Simple Advice: Get a Mentor and Learn to Teach

Jerry W. Samples
University of Pittsburgh at Johnstown

Abstract

New faculty members, especially those in their first tenure stream assignment, enter the process needing assistance in the development of research plans, professional development plans and teaching methods. Most have been exposed to the rigors of tenure and the demands of the position; it is not until they are in the tenure race that they find it to be "difficult".

The "difficulty" of the process can be partially alleviated by developing a positive mentor relationship with an experienced faculty member. The best situation is the development of a relationship that is spontaneous, one where the mentor volunteers to work with the new faculty member. Assignment of a mentor by the responsible administrator can work if the mentor being assigned agrees to work with the new faculty member. In either case, the availability of a mentor can be very useful in the area of professional development.

Learning to teach is a separate issue that can be a more difficult process. The best avenue to successful teaching is to attend a workshop, or several workshops, that discuss teaching methods, from fundamentals to advanced techniques. Becoming a better teacher will increase efficiency, assist with student evaluations, and remove one of the stressors that can make the tenure years very difficult.

This paper will address the mentor process and what it can mean to new faculty members. Real cases will be illustrated to demonstrate how mentoring has helped. Similar descriptions of the process for becoming a better teacher will be illustrated. Sample cases will be described to illustrate positive results.

Introduction

On the academic side of engineering, there are a myriad of responsibilities for the average faculty member regardless of the type of institution at which they serve. Teaching is an important part of the tenure and promotion process, especially at those teaching institutions where research is not emphasized. Even at those universities where research is a critical element of tenure, there must be evidence of good teaching. Grouping the research together with scholarly work leads to the general area of professional development, critical at all institutions, but more where research is highly regarded. Without professional development, there is a "probability" that the quest for tenure will be unsuccessful. If that isn't enough to consider, there is also a service element that must be factored into the equation. How much service is enough? What kinds of service are appropriate and accepted?

As a new faculty member, either recently graduated or entering academia from industry, it is important to recognize what is expected of you early in the quest for tenure. Unfortunately, the preparation of most faculty does not include a course on tenure implications, nor does it include extensive guidance about teaching and publishing. Teaching may have been emphasized during graduate study or it may have been totally neglected. Perhaps the best preparation for publishing comes in the form of writing a thesis or dissertation and having it published in various venues. As Aaron S. Carton, Professor of Linguistics at the State University of New York at Stony Brook relates: "My warrant to teach has been justified by training and credentials that attest only to my ability to conduct and lead formal empirical research on specific problems in as dispassionate and objective manner as possible."[1] The average faculty member has no training on teaching techniques, no training on how students learn, no training on the politics of tenure, just training in the specific research area.

The question is: Why worry about these things (teaching, professional development, service); they will take care of themselves, right? The answer is often yes, but there are times when the answer is not yes. All too often, seemingly unsuspecting faculty find that tenure is not granted or that they are being criticized during annual evaluations about one or more elements of the conditions for tenure. Faculty members certainly want to, and need to, know how to avoid these unpleasant situations. Administrators, senior faculty members and academic organizations spend a lot of time recruiting these new faculty members and want to retain the good ones.

What can be done to help? An unscientific survey of the tenure stream faculty in the Engineering Technology Division at the University of Pittsburgh at Johnstown was administered over a five year period. Faculty polled were at various stages in their careers and no administrators were included. None of the faculty mentioned their industry experience or their reasons for leaving industry. The following comments were gathered and generally apply to the use of mentors and teaching.

1. Why did you decide to take your current job?
- To Teach!!
- Teaching rather than research institution.
2. What will keep you here?
- Variety of teaching assignments.
- Time to pursue activities of interest (not necessarily fundamental research, but new
  skills and applications.)
3. What kind of assistance is appropriate to help you stay here? Mentor?
- Mentor is excellent suggestion.
- Keep me on the tenure track.
- Guidance through the tenure time-line, i.e., good committees, assistance with initial
  papers and other activities.
- Adequate time for professional development.
5. What will likely influence you to leave academia?

