I recommend this thesis for acceptance by the Honors Program of Ball State University.

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THE FUTURE: CHALLENGE TO EDUCATION

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In today's society changes are occurring in vast proportions and with ever greater rapidity. Information and skills once useful are becoming obsolete at a faster pace. These changes will affect all facets of American society, but possibly the greatest strain will be placed upon education. Educators are beginning to realize that in face of our uncertain future, the past can no longer be relied upon for prescriptions. At the same time, they are realizing that it is they who will be held accountable.

From the beginning of Colonial America, education has been an important institution. Educational institutions are viewed by the society as a major, if not the chief, transmitter of values, meaning and understanding of our society. Educational history indicates the continual emphasis placed upon the idea that an educated population is essential to an effective democracy. As the complexity and transitory nature of our society increases, one's livelihood and the quality or essence of life is more dependent upon his education. The ability to discard obsolete information and to acquire new information more pertinent to present needs, will determine individual as well as societal ability to successfully adapt to the future.

Criticism of American educational effectiveness is not new. The challenges posed by the future however, do not call for improved means of presenting material but for new material and an entirely new orientation along with more effective methods. This must take place in an orderly,
directed manner if worthwhile change is to occur. Hirsch has suggested the following steps toward inventing education for the future.¹

1. Identifying new developments bearing on society in the future and forecasting important parameters.

2. Estimating the effects of societal changes on the future's demand for education.

3. Estimating future imbalances and strains on education and appraising their general order of magnitude. Hirsch predicts that there will most likely be a discrepancy between the demand of the future and the supply which education will be able to give. He further estimates that today’s educational structure is unlikely to be able to provide for as near a future as 1960-1990.

4. Identifying promising solutions or innovations.

5. Forecasting probable differential effects of alternative solutions, or innovations.

6. Evaluating the net consequences of alternative solutions, or innovations.

In this task, educators will be aided by the work and research of the professional futurists.

The traditional western view of the future equates it to the idea of progress. However, two aspects of change in the twentieth century exist which greatly influence its effects and direction. In the first place, a great growth of man’s capacity to interfere on a large scale with natural processes has taken place. The increased development of science and technology has given man an unprecedented degree of control over his environment. Accompanying this increased power occurs a lag in conceptual orientations toward these capacities. Technological development is greatly value free. In order to survive however, we need value commitments. Our nineteenth century view of the future as inevitable progress must be abandoned with more attention
being given to man's social future. The idea of "willing a future" is useful in this context as an action-oriented commitment to the future. Pro-active man institutes and controls change to create his world. Reactive man, on the other hand, passively accepts his future. We have well developed technologies but are deficient in our thinking about the application of these in humanly desirable ways. It must be realized by all that actions and decisions of today affect the course of the future. For this reason, predicting and planning are needed in order that we may evaluate the effects of alternatives and thus will our future.

The professional futurists are primarily composed of scientists and scholars who feel that the future can not only be envisioned and studied, but that through this study, the future can be influenced by present actions and decisions. The concern of futures research is the application of systematic and appropriate knowledge to human affairs for the purpose of creating intelligent action and directed change. Futurology is still a quasi-science of recent development with its beginnings emerging only after World War Two. Initially the application of futures research was long range planning in the fields of the military, business, and industry. This is still largely true, but increased demands are being made for its use in social planning. Within the last decade, more futurist organizations, focused on social planning goals, have appeared. This research however, has not remained the esoteric interest of isolated groups. In 1957, the United States government moved in a future-oriented direction with the establishment of five futures research centers by the Office of Education. In addition to this, future concerns
have come to the attention of the public through popular media. Probably the most exemplary literary work of this category, after that of science fiction, is *Future Shock* by Alvin Toffler, which has gained a significant reading by the general public. Also two popular movies, *2001: A Space Odyssey* and *Andromeda Strain*, have served to make the public aware of the future.

The term "Futuriable" has been coined to describe a statement merely that something may happen; possibilities, not certainties, are the concern of futures study. Research is based primarily on extrapolation from technological and social trends. At this point, the consequences of various developments and decisions are conjectured and used to more effectively plan action.

