



White Board



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Center for Effective Undergraduate Teaching (864) 388-8426

Give Everyone A "D"

THE INTERCOLLEGIATE Studies Institute released its second annual survey of civic awareness among American college students, and the results are just as depressing as last year's. "The average college senior know astoundingly little about America's history, government, international relations and market economy," according to the ISI report, "Failing Our Students, Failing America."

Harvard seniors scored a "D+" average on a 60-question multiple choice exam. That was the highest school score among seniors at 50 colleges surveyed - 25 elite universities and 25 other randomly selected schools. Some 14,000 freshmen and seniors took the test.

Among the questions were these:

The line "We hold these truths to be self-evident that all men are created equal.." is from

- A. the Federalist
- B. the preamble to the Constitution
- C. the Communist Manifesto
- D. the Declaration of Independence
- E. an inscription on the Statue of Liberty

The dominant theme of the Lincoln-Douglas debates was:

- A. treatment of Native Americans,
- B. westward expansion
- C. whether Illinois should become a state
- D. Prohibition
- E. slavery and its expansion

The Constitution of the United States established what form of government:

- A. direct democracy
- B. populism
- C. indirect democracy
- D. oligarchy
- E. aristocracy

The survey, conducted by the University of Connecticut's department of public policy, generally found that the higher a college was

listed in US. News & World Report rankings, the lower it ranked in civic learning. At the eight worst-performing colleges-including Cornell, Yale, Duke, Berkeley and Princeton, the average senior did worse than the average freshmen, an example of what the report calls "negative learning." The worst-performing college, Cornell, the report said, "works like a giant amnesia machine, where students



Color Guard, Fall 2009
Lander University ROTC

forget what they once knew." Only 28 percent of Cornell seniors knew or guessed that the Monroe Doctrine discouraged new colonies in the Western Hemisphere.

The ten colleges where civic knowledge increased from freshman to senior year were mostly lesser-known institutions: Eastern Connecticut State, Marian College, Murray State, Concordia, St. Cloud State, Mississippi State, Pfeiffer, Illinois State, Iowa State and the University of Mississippi.

Surveyed colleges ranked by Barron's imparted only about one-third the civic learning of colleges overlooked by Barron's.

One reason why civic knowledge lags is the trend away from teaching dates and factors in general, in favor of analysis, trends and

a student's personalized take on the past. And with the rise of postmodern theory and cultural relativism, many students have been taught to scorn the traditional values of the west - equality, freedom, democracy, human rights - as masks for the self-interest of the rich and powerful. It follows from this view that history, particularly American history, is mostly propaganda inflicted on the young.

ISI asks: "Is American higher education doing its duty to prepare the next generation to maintain our legacy of liberty?" The answer in the report is no. In 1896, at Princeton's 150th anniversary, Woodrow Wilson argued that a central purpose of higher education is to develop citizens capable of steering the nation into the future because they have a steady grip on the past. "The college should serve the state as its organ of recollection, its seat of vital memory," he said. But in the survey, Princeton ranked as the fifth-worst school for civic learning. And most of the other 49 schools weren't much better.

John Leo, Minding the Campus, From Forum, September, 19, 2007, [http://www.mindingthecampus.com/academic_studies/], January 13, 2010.

FACULTY MEETING
Wednesday, March 17, 2010
12:40-1:40pm, LC200

Spring Break March 1-5, 2010

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Science for Science Teachers

IN 1981, THE STATE of Arkansas passed into law a bill that demanded that if evolution was taught in state-supported schools, then something called "Creation Science" -- aka the book of Genesis read literally -- had also to be taught. This happened during the interregnum between Bill Clinton's first time in the governor's mansion and when he regained it two years later. The bill was debated for all of half an hour by the legislature and signed by the then-governor, a man as unqualified for the post as he was surprised at getting it.

Obviously this law violated the First Amendment separation of church and state, and so the ACLU swung into action to get it declared unconstitutional. After a two-week trial, the federal judge ruled precisely that and so that was the end of the Arkansas "Balanced Treatment for Creation-Science and Evolution-Scient Act," as it was called. I was one of the witnesses for the plaintiff, called in to testify on the history and philosophy of science, showing that whereas evolutionary theory is science, creation science is not science but religion.