• Inability to successfully complete tenure process, particularly professional development. [2]

It is interesting to note that the notion of a mentor was considered a good idea, indicating that mentors were either not assigned or not functioning well at that time. It is also obvious that those surveyed want to teach. Finally, they are concerned about professional development and the processes leading to tenure.

Find a Mentor

The process of finding or being assigned a mentor is a two-way street. The faculty member being mentored must agree to accept the help, and the mentor must be willing to help. Instances do exist where the mentor could not work with the new faculty member or the new faculty member just didn't want the help. In either case, the mentor relationship will not work if either is reticent about cooperating.

Early in the book, *Teaching Engineering* by Wankat and Oreovicz, [3] a discussion of the mentoring process is applied to teaching. In the past, new faculty were mentored in teaching and now they are mentored in research. This shift of emphasis can be a liability when teaching skills of new faculty are minimal. Conversely, those receiving only mentoring in the area of teaching can be at a disadvantage when research productivity is required. Boice [4] relates that new faculty with mentors often get off to a much faster start in teaching and/or research. Those who receive role-specific modeling in teaching receive higher teaching ratings; those mentored in research are more productive in research.

Two questions should be immediately obvious to new faculty: How does one find a mentor? What should a mentor do in support of the tenure process?

The first step in finding a mentor is to identify why the mentor is needed. To merely want the mentor to provide support in the tenure process is not specific enough; and since the mentor already has tenure, they may not want to "go" through the process again. Some possible areas where a mentor can be of assistance include:
• Assessment of teaching to provide helpful hints
• Assistance with scholarship, including reading papers and proposals
• Learning the ropes, such as the procedures for submitting grant proposals
• Assist with handling graduate students especially in a culturally diverse setting
• A source of advice that may not always be friendly
• Someone to talk to when things are not going as planned
• Development of a network of discipline specific experts

The mentor may be assigned by the department or group, a method that might work or might not. Some mentors although assigned, are not willing to serve in this capacity making them of little use to the faculty member in need. It is important that mentoring "assignments" be carefully considered to ensure that mentors are willing to serve, are compatible with the new faculty, and possess skills that will lead to a successful relationship. The mentor should have the skills

necessary to assist the new faculty member in a broad range of activities, to lead them through the process of tenure, and provide critiques of teaching and research as necessary. Some mentors do not possess these skills and the relationship fails. The assignment is the most important step in the process.

Second, the new faculty member and the mentor must meet to determine how they will accomplish the tasks that are at hand. These tasks may include improvement of teaching, research, graduate student interactions, or grant writing. It is possible that the mentor is not an expert in some facet of what the new faculty member needs. This may require the assistance of an additional mentor or other senior faculty member. It may be that an industry member of the advisory board can help, or perhaps a member of a grant awarding organization. In any case, the establishment of specific tasks is important to the success of the relationship. Once the tasks are identified, the mentor can call upon personal experience, courses and publications, and associates to help resolve issues that are of concern.

Finally, there is the exchange of ideas phase where many possible problems develop. It is important that pride not become a barrier to the success of the mentor relationship. Too often, the new faculty member feels threatened by the mentor and the suggestions being made. This feeling is born out of the realization that the mentor has tenure and that weaknesses identified will be harmful during the actual tenure process. Concerns of this type must be identified and resolved early, by both the mentor and the person involved with the assignment. It must be understood by all involved that a mentor does not denote a weakness in the new faculty member; rather, strength in the organization that assigns mentors. Sometimes the mentor's comments fall on deaf ears, a situation that can cause the mentor to quit. A perfect example is comments about poor teaching that are brushed aside by the new faculty member due to a "lack of understanding" of the material by the mentor. The new faculty member may be identified as less than cooperative; a condition of great concern as the tenure decision nears. Recently, collegiality has become an issue during tenure decisions, so being uncooperative is counter-productive.

