

The cancer in education

The “educrats” have come up with curricula to make students “feel good” about their abysmal ignorance. Prof. John LeDoux reports.

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The freshman engineering student entered my office. He appeared to be nervous and apprehensive. I greeted him in a friendly way and tried to put him at ease. I had asked him to come in to discuss his first mid-term test, because he had scored only 30 points out of a possible 100. Even the 30 points was mostly a gift. The test covered about four weeks of work and I was concerned that this particular student was headed for failure. But there was ample time to turn things around if we could determine why he had done so poorly.

This was a department test, not one that I had written. Most of the material had been covered in class lectures, in videos, and in homework problems. All of it was covered in the assigned text readings. We went over the test, problem by problem and point by point. I could tell that his failure was not due to testophobia, memory blank during the test. He just did not know the material, even though he had done most of the homework.

When I asked him how to do a certain problem, he used the phrase, “I feel that. . .”. I responded that this problem was based on basic math principles that he had to “know,” that “feeling” had nothing to do with it. He just shrugged his shoulders. When I asked him if he had read the problem statement, about three sentences long, he said he didn't have time. I asked for his textbook and opened it to the page

discussing this type of problem. I could tell that this was the first time this book had been opened to that page, or any page, for that matter. He admitted he had not read the assigned text readings. I asked him to read one of the sentences in the book. It was difficult for him. He sounded like a 3rd-grader reading “Run, John, run.”

This was in 1992. I had been teaching college-level engineering for 11 years after almost 35 years managing and doing engineering work in the “real” world. Even in 1981, I was surprised that students did not seem to be well prepared for college-level work, but this was the first time I explored in depth to find out why this particular student had failed a mid-term. I was devastated. This young man, after 12 years of schooling, could not read very well. How could he hope to master the difficult art of engineering? If he could not read, he most probably could not express himself in the written word.

Upon further discussion of his high school work, I found that he had never failed a course. He had an A-B record. In his school, students could express themselves verbally and were never corrected, even if they were wrong. He said, “The teachers made us feel good about ourselves.” I pointed out that an engineer could not design or build something based on “feeling good” about it. We had to know that what we had designed and built was based on sound physical principles. To become such an engineer required lots of hard work, study, and tons of reading. He left feeling good and would not believe he would fail, because that word had no meaning for him.

Was this young man just an exception, or was he representative of most students? Engineering students are at the top of the heap. Most have SAT [Scholastic Aptitude Test] scores of 1100 or more. What was happening in our primary and secondary schools that would allow a student to finish 12 years of education and not be able to read or think very well? I decided to investigate. The following are some of the reasons why American education is in a crisis situation.

A Department of Education report, “A Nation at Risk,” puts the problem in perspective. It states, “For the first time in the history of our country, the educational skills of one generation will not surpass, will not equal, will not even approach, those of their parents.” SAT scores have dropped

some 90 points since the 1960s. There had been a slight improvement in the 1980s, but that increase can be attributed to the increase of private schools from 1,000 to over 32,000 during this period. The SAT scores of the private schools have remained at or been above the 1960 level. The educational establishment will try to argue that the SAT scores have declined because more of the poorer students are now included. That argument does not hold water. Diane Ravitch, in her *The Schools We Deserve*, states, "The shrinkage of the top scorers has proceeded steadily since the 1960s and obviously is unrelated to the overall composition of the test group." Another U.S. Department of Education report shows that the top 5% of American high school seniors scored last on algebra and calculus tests administered to the top 5% of 12th-graders from a dozen countries.

Recently, a school superintendent wrote a letter to the editor claiming that our students are superior to those of yesteryear, because they now carry lap-top computers to class. A computer does not think any better than does a sliderule or a piece of slate. It has been my experience that computers actually inhibit thinking. Press a few buttons, and, presto, you have a solution. Students do not seem to know if the solution given is realistic. A classic example of computer number crunching versus thinking is a simple problem of finding the volume of a trapezoidal swimming pool, given the dimensions of the pool in feet. First of all, many engineering students have never heard of a trapezoid, which I find alarming. One student's solution was 3.65 gallons. My remark on that paper was, "You can hold that much water in a bucket!" The point of all this is that students are not trained or given the opportunity to think and cannot recognize whether a number is reasonable or not.

