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On the Bottom Line, Good Teaching Tops Good Research

By *FRANK HEPPNER*

In research universities, those faculty members who write and obtain grant proposals enjoy certain perks, including summer salaries, more travel, more space, and an extensive list of other benefits, great and small. As one of my own professors pounded into my head years ago, "A great teacher is known all over the campus. A great researcher is known all over the world." The implications of that maxim are not lost on rookie faculty members as they consider promotions and job mobility.

In part, research is more prized because it is easy to determine the dollar value that professors bring to universities through outside grants. It is more difficult to establish the economic value of good teaching in such institutions. But it is not impossible.

When research universities hire faculty members in fields where grants are available, the expectation is clear. Several years ago, in an issue of *Science* magazine, 65 percent of the want ads for entry-level science-faculty positions at American research universities stated an expectation that the candidate would secure financial support from extramural sources, outside the university. If the phrase "develop a strong independent research program" is code for "extramurally funded," the proportion would top 75 percent. New hires are usually given a briefing in which lip service is paid to teaching, but the reality of the expectation of "rainmaking" is usually made explicit.

Once hired, such faculty members follow a reasonably predictable path. If hired to teach large, lower-division courses, they go to the dean after a year or two and beg relief: "How can I write a proposal, which requires at least four months of near-full-time effort, with this monstrosity fastened to my back?" If the petitioner already has a grant, the request is almost a done deal. The dean can hire an adjunct instructor for a few bucks and take the money out of general overhead, freeing the enterprising new researcher to seek "productivity." If the grant hasn't yet come through, a positive response will depend on the dean's assessment of the likelihood that it will.

Large introductory courses therefore become orphans cast out into the snow, sustained only by the good will of the transients who are their temporary custodians. To the successful researcher (in the financial sense) come fame, money, promotion, and prestige. To the good teacher comes ... the gratitude of his students. It has been so since I began my career at the University of Rhode Island, almost 40 years ago.

But does that approach still make sense in light of the new economic realities at research universities? It is an enormously different dollar world than when I started. In 1969 the state provided more than 50 percent of operating expenses; this year it is below 15 percent. Our research-grant overhead income has increased, but our tuition income has increased much more. In 2008 grant recipients at our university brought in a little more than \$60-million, of which roughly \$20-million was gross overhead — money given to the college to support the grant. But the research enterprise is expensive. A glance through our campus phone book reveals 38 names associated one way or another with grant acquisition or processing (compared with two names associated with the improvement of teaching). By the time various administrative offices dip their beaks into this overhead pool, a reasonable estimate might be that \$15-million is left to pay the electric bill.

During the same year, gross income from tuition was around \$190-million, or close to nine times as much as gross overhead income. Clearly we are today a tuition-driven institution, and while research supported by outside sources provides valuable intangibles — visibility, support for graduate students, standing in the rankings, assistance with recruiting — in terms of net income to the university, it's chump change.

So where does good teaching come in? The proportion of freshmen who return for their sophomore year, or retention rate, is 81 percent. That's actually a pretty good number for an institution like ours. For our freshman class, that means about 500 students a year don't return.

Because each student who did not return would have provided about \$50,000 in tuition and fees over the three remaining years until graduation — based on a rough average of \$17,000 a year for in-state and out-of-state students — that retention rate represents a loss of \$25-million a year. That's \$5-million more than our gross overhead income.

Some of these nonreturning students are not "recoverable." They

have family problems, personal problems, economic problems. But a substantial number are on the fence. They could stay, but maybe they will, and maybe they won't. What causes a student to stay? Twenty years of research on the "retention issue" can be summarized in one word: engagement. If the student somehow forms a bond with the institution, he or she comes back to the fold.

How is such a bond formed? It could be social. The student picks up a boyfriend or girlfriend. Maybe her team wins in her first season. Or he pledges a fraternity. Professors have little or nothing to do with those things. But on the academic side, the biggest single factor seems to be: Does a member of the faculty care whether the student lives or dies? How can a student possibly have that feeling when he or she is part of an introductory sociology class of 300? Not easily — but with an investment of time and effort, it can be done.

I teach 600 freshmen a year in my two big introduction-to-biology classes. It is a demanding pre-med-style course, and a number of years ago, the failure rate started to skyrocket, because the university had "broadened its concept of academic excellence" in admissions. So I decided to see if I could do anything that would have an impact, short of the now almost universal practice of grade inflation.

I announced to my classes that those who failed the first exam would be required to come in and see me for a diagnostic interview. I have had over 95-percent compliance. How? I simply suggest that the result of their not coming in will be so dreadful that I can't even mention it in class. Power of suggestion does the rest.

Because more than 100 students typically fail the first exam, I essentially do nothing but see students for two weeks after that. Although they're a bit scared at first, most of them say "thank you" after the interview is over. The first semester that I tried this, the failure rate dropped by 40 percent. I continue the practice to this day with excellent results.

Of course, all the time I spend with these students I could be working on grant proposals. However, out of my 600 students, 114 are statistically at risk of not returning. If, through this personal attention, I "salvage" only five of those students, I will have recovered \$250,000 in lost tuition. And I can do that every year. In my discipline, that is far more than I would ever be able to generate in grant overhead.

My university has 27 departments that have an average of at least two courses with more than 150 students each. If instructors in each

of those courses "salvaged" the same number of students in their courses as I am sure I do in mine, almost \$15-million in otherwise lost tuition could be recovered — about the same amount generated by grant overhead minus expenses.

Can faculty members be trained to be more effective teachers and so have an impact on retention? Absolutely. Instructional-development programs traditionally do just that. These offices are typically marginalized and token at research universities, without appropriate money, prestige, or appreciation. Faculty members typically have no official incentive to seek advanced training in teaching; in fact, they are often discouraged because of the disproportionate emphasis placed on research "productivity."

If research universities like mine, facing hard economic times, are serious about improving their bottom lines, they need to improve teaching. That goal, with the potential to yield far more income than grant overhead, deserves an appropriate investment in time, money, and recognition.

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