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Modern Breakthroughs and Forecasts in Education

Susan Ann Todd
Ouachita Baptist University

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MODERN BREAKTHROUGHS AND FORECASTS IN EDUCATION

A Special Studies Report

Presented to

Mr. Ralph Ford

Ouachita Baptist University

In Partial Fulfillment
of the Requirements for Honors
Special Studies H493

by

Susan Ann Todd

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MODERN BREAKTHROUGH AND FORECASTS IN EDUCATION

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MODERN BREAKTHROUGHS AND FORECASTS IN EDUCATION

In September, 1957, many Americans pictured Russia as a vast slum composed largely of baggy-trousered peasants who couldn't make a decent refrigerator or automobile. On October 4, 1957, when the Russians placed the first manmade hardware in orbit around the earth, this illusion exploded into bleak reality.

The American people were staggered. The Eisenhower administration was in serious trouble--but not for long. Within weeks the nation was given to understand that the school teachers were to blame. America had fallen behind because John Dewey's fuzzy-minded disciples had failed to teach children enough science. Suddenly, American secondary education became our national embarrassment.¹

The effect of the breakthrough in satellite technology and the subsequent criticism has been to make education all the rage. Experimentation has become a visible notion in a traditionally conventional enterprise. The problem is that we are moving in a confused direction. What education needs is not more money from the outside but drastic changes on the inside.²

Since the launching of the first Sputnik, the United States has developed a remarkable technological dexterity. This is evidenced by the rash of hardware now being placed in space. The emergence of satellite technology was underscored when the

late John F. Kennedy announced a determination to explore the moon and other planets. He had committed the nation to an extraordinary goal.³

The implications for the process of education in this state of affairs are enormous. Take geology as an example. Astronauts will not be able to walk around on a planet gathering samples of rocks, or tapping with a geologist's hammer to study geology as we do it on earth. In not only geology but in physics and chemistry as well, man must discover and develop new and exciting electronic measurement techniques designed for measuring and analyzing the newly reached parts of the universe. The education curriculum is suddenly being pushed from auto mechanics to celestial mechanics and from terrestrial geography to celestial geography.

Faced with the colossal problem of educating youngsters for jobs which do not exist and for professions which cannot be described, education must be able to come out with individuals who are adaptable. If we fail in this goal, then our society will be too rigid to deal with the future. School administrators can profit universally from a bit of wisdom in Alice in Wonderland to the effect that, "You have to keep running just to keep up."⁴

The complex matrix of automation and cybernetics is bringing the need for gainfully employed individuals down, down, down! As cybernetics expands its domain, both blue-collar workers and displaced service workers must learn new skills not likely to be automated away in the future. The provocation for

a new kind of flexible education designed to produce adaptable individuals is enormous.⁵

While man is reaching new pinnacles in science and technology, education is still pedestrian. The first school started nearly 2400 years ago and the educational enterprise has made only halting progress since. In an era of rapid and quickening change, a pedestrian school system will have about as much impact as a feather falling on velvet.

The truth is that education has failed to match the challenge of this century. For one thing, there has been too much housekeeping in administration. The routine of running the school has had priority. The administrators' image has too often reflected window-shade and chalkboard men rather than dynamic leaders.⁶

Nor can we get by any longer merely by vulcanizing the curriculum. We must be done with juggling the basic organization. The accordion is pretty well stretched; we can't stretch it any more. We must stop running the schools as if we were in an era when "fallout" meant nothing more ominous than losing one's place in the ranks. The time has come to fish or cut bait.⁷ We have innovated cautiously, taking baby steps where giant steps are needed. Instead of experimenting boldly with promising new ideas, our innovations have been introduced with caution and trepidation. The bravery with which schools introduce new heresies can best be compared to the quavering whistle of a man taking a short cut a cemetery at midnight in the dark of the moon.

Just as Socrates brought philosophy down from Mount Olympus, there is a need today for scholars and teachers to bring the new idea in education from the minds of the few into the practice of the many. If this were done, its impact might be such that the nineteenth-century ideas of Karl Marx could not compete and would become only of historical interest to the world. In this potentially most promising and most dangerous of ages, it is now time to do more than write or talk about the new idea in education, which reasons and experience tell us is better. It is now time to unleash this new idea which could lead us to that green continent so clearly seen by Francis Bacon in the dawn of science. And what have we to lose when now we cannot even dimly see the shore?⁸

Enshrined in the history of education is the stereotype of the frontier schoolmaster. His was the rural American school that produced the Rockefellers, the Firestones, and the Ketterings, and won respect for the profession of teaching. The term of "schoolmaster" is out-of-date today, but the need for educators who are masters of their profession is greater than ever on our modern frontier.

It is a frontier characterized by mobility. Thirty million Americans change addresses each year. Classrooms become cosmopolitan for what is taught in Alabama or Arkansas or Oklahoma today, may determine the skills of the citizenry of Ohio, Oregon or New York tomorrow. With the fact of geographic change, one out of every six jobs today is located in

just three states--California, Texas, and Florida--as population has moved westward and southward. We dare no longer be provincial in standards of teacher education and certification.

Our new frontier is characterized by technology. By the end of this decade, output per man will well be doubled in the quarter century since World War II. Automation, cybernetics, and a computerized economy have revolutionized employment.

We are the only nation that has deployed the majority of its workers to services in contrast to the production of goods. There are 15 million more Americans teaching, transporting goods, buying and selling, working for the government and performing other services than there are in the entire farm and goods and manufacturing sector. Unfortunately, for all too many, there is no longer room at the bottom for the unskilled and unschooled.

It is a frontier of accelerating change. The body of human knowledge is expanding at a geometric rate. Will Durant, in his projected ten-volume Story of Civilization, may become the last scholar with the time and genius to master an entire field of human learning in a lifetime. Most of us cannot keep abreast of the developments within one specialized branch of learning. Moreover, it is more difficult to determine which principles and facts to teach. One may not be able to predict which will survive in the future.

It is a frontier of cultural revolution. The sociologist, rather than the psychologist, has become the spokesman for the direction of education--particulary for the minorities--

in America. Can the American school achieve what no civilization here or abroad has ever accomplished--that of change the basic learning rate of children? The pre-school Head Start was a hopeful, if unproven, venture in that direction.

It is a frontier of urbanization. Whether we live in the suburbs or in the city, we tend to group ourselves in population of like backgrounds, like incomes, like ethnic heritages, like education and even like religion. The typical middle-class teacher may be confronted with much more limited--or sometimes much more enriched--backgrounds than he possesses.

