2006-1212: MENTORING NEW FACULTY: WHAT WORKS AND WHAT DOES NOT WORK

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Mentoring New Faculty:
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Abstract

The world of academia has a unique set of challenges to the new faculty member. This is true even if the person just graduated with a Ph.D. since professors face many challenges that are not faced by a graduate student.

There are several different ways mentoring can be done. One way is to have the direct supervisor of the professor also serve as his mentor. While this has some merit, a new professor may be reluctant to share issues or struggles with a supervisor. A second and often more effective way is to have mentoring from a more senior professor who is not the new person's direct supervisor. In this way the new professor can be very honest in sharing challenges because the comments will not in any way be used in yearly evaluations. A third way is to have mentoring done on a spontaneous basis as the occasion presents itself. While many good things can come of this, we do not believe it is adequate to rely on such informal situations as the sole basis of mentoring. A fourth mentoring method is an organized program where more experienced faculty members make presentations about various aspects of faculty life. This is often done in group settings with perhaps all of the university's new faculty members in one group. This can be valuable in conveying useful information (such as how to use the library and the approval process for research proposals), but is less useful in helping a new professor deal with issues of day-to-day academic life and requirements specific to his or her new department. A fifth way is for peer mentoring to occur among the new professors themselves.

While all five of these methods have some merit, we believe that an organized approach involving a personal mentor who is not the professor's immediate supervisor is the most important component of any successful mentoring program.

The authors will discuss a number of activities that can be used in this mentoring process. They will include methods that worked as well as those that did not work.

Introduction

The authors have all served as leaders of departments and have been involved with mentoring new faculty in a variety of ways. The first author served for five years as a Mechanical Engineering Program Chair. This past year the first author became a Department Chair at a new university. As department chair he has responsibility to mentor new faculty, and as a new professor, he was also on the receiving end of an established mentoring program. The second author moved to an endowed teaching chair after eight years of service as Program Chair and Academic Director of multiple engineering programs at another university. The third author has served as a Department Head for a very large program. These new experiences of the first two authors will be integrated into the already developed activities to form an overall suggested plan of action.

All three authors have experience on both the giving and receiving end of mentoring/new faculty orientation issues. We have all been senior faculty in leadership positions for younger faculty members. In the last three years all of us have moved to new universities and have once again experienced what it is like to be the new person.

This paper is about mentoring new faculty to help them become successful. There are a variety of ways this can be done. Some of these will be outlined in this paper. We are largely looking at the subject from two different perspectives: what can administrators do to help mentor new faculty, and what can new faculty do to help themselves get mentored.

We will organize this paper using the following topical outline:
- Previous Work by the authors
- Previous Work by others
- What appears to work in a mentoring program
    o Mentoring new faculty members
    o Being mentored as a new faculty member
- What appears to not work in a mentoring program
    o Mentoring new faculty members
    o Being mentored as a new faculty member
- Recommendations for implementing an effective mentoring program

Previous work by the authors
This is not a new subject for the authors. Recognizing that faculty members face much time pressure, it is helpful if a professor can accomplish more than one task at the same time. The first author described how to integrate consulting into teaching in a 1999 paper[1]. That paper describes how the author took cases from his private failure analysis consulting business and used them as a basis to create two courses in failure analysis. The first course was taught as a continuing education course. The second course was a senior technical elective. This effort had several benefits: the author kept current with developments in the field, his income was supplemented, and the students gained a very real world experience as they learned to do failure analysis.

The new professor needs to understand the university's expectations. This includes both written requirements as well as unwritten ones. The professor needs to develop a response to these requirements that is consistent with the professor's personal and professional goals. This concept was developed in a previous A.S.E.E. paper[2].

No mentoring program will be successful in all cases. There will always be professors who deliberately make choices that will lead to academic failure (such as not doing research when that was clearly made a significant part of the formal requirements).

