Abstract

New engineering and technology faculty have come into one of the best jobs in the world. They are able to teach and learn in a field they love. They have worked hard to achieve this position, as it took many years to get an advanced degree. For some, there were additional years acquiring practical knowledge and experience in industry. It often comes as a surprise when they realize that they have to work even harder to keep the position they have worked so hard to obtain. Publishing is an important part of this work. While a list of publications will not guarantee tenure, the lack of publications can seriously hurt chances for a favorable outcome. For some faculty, getting started in publishing is not a problem. A research background from graduate school can be used as a springboard, especially if there are graduate students available to help with the research. For others, however, including most technology faculty, undergraduate teaching is the main purpose in their academic life. They have a different situation with respect to how and where to publish. There are rankings (written or unwritten) of publications that must be learned as some publications count more than others in the tenure decision process. Some institutions endorse publications supporting the teaching and course development missions as well as pure research, while others view them as less valuable. Additional issues, such as co-authoring, mentoring, and inter-disciplinary work, must also be faced. This paper discusses these issues from the perspective of a fifth-year faculty member who is currently going through the tenure decision process. Tips on how to get started, where to look for publication venues, and how to handle rejection are given, along with ideas on how to present and enhance the publications list in the promotion and tenure document.

The Tenure Track

Obtaining a tenure track position at the university of choice is a real joy. The next hurdle, you quickly realize, is that you must obtain tenure in order to stay. Tenure soon becomes the “Holy Grail” that the new assistant professor quests after, sometimes without knowing exactly what it is. Tenure, an old concept related to academic freedom, is most often defined in accordance with guidelines from the American Association of University Professors (AAUP). A summary of these guidelines follows:

1) The purposes of tenure are to provide for freedom in teaching, research, and outside activities and for economic security in order to attract people into the profession.
2) Tenure is defined as permanent and continuous except for age or retirement.
3) Dismissal can be for adequate cause only.
4) Financial exigencies, when given as adequate cause for dismissal, must be demonstrably bona fide.
5) Precise terms of appointments must be in writing in possession of both the institution and the faculty member.

6) Probationary service is limited to 7 years total of college teaching, except for some leeway when faculty move from one institution to another.

7) Probationary faculty have the same rights of academic freedom as tenured faculty.

8) Full-time faculty are defined as any teacher who teaches a “full-time load,” regardless of official title.

9) After two years of service, notice of non-reappointment must be given one year in advance, meaning that the tenure decision must be made no later than the sixth year of service.

10) There should be regular procedures for periodic evaluation and assessment of performance of probationary faculty members. [1]

Related to tenure, although technically using a different standard, is promotion. Most new faculty are looking forward to a promotion in academic rank from assistant professor to associate professor at the same time they receive tenure. At my institution it was once possible to achieve tenure without this promotion. This, however, is no longer possible as the school has decided to merge the two procedures. Only exceptional cases will be considered for tenure in rank. Another item to look for at your institution is the existence of a tenure quota. Is there a percentage limit to the number of tenured faculty in the department, school, or college? If there is, consider the situation. If the department of ten professors (six tenured) has a tenure quota of 70%, there needs to be some retirements, grand offers from industry, or catastrophe for there to be slots for all of the untenured faculty. Otherwise only one of the four untenured faculty will be able to stay. If after determining this possibility you decide to stay, you will have to become familiar with the promotion and tenure decision process. You know that you are supposed to do something, but what is it? This is akin to running hurdles in the dark. You know you have to run and jump, but when and how high? Start by looking in the faculty handbook, or even better, a departmental or school promotion and tenure guide. [2] This guide may have in it a system flowchart charting the promotion and tenure decision process. The flowchart will often have a striking resemblance to a multi-feedback circuit or a maze. Familiarize yourself with this process, especially the series of committees that will determine your future.