Mentor Examples

Two very short and very different cases will be discussed below. In each case, a mentor was offered to a new faculty member; one faculty member worked successfully with the mentor, the other did not. Recall that an important issue in any mentor relationship is cooperation.

Case 1. A new professor arrived from industry with no experience teaching and little experience writing scholarly materials other than a thesis and company reports. Since there was a need to produce some amount of scholarly work, it was suggested that a mentor be assigned to help establish a presence at a national conference including the publication of a paper in the conference proceedings. The idea of a mentor was immediately dismissed by the faculty member since help was not necessary. Three years into the tenure process, only one proceedings paper had been published. The new faculty member was behind the schedule personally established and decided that personal time was too valuable to worry about scholarship and teaching at the same time. Knowing that more scholarship would be required for tenure, the decision was made to leave the university. Cooperation did not happen and failure was a very real possibility, even though the mentor was willing to help with scholarly work and provide guidance during the tenure process.

Case 2. A new professor arrived from industry with no experience teaching and little experience writing scholarly materials other than a dissertation and company reports. As in Case 1, a mentor was offered, but was readily accepted. The mentor assisted in identifying potential topics for conferences, assisted with abstract preparation, reviewed draft papers, and reviewed presentations. The mentor was there for the entire process the first time; and based on the relationship established that first year, has been working with the "new" professor in subsequent years. The new professor, in the fifth year of the tenure process, is off to a great start and is an excellent teacher and scholar.

An important part of the mentor program is to pass on the "gift" that the mentor gives freely – time. Good mentors produce a legacy of those that they successfully mentor through tenure. It does take time to be a mentor and it is the responsibility of every professor who had a mentor to be a mentor to someone else. This action perpetuates the legacy and ensures that all new professors have a mentor and that all mentors have been trained by someone who provided guidance that led to success.

All mentor/mentee cases are anecdotal, some successful, others not successful. When the relationship works, it is easy to understand why – there is a synergy between the participants. When things go badly, the synergy is not there at all. The cases above are based on scholarly publications, yet in the second case there is also a teaching mentorship that has produced a fine teacher. The assignment of a mentor is not always the key to success but it can be helpful when success seems to be elusive.

Learn To Teach

As mentioned previously, mentoring is now focused primarily on research so learning to teach can be an individual and daunting task. What is good teaching anyway? Why bother worrying about teaching when only the students evaluate teaching, and what do they know? Both questions are common when discussing teaching with a group of faculty, new or more experienced. Both questions are easily answered with just a small amount of research.

Joseph Lowman writes that when asked for descriptors that define good teaching that certain adjectives come up, regardless of discipline. "[Students] most often choose words like "enthusiastic," "knowledgeable," "interesting," "concerned about me and my learning," "accessible to students," "motivating," "challenging, yet supportive," or "dedicated."" [5] To evoke responses like those listed above requires considerable effort in the preparation, presentation and assessment of learning.

The road to success in teaching has many stops. There are procedures that can assist in developing teaching skills and there are commons skills that will provide a great deal to the effectiveness of the classroom presentation. According to Wankat [3] and Lowman [5] the path to better teaching includes:
- Attending a teaching workshop
- Visiting the classes of the master teachers in the university

- Finding a teaching evaluation form to determine what is done well and what is not done well; then make corrections
- Staying current and intellectually excited
- Developing rapport with students
- Prepare, organize, practice and assess every class.

As mentioned above, Boice indicates that a mentor can be of great help to the new faculty member in the area of teaching. Often the mentor will be able to provide advice concerning the places to look for teaching assistance. Some of the better teachers at major universities spend time presenting seminars on teaching and the mentors should know of such programs. Similarly, many universities have a teaching center to assist new faculty as they develop and present their classes. A systematic approach to the development and presentation of class materials leads to efficiency in teaching. Good teachers are efficient in the classroom and their out-of-class time can be used to do other things, including research or preparation of new lessons or courses.