The first author has presented a paper that dealt with integration research into undergraduate teaching[3]. Developing a research program is very important to a new professor. Ways to integrate this with undergraduate teaching could be very helpful. Several ways to do this are:
- Bring the results into the classroom by creating a technical elective in the area of research.
- Involve senior students in the project as investigators. They could be paid with money out of the project (if it is externally funded). They could also be paid with a grade in a special

topics or independent study type class.
- Have some of your research be educational, where the research project is the creation, teaching, and assessment of the class.

The first two authors followed this up in 2003 with a paper that dealt with the broader issue of how to balance personal and professional life[1]. A number of strategies were developed. As with any effort to balance the many activities in life, it is important to differentiate between needs and wants. Of course, this will vary from person to person. The key is to understand this differentiation and to ensure that daily "do-lists" and weekly schedules accurately reflect personal priorities. The characteristic of the "balanced" life isn't necessarily demonstrated in an air–tight regimen, but in a personal self-discipline to persistently move toward the target of meeting personal priorities. While no one fully achieves perfection in this area, the successful senior faculty member can offer junior faculty valuable advice and life experiences regarding the pursuit of a balanced personal and professional life.

With the rapid advancement in personal technologies, such as cell phones, email, etc., there is a need for professors to utilize these in such a way that will help them fulfill their professional and personal goals. There is a great danger that such technologies will become our masters rather than our tools. The first two authors presented a paper in 2005 that dealt with that issue[4].

The authors of this paper are certainly not the only ones who have reflected on the issue of mentoring. The next section describes some recent work done by others.

Previous work done by others

Peer mentoring is the first kind of mentoring we would like to discuss. Peer mentoring occurs when tenure track professors provide advise and support for each other. There are two ways this can be done. Younger faculty can write papers and make presentations describing their experiences to try to help other young faculty who may be facing the same situations. This enables the faculty member to benefit by presenting/publishing his work and may defuse any perceived tensions arising among individuals at a local departmental level. A second way is with an organized peer-to-peer mentoring program among various junior faculty within a given institution. Of course, informal comparing notes is typically characteristic among tenure track faculty in a given department or college and can be a useful process.

One approach to peer mentoring is described by Bruce and Bruce[5] where they give a strategy to balance teaching, research, and service. Minerick and Keith[6] provide a series of suggested tips on how to prevail when the new professor encounters "unexpected experiences." Justin Davis[7] emphasizes not what new faculty must learn to do, but how they should do it. Davis writes[7]:
> "New faculty members are given a great deal of advice, but implementing that advice is where most of the difficulty lies. This paper has outlined a number of methods for setting goals, managing time, planning teaching and research responsibilities, handling students, and getting mentors."

Davis' point is well taken. If advice to new faculty members is to be useful, describing how to do it is crucially important. Elsewhere, Keith[8] provides a number of good tips on how to balance research versus teaching. He also recognizes that it is difficult for junior faculty to do this all on

their own. His last conclusion is that "you should seek out a mentor to give you more specific advice."

A second approach to peer mentoring can be done by a group of junior faculty working together. Rose, Miller, Jurad, and Martinazzi[9], in a fascinating paper, describe an organized group of junior faculty who work together to help all of them achieve the goal of tenure. This is an organized process that also has engaged some more senior faculty members. They state that this has "created an environment of collaboration and cooperation, rather than competition." This is a significant achievement, for many junior faculty see their colleagues as competitors for a small number of tenured positions. This is an example of how junior faculty members can take it upon themselves to help each other. In a similar manner, Bates describes a peer mentoring program at her university[10]. A group of first year faculty agreed to meet regularly in informal settings to discuss issues they were facing.

Another approach to mentoring described in the literature involves programs initiated by more senior faculty to help their tenure-track colleagues. Some of these programs are very formal, while others are intentionally informal. Wasburn[11] reports on a program aimed at helping women faculty members in science and engineering. She breaks mentoring programs into three types: grooming mentoring, networking mentoring, and a blending of grooming/networking. Her description of the networking model is very similar to what we earlier called peer mentoring. In networking mentoring there are a group of people involved with mentoring each other, with the mentors and protégés exchanging roles as the situation changes.