It is a frontier of urgency--one which the American people have become impatient with their schools. They want more innovation.

It is a frontier with an hourglass figure--a large population at the younger side, another large group on the older side, and a slim waist between. In other words, the decimated group from the depression years is educating the burgeoning group from the post-war years.

We are part of a revolution in American education--a fourth revolution. The first was ushered in by Horace Mann and his exciting concept of a common school--opportunity for all. The second revolution erupted in the midwest with the Kalamazoo decision that opened secondary education to the masses. The third revolution was the breakthrough in higher education that accomplished the G. I. Bill after World War II.

Now we are in the midst of a fourth revolution, unprecedented objectives unachieved by any other nation. The

question is, can we upgrade our school system to meet our modern needs?

If the American school is to succeed in its enormous new responsibilities, its teachers must be better equipped for a highly complex professional responsibility.

Teachers need time to teach. Every activity which diverts teaching time from its central function is a loss that may never be retrieved. Thus, the routines of roll and record keeping, of material inventory and management, of pupils' toilet and clothing, of hall and lunchroom control--all could be handled by persons of lesser skill under the management of the teacher.⁹

From among his many achievements Thomas Jefferson, toward the close of his life, personally selected two things he most wanted to be remembered by. He wanted to be remembered as the author of the Declaration of Independence and as founder of the University of Virginia.

Jefferson knew that the destiny of America was inseparable from education--that education would be the key to the fulfillment of the promise of this new nation. We have tried hard to hold to Jefferson's idea. We have seen our schools and colleges flourish and grow, ever enriching our heritage.

Now, almost a century and a half after Jefferson, we know a sterner truth. The philosopher and educator, Alfred North Whitehead, has warned: "In the conditions of modern life, the rule is absolute: The race which does not value trained

intelligence is doomed." So education, long the key to opportunity and fulfillment, is today also the key to survival.¹⁰

The President of the United States Richard M. Nixon says that we will have to be very bold as we move together in the 1970's. One of the great issues of the 1970's will be to determine the distinctive role of each level of government in the enterprise of education. President Nixon considers education a federal concern, a state responsibility, and a local function. He believes that a philosophy of encouraging the maximum local control and local participation will provide the answers the times demand.

The needs of children in a small New England town must not be presumed to be the same as those of children in downtown Detroit; and the needs of both may differ from those of a child in suburban Los Angeles or in rural Arkansas. The situation does not call for rigid blueprints or inflexible guidelines.

The President believes that it is vitally important that local school boards and local and state governments have the primary responsibility and the primary right to dispense funds. He plans to press for a federal program to turn back to state and local control, through bloc grants, such funds as are required to upgrade their educational performance. Bloc grants, administered at local and state levels, provide greater flexible means than any other assistance. The federal government, with its ability to raise funds on a national basis, should aim at reducing the discrepancies among the various states in their resources for the support of education.

State government must bear the legal responsibility of setting standards for attendance, teacher certification, per-pupil expenditure, and the development of long-range plans. Local school systems should be responsible for developing specific projects and programs, and they should be permitted maximum flexibility, subject only to the broadest of policy definitions.

President Nixon said that to prepare for the 1970's we should accord the highest priority to many needed changes on state and local levels.

First of all, serious imbalances exist in the financial support available to many school districts. In many states, the system of support for schools needs drastic revision. A second necessary move is to employ a variety of means to bring the schools closer to the people in order to relax the tense atmosphere of alienation and mistrust that prevails inside many urban neighborhoods among students, parents, and teachers. Within broad limits, curriculum can be tailored to the needs of different groups.

The individuals who make up a community must be involved with the schools. Parents need to find out what their children are learning. It is up to the local communities to see that education is a living and relevant thing, and that it uses the past in ways which enrich the present.

The communities of America need to stand behind the teachers insofar as discipline is concerned. This view is not

a punitive one toward students, but recognition that good education requires an environment of reason and order.

Another essential move is to make a serious and comprehensive effort to rejuvenate the teaching profession at the elementary and secondary levels. Everyone knows that the key to learning is the gifted teacher, but too often the incentive to excellence succumbs to a system that fails to distinguish and reward superior performance.

President Nixon says that we must level with ourselves, all across the country, about teachers' salaries. We tend to fancy that we have done very well in providing for these men and women who play such a critical role in our society, yet we pay them so little. This is wrong for America and it is a reflection on our sense of values.

Even though education is and should remain the responsibility of the state and local community, the federal government must still play a vital supporting role. To this end, President Nixon and the new administration will seek to:

1. Create a National Institute for the Educational Future to serve as a clearinghouse for ideas in elementary and secondary education and to explore the revolutionary possibilities that modern science and technology are making available to education.
2. Maintain our national commitment to preschool education, expanding as necessary such programs as Head Start and Follow Through.
3. Create a National Teachers Corps, to bring carefully selected college and high school students into action as tutors in the core-city school.
4. Encourage diversity by urging states to present plans for the distribution by the states

of federal assistance to nonpublic school children and for the inclusion of nonpublic school representatives in the planning process.

5. Help encourage the growth of our private colleges and universities by allowing tax advantages for donations up to a specified level.
6. Propose the formation of community resource units composed of individuals, organizations, and groups within the community who will make their experience available for the encouragement of education.
7. Devise new ways by which, through long-term loans, the federal government can further assist students to gain a higher education, and devise new ways by which private capital can expand its participation in the support of students who need assistance.¹¹

President Richard Nixon says that when he looks at American education, he does not see schools, but young Americans who deserve the chance to make life for themselves and ensure the progress of their country. If we fail in this, no success we have is worth the keeping, but President Nixon is very confident that we will not fail.

Nothing is so unequal as the equal treatment of unequals.¹² As a path toward excellence, the nongraded school opens up whole new avenues for the teacher who wants to deal with individual differences.

The nongraded high school contains elements which should be keys to the education of the future. It recognizes some profoundly important facts about young people and about learning. In conventional schools young people of high school age are creating a society of their own, with their own interests, their

own rules of conduct, their own standards of values, their own ideas of freedom. But their education too frequently does not give them the experience and the sense of responsibility they need to create a good society.¹³

Their learning started, as Jerome Bruner has written, "in response to the rewards of parental or teacher approval or to the avoidance of failure." This pattern persists in the traditional high school, where too often students, lock-stepped from grade to grade, learn for the reasons which Dr. Bruner has suggested or for marks which will get them into college, rather than for the sake of learning. Young people who are and who want to be individuals are herded along in mass formations. Education is a by-the-bell, by-the-grade affair. Thus, young people who are creating their own society for part of their lives are forced to live in a society created for them and handed to them. They make few decisions for themselves, they do little independent work. Education is not self-discovery as it should be. Their "leisure-time" activities which rouse concern in so many quarters are in part at least a reaction to their "school-time" activities.¹⁴

Nongradedness provides a reformed curriculum to meet individual rather than group needs. It permits the student to learn at his best rate and advance without limitation. Education becomes discovery and challenge rather than repetition and drudgery.