Educrats denigrate learning by "rote." Why fill your mind with all that data when you can simply look it up? If you are not encouraged and taught to love to read, how can you expect a student to "look it up"? I understand that the mind uses only about 10% of its capacity. Why not stretch it some by memorizing things and using some of that unused capacity? Engineers must be able to convert from the English system to metric, and most texts have pages of conversion factors that allow one to work from one system to another without all those tables. It may take a few minutes of computation, but that very type of work gives you a secure foundation for understanding each system. Another example of the fallacy of the computer crutch I see every semester is the following: I give an engineering-type problem which requires only trigonometry and geometry to solve. I make the students do it manually (with a hand-held calculator), graphically, and finally, by writing a computer program in Fortran. This is good practice, because the thinking process is different for each type of solution. The amazing outcome of this process is that fully half the class will turn in three different answers to the same problem. It does not seem to faze them in the least. When I ask them which, if any, answer is the correct

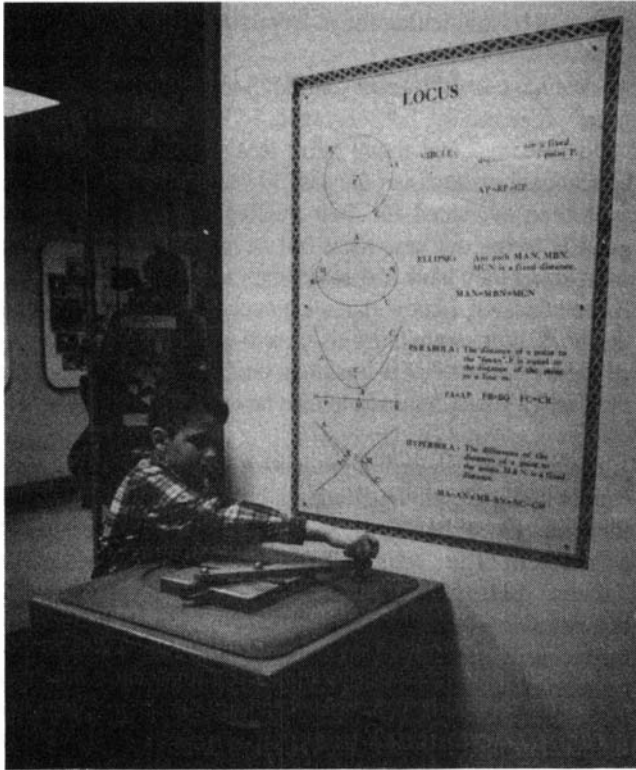
one, they look at me as if I am an idiot. After all, look at the work we did, they respond. They feel good about themselves, because of all this wrong work. When I tell them that this type of attitude produced the Challenger fiasco and the collapse of the Kansas City highway ramp, then they begin to wake up. Computers are not substitutes for thinking or reasoning, and never will be.

A few more facts on the state of education. A Carnegie Foundation survey of faculty members found that 67% of the professors reported a "widespread lowering of standards in American education." Seventy-five percent characterized their students as "seriously underprepared in basic skills." The chief executive officer of Pacific Telesis reported, "Only four out of every ten candidates for entry-level jobs at Pacific Telesis are able to pass our entry exams, which are based on a 7th-grade level." Compared to other industrialized nations, U.S. students place last in math and science. Project Literacy found that the United States has the highest illiteracy rate among all the industrialized nations. In 1986, seven hundred thousand students who graduated from high school could not read their own diplomas. This fact was from a White House study. U.S. industry spends \$25 billion per year on remedial education, so workers can perform simple tasks requiring reading and arithmetic. The Armed Forces must do the same thing.

Is it only math and science that are deficient? Consider the following facts from various studies:

- Nearly one-third of American 17-year-olds do not know that Abraham Lincoln wrote the Emancipation Proclamation.
- Nearly half do not know who Josef Stalin was.
- Thirty percent could not locate Britain on a map of Europe.
- Twenty-five percent of the students tested in Dallas could not identify the country that borders the United States on the south.
- Thirty-nine percent of the students in Boston could not name the six New England states.
- Forty-five percent of Baltimore students could not shade in the area of the United States given a map of North America.
- Almost half could not place World War I between 1900 and 1950.
- More than two-thirds did not know when the Civil War took place.
- More than 75% were unable to say within 20 years when Abraham Lincoln was President.
- One-third did not know that the Declaration of Independence signaled the American colonists' break from England.
- Almost half could not say even approximately when the Constitution was written.

