Ten Common Principles of Geoscience Departments - Part II

Successful science education represents a complex academic mission. Most departments of geoscience carry the duel missions of training future scientists coupled with playing a major role in the teaching of service courses for the university. Balancing these two core academic missions requires flexibility and thoughtfulness. A previous editorial outlined five common academic principles that can guide departments in fulfilling these missions. Herein an additional five principles are outlined that serve as a framework for structuring departmental administration. Together, these ten principles focus thought on sustaining and advancing the teaching of the geosciences at the post-secondary level.

6 – Assessment of teaching effectiveness. The importance of effective teaching to the mission of geoscience departments can not be overstated. Clearly, everyone understands and agrees that quality teaching is of the highest priority. However, the assessment of teaching effectiveness is an extremely controversial and complex issue. What is good teaching? At the core of this conflict lies the common misperception and misapplication of assessment. Importantly, assessment is not evaluation. As such, the first goal of assessing teaching is the collection of data, not the passing of judgment. Formative assessment of teaching provides the only rigorous way to understand strengths and weaknesses. In order to conduct meaningful assessment, there must be a high-degree of collegial trust. Without the explicit understanding that formative assessment will not result in negative performance evaluations, open and honest assessment can not take place. Each department of geoscience must make meaningful formative assessment a central and on-going component of their administrative activities. Such assessment should be conducted in addition to the department's regular summative evaluation of faculty performance.

7 – Programmatic review and strategic planning. Of the numerous administrative tasks with which geoscience departments are charged, none seem to meet with as high a level of disdain, and direct hostility, as do processes of programmatic review and strategic planning. These duties often run counter to the philosophy and work habits of many geoscientists. Despite such personal reluctance, the survival and growth of our departments depend directly on how we approach long-term planning. With increasing frequency, allocation of new and existing university resources is driven by the accreditation requirements of professional and technical programs. As such, geoscience departments are constantly challenged to justify their continued existence and fight for increasingly scarce resources. This tide of retrenchment and reduction can only be stemmed by serious reflection and well-considered action plans. Thus, our departments must approach the seemingly never-ending tasks of program review and strategic planning with high levels of aggressiveness and sincerity. This may not be pleasant work, but it is crucial to our discipline's future.

8 – Establishing measures of performance. What does it mean to be a well-functioning department? What characteristics do successful programs share? How does one establish the characteristics by which to judge? These questions sit at the heart of departmental planning. It is impossible to construct meaningful plans in the absence of useful data. As such, departmental faculty must agree upon a set of critical measures of successful performance. These metrics provide the quantitative undergirding for more qualitative documents such as departmental mission statements and strategic plans. By going through the process of discussing and debating a range of potential departmental performance indicators, faculty gain a greater appreciation for and understanding of what aspects of the departmental program are most valuable to themselves and their colleagues.

9 – Multiple levels of faculty obligation. As faculty members, where do our professional obligations lie? Naturally, a primary duty is to continually strive to become better educators and researchers. Yet, there exist obligations that extend beyond our personal professional development. One of the most important of these is the need for geoscience faculty members to actively participate in university service and faculty governance. As is the case with strategic planning, this sort of committee and administrative work represents a group of activities that run counter to the temperament of many geoscientists. However, representation of our department's role in the larger university mission is essential for the long-term health of our programs. As such, departments should both encourage and reward significant service to the university. Commonly, we hear the question "If I take on these new duties, what would you like me to stop doing?" Without a doubt we are all stretched thin by the various demands of our profession. However, the involvement of geoscientists in the day-to-day activities of our universities is a duty that is far too critical to be pushed aside.

10 – Creating an open environment for learning. Departments of geoscience, as a part of the larger university community, are obligated to provide an environment that is receptive and accessible to all. It is no longer sufficient to merely reiterate the fact that overt discrimination will not be tolerated. Rather, departments must continually strive to open our profession to as many people as possible. Faculty from diverse backgrounds and non-traditionally represented groups must be actively recruited. Any department that has recently conducted a search will clearly recognize the difficulties that underlie this suggestion. As such, we must be cognizant of the nurturing and development of all our students. Those who sit in our classrooms today represent the pool from which future faculty members will be drawn. It is essential for the long-term growth of our profession, as well as for its moral and ethical well being, that all individuals be afforded the opportunity to explore and study the complexities of our Earth.

Carl N. Drummond
Editor