But in the nongraded high school, things are different. The nongraded classroom places emphasis on young people as

individuals with programs tailor-made for them. A pupil is never at the top or bottom of a class. The student is just one of many in a particular phase, working with one to another, being able to move ahead to other phases at any time, any point, as soon as he is ready to open the next door.

Education becomes release, quest, and discovery rather than restraint, regurgitation, and rote memory (a new version of the 3-Rs) that is now too often is. Student inquiry is the heart of gradeless education. Schools become information-centered rather than behavior-centered. The library becomes the most important adjunct to a nongraded school curriculum.¹⁵

A student is encouraged to become intellectually venturesome and therefore responsible for his own education. With proper guidance, the individual, whether slow, average or superior, can transform his school experience into one of inquiry and curiosity rather than one of mere problem solving. Teachers become directors rather than bestowers of learning.¹⁶

Important facts about teachers as well as about young people and learning are recognized in the nongraded school. The job of the teacher is to teach--to help students to learn. Accordingly, in the nongraded high school the teacher is freed from all duties that have nothing to do with teaching. The teacher does not "give" student education; he helps the student get it.¹⁷

Butterfield Trail School, located in the northwest end of Fayetteville, Arkansas, is a school that is surrounded by

meadows where cattle graze and hills rise to the east. There is even a pond on the school property and the nearest houses are two or three blocks away.

What makes it unusual is that it is a one-room school. It isn't, though, like the one-room schools of 50 years ago. It is as different from schools of that era as a Model-T Ford is from a 1970 Thunderbird. The building is basically shaped like a cross. In three of the arms of the cross are the classrooms. The fourth arm houses the cafeteria. The center of the cross and the hub of the school houses the materials center. There are no walls as such in the classroom area. However, positioning of low portable storage equipment and grouping of furniture give an illusion of semi-privacy.

Upon entering the building for the first time, one expects the racket to be deafening. One is genuinely amazed after a few minutes inside to discover that it is quiet--quieter in fact than schools of more conventional design. The quietness is attributed to wall-to-wall carpeting, acoustical ceiling tile through the building, and the double brick construction on the exterior walls with insulation in between. Air conditioning eliminates outside noise and the need for windows. The only glass is in the eight double doors providing easy access from outside to any part of the building. A pair of doors is located on each side of each arm of the cross.

The achievement of independent study and individualized instruction is one of Butterfield's primary goals. To augment this task, the materials center seeks to serve as the nucleus of

the school's endeavor. Children are immediately taught to use the facilities of the materials center on their own. The center opened with over 3000 books, 250 filmstrips, 60 film loops, a language master, math drill tapes, reading machines, a variety of record players, projectors, tape recorders, a show-and-tell, and a Pixmobile. A bank of study carrels provide a place for students to do individual work.

Teachers in the school like to take advantage of the natural surroundings as an aid to teaching. For instance, when studying plant life a whole class will move outside to search for different species in the fields and nearby hills. The pond offers a constant supply of interesting things to study--algae, polywogs, and crawfish.

A decided advantage to the one-room school, other than the educational benefits, is the cost factor. The 23,424 square foot building cost \$262,931 to construct including air conditioning and carpeting. This figures about \$11.22 per square foot, a reasonable sum in these days of soaring construction costs.¹⁶

The current focus of education on the individual student is more clearly reflected in the growing emphasis on independent study than in any other innovation we know. Independent study is self-directed learning activity. On a continuum of learning activity, other-directed (usually teacher-directed) types are at the opposite extreme from fully self-directed types, or truly independent study:



Uncertain as we are today about the future of man and his society, we can be unmistakably clear about the needed focus of schooling: to develop self-directing learners able to achieve their potential in an ever-changing society. The individual's chance for optimum self-realization in an uncertain future seems directly related to his ability to continue learning throughout life.

Independent study logically belongs in the center of the revolution of changes in education. There seems no more certain way to serve the individual learner than to help him develop his abilities to function successfully as an independent learner after schooling is ended. The ways and means of independent study are now being and can in the future be more widely utilized for this purpose.¹⁹

Much less known than the Head Start Program, but perhaps even more revolutionary, is the Hawaiian program, Operation Home Start. Both programs have the same objective; enriching cultural input for children so that they will be better prepared to meet the demands of ordinary learning in the grade schools. But while Head Start works with the children, Home Start goes after their parents.

The Hawaiian program teaches parents how to ready their preschool youngsters for formal education--The First Big Step, as the Home Start textbook calls it. Parents are made aware that they also have a role to play as teachers and are encouraged to take a positive interest in their preschoolers' activities.

Home Start was created because kindergarten teachers in the community of Waianae, on the west coast of Oahu, decided

that the regular school program was inadequate for pupils who started school with a limited vocabulary and poor concept development. Waianae's population is a mixture of Hawaiians, Portuguese, Japanese, Chinese, and haoles (the Hawaiian word for whites), many of whom speak pidgin English.

In addition to having language problems, the area is below the Hawaiian average educationally and economically. To tackle the cultural deprivation that often accompanies these conditions, the planners of Home Start emphasized awareness to the parents--awareness that the preschool experience relate to later success in school, that the parent teaches by stimulating curiosity and encouraging informal learning.

Home Start is staffed completely by volunteers--a distinct advantage, the participants believe, that shows up in greater enthusiasm and sincerity from teachers and parents.²⁰

A generation ago, it was mainly the teachers' pets who liked homework. Many good students detested it, and for good reasons: It was drudgery, it was drill that went far past the point of diminishing returns, and often it was punishment given to a bored, bright student who whispered in class or challenged the teacher. That kind of homework contributed little to learning and frequently kept students from being willing partners in their own education.

Yet homework is still with us, and probably more so than ever. How has such an unlovable, unadmired institution managed to survive? It has survived because it has proven adaptable

to the great changes that have taken place in the function, content, and method of education. Harking back to an earlier time, again, the public viewed education, aside from promoting general literacy, as a positive good, something to be pursued for its own sake. 21

Homework has shifted from being a device for helping the student achieve literacy or scholarship to a device for helping him to master the tools of knowledge as a means of achieving some further aim. And since a student's goals are far more palpable and real to him, to his teachers, and to his parents than the admirable but vague concepts of literacy or scholarship, homework becomes a far more important and serious enterprise.