Alarming? Definitely! There are few, even among the educrats, who will not admit we have an educational crisis.



A display at the Franklin Institute in Philadelphia shows children how to construct geometrical figures, and gives them the “hands on” means to do it, helping them reproduce for themselves the thinking of the scientists who first tackled these problems. Today’s “educrats” could care less whether children learn, as long as they feel good about themselves.

What is the solution? The educrats are proposing “World Class Education,” also known as “Outcome-Based Education,” or the “Common Core of Learning.” This “new” method of education is supposed to propel the United States into a world leader in education. Just exactly what is Outcome-Based Education (OBE)?

First, OBE is not really new. A similar type of education called “Mastery Learning” was tried in the 1970s and promptly ridiculed out of existence. Explicit OBE has been around for more than five years, and some of the techniques in OBE have been around much longer. These will be touched on later. We will use the Virginia “Common Core of Learning” (CCL) program to explain what OBE is.

“The Vision of Virginia’s CCL:

“The Vision of the Board of Education is to create a World Class system of education, in which virtually all children:

- “learn and are able to demonstrate competence in a common core of knowledge and skills comparable to the best in the world;
- “are prepared, upon graduation, to enter and successfully continue in the skilled work force and to pursue further academic and technical education;

- “develop a sense of ethics and values reflecting individual and shared responsibilities for themselves and to the community in an increasingly global society.

‘The problem’

“America led the world in developing a system of free universal education; and Virginia led the nation. Thomas Jefferson and his colleagues understood that education for all citizens was essential both to the success of their democratic experiment and to the improvement of economic opportunity.

“For nearly two centuries, the American economy, based upon universal equational access, abundant natural resources, and expanding individual opportunity, has provided our citizens the highest standards of living the world has known.

“In recent years, however, there is growing concern that our economy is faltering, our multicultural society splintering. In both large cities and rural counties there are too many Americans living in poverty and despair. We no longer assume that the next generations will enjoy higher standards of living.”

(Note: These recent years, since the 1960s, basic education was changed, allowing “affective”-type conditioning to replace the three Rs. Could this be the reason our economy is faltering?)

“Although the world economy has changed dramatically since World War II, the ways we organize our schools and shape our curriculum have hardly changed at all. [This is not true — J.L.] America’s education system, which once led the world, too often graduates students who are not equipped to use computers and other technology, to discover or solve complex problems, to *express ideas clearly* [why do you suppose this is? — J.L.], or to work cooperatively with others.”

There is more to the vision statement, but it essentially shows that the U.S. educational system has gone to pot without making a case for why. Let us now look at the Common Core of Learning framework.

“Individuals who leave school with a world class education will do so after having participated in rigorous learning activities leading to the acquisition of knowledge and *critical attitudes* toward learning and work that they need to lead productive lives.” Note the word “attitudes.”

“**Fundamental Skills.** The fundamental skills are those things that students must be able to do to achieve the outcomes described in essential knowledge and *critical attitudes* sections of the Common Core of Learning. These fundamental skills interact with knowledge and *attitudes* to form the basis of learning.”

Again, note the italicized words.

The Fundamental Skills include Thinking, Problem Solving, Communicating, Quantifying, and Collaborating. Nothing wrong with any of this, but does anyone who was educat-

ed before 1970 have any trouble doing any of these things?

The next section discusses **essential knowledge**, such as: citizenship, the Natural World, Cultural and Creative Endeavors. One of the Outcomes of this last states, "Express insights, *feelings*, and perceptions through a variety of creative processes, performances, or products." Note the word "feelings."

"Critical Attitudes. Certain *attitudes* motivate students to apply their skills to knowledge, and encourage them to persevere and do their utmost to learn. *Most values toward life are properly taught by the family. Certain attitudes toward learning, toward work, and toward others* are essential to success in school and in life, and should be *reinforced* in the school setting."