The Promotion and Tenure Document

Decisions on promotion and tenure are based upon the promotion and tenure document. The document is what will take the journey through the aforementioned process. It is unlikely that you will be able to state your case personally. Generally your department head will present your candidacy to one or more of the committees. Find out if a part of your department head’s evaluation is the tenure and promotion of his or her professors. If so, the head could be a valuable ally in preparing the document.

The promotion and tenure document has traditionally been composed of three sections, Research and Publishing, Teaching, and Service. These sections are not given equal weight. While it is unlikely that you will find a system as put forward by Rosenfeld and Long [3], where Research, Teaching and Service are given respective weights of 40%, 30%, and 20%, it is important for you to find relative rankings. As with any employer, the employee, in this case the professor, must determine what is important and valued by the university and department, and emphasize these accordingly. The promotion and tenure guide or faculty handbook may be of assistance in this question, but do not hesitate to ask your tenured colleagues in the department. I am personally aware of one institution where service is talked about with high regard, but one professor who has gone through the process describes the worth of service to the tenure decision in a very
derogatory way. It is important to look out for the case where one thing is stated as most important, but something else is actually most important

Actual practice may in fact differ in some respects from the written procedures that appear in the handbooks. One professor in transmitting his college’s handbook included this cautionary note: “You will notice that, curiously, the word ‘publication’ never appears. ... Don’t let that fool you. People who don’t publish ... have a lot of explaining to do.” [1]

For some committees, a balance is desired, others may desire exceptional (whatever that is) attributes in one or two areas. It is an error, however, to neglect an area. Regarding publishing, an ex-professor wrote to Prism that:

This past year I won the Dow Award from ASEE’s Gulf Southwest Section for my work with undergraduates--both in the classroom and in independent study. Unfortunately, I paid for these activities with my job and, for now, with my academic career. [5]

Cecilia Campoverde, a professor of social work at Florida Atlantic University, obtained tenure without any publications. This occurred, however, only after a bitter, divisive battle that included newspaper editorials and a resignation from the tenure committee. In her case her teaching and service areas were very strong, especially service, where she “helped start three service organizations for migrant farm workers and ... worked with autistic children and their parents.” [5] Her lack of any writing about her experiences, even after being warned about the situation two years previously, led to the disputes. This case is part of the discussion by the Board of Regents of the State University System to change the tenure and promotion system in Florida. Plans or proposals include offering some professors “the option of going on the tenure track or working under a multiyear contract” [5] and a “two track road to tenure. Professors who choose one track would balance scholarship, service, and teaching. Those on the other, less-traditional track would be promoted solely on the basis of their teaching and service.” [5] Without the documentation and dissemination of publications, however, these teaching and service experiences are much less valuable to colleagues.

In my school, the promotion and tenure document is now two parts, teaching and service. Writing and publishing are still required, but it is in support of the teaching and service missions and is incorporated into these two sections (or one section if there is a need for a critical mass). This change to the two part document reflects an acceptance that the School of Technology has a separate mission from the School of Engineering. It demonstrates that grant seeking and pure research are no longer paramount to tenure in our school, even if writing and publishing are still required.

**Getting Started on the Paper**

Getting started on any paper is very much a personal matter of choice. The paper topic should first of all be interesting, especially to the author. The author can report on some activity as either a researcher, a practitioner, or a teacher. For research topics, graduate school can be used as the best preparation. Interests developed in graduate school can carry forward to one’s professional life. This is especially true if you have worked as a graduate assistant on a professor’s project. Continued cooperation, perhaps even co-authoring, could carry on into your own career. Seeking help from the grant office of your university can help you with your plans. There is sometimes money available from the grant office as seed money to help you obtain other
funding. Projects thus funded can then be reported. For those who are not into grants and pure research, at certain schools there are other options.

