forms, depending upon the circumstances. But in most cases it involves a center power. Few individuals or social groups will surrender power without a struggle. In any event, a shift in power is difficult to make. In many cases it is easier, as well as more effective, to neutralize or circumvent it than to confront it directly. In any balance of forces it is advantageous, almost necessary, to know where the centers of power are and the form the power takes - economic, political, prestigeous, administrative, and so on. An illustration is provided by Edward A. Krugg in his account of the origin of the College Entrance Examination Board. "The establishment on November 17, 1900, of the College Entrance Examination Board provided an instrument for uniformity in college entrance examinations. President Eliot had long been recommending such a board, but the main work of bringing it into existence was done by Nicholas Murrary Butler, who became president of Columbia University in 1901.

Butler's vehicle for the creation of the board was the Association of College and Preparatory Schools of the Middle States and Maryland, an organization formed in 1892. It was to the 1899 convention of this group, held in December at the State Normal School that rigorous discussion took place, with fears expressed by some of the college presidents, especially F.L. Patton of Princeton and Ethelbert Warfield of Lafayette, that colleges

might lose the freedom of selecting their own students." Here it is

evident that the presidents were interested in protecting the power

of the colleges to determine the conditions of admission, a right which

they had long exercised.

This expression of power was dealt with not by direct confrontation

but by clever circumvention. As Krugg goes on to say, "According to one

version of the proceedings, Eliot gravely assured President Warfield that

Lafayette College under his plan could even decide to admit only those

applicants who failed the examinations. The roar of laughter following

this observation, said Butler later, had much to do with the acceptance

of the proposal itself. In any case, the association did pass a resolution

for the creation of such a board."

Another powerful set of forces that can work for or against a change

is the tendency of persons to conform to a norm of behavior. Individuals

hesitate to engage in deviate behavior. They do not easily stray from

customary ways of behaving. When they do so, it is only to become a part

of some new conformity. Witness the conformity of youth and some adults to

the deviation in hair and beard style.

The power of social conformity, especially when it is reinforced by

the power of vested interest and the inertia of habit, can go a long way

toward neutralizing any effort to induce change in a system. The tendency

of beginning teachers to conform to existing patterns is a case in point.

It had been widely observed that trainees who have been exposed to new modes

of teaching quickly adjust to the old patterns when they begin to work in

a conventional school. Beginning teachers, no matter how strongly they may

believe in some new way of teaching, learn to conform to the ways of older

teachers or they leave the system. This same social pressure will work
to the disadvantage of any attempt to change the system.

The question is how deviations can be induced and sustained in the
face of such forces. A number of answers have been given to this question.
One is that a critical mass of deviation must be induced into the system
all at once. In the absence of a formula for estimating such a mass in
particular cases; it becomes a matter of judgement. And intuitive
judgements are risky. But that is the state of the art. Another answer
is that if prestigeous figures can be induced to adopt the change, lesser
figures will follow suit. In this way a critical mass can be developed.
Once such a mass is attained, additional participants will join the move-
ment, resulting in a snowball effect.

But this procedure encounters difficulties when there are rival
prestigeous individuals, groups, or institutions. To appeal to one
prestigeous faction is to alienate the other. This situation has occurred
when philanthropic foundations as well as USOE have promoted projects in
prestigeous private institutions on the supposition that the example would
be emulated by other institutions. When rival factions have been ignored,
this procedure has often been counter productive.

What has just been said is of course part of the whole problem of
diffusion. There is a tendency for social groups as well as institutions
to resist ideas and practices that originate in other groups or institutions.
To adopt outside ideas and practices smacks of inferiority, and groups are
loath to admit that status. This fact partly accounts for the tendency
of ideas and practices to become watered down, or to lose their original
significance, as they are transferred from one group or institution to

another. Each one feels itself impelled to do something different even
as it emulates the novelty. Each makes modifications and thus changes
the original motion without necessarily improving upon it.

An additional set of forces that can influence the induction of
change are those which center in the success or failure of prior attempts
at change. Previous failures may cause groups or individuals who would
ordinarily support change to withhold their support. Even though some
individuals or groups pride themselves on being willing to adapt and change
when new circumstances demand it, they can be saturated with failure to
the extent that they restrain their loyalties to the leadership. On the
other hand, successful alterations can whet the appetite for further change.
There are many school systems and institutions of higher learning, in which
change after change has been started and subsequently aborted by either
inept administration or poor planning. The morale of the staff is thereby
decreased and the chances of any further alterations being made are reduced
almost to zero. Thus, the identification of support for change-ideas in
the past phases of a particular school situation may not constitute a
reliable source of support in the future.