Who makes the decision on which attitudes are left to the parents and which are left to the school? Schools have no business in imposing faculty or state-mandated attitudes about homosexuality and abortion as the Rainbow Curriculum attempts to do. What other areas will be imposed by the school? This smacks of political indoctrination and plain brainwashing, and should be absolutely forbidden.

Critical Attitudes includes Responsibility, Learning, and Work. One of the outcomes under Responsibility states, "Understand the diversity of our society and respect the civil and human rights of others." Another opportunity to include homosexuality as a "human right" when the majority of people still consider it a perverse and unhealthy lifestyle.

I counted 52 "Outcomes" in this proposed program. Nowhere in the program is there any discussion on how these outcomes will be measured. Isn't that the idea? We will measure outcomes, not inputs. Let us look at just one of these outcomes. Under Critical Attitudes – Responsibility: "Exhibit truthfulness, fairness, integrity, and respect for self and others." How do you fairly and objectively measure any of these qualities? Between 1966 and 1988, the proportion of students cheating increased by 78%. How will that be measured under "truthfulness"? Over 60% of my students admit to cheating and find nothing wrong with it, because "it does not hurt anyone." How would you like to travel in an airplane designed by an engineer who cheated his way through college?

Is OBE really something new? No. Its basic "affective" type of education has been going on for 15 to 20 years. Affective means "feelings and attitudes" versus academic learning. Thomas Sowell's book *Inside American Education* discusses in detail the various educational dogmas that have been going on for a long time.

"Multicultural diversity," for example, can be summarized as a cultural relativism which finds the prominence of western civilization in the world or in the schools intolerable. In other words, our culture is the source of all world problems. What happened to the "melting pot"? Successive, massive waves of immigration have arrived on these shores and become Americans without any such programs as have been

proposed by multiculturalism. Diversity causes division, not unity.

We have had "Values Clarification," "Bilingual Education," "Sensitivity," "Relevance," "The Whole Person," "Self-Esteem," and many other terms introduced into our educational system over the past 30 years. Few, if any, have ever been evaluated for their outcomes. The educators are great at trying out new ideas but never attempt to evaluate what effect they have had on education in the United States. As an educator, I know that whenever you add something to the curriculum, something else has to go. Based on my limited view of about 2,000 freshman engineering students over the past 12 years, hard academics have been reduced significantly.

Since "self-esteem" of students is so important, the concept of "failure" will be eliminated by OBE. Grades will no longer be given, like A, B, C, D, and F, but merely an A or a "not yet." The "not yet's" will be remediated until they "master" the learned outcomes. There will be no grade levels, but exit points at the 4th-, 8th-, and 12th-grade levels. Eventually, SAT tests will be eliminated. It will be too embarrassing to see the results. SAT scores have declined every place OBE has been tried. OBE students will "feel good" about themselves as they jump through "politically correct" hoops, until they take an entrance industry test and find they cannot pass even 7th-grade work.

The idea of "World Class Education" is to prepare students for the "real world" by having them work on "real" projects that exercise them by combining such things as reading, writing, and mathematics. One of the problems with such a system is that the teachers or facilitators will be people who have probably never encountered a "real" world problem in their own lives. A degree in education hardly prepares one for that. A second problem is the transference of experience on one problem to another without a sound foundation of knowledge of the tools used. For example, trigonometry is a math skill needed in almost every engineering problem. If you are not taught trig, but only exposed to its application in a particular problem, you will not be able to transfer that knowledge to a different problem based on similar principles. I see that in today's students, because they have only a limited knowledge of trig, which was reduced so that calculus could be introduced in high school. I once had a student who was the top math student from his high school. He had a year of calculus, but absolutely no trig. This is the height of ignorance. He failed calculus in college precisely because he did not have the proper pre-calculus math.

The idea of learning through "real" world projects without first learning the basics of language, science, and history is utter lunacy. It is like giving a tool box to someone and asking them to build a house. He needs to know how and when to use a square and a level. Asking a 3rd-grader to go out in the community and find out why someone is homeless (actually used as an example in OBE) is patently ridiculous.

We need to teach students how to use each block of knowledge, like reading, writing, spelling, math unit by unit, before we ask them to do some sort of broad project.