Certainly a much wider range of activities is accepted as counting as research at the small colleges than would be the case at the larger institutions (papers at meetings, text books, classroom materials, course preparations, consulting work, participation in professional societies). [1]

Any activities as a practitioner in the fields of engineering or technology can also be reported. I have an interest in faculty internships and co-ops. After completing two summers as a faculty co-op, I wrote a paper on the subject with a professor about to take her sabbatical in industry. Any of the ways that industry and academia can cooperate is a good topic for a paper. I am very proud of my small contribution to a program called VISION, where high school teachers are given additional university instruction before going to industrial settings to work beside engineers and technicians. This project has led to increased cooperation between local school districts, universities, and industry, and has also led to a paper delivered at the 1995 ASEE Annual Conference [6].

Any innovative projects completed as a teacher could also be used for a paper topic. My own department frequently suggests that we try new ways of teaching the material in our classes. There is the expectation by our department head that some ideas will not work, but others will. Even negative results could be valuable to the department. Personally, however, I would not want to go into a promotion and tenure hearing as an expert on what does not work in the classroom.

As these topic ideas come to you, write them down and put them in a folder labeled “paper topics.” Additional material will find its way into the folder as you read and copy relevant articles. Your colleagues may help, for in the last month I have given copies of two articles to a colleague and used three article copies that had been previously given to me. When the topic is clear enough in your mind, go to the library and use the search capabilities to find additional writings on your topic. These articles will further tighten the scope of your own project. Eventually a topic will rate its own folder containing articles, citations, and ideas.

You may find it useful to visually illustrate your ideas. Write down all of your ideas on note cards, appropriate a large expanse of wall, and pin up your notes. You will be able to spend countless hours staring, thinking and rearranging. Doing this will reap several significant benefits (in the non-statistical sense). You will (a) gain an appreciation of how much work you have really done, (b) impress others (who will have no idea whether or not it has meaning), and (c) have a good excuse for sitting and staring at the wall. The real, and sometimes surprising, benefit of developing some type of visual representation of your ideas is that you may be able to see causes, effects, and other relationships more clearly. [7]

Cooperative Efforts

While departments periodically rediscover the benefits of mentoring, the concepts have been with us since the ancient Greeks, when “Mentor, the trusted friend of Ulysses in Homer’s Odyssey, was give the responsibility to tutor the King’s son in his absence.” [8] A mentor can be described as a guide, advisor, counselor, protector, helper, or sponsor. Whatever the definition, this is a tenured person helping someone who is not tenured through the process. Mentor/mentee relationships are developed, not assigned. My department head once suggested that two of us in the department talk about developing a mentoring relationship. Both of us declined. I had previously developed a mentoring relationship, and she has since co-authored a paper in the
Journal of Engineering Technology with an assistant professor at another university. We both recognized the benefits of mentoring, just not with each other.

If the mentor/mentee’s relationship works as it should, efforts will be made to involve the mentee’s department head in this process of faculty growth and development, since it is obviously in the best interest of the department to have faculty members develop the skills and professional expertise that lead to positive tenure and promotion decisions. [8]

A natural outgrowth of mentoring is the co-authoring of papers. During the initial stages of my review, a comment was made that I had too many articles which were co-authored. The Dean, however, has made it clear that he expects assistant professors to be on multi-authored papers. He also expects the professor’s name will gradually move to the left on the list of authors the longer the professor is with the university. In other words, moving from a mentee position of contributing author to a mentor position of principle author. An excellent example of this is a paper which a graduate student (whose name was last on the list of authors) delivered at the 1994 ASEE conference in Edmonton. It would be expected that, if this person attains academic employment, his name would start moving to the left. This co-authoring can also be interdepartmental or interdisciplinary. While some schools do not appreciate this dilution of effort by working outside of ones own area, my school seems to appreciate it. This is typified by my site administrators reaction to the story of one of our students saying “I’ve taken the math, the physics, the engineering courses, and you know, I’m having a real problem keeping them all separate.” “I think we’ve failed to show this student that they are all integrated,” was the administrator’s reply. One last tip on cooperative efforts, it might be a good idea to offer to review papers for a conference or journal. You will receive at least two benefits. One is the “Wow, I can use this in my class” feeling after reviewing an article. The other is the “Whoa, even I could do better than this” feeling that may give you incentive to start writing.

