Today’s IT Graduates Not Quite Measuring Up

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Let’s not kid ourselves (and I’m talking to anyone who graduated over 20 years ago): There are many more freshman entering colleges and universities who are not as “good” as we were when we were freshmen; many of today’s undergraduate academic programs not as “good” as ours were; and many of today’s graduates not as “good” as we were. If you think I’m going to refute or contradict those assertions, you’re wrong. I really believe them. I believe they’re true because of my own experience as a student, parent, information systems professor, and (previously and now again) IT practitioner.

Let’s look closer at my seemingly outrageous comments. In my opinion, people have an ill-conceived notion today that they did not have when we were undergrads—that, in the US, higher education is the right of every K-12 student. As a result, academia has thrown open its doors to many who are completely unprepared for the rigorous critical thinking and problem solving that once characterized higher education. It’s not that students are dumber than they once were. It’s just that many of the high school “graduates” accepted into college have not mastered basic principles of “lower” learning (reading, writing, arithmetic, and science) that should be the bedrock of advanced learning. Costs of higher education are skyrocketing for many reasons, not the least of which is the expending of expensive higher-education resources on inexpensive, lower-education instruction.

A consequence of this education travesty has been academia’s need to adjust (a euphemism for “dumb down”) undergraduate programs to accommodate too many unprepared students. In the late 1960s, computer science emerged as an academic discipline, first in graduate-level engineering programs, then later in undergraduate programs, mostly within engineering schools. Acceptance into those programs required extensive prerequisites of high school mathematics and science coursework.

Today, computer science programs have spun off look-alike programs, notably the information systems (IS) major typically housed in business schools. These programs seem to be a reasonable alternative for those students enamored with IT but lacking the interests and academic background required for admission to computer science or engineering programs. Most students who enter IS programs expect to receive undergraduate degrees about four years after they enter college. And outsourcing issues and IT job availability aside, they expect to enter well-paid professional IT careers with that degree.

The seemingly impossible challenge facing academia is how to cram years of high school foundation learning, plus basic and mid-level IS instruction, into those four years while still producing literate, educated, and skilled IS professionals who can contribute to the betterment of...
society. Well, academia can’t, so we compromise and we rationalize.

Consider that most IS entry-level employment is concerned (in one way or another) with programming, database, or networking projects. New IS graduates are simply unprepared to participate meaningfully within teams that work on such projects. Because of time constraints, undergraduate IS programs consist of a paltry number of technical courses and labs—they typically allot a bare-bones 20 academic credits to technical courses. Business schools claim (rationalize?), as even I have in the past, that IS graduates are more well-rounded than their computer science counterparts. But the truth is that in-depth technical coursework gives way to introductory finance, introductory economics, introductory marketing, and—the most inane of all—introductory management. None of these courses contributes to the technical foundation that IS graduates really need to do a job well when they graduate. Even worse, courses such as introductory management mislead many into believing they can manage projects and people upon graduation.

I have recently returned to (a rendition of) the “real world” where I am required to hire technical staff. And in my current position I now realize—just as when I was previously in the real world (before I became a professor)—that I would never hire any of my graduating IS students for a technical job. They simply don’t have the technical and problem-solving skills of engineering or computer science graduates.

I used to ponder why so many large-scale system projects (such as enterprise resource planning systems) are so incredibly over budget or late. Now I wonder whether my own graduated IS students are managing these projects! On the other hand, I also wonder why, after almost half a century of experience, and despite countless tools and methodologies, computer programming remains an art and not a science. Maybe computer science grads deserve the blame for that problem.

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