The efforts of futurology includes technological forecasts concerning trends, developments and possible dates of occurrence, long range plans for a variety of societal institutions, and the development of future alternatives. There are several techniques and processes used in these efforts. Trend analysis can be used in any area. In this case, the trends seen to be occurring in a particular area are identified and further extrapolated into the future. In this manner, possible conclusions of present day trends are forecast and indications of necessary alterations in patterns may be acted upon. Another technique is future histories or scenarios. Usually through brainstorming, all possibilities for futures are exhausted. These are then further assessed and evaluated with possible action toward a more desirable alternative being decided upon. Finally, the Delphi method, developed by the Rand Corporation, a government funded agency, is used widely in government and industry.
This technique involves a questionnaire composed of a series of possible developments. It is then administered to those competent to judge in the field involved and gathered are their estimates of the point in time when these developments or events will take place. These do not include all of the techniques of the professional futurists but are some of the more important and serve to give insight into the methods of futurology.

It would be impossible, and unnecessary for my purposes, to present the vast scope of proposed views of the future. However, to understand the implications for education, I feel it necessary to have not only some knowledge of the premises and techniques of futurology but especially to be familiar with some of the more basic views of the future.

The future is viewed as an uncertain and constantly changing experience. Science and technology have brought the people of the world closer together while, at the same time, making it imperative that they coexist in a cooperative manner. With more sophisticated methods, war will be more dangerous than ever, and the possibility of a depleted supply of resources will necessitate joint technological endeavors. On a more human level, Toffler, in Future Shock, outlines some of the experiences to be expected. In describing these, he identifies the lack of permanence which will come to greatly mark the future. This idea represents a combination of the great changes occurring, the acceleration of social developments, and our discontinuity from the past. Developments in technology will not only present us with an impermanent and everchanging social setting but will create a widening gap between the past and present. Another concept concerning the future is that of transience. Increased development will cause much information
to become obsolete thus requiring continuous re-evaluation. Not only will transience be true in the material and environmental realms but in the area of social relationships. Increased mobility will make the establishment of close interpersonal relations difficult. Novelty, due to science, technology, and diversity are also identified. These changes closely interconnect to create a "super-industrial society" which is fast paced, highly diverse, and filled with intergroup variety and conflict. In response to this, the individual is forced to make constant revisions both intellectually and socially.

The great majority of future predictions are based on the assumption of an expanding technology made possible by an abundance of natural resources. Current trends however, are challenging this belief. Presently the world is experiencing a race for minerals. The industrial world can no longer safely rely on a constant supply of raw materials. Increasing industrial and economic demands have accelerated competition and caused global scarcity of various crucial minerals. America, like most industrialized countries, has depleted most of its easily mined deposits and now is totally dependent upon importing numerous key materials.

If our current problems lead to persistent scarcity, lifestyles will be drastically different to those mentioned previously. Our quick-paced, transient society will give way to one which is more concerned with conservation. The possibility of reduced technological developments may result in a more stable society. Individuals will be forced to adapt to decreased mobility and material abundance.

We must wait to see what effects these developments will have on
education. A restriction in the material base of education may occur with an increased use of group learning devices such as simulation games. A return to neighborhood schools or even home based computerized education may result from decreased mobility.

Whether based on expanding or constricting supplies, the future represents a great change to present standards. The content of education may shift as projections alter future possibilities. In any event, educators must prepare students to cope with any possible future; with change and uncertainty itself.

The pervasive change, characteristic of the future, places stringent demands upon the individual. It is dangerous to human survival to assume that the individual can smoothly adapt to the future. We must work toward aiding man in meeting these demands. The term "future shock" was coined by Hoffler to describe the effect of disorientation upon individuals experiencing too much change in a shortened length of time.