Wasburn and La Lopa[12] describe a formal mentoring program at Purdue University. Their program grew out of their university's Teaching Academy. They make the point that real mentoring involves more than just helping a new professor to become a good teacher and researcher. There is also a social function of being a good role model, encouraging the new professor, counseling with the new professor and making the new professor feel like he is now the peer of the more senior one. They make an important point that being a good mentor is not just showing someone what they need to do and how they need to do it.

The concept of mentoring is sometimes confused with new faculty orientation. New faculty orientation typically involves new professors meeting as a group to learn about their new university. While these times can be quite useful in communicating information (like how to use the library, how to submit research proposals, etc.) we do not see this as true mentoring—which requires a more personal level of interaction to establish trust needed for a mentor/protégé relationship. Schulz and Schulz[13] describe a formal mentoring program that includes this orientation type material, but is much more extensive. This program goes on throughout the entire first year and includes senior faculty as well as new faculty.

It is sometimes difficult to get more senior faculty involved in mentoring the new faculty members. The time required for effective mentoring is not trivial. Senior faculty who are productive in the academic arena often have little discretionary time available for activities outside their normal routines. However, with careful assessment and appropriate choices, senior faculty can make significant impact in the mentoring process with minimal impact on their current research and teaching regimen. The paper by Williams and Pike[14] makes the point that the more senior colleague may also benefit from a good mentoring relationship.

What Appears to Work (advice to administrators)

As the first two authors progressed up the academic ranks, eventually becoming administrators, they developed some strategies that were used to help new faculty members. Some of them were informally created before they became administrators. Others were created after becoming administrators. Their university has continually improved to create a more effective new faculty orientation. It lasts two days and begins with presentations to all new faculty members. It is followed by a time with the new faculty in the college. However, this formal program is still an orientation program, and not really a mentoring program.

The first two authors' new university settings have a well organized orientation program that also has some mentoring aspects. A new faculty orientation is conducted just before classes began. At both institutions we have had both formal and informal meetings about once per month since then. Meetings are often centered around a meal, to facilitate sharing of concerns. At some of the meetings there have been formal presentations, while at others there have been sharing, usually around a particular theme. These meetings have been very useful to learn how to be a success at our new university. Each professor is also assigned a mentor, who is not the professor's supervisor. Additional meetings, both formal and informal, can be arranged between these two. As a new department head, the first author was assigned another department head in his college as a mentor. This has worked out very well, as many questions have come up about how to execute various adminstrative responsibilites.

We believe that the most effective programs involve new faculty meeting with more senior faculty who are not their supervisors. A new professor may be very reluctant to share his struggles with a direct supervisor, fearing it might reflect negatively in the annual evaluation process. By meeting with a senior faculty member (recommending that it be initiated by the established faculty member) a mentoring process can begin early in the tenure-track process.

The first two authors began something on their own shortly after being tenured when their respective departments hired new faculty members. They initiated meeting with the new faculty members to provide encouragement on the newly assigned tasks. Other ways they have engaged in mentoring is to co-teach a multi-section class with the new professor, with the more senior professor taking the lead. This enabled the new faculty member to develop their teaching style without the burden of organizing the class.

Administrators should seek to organize teaching mentors for each of their new faculty members. These are experienced, high quality teachers who can visit their classes and make helpful suggestions to the new professor. While the administrator could organize this in a general way, he should not receive copies of the teaching reviews. With the administrator out of the loop with respect to details about teaching quality the mentor and the new professor can be very candid with each other about ways to improve teaching without worrying about whether it will hurt their annual performance evaluations.

One way to help the new professors with teaching can be to graciously allow them to teach a senior elective or graduate course that might be considered the senior professor's course. This will provide them the needed exposure to potential graduate students to help them build their

research group. This could also help them improve their teaching quality as they are concentrating in an area of significant personal interest.