It should be noted also that assessment of the consequences of a
change can influence the probability that the proposed change will be
favorably received. It is one problem to determine if a change that is
advocated is desirable or not. It is still another issue to have con-
fidence that the stated results will be the actual results. Thus, the
planner of change has the manyfold task of clarifying the intended
results of change, appealing to the forces that make a difference in the
success or failure of the induction, managing elements that may block

change and eliminating doubts that the intended and actual results may be different. Individuals or organizations provide support or resistance to change on the basis of the consequences of the idea for change as they see it. The consequences of the change are viewed differently according to the vantage points of the viewer. Some may consider a given change to be desirable. Others may consider a change to be undesirable and still others may view a given change as useless or a waste of time, even when the factual consequences are agreed upon. But where differences in value orientation are complicated by disagreements about the factual outcome, the possibility of inducing change and establishing a new equilibrium is practically hopeless.

Social and Educational Dividends of the School

Two motives support attempts to make changes in the school. One is to increase the amount of learning or to change what is learned. The other is to alleviate social defects. The first is illustrated by the "right to read" program and the New Biology; the second by driver education and the move to eliminate segregation in the school. There can be little doubt that the first of these motives is well founded; that the school can improve the processes of teaching and learning over which it has control. The public is quite correct in holding the school accountable for the conventional outcomes of the educative process or for any new outcomes that may be assigned to the school from time to time.

Faith in the school as an instrument of social improvement and reform is part of the country's tradition, dating back to the earliest days of the republic. It is little wonder that the school finds itself from time

to time under pressure to take on same new responsibility or finds itself

being blamed for a social condition which it did not create. In view of

this tradition, it is valuable to know what effect the system has upon the

broader social context of which it is a part. This matter may be viewed

from two standpoints. In the first place, we may ask what effect the

system has upon individuals in the social system when they become adults.

Does it produce any greater amount of happiness and enjoyment in the

population? Data on this sort of outcome are difficult to obtain. In

general it can be said that there is no evidence that happiness and

enjoyment is increased in the population generally by an increase in the

amount of education. As to the individual's earning capacity, there is

firm data. All the investigations show that earning capacity is increased.

There is a direct, almost one to one correspondence on the average, between

earning capacity and the amount of education. The higher the amount of

education, the greater the amount earned during one's lifetime. The less

the amount of education, the less money one earns. If the amount one earns

is correlated positively with his happiness, then schooling enriches one's

enjoyment.

The effect of the school upon the sociological aspects of the society

is difficult to ascertain. For example, the question may be raised as

to whether education reduces crime, the rate of divorce or the incidence

of ill health. There is little or no evidence to support the view that

crime is reduced by education and none that the divorce rate is reduced.

It is the case that crime tends to be greater among the less educated

elements of the population but whether this is due to more strict enforce-

ment of the law at that socio-economic level than at the higher levels or

whether it is due to the general level of poverty that one finds in the lower income groups is difficult to ascertain. Divorce is certainly as high among the educated as among the uneducated, although common law marriages are more common at the uneducated and lower economic levels than at the upper level. The incidence of ill health at the upper economic level apparently is not affected materially by education, but probably is affected by socio-economic circumstances. Generally it can be said that the effect of the school upon specific defects in the social system is largely a matter of faith, and what little evidence there is to support the claim is extremely insecure.

In respect to the relationship between the amount of education existing in an economy and the status of that economy the data are fairly secure. If nations are ordered in terms of their gross national product, and at the same time ordered in terms of the amount of educational expenditures per person, it is clear that the higher the expenditure on education, the greater the gross national product. The nations which spend the least amount per capita on education are at the bottom of the list of nations ordered in terms of gross production. Those which spend the greatest amount on education per capita top the list. This sort of one-to-one correspondence does not prove a cause-effect relation, however, but it does indicate a statistical relationship between the expenditures on education and the economic growth and well-being of the people.

The political behavior of the population is presumed to be associated with the level of public education. One of the cornerstones of democracy is that only an educated people can govern themselves properly. On the other hand, the way that individuals vote on political matters is

apparently determined by economic affiliation and class status as much
as it is by the amount of education they receive. It is extremely
difficult to disassociate political behavior in individuals from their
economic and social position so as to show the effect, if any, the amount
of education has upon their political behavior.

It is safe to state that the school does produce certain effects
upon individuals within the system itself. That is to say, the school
does teach concepts, laws, rules, procedures, skills, and particular
facts and values. But whether or not, or to what extent, these learnings
affect specific social and political behavior of the population in the
broader society is an open question. This uncertainty raises very
important questions with respect to changes in the educational system.
It is generally assumed that if there is a social problem, the best way
to attack it is through changing something in the school that seems to
be related to the solution of that problem. That this is a common pattern
of thinking among the American people is beyond question. The school is
looked upon as the instrument through which all sorts of social maladies
can be corrected. The cold fact of the case is, however, that the
school's influence upon specific social difficulties may be much less
than is supposed. This point raises serious questions as to whether or
not the energy spent upon trying to modify the educational program is the
most appropriate way to bring about specific changes in society. Never-
theless, it is clear that the general level of education in a nation is
definitely associated with the vitality and strength of the nation and
the general welfare of its people. What has been said in no way casts
doubt on this proposition.