To avoid this, most futurists call for some sort of directed control over technology and change. In order to achieve this, there must exist an informed citizenry who are willing to look beyond apparent personal gains to societal and world interests. In addition, the citizenry must be prepared to adapt to necessary changes which will still take place at an ever increasing pace. Since industrialization and the accompanying breakdown of the family unit, educational institutions have increasingly been taxed with the responsibility of preparing youth for their place in society. A burgeoning amount of information and technological knowledge have made it even more impossible for the family to serve as the socializing agent in these areas. In the super-industrialized world
which we are seen to be moving toward, education is placed with the

task of preparing individuals for the demands of his life.

In pre-industrial and present day non-industrial societies, the
past becomes the present which extends into the future, and so skills
of the past are capable of meeting present and future needs. In these
societies, educational facilities are overshadowed by the family and
church in the transmission of knowledge. Educational practices, in
their orientation to the past, are sufficient to societal and individual
needs. However, with the coming of industrialization, not only did the
educational institution take on more responsibility, but through the
efforts of such men as John Dewey, a gradual orientation to the present
case about. This trend has traditionally been fought by those who
feel it impossible to educate for a present which is undefinable, thus
even the needs of our industrial society have been failed by our
educational orientation. The assumption is made by many that the future
will be an extension of the present on a somewhat bigger and more complex
scale, but even if this were the case, our present educational practices
would fail in their preparation of students.

Our present educational system is concerned with maintenance of
the status quo. In the transmission of values, knowledge and skills,
our schools are deficient in that the symbolic and value content of
education is dealt with in terms of the past. We tend to require the
illustration of continuity between the past culture and present situations
to the exclusion of any true concern of change or discontinuity and
almost no concern for the future. Children are told that their future
depends upon an education, but students are usually focused backward.
For example, in biology the year may begin with some study of background and historical figures. The rest of the year may be spent with students replicating experiments and making long acknowledged discoveries. The argument is not that this type of material be totally excluded from the classroom but that students get some sense of application and implication concerning this knowledge. Emphasis is too often upon factual knowledge with little concern in its further use. The student remains unaware of future demands upon biology and of the possibilities of unaccomplished research as in the area of genetics. Another case in point is that of the social studies, to be discussed in more depth at a later point. With the traditionally chronological presentation of historical data, most educators are lucky, and no doubt expeditious lecturers, if they are able to bring the students up to present circumstances. Usually, as token attempts at relevancy, occasional class sessions may be spent on "current events." Past this point, the teacher's responsibility is ended. No concern is taken of the possibility of new and more effective forms of government or of the need for more cooperative international relations as developments take form. The present is fortunate if it is adequately presented, but the future is seldom touched on. Today's schools are for inculcation and the maintenance of present value systems and thus lag drastically behind needs of the time. The response to demands for change has been more in the way of administratively convenient technologies with little attention to actual educational changes in content and orientation.

How can the schools prepare students for an uncertain future when established patterns may be obsolete in the course of a decade? Education
must serve as the threshold in exploration into the unknown future of man and society. At the base of this is the matter of educational goals or aims. Great difficulty exists in making a shift in orientation, and so, in order to make valuable changes, the course of education must be studied and planned. To aid in this, the federal government is funding two research centers in educational policy at Syracuse University and the Stanford Research Institute. In addition to this type of work, many call for more broadly based planning. An example of this is Toffler's "councils for the future." In order to meet the problem with sufficient force, a mass attempt is necessary. Councils, located in every community and controlled by all interested citizens, would project and study alternative futures. As a result, the main purpose of these councils would be accomplished by defining workable educational approaches and goals through the encouragement of a future orientation, transformation of educational structure in indicated directions, and finally, by altering the curricula. An additional asset to these councils is that by generating widespread community interest and involvement, they might serve to lessen the effect of inhibitors in their hindrance of change.

Some general educational goals have been identified on the basis of future needs and demands. One such goal is to increase the individual's ability to cope with the change confronting him. The faster change occurs, the more need exists for futureness in education. As has been noted, the future is not a definite but can only be projected. Education must create a stronger future-consciousness by sensitizing students to the possibilities of the future. Many futurists and educators see the creation of a curiosity and awareness about the future
as one of the chief roles of education. Anticipation is of key importance in efficient adaptation.

