PROFESSIONALISM

Thank you for providing an interesting debate in Computer’s The Profession column (R. Fabian, “Computing Professionals,” Feb. 2011, pp. 96, 94-95). As a software engineering professional who has relevant qualifications including 30 years’ experience working on safety- and mission-critical systems in multiple industry sectors, I have found that issues pertaining to professionalism are an important but often ignored topic (www.crosstalkonline.org/storage/issue-archives/2010/201005/201005-Allen.pdf).

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COMPUTING PROFESSIONALS

Regarding Robert Fabian’s thought-provoking The Profession column in Computer’s February 2011 issue, I too have pondered the state of computing and the concept of profession as applied to it. Computing is different from other professions such as medicine and law and even other engineering fields like electrical or civil engineering.

From its invention, programming has always been easy in the sense that very little penalty is exacted for a failed attempt at creating a system. During its development, and for most systems in deployment as well, software failure doesn’t cause lives to be lost, disastrous property damage, enormous wastes of physical resources, nor even (usually) the loss of too much time or money. Fix the problem and try again. Engineering by trial-and-error can be successful.

While system applications have exploded in variety over the years, programming’s essential nature has been retained. As well, while some applications require a more formal approach, an increasing number can be built with only a little training and a willingness to experiment.

This attribute of programming sets it apart from all other engineering fields. And within it we find a variety of design and organizational styles, ranging from very formal to purely experimental, with a host of others in between.

A professional style, comprising a striation of practitioners with different depths of education, experience, and formal certification, is found in several subareas of computing. There is, however, no single umbrella organization or traditional structure that forms an overall computing profession. I don’t expect one anytime soon; rather I expect that we’ll continue in the opposite direction for awhile, as the field continues to diversify.

We’ll continue to see subareas of the professional style come and go. To me the best thing to do is to embrace and support subareas that can be successful using different approaches.

In this sense, I want to be proactive like Neville Holmes, but perhaps allowing for a greater diversity than he in such professional subareas.

The invention of the computer and the development of software and computer science have provided us with a descriptive capability and a means to instantiate descriptions as operational machines unlike anything seen in the past. It’s not surprising that we have such a range of capabilities and diversity of people able to participate in many different ways. Of course, along with this come vexing issues such as reliability, security, and so on. But if there comes a time when the field has resolved to just a few means of practice, with a single well-established organizational and educational hierarchy, then we will have reached a point of significant stagnation.

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Robert Fabian responds:

Thanks for your thoughtful comments. A minor point of clarification about my position. I believe that computing practitioners can, and should, be computing professionals, behaving in all ways as professionals. What I can’t see happening is that there will be one body—the computing profession—to which all computing professionals belong.

This puts the onus on the computing practitioner to determine what it means to be a computing professional—there is no “profession” that will make that determination. But we should do what we can to encourage computing practitioners to become computing professionals.
ACADEMIC MISCONDUCT


Before addressing solutions to this problem, we need to realize that several parties are involved, each with their own ethics and cultural views of what’s acceptable. There’s no way that all the parties will be satisfied with what happens.

Is the goal to keep university administrators happy or to keep the paying customers happy? Is the customer right or not? I vote for the buyer not the seller.

Professors and administrators have their own arcane views of how the world should be. And they want to impose their processes on students without considering the other stakeholders. Their views conflict with students who want to get a degree, parents who are paying for the education, and businesses that only want trained graduates.

Note that education and training are orthogonal concepts; and a degree is only partly correlated.

Businesses that want cannon fodder should look at vocational schools for bodies trained in the latest technology and not expect universities to change for a third party that is little more than a leech.

Teamwork, cutting and pasting, and outside help are all the norm in the real world, where efficiency, speed, and profit are the metrics used to grade performance. That behavior should not be penalized to appease the professors who live in a different world where footnotes and formats mean more than results or reality.

Universities must decide that education is the goal and adapt by finding new and better ways to achieve that goal. If they charge tuition, they also need to find a way to ensure that the education actually happens, not just give a degree for having paid tuition for four or five years.

We need better ways to teach and educate so as to totally avoid the purported problems, not try to find ways to counter them.

Zero tolerance is total stupidity, especially with respect to irrational rules like even forbidding tutors as our local schools did. It’s time to break the cycle of abuse in our universities as well as in our elementary through high school public institutions.

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