

TEACHING AND RESEARCH: A FACULTY PERSPECTIVE

Thomas N. Taylor, Ph.D.

Department of Botany, Natural History Museum, Biodiversity Research Center
University of Kansas

Introduction: Background and Influences

Addressing issues as they relate to teaching demands on the researcher is much like the advice I once received from my father when I was ready to purchase my first house. The three most important things are: location, location, location, he said. The parallel as it relates to teaching and research, is time, time, time – a scenario that I believe we will hear more than once during these discussions.

My thoughts and perhaps philosophy have been molded by the institutions that I have been associated with during my academic career, and perhaps to some extent, the thirty plus years I have been a teacher and researcher. My undergraduate degree is from Miami of Ohio, then a liberal arts college of about 8,000, with no graduate degree programs, but a botany faculty that prided itself in having undergraduate research participation. As I recall, none of the faculty were extramurally funded. The pride component is important because in my class of undergraduate botany majors that totaled 16, 15 went on to obtain Ph.D.'s. From Miami, I moved to the University of Illinois for doctoral work. The botany department there was modest in terms of extramural funding, but nonetheless had a strong tradition of graduate education. Following this was a year at Yale as an NSF postdoctoral fellow with no teaching responsibilities.

My first academic position was at the University of Illinois at Chicago, a new campus, with what seemed to be unlimited funds for equipment. The Illinois Circle campus Biology Department was a large (35), interesting mix of young turks who thought only of research, and a carryover of faculty (many with terminal MS degrees) who had little or no interest in research. To say that the faculty meetings were lively is an understatement. Despite the antagonism, the undergraduate biology students received excellent training. My next position was a two year stay at Ohio University in rural Athens, after which I accepted a position at Ohio State University. This job included not only chairing a twenty person department, but also keeping my research and teaching program viable. With about 46,000 students at that time, Ohio State had graduate programs in all departments, but a relatively modest research enterprise of about \$60 million. I served on the Board of Directors of the Ohio State University Research Foundation at a time when there was a determined effort to increase research and extramural funding. (Being at KU now, I feel a strong sense of *déjà vu*.) Two things stand out in my memory as major impediments to progress toward our goal:

1. There was an inherent culture that separated teachers and researchers. Those were the days in when you could be one or the other, but not both, and to a certain degree, that philosophy was promulgated by the administration.
2. There were ample internal funds from the state that meant that the solicitation of extramural funds were often not necessary.

To a large degree, researchers were isolated and there was little attempt at coordination among units and researchers. This was also the phase in history when universities believed that they could be all things to all people. Today, each of us might rank Ohio State with the Big 10 (now 11) for research; but I would venture to say that few of us would include Ohio State University in the same category with Michigan, Illinois, Northwestern, Wisconsin and Indiana. Some of this perceived underachievement is a result of faculty attitudes surrounding teaching and research.

How does all of this relate to the importance of time in the teacher/researcher scenario? Allow me to offer some comments that I believe partially address this issue.

Continue to Change the Culture

It has always been my belief that all faculty must engage in research and scholarship, and participate in the solicitation of extramural funds that variously support the unit (defined here as the department). When I first chaired a department many years ago, I naively believed that every faculty member needed to apply for research funding from institutions like NIH and NSF in order to support all of the activities that we have come to associate with graduate education.

I now believe successful administrators need to be far more cognizant of where an individual may be in his or her career, and what the strengths of that individual are. Further, the administrator needs to substitute flexibility for increasing faculty frustration so as to search for alternative methods of supporting the unit. Examples of alternative support for graduate education research would be programs such as Research Experience for Undergraduate Students, various forms of summer institutes for K-12 teachers, in-service programs and workshops, minority recruitment funds, contracts, endowment association assistance, etc.

The flexibility to adjust expectations during a faculty career is critical as it relates to supporting the research enterprise of a unit. One important key is that when someone opts to increase teaching at the expense of research, everyone in the unit is still rewarded. This action can take on a more positive “spin” when viewed as giving someone else in the department the opportunity to have increased time for his or her research. At KU, the ability to adjust a faculty work load following the granting of tenure, is an important component of this flexibility and is a strength of the institution.

Expectations

If we add to my initial premise (related to available faculty time) the fact that not everyone possesses the same talent profile, an equally important component in this discussion becomes what I call “performance expectations.” At every institution during my academic career, I was required to annually submit a list of papers published and presented, grants written and funded, courses taught (including student evaluations), membership on committees, etc. Before I arrived at KU, the Systematics and Ecology Department that I now chair had taken the faculty evaluation concept and turned it into a new “art form”: it provided points and fractions of points for everything a faculty member might do during the year. One inspired colleague asked me if he could get an additional 10 points for obtaining a sabbatical leave this year! This must

illustrate a new faculty concept of increasing one's merit by being away from one's institution, and will, no doubt, appear soon on the opinion pages of the Chronicle of Higher Education!

Perhaps a more accurate faculty evaluation relative to teaching, service and research activities is one that begins with the development by the chair and the individual faculty member of a list of expectations for a specified period of time. The subtleties of such a system, I believe, decrease the conflict between teaching and research, and perhaps most importantly, decrease the frustration level of everyone who is being measured.