Publishing Opportunities

The first thing to investigate is where others in the department have published. After all, if it was good enough for them, why not you? There may be a list of articles in the department office. If not, perhaps one should be started. Helping with this task may (or may not) endear you to a departmental secretary, but copies of publications are often used in departmental or school displays. Next investigate the relative rankings of publishing venues. Again, it is unlikely to find a system of worth as put forward by Rosenfeld and Long [3], where a scholarly book is worth 50 points, a textbook 20 points, a national/international journal article 12 points, and an article in review 1 point. Some types of publications, however, are worth more than others to your department or school.

While not given absolute value weights, our promotion and tenure guide does list venues in what appears to be decreasing value. This list includes refereed journal articles, reviewed journal articles, refereed conference proceedings with (and without) presentation, reviewed conference proceedings with (and without) presentations, and conference presentations. Use this information on places and values when searching for a venue for your paper. Do not forget that you can attend and present at ASEE regional conferences other than your own, which may be a way to meet some new people (and see Gatlinburg, Tennessee in the spring). Also be aware of some non-traditional places where your paper may fit perfectly. For example, one of my colleagues has published in a nursing journal because of some cooperative work done with a member of the nursing department.

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There may be the temptation to write a book, or, to say to oneself that I will write a quality article which will be referenced in textbooks for the next decade. One of my colleagues has succeeded in doing just that. In his first four years he wrote a textbook which has had many adoptions, wrote a single refereed conference paper which was judged to be “best in conference,” and won “best teacher” awards from both students and faculty. Consider, though, if these publications had not worked out, what then would the tenure decision have been based upon.

A text book also takes a great time commitment. It is difficult, to say the least, to produce a text and at the same time write for the publications described earlier in this paper. Unfortunately, though one well written text may outweigh in effort, quality, and worth, a dozen or more papers and articles it will not be accounted to the scholar as such. [9]

So, you have selected the topic, done the research and selected the venue. Then it is time to write the paper in such a way as to increase chances for acceptance. Read previous journal issues, make sure that you follow the author’s information requirements, and conform the writing to the style requested, (e.g. American Psychological Association (APA)). Purchasing (or receiving from your department head) the APA style book also has the benefit of being able to see explanations of common problems in writing. Submit the proper number of copies of your article to the editor or coordinator along with a cover letter explaining the relevance to the editorial needs of the journal or the conference theme. The article will now be reviewed, perhaps by referees who will not know your name, perhaps by the editor or conference presentation track chair. Three results are possible, acceptance with no or minor changes, rejection with a possibility for resubmittal, or rejection with no offer of resubmittal. Do not become despondent if the paper is rejected, use the free advice from the reviewer(s) and try again, either the same or a different venue. If the paper is going to a different place, however, make sure that you modify it to meet that venue’s standards.

Conclusions

This paper has attempted to demonstrate the importance of writing and publishing for new faculty seeking tenure. This importance holds true even if the faculty member is in a department or school where teaching and service alone are used in the promotion and tenure decision. It is up to the new engineering educator to discover the rules of the process in order to have a successful outcome. An additional resource for new faculty interested in the historical background of the promotion and tenure process is the book *The Development of Academic Freedom in the United States*, by Hofstadler and Metzger [11]. Two books which overview current situations in our field are *The Professor Business*, by Flood and Moll [12], and *Mentor in a Manual* [13], by Schoenfeld and Magnan. A set of four articles by S. Ross and G. Morrison [14], published in the journal *Tech Trends*, give helpful hints on preparing a research proposal, designing and conducting research, making effective presentations at conventions, and getting research articles published in professional journals. Additional information and papers can be found by looking at previous ASEE conference proceedings, the *Journal of Engineering Technology*, and the *Journal of Engineering Education*.

References


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