The "why bother" question is easily answered: it is what students expect. Many faculty feel that teaching is not important, often because it is evaluated by students. They feel that students are biased or not prepared to evaluate faculty. "A common notion among faculty is that ratings merely reflect instructor popularity, attractiveness, or grading stringency and have little to do with competency as a teacher. Arguing against this position are the results of studies showing that students consider the quality of teacher-student relationships to be second in importance to the instructor's ability to present material clearly and in ways that are engaging."[5] This speaks clearly to the notion that faculty need to be current within their discipline, intellectually stimulating and organized. It doesn't hurt to develop some rapport with students when building the classroom learning team.

The message is to learn to teach through a mentor relationship, by going to other's classes, or through attendance at a workshop. Learning to teach takes some practice, but once learned it too must be kept current to be engaging. Continued study of the latest teaching methods, learning the new technology, and learning about today's students are important to the success in the classroom.

Learn To Teach Examples

Two very short and very different cases will be discussed below. In each case the professor had a full teaching load, each was offered the opportunity for mentorship and outside assistance; one faculty member is successful, the other was not. As in the case of the mentor relationship, cooperation and idea exchange are key to learning to teach.

Case 1. A new faculty member with industrial experience and a doctorate was assigned to teach several classes and the associate laboratories. The mentor made classroom visits with comments being rejected because the new faculty member "knew how to teach". The mentor relationship immediately broke down and so did teaching performance. Student ratings began to falter and complaints began to grow. Steadfast in the belief that no one was right about teaching but the professor, the situation worsened until the professor's departure. The departure was not sudden, nor was the degradation of the teaching that began to degrade during year three and hit bottom in

year five. The decision to leave was unilateral and the attitude about teaching was consistent until the last day.

Case 2. A second new faculty member with industrial experience and a doctorate was assigned to teach several classes and the associate laboratories. Classroom visits resulted in an exchange of ideas that might help make the classes better. A teaching course was suggested and attendance proved to be of great assistance in the preparation, delivery and assessment within the course. Resulting student evaluations were superior, culminating in a teaching award.

The difference between these cases was the willingness of the professors to accept/reject constructive criticism from experienced mentors and the students. The mentor and the professor exchanged ideas, followed a format they had discussed and spent time developing a relationship of trust. Similarly with the students, the rapport in Case 2 was exceptional, student-teacher, teacher-student. Student ratings in Case 2 were exceptional. And, just to test the hypothesis that high ratings come from easy courses, graduates of this engineering technology program are focusing their graduate study in the subject area of this professor and are doing top quality work.

Conclusion

The advice is simple; find a mentor and learn to teach. Success and the attainment of tenure can be an individual project but it doesn't have to be. Help is often available; seek it out. Attend teaching workshops, attend research workshops, learn from peers, and find that certain person who can help pave the path to success. The cases are real and reflect more than just the use of mentors and workshops; they reflect attitude. Positive attitudes and the ability to work with others are very important to success.

Bibliography

1. Katz, Joseph, and Henry, Mildred, *Turning Professors into Teachers*, American Council on Education, Orynx Press, Phoenix, Arizona, 1993.
2. Samples J., Harter, D., and Bearden, K., "Finding and Keeping Good Faculty", Proceedings of the 1999 American Society for Engineering Education Annual Conference & Exposition, Charlotte, North Carolina, June 20 - 23, 1999.
3. Wankat, P. C., and Oreovicz, F. S., *Teaching Engineering*, McGraw Hill, New York, 1993.
4. Boice, R., "New Faculty as Teachers," Journal of Higher Education, 62,150, March/April 1991.
5. Lowman, Joseph, *Mastering the Techniques of Teaching*, Jossey-Bass, San Francisco, CA, 1995.

Biography

Dr. Jerry Samples holds a BS Ch.E. from Clarkson College, MS and Ph.D. in ME from Oklahoma State University. Dr. Samples served at the United States Military Academy twelve years before assuming the position

of Director of the Engineering Technology Division at the University of Pittsburgh at Johnstown in 1996. He is currently serving as the Interim Vice President for Academic and Student Affairs at the University of Pittsburgh at Johnstown.