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Preliminary Remarks
by
Admiral H. G. Rickover, USN
at Shepherd College
Shepherdstown, West Virginia
March 3, 1977

It is a pleasure to be here tonight through the encouragement of my friend, Senator Jennings Randolph. It has been my privilege to know Senator Randolph for many years and I can say he is one of the finest men in the Senate. He is a prodigious worker and knows that a good leader is doing his job when half the people are following him and half are chasing him. Evidence of his success can be shown by his accomplishments and by the high esteem and great affection his congressional colleagues hold for him.

This distinguished young man—and I can call him young because he is my junior by two years [March 8, 1902]—has been in Congress since 1932. The people of West Virginia have been fortunate indeed to benefit from nearly half a century of his ability, experience, knowledge, determination, and strength of character. He is a man of great wisdom in a position of responsibility at a time when vision is essential to our Nation's future.

And now to my speech, "The Purpose of Education."

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THE PURPOSE OF EDUCATION

by
Admiral H. G. Rickover, U. S. Navy
at Shepherd College
Shepherdstown, West Virginia
Thursday, March 3, 1977

I will speak on the condition of public education in the United States. My concern is with the purpose of education and the role it should play in society.

Since the ancient Greeks, men have affirmed that to be educated was to be made better. The Emerald, a book first compiled by a fourteenth-century Russian from Greek materials, argued that ignorance was worse than sin. A young Norwegian of the thirteenth century received this advice from his father: "Remember this, that whenever you have an hour to spare you should give thought to your studies, for it is clear that those who gain knowledge from books have keener wits than others, since those who are the most learned have the best proofs for their knowledge."

The papal charter of the University of Basle, founded in 1459, speaks of the hard and persistent labor by which students may obtain "the pearl or jewel of scientific knowledge" and with it "one of the greatest happinesses accorded mortal man by the grace of God." This pearl is the key to a good

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and happy life. It "bestows its favors on the untaught and raises to the heights men born in the lowliest circumstances," for "as learned men they are placed far above all who are unlearned, indeed made alike to God."

What does it mean to be educated? First, it means to have knowledge of the world around us, to know history, literature, philosophy, and science. Second, it means to possess skills such as the ability to read, to write clearly, and to calculate, which make a person a useful member of society. Third, and most important, it means to be able to think critically and logically.

The purpose of education is to instill these attributes in people. To accomplish this, the overwhelming concern of the school must be with the intellect; preoccupation with anything else increases the probability that the goal will not be met.

Unfortunately, our educational system is not up to the task. Every year I interview several hundred midshipmen from the Naval Academy and officer candidates from most of the better colleges and universities. These interviews give me an insight into the kind of education our better students have received in sixteen years of schooling.

Educated people are needed to develop and work with nuclear power. But I know from student performance in our nuclear power schools, and

from the interviews, that few graduates of American schools and colleges are well educated. In digging into the reasons why this is so, I have been convinced that the American educational system is doing a poor job of training young minds to think clearly, logically, and independently.

Part of the blame lies in the lack of purpose in our schools. For many years, and with few exceptions, public elementary and secondary schools have been guided by educators imbued with the philosophy of John Dewey. Dewey claimed that "the primary business of the school is to train children in cooperative and mutually helpful living." I believe this to be an erroneous concept of education. In embracing it, educators have rejected thousands of years of thought about the purpose of education; they have also left our children poorly prepared for the dynamic, competitive society they must eventually join.

The purpose of public education has been perverted by the so-called progressive ideas of Dewey and his followers. Behavioral scientists now swell the ranks of teachers and administrators. Experimental programs absorb massive amounts of tax monies under the guise of such ambiguous names as social engineering, behavior modification, and sensitivity training. These programs do not develop children's ability to sort facts

and make their own decisions. Instead, they offer material carefully prepared to indoctrinate them in favor of pre-selected attitudes.