Another related goal of education for the future is to help students become more educable. Learning has been defined as the process of acquiring knowledge and skills. Today's schools seem to have learning as their primary concern. However, education, or the integration of these elements into wholes, does not necessarily follow. A student may graduate from an educational institution without truly being educated. Beyond this problem is that of developing in students the attitudes and skills necessary for continuing educational growth. For example, students should be aware that knowledge is not constant and that to keep abreast of developments he must be able to decide on priorities of information. He should also be familiar with reference sources for use in independent study. Continual self development will provide one with control over his destiny.

Increased longevity along with quick-paced change creates the circumstances for the third educational goal of life-long education. Technology is changing so fast that one can not train for a lifetime skill. This is especially true in the professional fields where one must go back to school frequently or face obsolete status. Illustrating the need for continual education is the phenomenon that many of the jobs now available were not present when their occupants were in school. Every look into the future indicates that change will occur even faster and that new life patterns will be necessary just for survival. Not only does the future call for changes within educational practices, but for a drastic change in the structure itself. A shift must be made
from the traditional school age education to the idea of education as a lifetime experience. This does not necessarily mean that one's life would be spent in formal education. Instead, one might find more of a blurr between college and real life. Many today want to abolish compulsory school attendance laws. If education was made a lifelong pursuit, a breakdown of these laws would surely accompany. Voluntary school attendance throughout life presents an alternative to traditional practice. Not much opposition could be found to the argument that, under these circumstances, more true education would be accomplished. In addition, this would facilitate the removal of useless curriculum and tie the educational experience closer to individual needs and life situations.

A final suggested educational goal is the creation of a global perspective. Traditionally, education in the United States had been western oriented with emphasis upon the inculcation of western values. With improved communication and vast developments in technology, it has become necessary for man to learn to live in a family of nations. The future of mankind is essential to every nation, demanding the abandonment of ethnocentric views. Four elements necessary to the transition to a global perspective are:

1. the individual's knowledge and acceptance of the self
2. the creation of an expanded, non-parochial view of man and his human conditions
3. the creation of individual commitment to the welfare of all mankind
4. a self transcendence

In order to prepare students for their future, a great deal of diversity must be introduced into the curriculum, through a combination
of methods to be discussed later. Students must be allowed to deal with the unknown as well as the known of the future. However, a balance must be achieved between diversity and homogeneity. Along with diversified data offerings must come efforts to create common experiences through a unifying system of skills. There are three basic skills felt to be important to human communication and social integration. One such skill is educability which has been discussed earlier as a broad educational goal. The student must be made capable of handling continuous amounts of new data. The next skill is concerned with interpersonal relations or relating. As stated, many futurists feel that an unprecedented scale of transience is in store for man. Not only in the areas of knowledge and jobs, but in human relations. Under these circumstances, it will be more difficult to form deep friendships and to maintain them once formed. Skills and attitudes which will facilitate friendship formation are called for. A final skill identified is that of choosing.

The objectives that teachers are most reticent to work with are those of values and attitudes. In our changing world, people are exposed to a myriad of inconsistencies. It is increasingly seen to be a responsibility of education not to inculcate their students with values but to help them in the definition and clarification of their values. Experiences in the classroom should help students arrive independently at their values. The child must be allowed to make choices within the classroom. In doing so, he must be given meaningful alternatives that truly present a choice situation. In addition, the teacher should help the child, when necessary, in understanding the alternatives and their consequences. By examining his commitments and being allowed to exercise
them in choice situations, the student will become a more effective
decision-maker.

In the educational system projected for the future, a certain amount
of de-professionalization must take place. The teacher must abdicate
his post as a dispenser of knowledge and adopt a position closer to
that of a resource person. The student of the future will be involved
in much more independent study. If decision-making skills are to be
developed, the student must have an opportunity to exercise this power.
The teacher and students will work together in a situation of mutual
assistance toward the attainment of individually selected goals. Through
their methods and the situations to which they expose the students, the
teachers will work toward the broad educational goals and the development
of skills which were discussed previously.