Administrators should seek to organize research mentors for each of their new faculty members. These are experienced, high quality researchers who can help them navigate the maze of how to write successful funding proposals, how to write high quality papers, etc. While the administrator could organize this in a general way, he should not receive be involved in the meetings themselves. By the administrator not being in the meetings, the new professors can be more honest about sharing their problems in developing a research program. The young professors can be greatly helped by having more senior professors make them co-principal investigators on research proposals to help them get funding. He can also suggest places that they might go for research support, since they will generally be unaware of all of the possibilities for funding. At conferences, the more senior professor can introduce them to leaders in the field whom he knows and help them to become a more visible member of our academic guild.

If there is a sufficient cadre of graduate students, the research mentor can encourage graduate students who would like for him to be their advisor to consider working for the junior colleague, explaining that he or she can probably give the student much more time and assistance.

Most successful among our various mentoring activities has been the organization of meetings between senior and junior professors. The department chair was kept informed about the occurrence of the meetings, but deliberately did not attend them. This allowed the junior faculty members to honestly share their struggles without fear of it hurting their evaluations. The more senior faculty members could also share honestly without being observed by their supervisor. Frequently these meetings occurred during an off campus lunch. Even as administrators, regular informal visits with junior faculty have been successful to keep them informed of broader activities within the department and college and have provided strong social interactions for deepening communication and facilitating collaborative efforts to benefit the junior faculty member.

Getting tenure (or worrying about not getting it) is almost always on the mind of the new professor. The third author has done the following in a program he led. As a department head in a very large College of Engineering, he reviewed the tenure and promotion packets for the whole college each year, summarizing the accomplishments of each candidate and whether or not they were tenured and promoted. At a pizza luncheon each January, he would share this information (without mentioning names) with the junior professors to give them as clear a picture as possible about what successful candidates were doing and at what level. It also helped them to see that each packet was in some ways unique, and that different combinations of accomplishments were acceptable for tenure and promotion. This helped to reduce the ambiguity about what level of accomplishment would be sufficient to be tenured.

With the many demands placed upon them, learning to manage time is a difficult task for many professors, new and old included. It is important that new professors be shown how leading a balanced life is essential to their success. Teaching brings many small, short term deadlines, such as preparing lectures and exams that must be balanced with research deadlines which are fewer in number but more time consuming, with longer lead times, such as journal articles or proposals. Attending a seminar such as "Things that Matter Most" or "7 Habits of Highly

Effective People" can be very helpful in developing a strategy for balancing the teaching and research responsibilities.

Finally, new professors need to be encouraged to take some vacation time and holidays. If they do not take time to "resharpen their axes", they cannot do the creative work that is essential to be a high-impact teaching and researcher who is deserving of tenure. They need to focus on making an impact, making a difference, and then making tenure will naturally follow. There are many different ways to make a difference and they should be as creative as possible in exploring their options.

What Appears to Work (advice to new faculty)

The first author experienced being a new professor this past fall as he moved to a new university He taught one section of a multi-section class with a more senior professor. Even though the author is now an experienced professor, every university has its own culture and this was a big help in beginning teaching at a new place. He was also moving from a quarter schedule to a semester system, so having another professor take the lead was very helpful. New professors should seek out senior professors who teach in the same area as they do and ask for help. If there is not a formal program to do this, it can be done informally. Many senior professors will be quite willing to help the newer faculty. It is in their best interest to have a stable department with successful new faculty members.

In a similar way, new professors should seek out a research mentor who can help them make the adjustment from research while in graduate school to research as a professor. There are many details concerning writing a successful proposal or a high quality publication that the new professor will need help on. The new professor should not worry if the senior professor's interests do not exactly match their own, as long as they are in the same general area.

Peer mentoring has been shown to be very helpful to many new faculty members. However, we recommend that the new faculty not rely on this approach alone, as there are issues they face that only more senior faculty members can give good advice upon.

If the university does not offer some formal time management training, the new professors should pursue it on their own. Taking a public course such as "What Matters Most" from Franklin Covey will cost a few hundred dollars and a day's time, but would well be worth it. For someone in the negotiation stage of accepting a new position it might be advisable for a new professor to ask for support to take this training as part of his start up package.