Many education leaders and organizations have for years disavowed teaching and learning as the primary purpose of American education, and pursued instead a supposedly higher goal. The National Education Association's School Administrators' 25th Annual Yearbook, published in 1947, urged, "A fundamental shift of emphasis through our whole education program from helping to educate the individual in his own right to become a valuable member of society to the preparation of the individual for realization of his best self in the higher loyalty." The "Forecast for the 70's," a 1969 article which is frequently quoted in educational publications, predicted that teachers will more accurately be termed "learning clinicians," since "schools are becoming clinics, whose purpose is to provide individualized psychosocial treatment for the student."

In my opinion, "psychosocial treatment" as well as most social scientific experiments have no place in the educational system of a free society. That they are so prevalent shows that schools, consciously or otherwise, tend to be run for the benefit of teachers and administrators; not for the benefit of the students they are paid to serve. The public has long given teachers and administrators great leeway in running the schools; at times that leeway has resembled total neglect by the public of the

direction and purpose of education. In the absence of controls, the educational establishment has found fads to be more self-serving than fundamentals. Every three years, something comes along that is supposed to improve education. But career education, counseling, compensatory education, and social engineering all require more staff, more buildings, and especially more money. When these additions to the schools' mission detract significantly from training students in the basic skills, then I believe the public must pay urgent attention to the consequences of continuing on that course.

The results of the drift in educational thinking strike at the very basis and fabric of society. Schools are fostering attitudes in students that ill-prepare them for the harsh realities of the world. Take the idea that learning must be fun, not work. This idea is both cruel to the child and dangerous to society, for children grow up believing that they need not struggle to excel.

In order to make teaching fun, and I believe to make themselves popular, many teachers and administrators have deemphasized disciplined thought and work habits, and stressed creativity, individuality, and "feeling." What this means in teaching English, for example, is a turning away from serious reading and closely reasoned writing. Students, especially at the high school level, are led to believe that oral and written expression need no real effort. Feelings are often placed ahead of

language as the primary tool of expression. In consequence, students are cheated; they do not face the difficulties inherent in good writing, and do not develop the ability to write well.

One of the truths of life is that if you want to influence others, it is not enough to know a subject; you must also be able to express what you know. That is what makes the ability to write clearly a most valuable skill. But many students simply do not value writing skill in a world they see as predominantly technical. Teachers who hold grammatical achievements in small esteem only reinforce this notion.

The "learning is fun" movement has also affected mathematics. In the late 1950's, the "new math" was hailed as a revolutionary method of teaching a subject that generations of children had found "distasteful," or "not fun." By abolishing the systematic progression from arithmetic through algebra and geometry, the new math was supposed to make it easy for children to understand and enjoy mathematics. The results were predictable. The money spent on training teachers in the new math and rewriting textbooks was largely wasted. Millions of young Americans learned something of sets, variables, and binary operations. But many failed to learn the arithmetic needed to balance checkbooks or figure income taxes, and most have a poor foundation whence to move to higher mathematics, physics, and engineering.

A passage in the Talmud reads: "The world is upheld by children who study." For such children, there is no easy shortcut to learning. Learning can be interesting, rewarding, and exciting, but it is not fun and games; it is work. No learning takes place, just as no ditch gets dug, without work. Mental sweat is required of the student who would master a course. Preaching the doctrine that learning should be fun implies that society has an obligation to make life easy, and encourages an antiwork attitude already far too prevalent. If what we want for our children is fun and games, then why do we need schools or teachers? We could get along just as well with playgrounds or the streets. All we would then need are some playground attendants and a few athletic coaches.

In the past few years, behaviorists and other social scientists have done much experimenting in education. Team teaching, open classrooms, and unstructured courses are some examples. The new experimental programs have a couple of points in common. Generally, their purposes are explained in jargon which is unintelligible and meaningless to the average citizen. The jargon of systems analysis and other pseudo-sciences is used throughout the schools: instructional systems, configuration of resources, instructional systems components, task analysis, information networks, program planning, instructional development functions, operational effectiveness. If this weren't enough, some educators call history and geography "social living," while English has become "language arts."