All facets of the school curriculum must switch to a future-orienta-
tion and educate the student more effectively. One area in which
change is essential is that of the social studies which still focuses on
the past.

The substance of the social studies is the examination of the
nature of man in society. In this area especially, a future orientation
is necessary. History has traditionally been the main focus of the
social studies curriculum with little mention of the related disciplines.
Much innovating force has been present during the past decade with an
emphasis on re-evaluation. More than one hundred major curriculum
development projects were funded. The impact of new approaches, however,
has not been universally effective. The introduction of interdisciplinary
texts into social studies classrooms is in many cases only a token attempt
at change. Too many times, the emphasis is still upon history with only brief attempts to relate the other social studies disciplines.

A broad aim of social studies instruction is seen to be that of helping young people learn to carry on the free society they have inherited, and to make whatever changes modern conditions demand or creative imagination suggests that are consistent with its basic principles and values.

In a 1965 report sponsored by the National Council for the Social Studies, this idea was elaborated through the definition of some citizenship goals of a new age. Included are the following:

1. A citizen who recognizes that we live in an "open-end" world, and is thus receptive to new facts, ideas, and ways of living.

2. A citizen who makes value judgements which enable him to function constructively in a changing world.

3. A citizen who accepts the responsibility of participation in decision-making.

4. A citizen who possesses and develops the skills and knowledge required to assist in the solution of political, economic, social, and cultural problems which he will face. (1. gathering information 2. interpreting information 3. techniques of group participation.)

5. A citizen who is aware of scientific discoveries and their effects on civilization and works toward their intelligent use in creating a better life for mankind.

6. A citizen who understands the need for international cooperation.

These goals may be broken down into three general aims: the creation of an informed citizenry, the development of an analytic citizenry, and the promotion of a committed and involved citizenry.

Social studies curriculum continues to lag drastically behind the demands made by societal changes. Courses have been characterized
as a series of ad hoc explanations and exhortations to be a good citizen.¹³

For one thing the social studies are still primarily concerned with the western world. This failing is true of education in general, as has been mentioned, but is especially drastic with regard to the social studies. The social studies is the most crucial area for the creation of a global perspective. Only when we end the practice of distinguishing between our life and their life and become more concerned with the problems of man, will we be moving toward this perspective. Another problem area alluded to earlier is the lack of an interdisciplinary approach. As mentioned, history has maintained a position as the base of the social studies curriculum. In order for the study of man and his society to be achieved effectively, material from all disciplines must enter the curriculum. In reality, history does not occur as an isolated event and the separation of education into discipline areas results in a concentration on factual knowledge. An interdisciplinary approach, on the other hand, has the potential for offering valuable interpretations, concepts, and learning to the student who can further apply this to problem solving and decision-making. A third problem area is that the social studies continue to be presented through mass produced textbooks. On the whole, the social studies, or history, is offered as an accumulation of facts presented in a chronologically ordered fashion. When deviations from this pattern do occur and inquiries are made into problems, it is usually in an open-closed area. For instance, much effort may be taken to initiate an intense discussion concerning why America entered World War I, a fact that even historians can not agree upon. Even if this problem can be solved to the agreement of the students,
its worth must be questioned. The conditions existing at this time which had great bearing upon the events, have little probability of ever being present again. The sole justification for this practice is the incidental exercise in polemics provided and the break it allows students from the regularly dry presentation of historical data and events. It would, I feel, be of more worth to students if they were able to become involved in more current or even anticipated problem areas. Not only would they be allowed practice in problem solving, but in dealing with real problems which touch the lives of the students, decisions could result in positive action.

Futurists have suggested ways in which the social studies teacher can introduce the future into the classroom and thus work toward attainment of their goals. Edward S. Cornish, President of the World Future Society and Editor of The Futurist, suggests that students be given an opportunity to experiment with the techniques of the professional futurists. This can be done in a number of ways. The students may read books on forecasting developments, make technological assessments or do actual forecasting in certain fields. Another suggestion is that teachers urge students to identify the world's most critical problems and how to go about solving them. A third means of exposing students to the future is by allowing them to study and discuss new technology and institutions as a means of achieving a better understanding of their origins and implications.