One result is greatly increased pressure on students, which has good and bad outcomes. A bad outcome is the resultant tension which seems to tie in with an increase in student crack-ups and suicides. Counselors and teachers must make a reasonably accurate estimate of how much each student can do without wrecking himself, and govern schoolwork accordingly. Homework will never be a totally happy experience. It is work, and even in today's schools it can range from an assignment that fits the interests and potential of the student to the dull, purposeless load heaped on a hapless youngster by a boring old pedagogue. 22

A Latin teacher at the Jonesboro Senior High School in Jonesboro, Arkansas, got fed up with flying into a fit when some kid who had been paying zero attention to what was going on in her Latin class carefully copied some other kid's algebra paper

right under her nose. So in the name of self-preservation, she now accepts piggyback papers. She has a somewhat amazing justification for this. She says that since imitation is a valid and fundamental learning process that is merrily accepted everywhere else, we would be better off to coax it out from under the rosebush in school.

On any written homework except (obviously) individualized assignments, a student who is unable, for some reason, to produce an adequate effort by himself may elect to substitute a careful copy of another student's work if the other student consents. Both students report the transaction with notes on their respective papers: "This is a copy of Chuck Gorham's paper. He let me borrow his because I couldn't figure out how to do it." And Stevie Layson copied my paper again today."

Our long-suffering Chuck gets whatever the quality of his paper entitles him to--no bonus, no penalty. Stevie gets three-quarters of his score. Even if his paper and his copy of it are free from significant error, he barely squeaks by. But for him, that's better than nothing and certainly better than cheating, and for the teacher--normal blood pressure!

Piggyback is also the best remedial measure. When a student hands in his own homework that is almost totally wrong, someone's correct paper is stapled to his poor paper and the student is asked to make a careful copy of the correct one. He hands all three papers back to the teacher; but only his own two are returned to him. The copied version is kept in his notebook as a sort of answer sheet.²³

Rise and Shine is a scheme that offers triple benefits-- the involvement of students in worthy use of their study time, a lively but well-ordered class period, and no papers for Teach to lug home the next day.

This is the sequence of simple steps for Rise and Shine:

1. Spend a minute giving the kind of homework assignment some teachers are prone to give most of the time--i.e., "Study all of Chapter 10 in your English composition text." But for better-than-usual luck, add this: "You'll get question sheets for a books-closed oral quiz tomorrow. If you make notes as you study, I'll let you use them in class even though your books must be closed."
2. While students are making use of their out-of-class time, the teacher should do the same by producing a question sheet that fits the material and manages, somehow, not to be diswater dull. The sheet must, of course, be duplicated for everyone.
3. The next day when the class period begins, pass out the question sheets and allow ten minutes for students to compare the questions with whatever notes they made while cracking the books.
4. At the end of ten minutes, the oral quiz gets under way.²¹

Rise and Shine refers to the student's chance to pick his own question and therefore, perhaps, achieve nobly; otherwise, to grin and bear up under an embarrassment that he wished upon himself.

Who gets what question is naturally the sticky bit, for those who pick first have a wide choice of questions while the last ones are compelled to take what's left. But Rise and Shine is a jump ahead of the Selective Service System on how to determine who goes first. Instead of drawing fat blue or orange

capsules, this teacher shuffles white note cards, each one bearing the name of a student and space for an on-the-spot evaluation of his answer, which can be transferred at leisure to the appropriate spot in the grade book. This wholly unpredictable selection--this perching together of students on the precarious lap of the gods--is probably what creates the excitement.

After the ball is over, everybody has a souvenir. The teacher has a few grades to record, but no stack of papers to mark. Students have question sheets to add to their first notes on the material, and they've reviewed questions that will appear later on a test.

There is another method used for resistance to homework. It is called second bounce. If a student's first effort is less than satisfactory either to the teacher or to him (when he sees his score), he may submit a second version in which he puts into effect the corrections and suggestions that the teacher wrote on his first paper. If this version is wholly correct, the student suffers a mere 10 percent penalty on his score the second time around.²⁵

Although this procedure requires double handling of the material by both pupil and teacher, its benefits fully justify the extra work. For example, instead of merely glancing at his grade and chucking the paper into the wastebasket, the student really reads the comments that have been made on his paper and acts upon them. An even more significant yield from this procedure is the student's increased confidence in the possibility

of achieving reasonable success by his own effort. Help from the teacher is free. It doesn't count.

In recent years a tremendous number of proposals have been made and programs launched in an attempt to close the gap between early childhood development and potential. Numerous recent proposals have called for more highly structured, cognitively oriented nursery and kindergarten programs than in the past. In deadly earnest they have claimed that as much significant learning occurs before the child reached first grade as in all school life to follow and that without this early learning, the child may be forever handicapped. In considering the plight of the poverty child in particular, they have cited almost insurmountable readiness limitations at the time he enters school as major obstacles to later school success.

The Durham Education Improvement Program takes its place alongside "Head Start" and other recent early childhood programs designed to bridge the gap. In many ways it represents the best that modern learning theory can offer early childhood education.²⁶

Underlying the entire program is the notion that independence and self-control grow out of an earlier state of dependence and adult control. The rationale is that cooperation, academic achievement, and other desirable pupil objectives can best be promoted--at least for disadvantaged children--by first attaining a high degree of teacher control over their school behavior, carefully shaping it to fit school expectancies.

Teacher control is retained until desirable behaviors emerge and it is no longer needed. This emphasis on a high degree of teacher structuring of children's early school experiences seems to be in direct contradiction to the recommendations of many childhood authorities that young children need a great deal of freedom to explore, and even explode at times, without undue adult intrusion.

One cannot help wondering if yesterday's stress on the need of middleclass children to have uninhibited play in nursery school was not a reaction to an overly structured, authoritarian home of an earlier generation, whereas today's stress on structure and control for the lower class child is an outgrowth of relatively unstructured, laissez faire home conditions.

Several features of the Durham project seem commendable. First in importance is the use of "warm, personal attention by the teacher" as the major means of shaping desirable pupil behavior. Teachers often do not realize how much they use aversive control techniques and how ineffective such procedures really are. The best that can be said for most aversive techniques--sharply stating, "Dean, be quiet," for example--is that they usually bring forth temporary compliance so that the class as a whole has a momentary respite from disruption.

Generally, however, few positive, long-term consequences result for the child himself. It is both more wholesome for him and more lasting in consequences, when he is noticed for exhibiting desirable behavior and ignored--whenever possible--for showing undesirable behavior.