Another common trait of the experimental programs is their high cost. Much of the expansion in school staffing has occurred not in the ranks of teachers, but through increased employment of psychologists, sociologists, and other "counselors." Further, the schools being built are often far more sumptuous and expensive than necessary because of the technical gadgetry that the educationists find vital to their work.

Sumptuous buildings and experimental programs do not make students educated. Children could be taught in a barn if the teacher were competent and a learning atmosphere were encouraged. Still, in the past few years, hundreds of millions of dollars in educational research has been done in an effort to replace teaching concepts thousands of years old. I do not believe this research, or the millions it cost, has made students any better educated today than those of twenty years ago. On the contrary, to the detriment of our children, it has diverted attention from education's real purpose of training the mind.

Undisciplined learning and experimentation has resulted in students' increasing inability to use the English language. This is shown by college board scores on the verbal test which, over the last decade, have dropped thirteen percent. The decline is confirmed by college professors who find themselves confronted with students who have limited vocabularies; who cannot make proper sentences, organize papers, or write well enough for college work.

To be sure, some of the blame can be laid to television. According to one study, high school seniors have spent more of their young lives watching television than they have in the classroom. Not only do parents allow their children to become slaves to television, they reinforce the habit by watching programs with the children. Such tacit adult approbation of television's value provides children with little incentive to read for profit or pleasure.

With television, the viewer is passive. He does not have to act to absorb the message as he does in reading. Reading allows a person to stop, reflect, and then return to the text. Television is non-stop; it gives the viewer no time to think. In our complex society, each citizen needs the ability to view his world critically and dispassionately. Television does not lead to or develop critical thought the way good books do.

Then there is the question of equality in the schools. A cherished goal of American education has been to provide free education through high school to every child regardless of family background or financial status. The objective was to give each pupil an equal opportunity to earn a high school education. Those who could not keep up with the work failed, and did not receive promotion to the next grade and ultimately a diploma. At some point, the objective was changed to one of giving each pupil a diploma. In an effort to ensure that nearly all who wanted

to pass could pass, the system lowered its requirements and standards. Homework was seldom stressed or required. Children advanced into the next higher grade almost automatically.

By itself, this action only affected students who were lazy, slow learners, or had limited capability. Above average students could conceivably move ahead of their peers into advanced work. But the social scientists decided it was "unfair" to separate students by ability. Ability grouping was anathema since it implied that not all students were equal. Instead, all students were to be lumped together in the classroom, a condition which produces a stifling atmosphere of mediocrity.

Children have unequal mental abilities and therefore learn at different speeds. They cannot all climb equally high on the ladder of education. Therefore, to brake the learning of talented pupils to the speed of advance of the average or less capable students is to waste their time and abilities. Our society cannot afford to waste these human resources. Since natural resources are being rapidly depleted, brain power is becoming an increasingly more valuable component of continued economic well-being.

These principles ought to be evident to every concerned citizen. But the educational establishment prefers a sham egalitarianism, even if this results in many children being denied an education geared to training their minds as completely as possible. Lowered standards and lessened discipline may allow the mass to move forward together and

to claim the same rewards, but they do not produce well-educated citizens.

One way progressive educationists have lowered standards is by tinkering with tests, grades, and other measures of performance. The trend against testing began by first discounting tests, then hiding their results, and finally abolishing them altogether. The culmination of this movement was the resolution adopted in 1972 by the National Education Association at its annual convention. The resolution said "Tests and the use of tests are a violation of human and civil rights."

That is patently absurd. Tests and grades are not intended to measure a student's value as a person, but to measure the extent of his knowledge and the quality of his work. Students, parents, and employers have a right and a need to know where students stand academically. The abolition of tests is itself a violation of that right.

Along with abolition of tests has come the end of failure. Many colleges no longer list "F's" on student transcripts. One institution graduated a student magna cum laude even though he had received 10 F's in his courses. Hundreds of schools allow students who receive a poor grade to take a course over, and then only the last grade is taken into account in computing the grade point average. Grade inflation has spread to the extent that at many colleges, three-quarters of the grades given are A's or B's. Grade inflation in high school is just as prevalent.