The social studies have traditionally been considered of grave importance in preparing citizens for their society. As they stand now however, this is a crippling myth. The social studies, as well as
other areas of education, must make changes now. The past should be used to illustrate the present and the future. An appreciation and understanding of the future should be worked toward as we have always done with the past.

The study of the future is being gradually entered into all levels of the curriculum. In most cases, the courses approach traditional subject matter in a future-oriented way. For example, at the Mark Meadows Elementary School in Amherst, Massachusetts, the idea of genetic engineering has been entered into the science curriculum at levels one through six. The teachers combine the study of achievements with that of the potentialities of biological science. Emphasis is placed upon the way in which these achievements affect the lives of individuals. In addition, students are made to realize that it is within the power of people to control such achievements in the creation of a future which they view as positive. These situations also allow the students to begin dealing with value-clarification. Various methods are available which allow the teacher to go beyond this surface re-orientation.

Simulation games are one such method. These games may deal with present situations and serve to develop in the students some insight into present problems and the forces influencing decision-making. On the other hand, they may deal with the future thus introducing the student to the possibilities of current trends and communicating the necessity of choice and control over them. Many simulation games have been developed and produced for use by teachers. Also, with some knowledge and skill, teachers can develop games to meet their own specific purposes.
This technique appears to have considerable value as a teaching tool. Its motivational value is shown in the enthusiasm evident in the students. Inherent in gaming is the self-generating efforts and discipline demanded of participants. Student evaluation of this technique reflect attitude changes as well as increased knowledge, both factual and in-depth.¹⁵ There do not exist any pre-conceived results for these games, and so the students are free to exercise their own power of decision-making. These are especially useful in social studies classrooms.

A technique which is very similar to that of gaming is role playing. In this instance, an issue is identified which is interesting and relevant to the students. This may develop out of classroom studies or discussion. In this technique, students assume roles connected to the problem. This, as in the simulation game, requires thorough knowledge of the situation. In order to involve all students, pair groups may be established with each dyad representing the problem. In this manner, alternative solutions to the problem are arrived at and are available for further class discussion. Again, this approach stimulates individual creativity and enhances both factual and in-depth knowledge. Both gaming and role playing are capable of presenting the diversity necessary in preparation for the future. Factual knowledge is put in its true place as only a base for more in-depth understandings. The students are not bombarded with facts, but instead they are required to obtain this knowledge through their own means, thus aiding in the development of reference skills.

In lieu of a standard text book to teach a particular course, novels may be used to suit the purpose of the teacher. One type of
novel which is especially useful in creating an awareness of the future is science fiction. This, along with utopian writings, is our literature about the future and serves to enhance anticipation which is so necessary to adaptation.

During the sixties and into the seventies, much interest was shown in questioning techniques used by teachers. The inquiry technique, entailing higher-level, analysis-evaluation questioning, has become a popular method in recent years. In a study conducted by Francis Hunkins, it was found that sixth-grade social studies students who were guided by this method scored higher on posttests measuring achievement than did students guided by the more traditional knowledge-type questions. In a more recent study by Frank Ryan, consideration was taken of the students level of responding. Three groups were formed consisting of high-level questioning (H) high-level responding, low-level questioning (L) low-level responding, and a control group. The students were fifth and sixth graders from a Minneapolis suburb. In this case it was found that both the H and L group scored better on a test geared to low-level achievement than did the control group. However, the H group was superior to both the L and the control group when tested on high-level achievement. These results suggest that high-level questioning is more efficient for high-level as well as low-level understanding. This method could be used by teachers to get students thinking beyond the ordinary factual material. Most will agree however, that in order to achieve these results, the inquiry method must be administered in a systematic fashion. The teacher must have his objectives well in mind and go about gaining them in an orderly, well prepared way.
Joffler has suggested that classes about the future be established in which the possibilities of the future are explored. One way in which these, as well as other classes, could be offered is through mini-courses. These courses usually range from three to twelve weeks in length and focus upon a concept. In the traditional school system, classes are set up to last an entire year. The student is required to take certain basic subjects and may elect to take others to fill in credit hours. With a system of mini-courses, the student may still be required to take a certain number of classes in an area, or they may be completely free to elect any of the offered courses. This system offers diversity, and at the same time, gives the student the opportunity to individualize his curriculum. Sylvester Kohut, Jr. in his 1971 doctoral dissertation, found that students in mini-courses showed a significant improvement in attitude both toward the course and teacher performance as compared to students in a traditional classroom program. It may be that due to the choice and personal interest factors, this method creates an atmosphere more conducive to education.