A second sound feature of this program is its emphasis on specifying instructional objectives behaviorally, i.e., in terms of what the child should learn to do. Another major commendable feature is the planning of instructional objectives around diagnosed strengths and shortcomings of learners. Such a plan should result in a highly individualized classroom.²⁷

Until recent years most high school teachers have gone about their assigned tasks in their classrooms with little or no effort to teach cooperatively with other teachers. Although the advent of core programs helped to promote some attempts at cooperative teaching, efforts to correlate subject matter have been sporadic; however, efforts to provide more effective teaching through cooperation are increasing.²⁸

Within the last few years there has been considerable interest in experimenting with radically different instructional techniques. The new developments have resulted in part from a desire to meet the demands of increased enrollments and to find ways to use the teaching staff more effectively.²⁹

Educational television and filmed instruction are two developments which seek to provide improved instruction to larger numbers of students. Cooperation between producers of programs and teachers is essential, since the classroom teacher utilizes programs developed for his classes; follows up these programs; and can contribute talent in planning, presenting, and evaluating the programs.³⁰

Today's youngsters have never known a world without television. It has been as much a part of their environment as the automobile, the airplane, smog, or the refrigerator.

By the time he goes to school, the average youngster has already watched 4,000 hours of television. Children can and do learn from television. As natural citizens of the electronic age, they respond to visual and auditory stimulation in ways they do not respond to print. Television is a now medium that captures their imagination.

Today's teachers cannot afford to ignore the tools of the electronic age if they hope to communicate effectively with the younger generation who look upon television, radio, and film as their own special tools of communication. Television, as the most pervasive and powerful of the modern instructional tools available to both teachers and learners, opens up many promising and exciting opportunities for learning in the classroom.

Today's classroom television is many things. It is a teacher on camera teaching students directly. It is a resource person who, via television, can visit many schools at once. It is a demonstration magnifier giving everyone a front-row seat. It is an instructional film distributed to classrooms via television. It is a classroom observation lesson in which student teachers watch good experienced teachers at work. It is a teacher learning a new technique or process from a televised in-service education program. It is a teacher using videotape for self-evaluation and appraisal of his own teaching.³¹

It is a group of students using television or videotape to produce their own messages and tell their own story. It is a student in a study carrel viewing a television monitor that,

at the touch of a button, serves as a display device for data, for short, single-concept film vignettes, for micro-form and for video-tapes. All of these strictly in-school uses of the television make up what is known ITV (instructional television). There is no one best way to use the medium; the creative teacher will find many approaches.³²

The Federal Communications Commission has reserved 330 channels exclusively for educational television. The first open-circuit educational television station began operation in May, 1953, at Houston, Texas. In 1960-61 there were more than 150 closed-circuit installations in schools and colleges, and additional installations are appearing very rapidly. Most plans for new school buildings now provide for immediate installation of closed-circuit television facilities. Series of 30 minute educational programs designed to bridge the communication gap and develop a better informed public is provided by Arkansas Educational Television, KETS, Channel 2 in Conway.³³

Only a teacher completely out of touch with the world in which students live would fail to see that television has changed the teacher's role. Today television is everywhere-- and wherever it is, the student and their families and their friends are there also. Because of TV, boys and girls start kindergarten with a vocabulary that included words like "detergent," with an awareness of a manner of life in no way resembling their own, and with the vicarious experiences of an adult world instantly available at the switch of a television channel.

This conditioning of students requires a new role for the classroom teacher. No longer is he a "classroom" teacher; that's too confining. No longer is he a dispenser of information; there's too much of it. No longer can students wait for teacher to tell everything; there are too many more efficient ways to acquire knowledge. No longer will old methods bring the desired results.³⁴

A number of advantages of television teaching can be cited. Every good classroom teacher has at some time felt the handicap of insufficient materials. Although materials and audio-visual aids are generally plentiful on the market, they do represent considerable investment, especially if they are to be duplicated in many classrooms and schools. With television the need is reduced from that of providing many sets of materials and aids for many individual classrooms to that of providing one good set for a television studio. Expensive materials and aids can be placed at the disposition of the television teacher, whose presentation reaches out to many classrooms.

The television teacher is given time to prepare his scripts and materials. It may take a teacher a great deal of effort to secure a desired specimen needed for only a brief demonstration. The classroom teacher in his hurried day cannot afford the time to do this. The television teacher with time provided for planning and with the prospect of hundreds of viewers in many schools finds the effort worthwhile. Television extends the range of the good teacher. It makes the talents of the televised teacher available to large numbers of students.³⁵

Educational television may serve some specialized purposes. The small rural school is often handicapped by its meager curriculum. Often the rural school has teachers who are not fully qualified in their field. Educational television provides special enrichment for schools whose size and location deprives them of services available to larger, urban schools.³⁶

The role of ITV in the ghetto may be defined as providing a means of self-expression for the subculture, providing a tool by which content and curriculum required by the majority of society may be learned, and establishing a two-way means of communication between the inner city and the majority of the society.³⁷

Hensley Elementary School, located 15 miles south of Little Rock, Arkansas, in the Pulaski County Special School District, provides an interesting test of the influence of Educational Television on such a school. It has six grades, seventy-two pupils, and three teachers. Of the twelve elementary instructional series offered over Channel 2, eleven have been used systematically as a part of the school's curriculum. Grades one and two used it for seven per cent of their instructional program, viewing science, speech, art, music and story-time. Grades three through six used it for thirteen per cent of their instruction. Music, science, art and speech were called upon by grades three and four. The upper two grades utilized Arkansas History, art, music, science and Places in the News.³⁸

Ten teaching specialists visited the school via Channel 2. The total Educational Television offerings involved in the

teaching program at Hensley added 20 hours and 20 minutes to the curriculum. Informed sources estimate that the television teacher spends an hour in preparation for every minute that he is on camera. Therefore, the combined effort which went into the weekly schedule is equal to three full weeks of work done by each of the ten members of the teaching team.

A thoughtful use of ETV enables boys and girls to receive an exciting change of pace, and transforms much of learning into a pleasurable experience. There are no sufficient series available to provide "too much" viewing, although an incorrect use of any of the audio-visual aids at the teacher's disposal might be considered excessive.³⁹

The teachers in the Hensley school also agreed that they had fewer discipline problems during the telecast because of the increased motivation of the students to learn. The teacher should realize that educational television substitutes for the teacher in only certain ways--it certainly does not replace her. It is an aid and a cooperative process of teaching. Televised instruction has its merits and disadvantages, but it can be a powerful aid to effective learning.

