

# **A Practical Faculty Mentoring Program**

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## **Abstract**

Much has been made about engineering faculty being strong in content knowledge, but lacking in many other aspects of faculty life. New faculty are typically not provided strong mentors to help them succeed in the tenure journey. This paper describes the motivation for our new faculty mentoring program, describes the mentor selection process and provides implementation and participant feedback.

## **Introduction and Motivation**

Engineering faculty have a difficult journey to tenure. They must excel in many areas of competence. They must write winning proposals, generate innovative and novel research ideas, manage projects, manage students, direct student research, develop strong classes, teach effectively, advise undergraduate students, facilitate student success, and serve on various committees. Typically, there is little assistance or even formal advice given as faculty endeavor to be effective and efficient in these roles.

The tenure and promotion journey is not clear to many new faculty. Frequently, not only is the path unclear, but the terms change during midcourse. Sometimes the bar is continually raised to a point that become difficult to achieve. “Most campuses set expectations higher than can be attained without effective mentoring” (1) (Boice 2000, p. 247). The hiring of new faculty is costly and time consuming. Just as colleges spend time and money on retaining existing students, these same organizations should spend time and money on retaining existing faculty – especially new faculty. A key technique to retaining new faculty is the mentoring process. One study showed that 15 percent of faculty without excellent mentoring left campus early by their own choice or not, but none with effective mentoring left for either reason (2) (Gray 2007 as cited in Boice 2000, p. 246).

Many academic institutions have implemented various mentoring programs. The next section reviews some of the literature available describing and assessing the impact of these programs.

## Literature on Mentoring

There is a great deal in the literature on mentoring students. Specifically, the mentoring of undergraduates has received much attention. For a comprehensive review of the literature on mentoring undergraduates, please read the article by Crisp and Cruz (3). The mentoring of graduate students has received much attention as well. An interesting study as to what doctoral students value in a mentor was performed by Bell-Ellison, et al. (4). There is some literature available on mentoring faculty in specific areas such as research, etc. Thomas, et al. (5) propose an interesting program to integrate undergraduate research, mentoring junior faculty and program assessment in an interdisciplinary program. Ewing describes a specific faculty mentoring program in Australia (6). Brightman (7) proposes elements that must be in place for the quality of instruction to improve, and they state that faculty mentoring is a key element. Brightman (7) presents a normed instrument for faculty evaluation and summarizes an existing faculty mentoring program. Lopez-Real reported from a survey that about 70% of the mentors felt they had benefitted from the mentoring program (8). Ziegler (9) describes a mentoring program for adjunct faculty. Ramani (10) provides tips on developing effective mentors.

Concerning mentoring of new faculty, a survey of 191 new faculty at a single university revealed that not much support is typically available to these new faculty. The survey found that, “Untenured faculty reported stressful and unbalanced lifestyles, and work expectations exceeded assigned workloads for several institutions” (11). A qualitative study was performed by Lund at a small Christian university (12). There are several mentoring studies in medical colleges. Wasserstein et al., (13) present a quantitative study, which proposed that as faculty are mentored, they have increased job satisfaction. Ambrose et al. (14), furthered the concept of job satisfaction by qualitatively studying a matched cohort of those faculty who stayed at their institution and those who left by measuring their job satisfaction through structured interviews. Mentoring was one factor significant to faculty retention.

A common concern in mentoring is the time involved. An article by Gabriel, et al. (15), discussed a faculty mentoring program for online learning which used a reciprocal model which provided for “just-in-time” mentoring. This provided a more clear benefit to the mentors as well as to the protégé. E-mentoring has the potential to ease the time constraint on mentoring. Wadia-Fascetti (16) presented the longitudinal impact of an e-mentoring program for women pursuing technical careers. The result of the study found that e-mentoring was useful and encouraging, but that most participants still wanted more face-to-face interaction. Studies have also shown that mentoring has a positive impact on faculty, especially minority and female faculty (17).