Among the other expert witnesses was the late Stephen Jay Gould, the well-known paleontologist and popular-science writer, and the late Langdon Gilkey, the most eminent liberal theologian of his day. But far more impressive than any of us was a local, high school biology teacher. I remember sitting in the courtroom as he testified. The assistant attorney general was trying to tie him into knots over some technical point in evolutionary biology. Finally, the man blurted out: "Mr. Williams, I'm not a scientist. I'm a science educator. I love science, I really do. And I love my students. My job is to take the science and teach it to my students. I am not a leading researcher. I am an educator, and I have my pride and professional responsibilities. And I just can't teach that stuff [meaning creationism] to my kids." Sometimes it is just a privilege to listen to other human beings and recognize that they are better people than you are. (I am quoting from memory. I have just looked at the actual transcript of the trial. The teacher's words are even more moving that I remembered.)

I have been thinking about that man a lot since I wrote my piece on why I am weeping for Florida State University. In that post, I made the point that there is something seriously out of kilter in an institution,

claiming to be a place of higher education, that lavishes funds on the football program but starves the academic side. In passing, I made reference to one of the very good things that is happening on the FSU campus: the project to upgrade the teaching of future school teachers of mathematics and science.

A number of people asked me about this and so I dug into it a little more. Based on a very successful program at the University of Texas at Austin, it is humming along nicely now, although as you might expect there are all sorts of territorial tensions as science ed is taken from the College of Education and put in the College of Arts and Sciences. (I should say that the dean of the College of Ed is one of the leaders in this project, and some members of her faculty are deeply involved, so it is not simply plunder of one part of the university by another part. Anything but, in fact.)

The relevance of the Arkansas teacher struck home when I looked at some of the figures. Get this. In 2007 (the last year for which there are available figures) within the State of Florida 1,295 people were hired to teach mathematics. Of those, only 394 had qualifications in teaching mathematics. Within the state, 1,154 people were hired to teach science. Of these, 282 had science qualifications. In other words, and I can attest anecdotally to this at my kids' high school, most of the people being hired in Florida to teach mathematics and science aren't qualified. And note that these are the numbers of people being hired, not necessarily the numbers needed.

In other words, we are simply not getting into our classrooms people like the Arkansas teacher who just loved science (including mathematics) for its own sake. Or if we are, it is purely by chance. We are not getting people who were themselves so thrilled by astronomy or biology or algebra (and there are such people) that they wanted to do it at university -- and then who wanted to go back into the classroom and teach it to others. We are getting people who for various reasons are taking the job of teaching mathematics and/or science, but who have no background training. And of course, not necessarily any passion or deep commitment to science.

That Arkansas teacher was on the stand because, as the great geneticist Theodosius Dobzhansky used to say: "Nothing in

biology makes sense except in the light of evolution." In other words, let's teach about the cell and the parts of the plants. Who gives a damn about whether everything started six thousand years ago or fifteen billion years ago?

This, I have discovered (and the ultimate credit goes back to Texas, which, God knows has got its own troubles with Creationists) is one of the big things that the science-educator professors are trying to address on my campus. They are now insisting that all would-be science teachers have a joint major, one in education and the other in a science or mathematics. This means that the undergraduates are having to take a lot more science and mathematics than before and that some of what they are taking has to be upper-level. No more meeting the qualifications with just first and second year courses.

What our people are trying to do is to get our students hooked on mathematics or science. Make them identify with the field and want to contribute to it -- if not as researchers then as teachers of the next generation. Make them care about mathematics or physics or chemistry or biology for their own sakes. Then send them out into the world.

Will any of this work? Ten or 20 years down the road, will we look back and think it a success? I guess no one knows for sure, but it does seem very much worthwhile. It may be that what I am telling readers is stuff that they know very well. I can only say that after 45 years as a professor and with five kids having gone through high school, I am finding how little I know about educating educators. If there are other things I should know, feel free to contact me, and periodically I will make sure that it all gets passed on. I don't know about you, but the last year's battle in Washington to get any kind of health-care bill passed has left me really depressed. It is good to know that some things in America are working for the benefit of those to whom we have such great obligations.

Michael Ruse, The Chronicle of Higher Education, Brainstorm, January 13, 2010, [http://chronicle.com/blogPost/Science-for-Science-Teachers/20510/], January 13, 2010.