The concept of an extended school year has been under intense discussion in recent years. But for the most part this discussion has been based on judgments held by interested parties rather than on information drawn from carefully designed research. A number of plans have been tried and abandoned.

A Staggered Term for All. With this plan, children attend school for three of the four quarters. Theoretically,

three-fourths of the children are in school during each quarter while one-fourth are on a three-month imposed vacation.

A 48-Week Year for All. This proposal would require all students to attend four 12-week quarters. It holds readily discernible opportunities for acceleration and eliminates the summer "forgetting time."

The Voluntary Summer Program. The voluntary plan provides opportunities for enrichment as well as remedial learning experiences, but major emphasis is now usually placed in course offerings and experiences above and beyond what is offered during the regular term.

Plans on the Drawing Board. Many educators are considerably interested in two other proposals:

The first is the Continuous School Year Plan for elementary schools. Based on a 210-day school year, this plan calls for completion of the regular year's work in the traditional 180 days, with the remaining days spent on the next grade's work. By the end of the sixth extended school year, pupils will have completed the work of seven regular grades. Basic to the success of this plan is implementation of the concept of continuous progress.

The second is the Multiple Trails Plan, for secondary schools. This plan may be implemented in four stages and may be directed toward either economic or educational goals. Daily schedules of pupils and teachers are adjusted by varying the lengths and frequencies of class periods. Classes may meet less often and for less time per week than before, but over the

extended 210-day school year, total instruction time will equal that of the traditional 180-day year. The plan immediately releases classroom space and teacher and pupil time,⁴⁰

Outdoor education is experiencing a phenomenal growth throughout the country. As a result, teachers must learn to make more and better use of the out-of-doors. This form of education is used by the Frederick County, Maryland, school system. One successful approach that has been used is the field notebook technique. During an outdoor class session, students are instructed to do the following:

1. Find an object that is totally unfamiliar to them. Examine it closely, touch it, smell it, become involved with it.
2. Make a rough sketch of the object; put as much background as possible into the sketch and label whenever necessary.
3. Write a detailed description of the object, including its color, size, environment, and location.
4. Attempt to name or identify the object and then--back in the classroom or library--read as much information as you can find about it.

Another technique that has been found to be very helpful is the use of cue cards. The cards are divided into squares; blocks across the top are labeled Rock Sample 1, Rock Sample 2, and so on; the ones on the left side list characteristics that help to identify rocks, such as color, texture, and hardness.

When students find rock samples, they fill in the cue cards which then serve as handy records for identifying their samples. The cards can also be used to record information about trees, wild flowers, ferns, and the like. Games, contests, and storytelling are appropriate in the out-of-doors as well as in

the conventional classroom. Games such as twenty questions or a nature scavenger hunt are ideal. In the outdoor situation it is never difficult to find something that can stimulate storytelling. A technique found to be very successful is the unfinished story. A teacher in the out-of-doors is limited only by his enthusiasm and imagination, for if he looks around, he will find endless opportunity to broaden the horizons of the students.⁴¹

The relief of professional teachers from the routine chores of teaching through the use of a paraprofessional, the teacher aide, is not new. Historically, the use of proctors, apprentice teachers, and volunteers such as home room mothers has preceded the present concept of the value of employing teaching aides. However, today's approach to the solution of the perennial problem of "no time to teach" is a commendable one. Teachers in the Armed Forces have aides, teachers in government and business fields have assistants, and physicians employ para-medical staff, including practical nurses. Therefore, it is necessary for public school teachers to have the services of aides to better perform teaching services.⁴²

The present teacher-aide program had its official beginning in Arkansas during the 1968-69 school year. The program was financed under Title I of the Elementary and Secondary Education Act of 1965, Public Law 89-10. Aides were defined by the Arkansas Department of Education as follows:

"Education aides, as used in the amended Section 205 (a)-11 of Public Law 89-10, applies to all noncertified employees working with certified employees (teachers, librarians, etc.), dealing with children."⁴³

Teacher aides generally report that they find their assignments interesting and rewarding. Some of the duties of an aide have included taking the roll, fixing the bulletin boards, filing, and getting the children ready for lunch.⁴⁴

In a recent survey of teacher-aide programs, it was found that 9 out of 10 teachers surveyed indicated that having teacher aides greatly helped them. The NEA National Commission on Teacher Education and Professional Standard says, "As they move into new ways of administering classrooms which an aide is available promotes, many teachers find renewed satisfaction in their work. They see themselves anew--imaginative, creative, and able to handle anxieties which are likely to accompany change."⁴⁵

This is an age of confrontation. Conflict besets almost every aspect of the human scene, and education is not immune. Arguments about the who and how of decision making, the dimension and design of relevant instructional programs, and the unique role of the school have pitted students against administrator, black against white, parent against parent, teacher against teacher.⁴⁶

The people of America--the people in Arkansas--are no longer seriously threatened by anything on earth save the consequences of their own actions. This is true not only in our domestic affairs but also in our international affairs. To contend that the disturbing and frustrating issues we face are the results of some Machiavellian plot is to deny the basic axioms of our democratic society and to ignore the realities of our time. What is happening in America today adds awesome new dimensions to the responsibility of teachers.⁴⁷

What happens to education in Arkansas in the decade of the Seventies will be determined largely by what happens to teaching and teachers. The determining factor in the effectiveness of every educational venture is the "teacher."⁴⁸

As every headline reader knows, student unrest reached fever pitch in the late sixties. Students protested--very often violently--against the kind of curriculum that was remote from life in the latter half of the twentieth century. Significantly, before they marched, staged a sit-in, or took over the PA system, they pinned on buttons reading, "I am a human being; do not fold, bend, or mutilate." They were telling their elders, rudely, and at the tops of their voices, that they were rejecting the role of captive audience. They were fed up with being consumers without choice or voice in schools supposedly designed for them.⁴⁹

College students were the first dissenters, but the movement quickly spread to the lower levels of education. A survey made this year by the National Association of Secondary School Principals revealed that 59 percent of the respondents had already experienced some form of student protest and 56 percent of the junior highs had seen students on the march.⁵⁰ Dissatisfaction with the school program--the teachers, the curriculum, the scheduling, homework, grading, and testing--accounted for student unrest in 45 percent of the schools responding. Students seemed to be asking for learning based on their own living--for a curriculum that would help students to find facts of war, racism, riots, and urban decay and to help the students to find answers to the urgent perennial questions, Who am I/ and Where am I going?⁵¹

Black students took the protest route, too, to demonstrate that they no longer intended to remain ignorant of their own identity, pride, and culture. The justice of their complaints hit home in many schools during the sixties. Courses in soul music and Swahili, black history and black culture began to multiply. Student power cannot be ignored, laughed out of existence, or swept under the rug.⁵²

It is indicated that schools and education as they exist today will change drastically during the 1970's. It will be modified almost beyond recognition by the end of the century. The projections utilize conservative assumptions about the future. The critical one is the birth rate. If it should not decline during the seventies, and then remain at a lower level, the total population of the United States may well be over 250 million by 1980 and close to 350 million by the end of this century.