Many of these studies demonstrate the impact a structured (and, in some cases, even an informal mentoring program) program can have on faculty retention and

job satisfaction. The faculty mentoring program also serves as a motivator for new faculty to better mentor their own students, create a sense of community between faculty and students and motivate a new critical mass of faculty to effectuate change in engineering education as a long term goal. Additionally, the faculty mentoring program could reinvigorate senior faculty members. As increased faculty retention is a focus of our college, and the other possible outcomes are much desired, a faculty mentoring program was initiated in the Fall of 2008.

### **Protégé and Mentor Selection Process**

This section describes how the protégés and the mentors were selected. The protégés were selected simply by asking all new, untenured faculty members within the College of Engineering if they would like to participate. All nine new faculty agreed to participate. The potential mentors were recruited by asking many tenured and promoted faculty who were considered strong scholars both inside and outside the college. Many faculty were invited outside the college who were active in research in their fields. The faculty were invited to lunch meeting where the program was described. The meeting provided an overview of the program which included a stipend and a free lunch each month. More importantly, the faculty were encouraged to participate as it will focus their career progress and help them improve as faculty as well.

After the potential faculty mentors were selected, the matching process began. A luncheon was held with all faculty mentors and protégés in which a presentation detailed each role including responsibilities and benefits was provided. Existing faculty development activities were also highlighted during this time. This included the faculty writing circles and activities of the Wichita State University “Center for Teaching and Research Effectiveness,” (CTRE) including speakers, panel discussions and webinars. The director of the CTRE was also present during this time (and available himself as a potential mentor).

Participants were informed as to what the mentoring program provides: sound advice, an advocate, someone to talk to, a view from someone who has succeeded as well as a colleague for your career at WSU. Likewise, the participants were informed as to what the mentoring program does NOT provide: a substitute for your department’s mentoring, a “sure path” to success, or a faculty to cover for you when you are out of town. These items were important, as participants must be clear as to the intent of the program. The specific characteristics are described in Tables 1 and 2. It should be noted that protégés would not be matched with a mentor from their home department (this year, two-thirds of the new faculty were from a single department).

The initial matching event was a quick meet event patterned after “speed dating.” The actual mentor/protégé matching process had each potential mentor meet each protégé in a rapid and ordered succession. Each potential mentor/protégé had 3

minutes to get to know each other. For the first thirty seconds, both the mentor and the protégé stated their name, rank and favorite movie. Then, for the next one minute the prospective mentor told where they were from, how long they have been at WSU, their research area, and described their experience teaching. For the next minute, the protégé provided the same information. For the next thirty seconds, the prospective mentor made any closing comments. Then, the mentors moved to the next station (protégé) and repeated the process. Finally, the protégés were provided a little time to write notes as the mentors then switched to the next protégé.

Table 1: Protégé characteristics (18)

<b>Effective Characteristics</b>	<b>Ineffective Characteristics</b>
<b>GOAL-ORIENTED</b> Place a high value on setting and accomplishing goals.	<b>TOO SELF-PROMOTING</b> Constantly position themselves or name-dropping.
<b>SEEK CHALLENGES</b> Are vocal about wanting and accepting new challenges.	<b>TOO BUSY</b> Cannot give the time and attention required to be successful.
<b>TAKE INITIATIVE</b> Are willing to spearhead a positive learning activity	<b>UNINTERESTED IN TARGET AREAS</b> Do not show a drive to excel in the mentors' areas of mastery.
<b>SHOW EAGERNESS TO LEARN</b> Are curious and able to ask for assistance or resources.	<b>LACK FOCUS</b> Never fully commit to anything; hop from one thing to the next.
<b>ACCEPT RESPONSIBILITY</b> Do not shift blame, procrastinate or become easily distracted.	<b>OVERLY DEPENDENT</b> Are overly needy for approval or require constant supervision.