Even the "Vision Statement" admits that the United States had the best education program in the world until sometime after World War II. What type of education did the generation have who had won that war? If they had the college prep curriculum like I had, they had four years of English and literature, two years of Latin and two years of French, biology, chemistry, physics, algebra, geometry, trigonometry, analytical geometry, solid geometry, history, and civics. I did not have one single elective. There was no time. Today, I understand, students have almost two-thirds of their classes as electives, like "bachelor living."

During high school, I worked after school and became a journeyman meat cutter. I even managed a meat market for six months when I was only 18. In that trade, I learned how to apply math to selling a side of beef. My boss taught me how to break down a side of beef and determine how much we had to charge for each cut to make a profit. I had to learn to account for shrinkage and many other subtle aspects of that business. I could do all that, because I had a sound mathematical education and I could read and understand what I was reading. I did not suffer social shock when I went to the University of California or the Naval Academy. The effort in college was no different than high school. What a difference today, when students have to learn how to study and budget their time. They never had to do that in high school. Education today is vastly different from what it was 30 and 40 years ago, and the results are plainly visible. It is interesting to note that the Japanese have a school system based on our 1940s model that was introduced by General MacArthur. It has not changed since then, and Japanese students outperform American students in every category.

Parents must be alert

Some of the techniques to implant this new educational dogma have been used in schools in the United States. Read Thomas Sowell's book *Inside American Education*. Be alert to these techniques by talking to your children every day about what went on in school. Teachers have been told to tell their students not to discuss a particular subject or topic covered that day, because parents are "old-fashioned" or "they would not understand." Be alert to the following methods:

- 1) Emotional stress, shock, or desensitization, to break down both intellectual and emotional resistance.
- 2) Isolation, whether physical or emotional, from familiar sources of emotional support in resistance. (Parental support?)
- 3) Cross-examining preexisting values, often by manipulating peer pressure. (Parents' values and attitudes?)
- 4) Stripping the individual of normal defenses, such as reserve, dignity, a sense of privacy, or the ability to decline

to participate.

5) Rewarding acceptance of the new attitude, values, and beliefs—a reward which can simply release the pressures inflicted on those who resist, or may take other symbolic or tangible form.

This last is how students jump through the politically correct hoop and go from a "not yet" to an A.

Has OBE ever been successful? The educators will say yes, but it has failed (based on falling SAT scores) in every state that it has been tried. Canada eliminated it after a three-year trial that led to chaos.

A definition of education is: process of developing knowledge, skill, mind, character, etc. especially by formal schooling. Notice that this definition does not mention feelings or attitudes.

The definition of brainwashing: to indoctrinate so intensively and thoroughly as to effect a radical *transformation of beliefs and mental attitudes*.

In April 1993, the Virginia Department of Education promised, "A more detailed blueprint for *transforming* schools and curricula will be available . . . during the fall of 1993." An unfortunate choice of word—transforming—or a Freudian slip? OBE is ideological indoctrination similar to the methods used in China to control the peasants.

Parents need to get involved. Contact your state representatives and school board. Attend any briefings and ask questions. Let your school officials know you do not want OBE in your schools. Do not be put off with a statement that they will study it, and let you know later. The Virginia school officials are already having seminars for teachers, and these seminars have sessions on how to divert parents' questions away from the facts of OBE. It may be necessary for parents to put their children into private schools or home school them.

Finally, note the following from the *Humanist* magazine, the flagship publication of the secular humanist movement: "I am convinced that the battle for humankind's future must be waged and won in the public school classrooms by teachers who correctly perceive their role as the proselytizers of a new faith: a religion of humanity that recognizes and respects the spark of what theologians call divinity in every human being.

"These teachers must embody the same selfless dedication as the most rabid fundamentalist preachers, for they will be ministers of another sort, utilizing a classroom instead of a pulpit to convey humanist values in whatever subject they teach, regardless of the educational level—preschool day-care or large state universities."

OBE is an appropriate set of initials if they stand for Outrageous Behavioral Education. I cannot believe that most teachers subscribe to the OBE philosophy. But there are enough who do, and those in authority can ram it down everyone's throat. We need to stop this rapidly growing cancer now!