Educational attainment levels will continue to rise so that, by 1980, the "average" adult 25 years of age and over will be receiving more than a high school education. By 1980, close to 60 percent of the persons 25 years of age and over will be high school graduates; about 13 percent of those 25 years of age and over, college graduates.

The environment of the 1980's may not match our private notion of a brave new world, but it cannot fail to be exciting and stimulating. There will more years devoted to education, greater access to continue education throughout our lives, more time for leisure, and far greater technological advances in all areas.⁵³

The most significant educational development in Arkansas in the Seventies will be the trend by an increasing number of teachers away from "training" to "education" as the major method of instruction. Schools will continue their role of training students for jobs, but there will be increased concern for the objectives of self-realization, human relationships and civic responsibility, and their logical and detailed implications.⁵⁴

The mood of guilt and panic over the neglect of our disadvantaged youth which led to the inauguration of new programs of vocational training with an emphasis upon what man can do and have will begin to subside. There will be a renewed and growing awareness that there is importance of adequate educational programs for that vast majority of our children and youth: the "average", the "normal". There will be growing awareness that the basic task of educational programs for the disadvantaged, as well as the advantaged, is to improve the literacy and alertness and scientific mindedness of youth so that they will be prepared to absorb vocational training when they enter the labor force.⁵⁵

Education will reverse its traditional pattern of expenditure. From the beginning, more money has been spent per student in higher education, with secondary education coming in a strong second and elementary education, a poor third. Pre-school and kindergarten programs have not even been in the race for funds. But now, major support for early childhood education seems highly probable because of our belated recognition that we have spent literally billions at the upper-age levels to

compensate for what we did not do at the two- to seven-year age levels.⁵⁶

Now priorities for education of the youngest will bring to public education nonschool preschools, mini-schools, and a preprimary continuum. As nonschool preschool programs begin to operate, educators will assume a formal responsibility for children when they reach the age of two. Parents of the young children will be worked with both directly and through educational TV programs for young mothers.⁵⁷

New programs for two-year-olds will involve the coordination of community resources, under school auspices, to equalize educational opportunity for these children before cultural deprivation makes inroads on their social and mental health.

The minischool, is one that provides a program of carefully designed experiences for the three-year-old--experiences deliberately devised to increase the sensory input from which the children derive their intelligence. Each minischool presumably would enroll six or eight children under a qualified paraprofessional. These small schools will probably be built into housing projects.⁵⁸

The preprimary continuum is a new creation intended to replace contemporary kindergartens for the four- and five-year-old. This program presupposes that the young learner will spend from one year to four years preparing himself to perform effectively in a subsequent primary continuum, the segment of education now usually labeled grades one through three.⁵⁹ Major environmental mediation for two- to six-year-olds will permit

schools to abandon the current transitional concept of non-grading. In the Seventies, a seamless primary, middle-school, will begin to replace the nongraded programs of the sixties.

Instruction will tend toward individualization. There will be greater emphasis upon the identification of each pupil's academic capabilities, his achievements and his specific deficiencies. Causes of and potential cures for environmental pollution will be given intensified attention. Educational programs will be expanded downward to include kindergartens and upward to include more educational services for older youth and adults. The length of the school term will be extended.⁶⁰

The yearning of teachers to live up to the intrinsic power for good that belongs to their calling—to attain the wisdom, skill and artistry inherent in their positions, will become an increasingly powerful force in the decade of the Seventies. To satisfy this yearning teachers will demand and secure a greater voice in the determination of the policies under which they exercise their professional competencies.⁶¹ In the decade of the Seventies we will see the formalization by statutory enactment of mechanisms by which there will be orderly involvement of teachers in the decision-making process at the state and local levels. This yearning will also lead to an increased willingness, desire, and demand on the part of teachers to assume responsibility and accountability for their own professional⁶² destiny. In this decade we will see the legal establishment in Arkansas of: (1) professional standards Board and (2) a professional practices commission. Teachers will see their salaries double. Teachers will seek more money primarily because they

believe that an adequate income is essential to the full exercise of professional competence and will give them prestige, influence and perhaps other things that they covet.⁶³

The roles and responsibilities of the teacher will alter. Ten years hence it should be more accurate to term him a "learning clinician." This title is intended to convey the idea that schools are becoming "clinics" whose purpose is to provide individualized psychosocial "treatment" for the student, thus increasing his value both to himself and to society.⁶⁴

In the school of the future, senior learning clinicians will be responsible for coordinating the services needed for approximately 220 to 300 children. In different instructional units, we will find paraprofessionals, teaching interns, and other learning clinicians with complementary backgrounds. Some will be well-formed in counseling, others in media, engineering, languages, evaluation, game theory and simulation.⁶⁵

One of the most disturbing and perplexing problems in many school districts in Arkansas will be desegregation of the schools. This problem will probably be resolved in most districts, but the real task of dealing with the larger dimensions of the problem of integration will only have begun. It will become more obvious in all sections of the nation that the great mass of culturally disadvantaged Negroes in our population is not going to be integrated fully for a long time, certainly not until the culture gap between Negroes and whites is closed.⁶⁶

In Arkansas, teachers, black and white, will develop increasing understanding of the handicaps that Negroes suffer and will teach so as to compensate for those handicaps. We will

accept, in good faith, the idea of black power as a political fact of life--a necessary fact if all people are to be part of American society. We will recognize that black power does not demand white violence any more than white existence merits black violence. We, both black and white, will draw upon each other as human beings.⁶⁷

Desegregation will result in the establishment of a few private schools which may pose a problem in some areas. Most of these private schools will be short-lived and they will pose no threat to the state public school system. An increasing number will be ready to engage in controversy if doing so might enhance the cause of education.⁶⁸

Biochemical and psychological mediation of learning is likely to increase. New dreams will play on the educational stage as drugs are introduced experimentally to improve in the learner such qualities as personality, concentration, and memory. Enrichment of the school environment in the seventies--especially in the ghetto--to "create" what we now measure as intelligence by improving experimental input will also become more accepted.⁶⁹

