

Education vs. Learning - It's All About Ownership

No one has ever washed a rented car! Tom Friedman and Lawrence Summers have used this statement often to emphasize the importance of ownership. It originated in 1985 from the response of a military noncommissioned officer to a question from a general officer about aircraft maintenance and the importance of owning the whole aircraft and not just a piece of it – only whole planes fly!

As an engineering educator for over 40 years, I have always felt my responsibility has been to have students first *experience* engineering – what it is like to be an engineer – and then, if there is interest and the start of passion for engineering, guide students to *become an engineer*, not just study engineering. Students study to *become* something - not just take courses, receive grades, earn a diploma, get a job, and make a living. Becoming something takes passion and, most importantly, *ownership*. This is a commitment each one of us has to make in whatever profession we choose. Once a commitment of ownership happens, an educator can then be the mentor, the guide, to the student's life-long pursuit of becoming something they are passionate about. There is no secret here – it is all about commitment and ownership. As the famous golfer Ben Hogan once said, the secret is “in the dirt.”

Unfortunately, making a commitment to become something is long-term and does not lend itself to daily postings in social media that everyone is seemingly judged by. And when trying to attract students to enroll in a university, it always seems to be the newest building or most successful athletic program that gets the publicity. I do not think telling potential students that the answer to their pursuit is “in the dirt” would increase enrollment.

For engineers working on real-world engineering systems, it is always about the response of the system to some stimulus to produce a desired result. Higher education must also focus on response, and effectively lead to actual learning. Learning is the essential systems response to education. If this is not so, then education fails human beings around the world. Throughout the many years of formal education – middle school, high school, and college – educators use assignments, exams, and grades to help students understand and internalize the material being studied. They are not an end in themselves and are used to promote critical thinking in students and foster the attitude that life-long learning is not only necessary, it is joyful. A human being's response to formal education is learning for the sake of learning and embracing the knowledge in a field one has a passion for in order to grow as a person each and every day. Each of us must never stop learning, and all our learning makes the world better through the solution of the problems humankind faces. Unfortunately, in today's society, so much emphasis is placed on these performance metrics, that the reason for their existence is forgotten; they become an end in themselves. Education then becomes nothing more than a test, and once passed, learning stops – because it was never embraced, and innovation ceases.

Focusing only on the educational rubric results in a view that life is a test, to be passed with some acceptable grade, and then rewarded for a job well done. *Do just enough to get by, stay out of trouble, and all will be fine in the end.* This is certainly not a prescription for world-changing action. Focusing on *learning* results in a view that we are all works-in-progress, each of us on a quest for evolving knowledge and understanding. The ignited and sustained fire this view fosters in each of us cannot help but change the world for the better.

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