Table 2: Mentor characteristics (18)

<b>Effective Characteristics</b>	<b>Ineffective Characteristics</b>
<b>SPOT POTENTIAL IN OTHERS</b> Positive view of others increases amount of learning transferred.	<b>TOO BUSY TO MENTOR</b> Miss scheduled meetings, are not accessible in an hour of need, etc.
<b>ARE NETWORKED GUIDES</b> Act as repositories of information and provide just-in-time learning.	<b>USE THE PROTÉGÉ AS HELP</b> Pass off responsibilities and extra work they do not want to do.
<b>DISPLAY PATIENCE &amp; TOLERANCE</b> Use mistakes and experiences as learning opportunities.	<b>OVERLY CRITICAL</b> Believe being mentors gives them the right to point out all mistakes.
<b>GIVE ENCOURAGEMENT</b> Consistently build protégés' self-esteem; encourage them to try.	<b>NOT WITH THE TIMES</b> Unaware of current trends, issues, etc.
<b>SEE THE BIG PICTURE</b> Bring up points that protégés would otherwise not consider	<b>EGO STRIVING</b> Feel vulnerable if protégés become more successful than they do.

After all the mentors and protégés had gotten to know each other, the protégés provided a prioritized list of prospective mentors. Using this prioritized list, each protégé was matched with three potential mentors. The matching was mostly to ensure one mentor was not selected by all protégés. The potential mentors and protégé scheduled a time to go to lunch to get to know each other better. After about six weeks and each protégé had met with their three potential mentors, each protégé submitted a prioritized list of potential mentors. Using this new prioritized list, a match was made considering the priority provided by the protégé, the availability of the potential mentor and research areas of the mentor. One mentor was selected for two different protégés. The other potential mentors were thanked for their time and asked to consider being involved next year.

### Implementation

This section of the paper describes the implementation of the faculty mentoring program at the WSU College of Engineering. The program began with training of the faculty mentors which provided guidance during the academic year. Only those that were selected as mentors attended the training (protégés did not attend). The training presentation began by reviewing the mentoring program along with other mentoring best practices. Mentors were introduced to the short survey that would be completed each month. Mentors were provided a topic for discussion for each month of the program. The topics as shown in Table 3 included exchanging syllabi for the Spring 2009 semester (in conjunction with a CTRE syllabus workshop), exchange of faculty activity reports, classroom visit exchange and research agendas/proposal exchange as well as existing journal plans.

Table 3: Monthly Mentoring Topics

Nov./Dec.	Syllabi exchange
Jan.	Faculty Activity Report exchange
Feb.	Classroom visit exchange
Mar.	Paper Draft
Apr.	Research Plan
May	Celebration Banquet

The mentors were asked to basically be a friend and provide advice and counsel. The mentor was to schedule a lunch off campus once a month (the college picked up the tab). During the lunch, the mentor was requested to follow the suggested topic for the month. Each mentor was provided a stipend and asked to buy the lunch; the college later reimbursed the lunch expense. Finally, both the mentor and the protégé were asked to respond to periodic surveys, which are discussed in the last section of the paper.

## Survey results

There were three monthly surveys given during the course of the program. The surveys were to be completed by the end of January, the end of February and the end of March. An end of program survey was also administered after the semester was over. The same survey was made available to both the mentors and the protégés.

Eight of the eight mentors responded to the January survey. This survey simply asked what their concerns were and how many times they had met with their protégé so far in the program. The mentors listed as concerns the following:

- *a fear that the information mentor passes on to the protégé is not well received,*
- *a fear that a more experienced protégé might not think the time used for meetings be efficient,*
- *a concern that the mentor does not know how to help and determine exactly what the protégé needs,*
- *a lack of real (measurable) feedback as to the outcome of this program (note: we're not discussing feedback from protégé here),*
- *a concern that the mentoring program might die out after this year. I hope that it keeps going,*
- *(similar to the above concern) As I believe that the mentoring program is an extremely helpful vehicle through which the protégé can get valuable information on any matters related to the academic life from the mentor, my only concern is whether the program shall have the continuity it needs to be effective and*
- *Two listed no concerns.*

For the protégés, no one listed any concerns except that the program would be cut due to budget limitations.