But even if all of the experimentation and the tinkering with tests and grades stopped, and students took difficult, challenging courses, one more step would be needed before schools provided an excellent education. The corps of teachers needs radical upgrading before it will be able to fulfill the job of educating the young properly.

Educationists have the mistaken belief that teaching is essentially a matter of classroom management, and that how teachers manage their classes is more important than their background knowledge in a specific subject. This is a unique notion. In Europe, teachers are required to be knowledgeable of the subject matter they teach. Those teaching above the elementary level hold advanced degrees in their field. In this country, teachers colleges generally do not require specific mastery of a subject beyond passing standard courses in that subject. What is considered important, and is implemented by restrictive state laws, is how many courses the teacher took in the techniques of teaching.

Here is how a publisher of science materials for junior and senior high schools used this philosophy in advertising his product:

"It does not require specific subject background
on the part of the earth science teacher."

In other words, the teacher does not need to know much earth science in order to use these teaching materials. The problem does not end with

earth science. French is taught in many high schools by those not fluent in French. English composition is taught by those who are not well versed in English. Geometry and algebra are taught by those who know little mathematics.

Not only are many teachers unknowledgeable of the subjects they teach; as a group they are intellectually inferior to other professionals. James Koerner, in his book The Miseducation of American Teachers, cites studies showing that prospective teachers on the average exhibit the lowest academic ability of any major group in higher education. One study found that the average high school academic performance of the teacher group exceeded only that of the group which dropped out of college with failing marks. This conclusion is supported by the Educational Testing Service which found that those taking the Graduate Record Examination in the field of education consistently make lower scores than those in any other field.

Low ability combined with second-rate training means that many teachers are not competent to teach, despite the glut of apparently qualified teachers on the market. For instance, more than half the English teachers who applied for jobs in 1973 with a suburban school system flunked a grammar test. One need look no further than this report to discover the reason so many high school graduates are nearly illiterate.

With all of the problems, the solution is massive reform. Unfortunately, reform is not something the educational establishment recognizes. Many education leaders still rate their performance by counting desks filled and diplomas granted, without considering what the pupils sitting at those desks or receiving those diplomas are being taught.

Some educators do admit that the high school diploma no longer is as valuable a measure of educational competency as it once was. But in the same breath they cite impressive statistics on educational achievement as in this quote from the director of the National Institute of Education: "Over half of our population now has a high school diploma which is the highest degree of educational literacy, I guess, that any country has been able to manage." You may remember the famous case where a high school graduate could not read his diploma.

The sad truth is that Americans keep every child in school almost until adulthood, regardless of whether or not he profits from school learning. In that sense, our country has managed to do more than other countries. But, in fact, the average European after ten or eleven years of school has achieved, to use the phrase, a higher "degree of educational literacy" than his American counterpart.

Teachers, like educators, share blame for this situation. Teachers like to consider themselves professionals. They are aided and abetted in

this effort by teachers colleges, phony advanced degrees, and teachers unions. But, because of low ability and poor training, they really qualify only as technicians. Unlike the skilled but unionized laborer, teachers are seldom judged by output or results. An incompetent carpenter can be fired despite his union affiliation. Teachers, however, are rarely fired if students fail to learn.

Since the educational establishment has and will do everything it can to stifle reform, it will take public pressure to straighten things out. In some parts of the country, parents have successfully pressured local school districts into establishing back-to-basics alternative schools. In large part, however, parents have not succeeded in revitalizing the schools.

I have no panaceas for the problem of poor education. However, I do have some basic recommendations which would go a long way toward stimulating educational excellence.

First, we need to recognize the importance of the teacher in the scheme of education. As it is now, we are indulging a national penchant for trying to create people-proof institutions. We want schools that can educate without good teachers. The often discussed Coleman report found that the characteristics of a school have little correlation with educational achievement; that the one school characteristic that does show some correlation with scholastic achievement is the intellectual attainment of the teachers. It makes sense that pupils learn more in schools where the teachers are intelligent, educated people.