Later in the Seventies, the elementary school changes will cause the junior and senior high schools to modify their programs. Their curriculums will presumably become more challenging and interesting. Wider age ranges, increased pupil interchange within and between schools, and individualized programs built around new instructional media will inevitably influence emerging secondary school organizations.⁷⁰

In the late 1970's or early 1980's, it is not unlikely that students will graduate from high school with knowledge and social

insight equal or superior to that of the person who earned a bachelor's degree in the 1960's. On entering college, these students will be ready to begin postbaccalaureate studies, and our undergraduate college programs in their present forms will be unnecessary.⁷¹

Teachers will recognize that they can no more afford the role solely of critic than they can the role of indifference or apathy. Probably the most noticeable change within the teaching profession in Arkansas will be the geometric increase in the willingness to take risks in controversial situations. Whether we like it or not, Federal power will continue to grow, simply because our nation has grown into such a large, complex society. It will exert a growing influence on educational decisions, but with a different emphasis.⁷²

During the next ten years, business will participate in education to a greater extent. Although many of their activities are neither widely known nor generally understood, major corporations are already contracting to tackle pollution, teach marketable skills to the deprived, administer police protection, reclaim slums, and manage civic governments.⁷³

Ten years from now, it is predicted that faculties will include:

1. Culture analysts, who make use of our growing insights into how a subculture shapes the learning style and behavior of members.
2. Media specialists, who tailor-make local educational aids, who evaluate hardware and software and their use, and who are adept in the information sciences of automated-information storage and retrieval, and computer programming.

3. Information-input-specialists, who make a career of keeping faculty and administration aware of implications for education in broad social, economic, and political trends.
4. Biochemical therapist/pharmacists, whose services increase as biochemical therapy and memory improvement chemicals are introduced more widely.
5. Early childhood specialists, who work in the nonschool preschool and minischool programs and in the preprimary continuum.
6. Developmental specialists, who determine the groups in which children and youth work and who make recommendations regarding ways of improving pupil learning.
7. Community-contact personnel, who specialize in maintaining good communication, in reducing misunderstanding or abrasions, and in placing into the life of the community the increased contributions that the schools of the 1970's will be making.⁷⁴

As educators turn a speculative eye on the next decade, they must seek to answer a question that most of them have hesitated to face. For what kind of world should we strive to prepare children and youth who will spend most of their lives in the next century? We say this question is crucial because educational policy decisions in the 1970's will not only anticipate tomorrow, they probably will help to create it.

Recent publications in the physical, natural, and social sciences suggest emerging changes in society that seem likely to characterize the world of 2000 A.D. A number of future-think writers agree that unless unforeseen catastrophes intervene, such developments as the following are probable:

1. The individual's personal freedom and responsibility will be greater.

2. The IQ of the average child will be 125, perhaps 135.
3. Cultures throughout the world will be more standardized because of the impact of mass media and increased mobility.
4. Access to more information will carry us toward an international consensus as to what is desirable in family life, art, recreation, education, dist, economic policies, and government.
5. Cruelty will be more vigorously rejected and methodically eliminated.
6. Leaders will be those who are the most able, regardless of their racial origins, religious beliefs, family backgrounds or lack of wealth.
7. The worldwide status and influence of the female will greatly increase.
8. Differences in wealth and ownership between haves and have-nots will narrow.
9. Through the mediation of trends, society will begin to design or give direction to the future so that the years ahead will better serve human welfare. ⁷⁵

Legislators can pass laws, military leaders can fight wars, civic leaders can lead local efforts, newspapers can report and report and editorialize. All of these can help, but, as we know, the answers to our problems lie within ourselves. The answer to attitudes lies in education, in the home, in the church, and in the classroom.

The picture of assurances for teachers of the 1970's is improving rapidly, and the salaries will increase. Far overshadowing the aspect of this picture is the challenge and responsibility that will face the teacher of 1970. It will be the job of the teacher to help instill in the coming generations a love of peace, not war; a sense of fairness and equality toward

his fellow men, not hatred; a dedication to this country, no alienation; a sense of purpose, not a loss of direction.⁷⁶

We have seen major advances as the result of technology. Now we must learn to live as human beings and retain our personalities and individuality in the face of computerization. We have seen the weapons of war grow ever more fearsome and destructive. We have seen wars become the rule rather than the exception. Now we must develop a new love for peace and a new dedication to life rather than death. We have seen new emphasis placed on equality of opportunity and the quality of man. Now we must work to develop new bonds of friendship between neighbors, between classmates, and between fellow citizens. We have seen confrontations that have often led to destruction over every possible subject. Now we must instill a sense of cooperation rather than confrontation in the coming generation. These challenges and responsibilities seem to almost be the "impossible dream."⁷⁷ Most American teachers do not reject a challenge.⁷⁷

For many who seriously study the existing and the on-the-horizon developments in education there remains something not quite real about the process of planning for the future. Education has made many false standards and has made more than a fair share of false prophets.

There seems little reason to doubt that the forces necessary to bring about massive changes are present. It also seems sensible to accept the broad general outlines of predictions of things to come. It is one thing for planning committees to be convinced, but quite another to convince many educators and large

segments of the people that certain changes are essential. Long experience has taught us that change in education is easy to talk about but not so easy to bring about. They are inclined to view proposed change in Hamlet's words--"The funeral baked-meats did coldly furnish forth the marriage tables." It is not that people do not recognize the need for change.

The validity of these observations would be tested if we were to have Gallup ask public reaction to these two recent statements which we probably could cautiously endorse:

1. By 2020 we will have discovered that all learning is joyful, and will realize "that solving an elegant mathematical problem and making love are only different classes in the same order of things, sharing common ecstasy. Advanced learning. . . will be like pursuing a pretty girl or handsome boy.
2. By 2000, or before, "teaching" as it is now commonly accepted will be dead, and the job of an educator will be transformed into that of a "facilitator"--one who creates a rich, responsive environment that will elicit the most learning and change from the student. There won't be any compulsory education, but education will have to make the material relevant to students' needs "or they won't get any students."

There are many things that have contributed to America's greatness. Our free enterprise system has led to technological greatness. Our dedication to democracy has led to political greatness. Our emphasis on faulty measure of education in the home, in the church, and in the classroom has led to moral greatness.

The dedication, resourcefulness, enthusiasm and initiative of our teachers have helped to pave the road to progress in America. It is now up to the teachers to meet the challenge of helping lead us to an even greater future.

If you treat an individual as he is, he will stay as he is, but if you treat him as if he were what he ought to be and could be, he will become what he ought to be and could be.¹⁹

---Johann von Goethe

FOOTNOTES

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