The next question asked for expectations as a mentor or protégé. The mentors responded with: helpful guidance towards tenure and beyond, passing on experience as a faculty to protégé, motivating protégé, being a role model, to work with the protégé on issues related to her success as an academic at WSU, to share my experience at WSU (or academia) and share my views on how to be a successful academician (a good teacher and researcher), have regular interaction with protégé, be available as a resource for improvement, provide feedback on protégé activities or lack thereof, to help guide the protégé toward successful tenure and promotion, the mentor shall not only discuss and advise the protégé in matters related to a successful career as an engineering professor, the mentor needs also to build a trust and become a friend that could help the protégé in other matters such as personal life (e.g., buying a house, retirement planning, etc.) and to provide guidance to the protégé to have a successful career. The protégés responded with: have an inquisitive mind and respect the mentor's experience, keep my mentor informed of my academic (including teaching, research, and service) activity so advice can be obtained from my mentor, be courteous, including being mindful of my mentor's other time commitments, be willing to learn and try new things, be honest to and respectful of my mentor. Several more commented on the need to be respectful of the mentor's time. The mentor's expectations of the protégés matched the protégés expectations of themselves.

Likewise, the protégés expectations matched the mentor's expectations of himself or herself. The number of times that the mentors and the protégés had met was 2 to 4 times.

The final survey question was to list one thing that had already been learned. The answers were:

- *Protégé seems to be taking this mentoring program quite seriously,*
- *Overall speaking I think it is a very good program--for both the mentor and protégé. When the mentor tries to help the protégé, he/she is improving himself/herself at the same time,*
- *XXX is doing well on the publication side but will need some help getting started with research. XXX seeks advice from a number of people - which is so good,*
- *We agreed to revise course syllabus,*
- *How to write a good syllabus. We both went to the syllabus writing workshop and we shared our newly prepared syllabuses for the spring semester. We also went over T&P expectations,*
- *The mentoring program seems to be working well for us. I think having deadlines and a schedule really helps in making sure the mentor and protégé meet.*
- *I have learned that as I have advised the protégé on academic matters, I have also learned much. Some of the things I have learned include new challenges for a starting assistant professor, new resources for improvement of teaching, latest research trends in specific areas, etc.*
- *How to write successful research proposals.*
- *How to make a syllabus more informative to students, classroom teaching, how to work with graduate students for research. initial research discussion,*
- *How to balance teaching, research and service; the importance of publication; external funding by writing proposals; syllabus preparation for both UG and G students; student evaluation*
- *How to use Blackboard as a tool to communicate with the students. The importance of posting grades regularly, posting handouts and problem solutions. (This was an excellent piece of advice from my mentor). Also, it was very helpful to review the syllabus together.*
- *I have observed that my mentor pays keen attention to my experiences at WSU, and assesses them practically before providing me with valuable input and feedback. I have learned that managing time between teaching, research and other activities (including undergraduate advising) is quite challenging. I have also learnt that I am going through a difficult phase as a new faculty member, and that everyone goes through this phase,*
- *Preparation of an effective syllabus/course policy document; 2. Pros/cons/experiences associated with providing help-sheets on exams; 3. Exchange of ideas/experiences on use of PowerPoint for classroom teaching,*
- *An outside perspective of what is expected to make Tenure. For example, what is expected may be different across departments and colleges, and my mentor has the experience to tell me what are the different things that may be expected.*
- *Some tips on proposal writing and submission were very helpful. Actually, they were the most helpful. 2. Tips on assessing and hiring students and in assisting them towards their graduate degrees, esp., with respect to journal writing.*

For the February survey, eight out of the eight mentors responded (the mentors were told that they would not receive their stipend until they had completed the survey). This survey also asked how many times they had met and how the classroom visit went. The responses on the classroom visit were:

- *We have already visited each other's classes -- both at the undergraduate levels. Mentor has some input that will be shared with the protégé in a meeting to be set up shortly (both the mentor and the protégé are having a busy traveling schedule out of town). Mentor plans to seek feedback/comments from his protégé about the \*mentor's\* teaching as well.*
- *(faculty with two protégés: I visited her class and she visited mine. She also visited (other protégés class with me as well. Had lunch together exchange ideas, comments, also discussed about some changes she has made. Will visit her class again in about a month. I visited his class and he visited my class. Will have lunch with him tomorrow to go over my observations and provide some suggestions. Overall speaking, this is a good practice in terms of seeing other faculty's teaching. We can actually learn from each other.*
- *It was OK. I found it a little difficult since I didn't know anything about the subject. Next time I would go the first week.*
- *I think he does a pretty good job. He tried to cover too much material. Could have given some more problem solving experience. Responded to student questions.*
- *Very well. We each visited one of each other's class and had a meeting to discuss. The discussion was about our observations of the teaching styles that were presented and also a general discussion of teaching. We each came away with something to try or a way to improve.*
- *It was very good. The students seemed very active and protégé seems to be a good professor. He will definitely get tenured and he seems comfortable in front of the class.*
- *I visited the protégé's classroom first. It was nice to see his energy, and his strong desire to do the best in classroom presentation and to expand his students' knowledge in the class subject matter. He seemed to be quite a master of the subject, but I outlined several items that could increase the effectiveness of his teaching method. The protégé visited my classroom as well, and he indicated to me afterwards that he took a lot of pointers on good teaching technique and interaction with students. We visited for lunch after the classroom visits, and went over the key items and suggestions for the protégé to improve his teaching skills. Overall I feel that the experience was quite beneficial for the protégé. I also enjoyed sharing my views on good teaching skills with the protégé.*
- *It was a great experience for me. After the class, my mentor gave me a few feedbacks to increase my teaching skill.*
- *The visit went well. My mentor was preparing the class for a exam next week, and spent the class period going over homework problems and answering questions from the students. I was interested to see how he encouraged participation from the students, calling on them by name when a response was not forthcoming.*
- *I learned a lot from attending my mentor's class. His visit to my class was also useful to me, as I received a lot of good feedback from my mentor about how to improve my overall teaching skills. Over lunch, we also discussed various topics related to developing good teaching styles and strategies.*
- *After my Mentor XXX had visited my class and I visited his class in Feb. We talked about where I can improve my teaching. He gave me good suggestions such as efficient way to use blackboard, organizing notes and he pointed out I could speak louder because of the class room seems big and there is no microphone system to use. Those are very help suggestions to my teaching. To follow up his suggestions for my teaching, I asked Mentor to make another visit to my class in Mar., he agreed.*
- *I visited a 400+ level class taught by Mentor. I got to see (from the students point of view) how some of the effective teaching techniques used by Mentor was working - e.g., engaging student in solving problems in a stepwise manner. As part of the class, Mentor provided tips to the students on the upcoming exam. This included review of problems, discussion on problem types/variations that could show up on the exam. This review class, in my view, was putting the students at ease and focusing them on the topics/contents they need to pay attention to for the exam.*
- *It was good. Saw how my teaching can be improved, and also re-enforced some of the techniques I myself use in class. Most importantly, can see how classes play out with an instructor that is not you.*



For the March survey, seven out of the eight mentors responded (one mentor who responded was unable to meet as his protégé was stranded out of country). This survey also asked how many times they had met and how the paper exchange went. The responses on the paper exchange were:

- *We did not exchange papers but talked about teaching and research. I visited Mentors class again and saw improvement in class teaching. Had lunch together with Protégé1 and discussed teaching and proposal writing in general. Had lunch with Protégé2 and discussed proposal writing, research, and teaching.*
- *We talked about research instead. This seemed to be more critical since she is planning on writing a CAREER proposal. I also met with a bunch of other protégés to talk about research for 1.5 hours.*
- *The mentee has given me two drafts for review. I'll complete that this week and if necessary meet again to discuss those.*
- *It went well. We basically talked about requirements for T&P, how the protégé was doing in terms of papers, and then looked at the papers that were in the process of being submitted.*
- *It was good. I reviewed one paper draft and showed potential problems. We also discussed issues on quality of journals and how it impacts tenure.*
- *We discussed a framework on how to engage in continued publication in a specific area of research of the protégé. The quality of the papers, as well as, suitability for journal versus conference proceedings, was also discussed.*
- *My mentor took two of my recently written journal papers and is reviewing them now. We also went out and discussed about my papers and their quality.*
- *I shared a couple of journal/conference papers, a proposal, and my resume (with list of publications) with my mentor. I got a lot of positive feedback and suggestions from my mentor, including how to expand the scope of my research, and how to attract external funding to support my research. In addition, my mentor shared a lot of his own experiences with respect to research and publications, which was very helpful to me.*
- *As promised, Mentor made another visit my class in Mar. He gave me further feedbacks about my teaching, including the way I answered the questions from students. He also suggested some program for my accent corrections. To improve my teaching, I also visited another faculty Protégé2 class in EECS department. Mentor also gave me good suggestions about proposal writings; he also forwarded me links from NIST for proposal preparations.*
- *We did not exchange paper drafts. We discussed about publications, getting students involved/motivating, review of paper by a non-expert etc.*
- *Went well. More than papers we were interested in discussing overall publication quality/quantity tradeoffs etc.*

For the end of the semester survey, five out of the eight mentors responded (one mentor who responded was unable to meet as his protégé was stranded out of country). Six protégés responded. The first question was in general about the mentoring program. Three respondents said it was, “the best experience of the year.” Seven responded that the experience was “well done.” One respondent said it was ‘okay.’ The survey also asked how many times they had met with a minimum response of 5 times and a maximum response of over 10 times. The participants were asked what was the best part of the experience and their responses were:

- *Visiting each other's class, exchange syllabi, lunch together. Share my personal experience with new hires.*
- *meeting with new faculty; trying to address what i could have done to be more successful and share those thoughts with the protégé*
- *I hope to have some positive impact in the career of my mentee.*
- *Helping out a young faculty member in preparing for T&P.*
- *We chatted about almost all the aspects of being a engineering faculty at WSU -teaching, research, proposal, service...*
- *Open discussions about how to be a successful faculty member at WSU.*
- *Sharing my experiences with my mentor, and getting his feedback and opinions on the same have been very beneficial to me. In addition, I very much appreciate he sharing his own experiences with me. That helped me learn and understand the dynamics involved in the various facets of faculty life. My mentor introduced me to a lot of interesting places to eat. We went out to a different restaurant each month. I am new to Wichita, and hence getting to know new places to eat was very useful. I have revisited most of the restaurants he introduced me to, several times.*
- *I gained a lot from my mentor this term, from teaching and research. Visiting my mentor's class and other colleague's class gave me very usual experience on how to organize a class, lecturing in the classroom, handling students' questions, etc. I also get helpful suggestions about my research and writing proposals.*
- *Exchange of ideas and classroom visits*
- *A college level perspective of things apart from your department mentors*

The participants were also asked what to improve in the program for next year. Other than concerns for the sustainability of the program, only one comment was made to starting the program earlier in the year.

## **Conclusion**

This type of effort has significant benefits to both new and tenured faculty. The new faculty benefit by achieving an 'outside their department perspective' on the tenure process at their own institution. These faculty are more likely to achieve tenure. The college benefits by enhancing their existing faculty. Students benefit by having better instructors. As tenured faculty become better mentors, they also become better researchers, grant writers, teachers and citizens of the university.

All things considered the program was a huge success. There are plans to continue the program next year with some modifications. More follow up needs to occur to ensure that all pairs (mentor/protégé) are meeting regularly. Some of the faculty did not follow through with the topics. Methods to encourage the pairs to accomplish the recommended tasks must be implemented.

For next year, due to budget concerns, the faculty stipend will not be provided. Lunch reimbursement will be provided. The impact of this change will be noted for the next year. Additional changes are to provide a mentor lunch midway through the year to check on how the relationship is progressing and to start the program earlier in the year.

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