The amount and quality of educational research has been relatively low. Many very successful innovations have never reached the local school systems and still remain unapplied. There is an estimated lag of thirty years between the development of an educational innovation and its widespread adoption. Education is a process that is to change the learner toward a more aware, effective decision-maker. However, the school system is dependent upon the standards of the society for which they are educating, and most societies require that teachers prevent any significant change in their students. The function of present day education
is to civilize not change. As shown in the Coleman report, the majority of educational administrators and teachers, are from a successful background, thus making change more difficult. They tend to be more conservative and suspicious of change proposing administrative and procedural changes instead of those in the areas of subject, structure, or content.

Illustrating the rigidity of teacher attitudes is a study by McLeish. In this study, teachers participating in advanced courses designed to change attitudes were given both pre- and post-tests. On the post-tests just less than 45 per cent of the subjects showed either no change or that of only one point. The changes that do occur, do so selectively. They mainly affect the academically inclined students at the better suburban schools. To work toward closing this dissemination gap, twenty regional experimental education labs were set up under federal legislation in 1965.

There are many forces within the decision-making power operating to inhibit educational change. First there are political and legal limitations to change. Teacher certification requirements inflict certain patterns of preparation upon educators. This causes difficulty in re-defining priorities. Politically, educational change may be blocked by a lack of funding for educational research. As was mentioned before, society many times encourages its schools to maintain traditional patterns. Teacher's unions also often work against educational change. Its emphasis upon teacher interests has overshadowed educational interests. The administration is usually composed of conservative elements as was said. For this reason, teacher instituted educational innovation is seen as jeopardizing to teacher's jobs of which the union's function is to
The teachers themselves represent conservative forces who protect. The possibility of increasingly automated education is also a concern. For these reasons, many teachers regard change as a threat to their role. In addition, parents act as inhibitors to change. Parents want a good education for their children and since they are many times unaware of future possibilities, any deviation from traditional values is looked upon with suspicion.

At the same time, there are many forces acting to facilitate educational change. Many times these come from the same positions as the inhibition. While administrators are ardently resisting change, the pressure of the new technology and the vast change is pushing them toward innovation. The federal and state governments may also play a role in the occurrence of change. Not only is government in a position to allocate funds for educational research, but educational funds may be used as a lever in urging the adoption of innovations in many school systems. Teachers may also act as facilitators. The freedom of teachers which allows individual innovation within school systems, allows a broken advance on educational change. The youth, as their control in politics increases, may work toward more change and flexibility in educational practices. Finally, social disaster may create a climate favorable to change. Widespread evidence shows that one of the most likely occasions for vast innovations among social institutions occurs after a disaster. In our present state of unpreparedness for the future, we probably face even more social disaster. Although these forces are
seen as good from the standpoint of the futurists, they will urge that this is not enough. The drastic changes which are even now occurring in our society warrant more directed and concerted educational change.

Even though we are now in need of vast educational changes, care must be taken in its institution. The decentralized control of education which allows teachers the freedom to innovate, also allows the introduction of innovations with little merit. The possible dangers of change must be made apparent. There is the possibility of change for the sake of change. The sixties was a decade of tinkering. A distinction must be made between experimentation, or systematic attempts at improvement, and innovative tinkering. Innovation should wait until the methods have been tested and improved upon to the point of providing valuable educational change. Change is needed, but haphazard changes based on no goals will more likely lead to disorientation as stability is transformed into uncertainty.
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17. Ibid., 66-67.


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