While our current system of annual evaluation rewards individuals via merit, perhaps an alternative is one in which the unit (department) is rewarded. This provides the opportunity for all faculty to share in the success of the unit, and, I believe, decreases the dichotomy in faculty time that is devoted to the teaching and research missions of individuals. The downside is an increase in administrative time for department chairs. In a very real sense, each unit has a variety of functions to perform that include teaching, research and service, in the very broadest context. We typically deal in the currency of weighted student credit hours measured again faculty FTE, etc., and of course there is some administrative expectation about number of courses taught per faculty member. The flexibility of differential faculty workloads will continue to allow faculty to be used where their talents are best suited. While we assume that we make excellent choices in hiring and granting tenure, the fact of the matter is that not everyone moves along at the same professional pace. The research enterprise of an academic unit is multifaceted and can better use the talent of all faculty, but with different expectation levels.

Mentoring and Graduate Education

One of my favorite concepts is mentoring, whether at the undergraduate or graduate level, or for junior faculty. While we all purport to become better mentors, the concept actually gets little more than lip service; as such, our graduate programs continue to train students pretty much as we were trained, directing many to careers in the academy. We collectively do an even poorer job in mentoring junior faculty. Having just spent some time evaluating faculty for three year reviews, I can attest to the fact that in some quarters, the level of expectation has not been delivered, and obviously has not been heard by the faculty member in question.

There are distinct market factors at work that, to some degree, will dictate how graduate students are trained. Faculty expertise in teaching and research as it applies to graduate education now necessitates extensive collaborative attention, yet our graduate programs are still pretty much unchanged. Graduate degrees that are truly interdisciplinary - where perhaps several students obtain advanced degrees while working together on aspects of a single topic, but from highly different disciplines - will be the norm of the future. For example, having just spent some time in western Kansas (and with some intimate knowledge of feeds lots, as a result of the Chancellor's 1997 Bus Tour), I know that water quality and quantity issues in that part of the state are important. Policy decisions regarding economics, geology (ground water reserves and uses), biological diversity and wetlands, water chemistry and pollution might all contribute to a research topic that involved teams of students from different traditional disciplines, all contributing to a fundamental series of research questions.

There is nothing really new about such an idea, but still, there are relatively few examples one might point to in higher education where radical changes have been instituted in how we train students and in the focus of their work. To be sure, funding for basic and applied science will eventually dictate that this dimension be added to faculty scholarship and teaching profiles. Why is this type of training germane to our discussion? Because some faculty can be more effectively utilized within such a collaborative activity than they currently are as “individual operators.” Paying less attention to who gets the “points” for having the graduate student decreases the conflict and increases efficiency in training; and, oh yes, turns out a far better product for what we anticipate the future will require.

Hiring and Tenure

The faculty job description has changed and will continue to change in the future. Not all hires are going to be successful teachers and researchers. Increased scrutiny and difficult decisions will have to be the norm when granting tenure. In my opinion, there is no dichotomy between teaching and research; they, together with participation in other aspects of the academy, are what make this profession such a wonderful endeavor. Within the biological sciences at KU, hundreds of undergraduate students actively participate in research laboratories side by side with faculty mentors. I am confident that this experience is what motivates many of these students to select careers in some facet of science. Is the one-on-one interchange with the faculty member a form of teaching, or of research, or of both? The answer, of course, is both, and much of what faculty members do falls within the scope of this “both” category.

Excellent hires must be coupled with tenure decisions that insure retaining faculty who are able to continually change in a changing university landscape. The opportunity for departments to be well positioned for these (certain) upcoming changes will come about only if administrators make decisions that provide flexibility in faculty assignments. An important step in this process is convincing faculty that job descriptions will continue to change. Part of the responsibility that goes along with the concept of tenure, is adapting to, and accepting such changes along with the associated accountability factor. Undoubtedly, various forms of change will be incorporated into the University’s research and teaching mission of the next century.

Finally, the University can no longer be all things to all people. While this is not a novel idea, we rarely witness the collective courage to make truly meaningful changes. For example, a department’s mission could change from providing a combination of teaching and research to focusing entirely on instruction. The increased centralization of certain aspects associated with the research enterprise (such as a research foundation) will greatly help to focus on the research mission and to develop research agendas throughout the entire University. Critical to meeting the needs of the research enterprise in the twenty-first century is a centralized graduate school with uniform admission and exit standards, stable infrastructure support, and University-wide coordination and counsel as we re-engineer what will constitute graduate degrees in the future.

Summary

Faculty must continue to appreciate that the job description will always be in a state of flux. Administrators will have to become better people managers who strive not to measure

performance against some universal standard, but rather to assist faculty in defining their niche within the unit, and then addressing performance accountability.

We need to take to heart the concept that the University cannot be all things to all people, and that difficult decisions will have to be made that dictate which programs will be supported and which will be reduced or eliminated. In the final analysis, there is no conflict between teaching and research. Both are necessary components of a modern university. The challenges we all face is to anticipate where disciplines will move in the future in order to answer increasingly complex questions, to be better managers of people and resources, to better communicate our ever-changing role in society, and to insure that the students we train have the necessary skills to effectively meet the demands of the next century.