Optical Engineering

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Never Too Old To Learn

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This past month has been somewhat of a dilemma for me. I am both teaching a course and taking a course, so I am seeing the learning process from both sides (as a teacher and as a student). I am not being graded on the material I am learning, but I am giving grades in my class, so the students are a little worried. It reminds me of the old joke:

> Tommy: Teacher, I don't deserve this grade.
> Teacher: Tommy, I agree with you, but zero is the lowest score I can give.

I have to admit I am not giving any poor grades currently. The course I am teaching is at night for Catholic University of America, and the subject is "Intelligence, Surveillance, and Reconnaissance Imaging Systems." I have roughly 10 students, and all of them are working professionals who are in the graduate program at night. They are all a joy to work with, and it has been 10 years or so since I've taught a course, so it really is a pleasant experience for me. The first day of class, a few students asked what to expect in terms of tests. I had not given it much thought, so I just replied "one in-class closed-book test, one take-home test, and one oral final exam." So far, it is working out well and the students have all agreed that the variation in style is a good experience. I have been an expert in high-performance military imaging for some time, but it still impresses me how quickly the students pick up the material and can actively work through hard issues.

The course I am taking is really a tutorial, and I am thankful that I am not being graded on the material. It is a tutorial on quantum optics by two colleagues, John Reintjes and Mark Bashkansky, who have met with me six or seven times now for an hour to help me understand photon entanglement, photon collapse, quantum imaging, and ghost imaging. I am thankful that John and Mark have patience with me, as I seem to ask the same questions over and over in an attempt to sort things out. It seems to me that some of the issues do not want to be sorted out. Either that or I am becoming very challenged at learning. I felt better after a few Nobel Laureates and other brilliant scientists came to our lab a few months ago to discuss these issues and they seemed to be having trouble sorting out some of the material themselves.

I do wonder whether it becomes harder to learn the older you get (i.e., you can't teach old dogs new tricks). There are many papers that describe how it is more difficult to learn once you are older, especially in the area of foreign languages. There are a number of theories that have been studied and rebuked, but I do have an opinion (as always). I think as we scientists and engineers get older, we tend to spend less time thinking and being creative and more time managing, directing, and using our already learned experiences to be successful. To me, learning is easier if you practice, so time must be set aside to think and be creative.

If Mark Twain was right, then "education is the path from cocky ignorance to miserable uncertainty." However, I'm not going down without a fight!

P.S. Since this is the holiday season, I want to recognize members of the military of all countries. Many military members are deployed around the world and do not get to celebrate the holiday season with their families. This sacrifice is one that we should all appreciate, since they keep our countries safe and secure while protecting our freedoms and rights. These people rarely engage in international politics and disagreements, but they willingly deploy and fight for the good of their people and, usually, for the good of all mankind.

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Editor