There are many time management techniques that new professors could implement on their own. We reported on a number of them in our 2003 A.S.E.E. paper[2]. An excellent book on this subject is Stephen Covey's *Seven Habits of Highly Effective People*. Peer mentoring has many benefits, as were discussed in the background section. Time management issues are something that can be discussed with peers who are going through the same issues at the same time. If there is not an organized group of tenure-track professors at your institution, the new professors should start an informal group of their own.

What Appears to Not Work (advice to administrators)

The first two authors received very little mentoring upon arrival at their first academic positions as this process was in an evolutionary state at the time of their appointments. There were short new faculty orientations that covered only a few basics of how to do things on campus. There was no direct guidance as to how to become successful. The first author received more help ahead of time from his Ph.D. advisor than he did on his new campus. While we survived a lack of a mentoring program, many of our colleagues did not. A lack of a mentoring program does not work. It will condemn many new faculty to almost inevitable failure. Administrators cannot assume that mentoring will happen spontaneously. Some effort needs to be made to make sure some things are happening.

A new faculty orientation program can be very useful, but by its very nature it is not a mentoring program. Administrators should not get complacent that they do not need to promote mentoring because they already have a new faculty orientation program.

We believe that an effective program cannot be created when the new faculty member's mentor is also his supervisor. A new professor may be very reluctant to share his struggles with a direct supervisor, fearing it might reflect negatively in the annual evaluation process. If this is the policy in your university, the new faculty member should at least seek out an informal member. If the relationship with the supervisor is a good one, they might gently suggest this is not the best mentoring combination.

While an administrator may help to organize a peer mentoring group, he should not assume that such a group will meet all of the needs of the new professors.

Senior faculty may not be excited about spending the time involved to help their junior colleagues. Attempts to involve senior faculty will fail unless it can be shown how it is in their self interest to do so. More successful mentoring will lead to more successful junior faculty. For the senior faculty this will mean:
- Not having to do so many new faculty searches which take up a lot of time.
- Having a smaller teaching load as there are more faculty to share the teaching burden.
- Having the potential for a more successful personal research program as there are other people who can assist you in what you wish to do.
- Having a smaller service load as there are more faculty who can share in the service burden of the program.

What Appears to Not Work (advice to new faculty)

New professors need to be careful whom they seek out as teaching and research mentors. Not all senior faculty are really good at either of these topics. The new faculty should carefully investigate before they seek out a mentor in either teaching or research. The senior mentor should not only be highly qualified in the area, but also need to personally compatible with that person. A wrong mentor can often hurt the situation, not help it.

While we recommend new professors form their own peer mentoring group, they need to recognize that this will probably not be enough on its own.

Just working very long hours at the expense of family and personal life is not productive in the long run. The new professor will eventually burn out, and may have significant personal issues that they need to deal with. Taking some time off to relax and be renewed is important.

Recommendations for implementing an effective mentoring program

We have the following recommendations.

1. An effective new faculty orientation program is very important. However, orientation alone is not mentoring. If a university wishes to mentor its new faculty much more will be required.

2. While the direct supervisor may be the initiator in getting a program started, he may not be the most effective mentor. The mentoring should be done by senior faculty members who have no direct supervision of the new faculty member. This allows the newer professor to be much more honest without fear of it hurting his annual evaluations.

3. While much true mentoring is a result of spontaneous interactions, a university should not depend upon such an unstructured approach. Some sort of organized mentoring program is desirable. While some organization is needed, the meetings do not need to be formal. For example, informal bi-weekly lunches could be very effective.

4. Some mentoring can be done in group environments. However, the most effective mentoring comes from one on one interaction.

5. If your university or college is large enough to have a significant group of untenured faculty members, peer mentoring can be very useful. This could be organized by the new faculty themselves. However, a more senior professor could be the organizer to get things started. Perhaps an academic program could help by agreeing to pay for a monthly luncheon of the untenured faculty members.

6. Potential faculty members should ask questions about a mentoring program before they accept a new position. If there is not an organized program, they should seek out resources that would help them succeed (such as funding for time management training). If there is no program and no potential resources, the person should seriously consider not accepting an offer from that university.

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