

perhaps need to examine their teaching methods.

When I taught Newton's third law of motion, I demonstrated how to use a balloon to propel a small cart and explained why it worked. Then I gave students the homework assignment of finding other ways to move the cart or to improve its efficiency, and I required that they make their own carts. They could search the internet for instructions, but they eventually had to make a real cart, which involved their using technical skills. Since grading of the homework was based on how far the cart could go and how innovative the method was to propel the cart, my students spent much more time on testing their carts than in front of the computers. As a teacher, I also had to spend a lot of time on the internet so that I could judge whether the students' designs were really their own.

Finally, let me underscore that the proper uses of science and technology are keys to making life better, for ourselves and for the planet.

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John Fang writes that in his assessment, the motivation, sociability, and

intellectual skills of college students have diminished in the past 30 years. He provides no data to substantiate his claims, and I don't agree with him one bit. I have thoroughly enjoyed working with the students enrolled in my introductory physics courses in the past three years.

I would caution all teachers, especially physics teachers, who tend to operate on a different intellectual plane altogether from the rest of mankind, not to allow their assessment of their students, their attitudes toward teaching, their philosophies about teaching, or their behavior in the classroom to be shaped by anecdotal evidence. We are scientists, and we should look at all of our work-related ventures, even teaching, as scientists. When we sense that something is amiss in the classroom, we should seek to understand what and why and how we might change it; and in doing so, we should consult the literature.

There is truth in the idea that the internet has changed how people behave, but the critical question is how? The field of media ecology deals principally with the interaction between the media environment and the human mind. I direct anyone interested in the subject to read the works of Neil Postman,¹ who

was a high-school teacher, college professor, and principal contributor to the discipline. Undoubtedly, modern college students have far less contact with the natural world than students did 30 years ago. Today, work and play take place almost exclusively on the computer, in a virtual world. So to understand this generation of students, we must ask two questions: What is the nature of that virtual world? How does it affect how students interact with teachers, with one another, and with the natural world? Their media environment, not our classrooms, is the dominant force that shapes their lives. I'm not saying that we must move into their media environment—Postman would argue exactly the opposite, that we must preserve our media environment—but understanding one informs the other.

Reference

1. See, for example, N. Postman, *Teaching as a Conserving Activity*, Delacorte Press, New York (1979), and "Informing Ourselves to Death," speech at the German Informatics Society meeting, 11 October 1990, available at <http://www.mat.upm.es/~jcm/postman-informing.html>.

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