To attract intelligent teachers, schools need to make teaching professional. Under the present system, many administrators and leaders of education barely tolerate scholarly pursuits. They value and require effort extraneous to the teacher's real job, such as paying dues, reading trade journals, attending workshops, and taking endless education courses. Many good prospective teachers are deterred from teaching because they recognize that such activities do not make teachers professionals.

Another need is for a realistic salary scale. Most teachers, competent or not, are paid exactly alike; seniority is usually the only differentiating factor. One way to get better teachers is to reward ability accordingly. As Koerner has said, "When a really first-rate teacher can command whatever the market will pay for his talents, as in any other profession, teaching will attract many more of the able young persons graduating from college." The military is also faced with this situation, but solves it by separating less effective officers at various points in their career.

Second, and notwithstanding this last point, there needs to be an awareness that money alone cannot and will not raise educational quality. Education in the United States is now a \$120 billion a year business. But in 1974, it was reported that 1 million of the Nation's 23 million young people aged 12-17 could not read as well as the average fourth grader and were, consequently, considered illiterate. People often have the mistaken idea that education is a service to be bought. The only acceptable

coin which buys an education is hard intellectual effort. Without that individual effort, no amount of money can do the job.

I believe that our children will put forth that effort if they are guided and challenged by competent, qualified teachers. Money should be used to attract such teachers. This does not mean that more total money should be spent on schools; it means we need to spend money more wisely. Our school establishment is already the most expensive in the world. We have luxurious buildings, large administrative staffs, and a surfeit of educational gadgetry. European countries spend less money per pupil than we. Yet, because they have simple, austere buildings, they are able to spend more on teachers. In my view, the most cost-effective way of improving our schools is to follow the European example.

Third, we need a national standard for education. Without a standard, there is no yardstick by which to hold teachers and administrators accountable for failing to educate our children. In fact, under the present system, parents, employers, and interested citizens have no real guide to how well the schools are educating the young until after the students leave school and try coping with the outside world.

A national standard is feasible and need not be coercive.

California and Oregon have established standards for graduating from high school. Several other states and cities are considering them. In

Europe, national standards are considered a protection for the student rather than interference by the state. Standards are drawn with infinite care by persons of solid scholarship and educational experience. While the primary purpose of a standard would be to set minimum levels of knowledge which students should attain, it will also enable local communities and parents to judge how well their own school systems are educating their children for the world, and in comparison to other communities.

Last, we need a guiding purpose to education that recognizes the singular importance of study and learning, of transmitting to each generation the accumulated knowledge, and perhaps some of the wisdom, of mankind. Maimonides, the famous Jewish philosopher of the twelfth century said that the first question on Judgment Day will be whether one fulfilled the duty of study. If schools are to encourage this view, learning must be elevated to its proper position as the primary focus for education.

To do this requires a return to basics and a rejection of social science experimentation. Anything which detracts from the central goal of imparting knowledge must be questioned, and in most cases eliminated. Most of all, schools have to realize their limitations. Today, they are attempting to carry on a vast social program rather than an educational program. In addition to those traditional teaching functions of the school, they are trying to perform the functions of social worker, parent,

physician, minister, policeman, drug counselor, and employment agency. They are trying to do everything; consequently they do nothing well.

As citizens, it is our responsibility to do all we can to make it possible for the country's youngsters to get a good education. If students had no teaching machines, no buildings, counselors, or administrators, they could still learn as long as there were enough competent teachers. But if schools do not teach, then for what reason do they exist? If we are just going to have places for social contact, for maturing our young and for keeping them off the streets, the job can be done more cheaply than by having schools.

Society's leaders are most often educated people, whose minds were developed from youth through disciplined study. Schools that do not stress mental discipline deny their students the kind of education that produces leaders. Moreover, each person's opportunity for becoming educated is limited. If schools do not rigorously train their students in the limited time available, the opportunity passes, and with it the options are lost.

You, in this audience, are responsible for seeing to it that your children and the children of your community receive a good education. You must take on the task of giving your schools direction and purpose, and of providing them with first-rate teachers. Not to assume this responsibility is to neglect your moral and personal duty to all of our youth.