Regional

Graduate students need advisement in life

Dr. Aldemaro Romero Jr.
Letters from Academia

One of the oldest traditions in academia is the apprenticeship. The idea was developed in medieval times in Europe when universities began to flourish as a means for youth to learn a particular set of skills from practitioners of a particular trade. As universities became larger and more specialized, and as the job market demanded more people with specific skills, the whole concept of apprenticeship evolved into what we know today as graduate programs.

Today graduate students represent an important component of higher education. Unless you are talking about a community or technical college or a purely 4-year college, graduate students play a significant role in both teaching and research.

Despite the important roles graduate students play in academia, we rarely hear about the best way to prepare them and how they are funded. But that is changing. In a recent study by economist Margaret Blume-Kohout published in the journal Research Policy, an analysis was made about how U.S. graduate students in the biomedical sciences are funded and about their first jobs after earning their doctorates. According to this study, students supported on a research grant are more likely to take a research job than those funded by other mechanisms. This is important because in many institutions of higher education there is a continuous debate about the best way to prepare the next generation of researchers.

The study was carried out among 41,580 students who earned a doctorate at 121 research universities between 2001 and 2010. It showed that in the case of biomedical graduate students, they have three major sources of financial support: the National Institutes of Health (NIH), a research assistantship from a faculty member's grant, or direct support from their university.

The way these students are funded, the study found, shapes their role and how they work. When the student gets a grant from NIH, for example, she or he has a great deal of autonomy since students are pretty much responsible for the output of their work. When students depend upon a research assistantship, they will pretty much be part of the research agenda of a faculty member and will be under direct supervision of that faculty, greatly diminishing the student's autonomy. When the student is directly supported by the university, he or she has the freedom to select the mentor under which to work but the funding usually comes with strings attached, such as teaching loads and less time and effort invested by the mentor.

The majority of graduate students pursuing a biomedical career are supported by grants from their mentors while direct NIH support represents about 21 percent of the total. Because at the present time we are producing more biomedical researchers than what the market can absorb, the study suggests that the NIH should emphasize fellowships and traineeships as a way to provide these graduates with better and more independent training while reducing the overall supply of researchers.

There may not be too much of an appetite for a change like this. Because many established researchers need research assistants to increase their productivity in terms of publications and the size of grants they may receive, many are reluctant to change the current system. Publications and grants are the critical measures of success in research institutions. This will also reduce the number of graduate students in biomedical research because although international students are ineligible for fellowships and traineeships, they are eligible for research assistant positions, thus eliminating the present glut in that area.

The other advantage of this change of policy is that women and minorities would receive a greater share of NIH-funded fellowship and traineeship openings than research assistantships, which will help to increase the representation of those groups in that area. Also, according to this study, students whose primary support was an NIH-funded research assistantship were 11 percent more likely to have taken a research-related job right after graduation than were NIH-funded trainees and fellows.

One of the implications of this study is that we should initiate a discussion about how and for what we should educate graduate students in general. Many of them pursue graduate studies after completing an undergraduate degree without a clear objective of what they want to do after that. Do they want to become university professors actively involved in research? Do they want to just get a master's degree so they can teach without being involved in research? Do they want to go to work in private industry where it is all research and no teaching duties?

These and many other questions are rarely asked by the students themselves when applying to graduate school. Worse, some faculty advisers fail to ask the students these important questions.

American society is very individualistic and too accustomed to allowing students to make decisions by themselves. I think it is a good idea for faculty – most of whom came to age under a different set of circumstances – to advise students properly about the current realities of the job market. By the same token, federal funding agencies such as the NIH need to start thinking about how their policies may affect not only the job market but also the lives of the very individuals they think they are supporting with taxpayers' money.

Finally, at the end of the day, we all must realize that not all graduate students are really prepared for what graduate school entails. In many cases it is not a matter of academic preparation, but rather a matter of personal preparation. Universities should be more proactive in providing better advice to their graduate applicants. Otherwise, they will be wasting time, money and effort in some of the best years of their lives.

Dr. Aldemaro Romero Jr. is a writer and college professor with leadership experience in higher education. He can be contacted through his website at: http://www.aromerojr.net