

Exemplary Faculty Mentoring Programme

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Abstract— Mentorship in institutions of higher education supports personal and professional development of faculty as they transit into new roles as teaching faculty. Mentorship programs attempt to address several types of common needs among new faculty, such as professional development, emotional support, intellectual community, role models, accountability, sponsorship, access to opportunities, and substantive feedback. New faculty members start their profession without any formal training in teaching. But teaching is a skill which can be best acquired through constant hard work, observation and interaction with senior faculty members. In an attempt to better train young faculty, they were made to choose a senior faculty as their mentor. This mentorship programme benefitted young faculty in several dimensions.

Keywords: Mentorship, Engineering education, Teacher, Students

1. Introduction

Mentorship is a relationship in which a more experienced or more knowledgeable person helps to guide a less experienced or less knowledgeable person. The mentor may be older or younger than the person being mentored, but he or she must have a certain area of expertise. The concept of “Mentor” dates back to ancient Greece when mentor, a wise teacher and trusted advisor, was asked by a friend of Odysseus to watch over his son Telemachus, as he embarked on the lengthy voyage to fight the Trojan war.

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The growth and contribution of young faculty are the foundation of institute’s future success. The mentoring

program is intended to be a useful way of helping new faculty members adjust to their profession and new environment. Junior faculty needs mentoring in – career success, networking, quality publications and in bringing grants. The success of mentoring program will depend on the new faculty members, their mentors and institute all taking an active role in the acclimation process.

When an institute makes a new hire at the assistant professor level, it has invested one of its most valuable resources: a tenure-track faculty position. If the institute does not nurture that new assistant professor, it greatly reduces the probability of a good return on that investment. If the new faculty member is successful, everyone benefits. If not, it is not only the faculty member suffering, but the entire department and the institute facing repercussion.

Engineering education is about the conceptual, planning and design skills. It is about imagining, understanding and predicting as quantitatively as possible. In engineering education, aspirants join teaching profession without undergoing formal training on teaching. Often, people choose to become teachers without any insight into the challenges involved and the aptitude needed for the job. Such new faculty members should be introduced to the methods of teaching, pedagogy, student psychology and approaches of teaching the concepts and fundamentals in Engineering and Technology.

Faculty mentoring is a valuable investment in an institute academic excellence which depends on the ability of faculty to do their best work throughout their academic career. Mentorship in the engineering education has an important influence on academic productivity, personal development, and career guidance for junior faculty. There has been growing interest in developing mentoring programs by protege at all levels of career development [4].

Thus an attempt is made to give additional guidance and support to young faculty by providing senior faculty members as their mentors. This approach provides a platform for faculty to discuss and acquire - "all one needs to know about engineering education but were afraid to ask" [1].

2. Necessity

Mentorship plays a vital role in training a faculty in improving his/her teaching ability. A mentor is a person who guides in a proper manner to be an effective teacher by using his/her knowledge and experience. Our institute is facing a critical problem. There is a demographic shift as significant number of faculty members hired in the early 1970s and 1980s start to retire in another 2 to 3 years. A large number of faculty members are relatively fresh with 5 to 7 years of experience. The gap between these two sections of faculty is striking and has called for an immediate action. Further the necessity to train the new generation of faculty to infuse research and pedagogy with new ideas, directions, and techniques was felt by people at helm of affairs and senior faculty members.

Although young faculty undergo a number of pedagogical training and workshops, a personal guidance by a senior faculty on whom they have trust, will help them to improve in several dimensions. Thus it was decided to introduce faculty mentoring program.

3. Literature Survey

Mentoring programmes are in force in several universities - Stanford University, Princeton University, Cornell University, Harvard University, university of Maryland[2], etc. College teaching may be the only skilled profession that does not routinely provide training to its novice practitioners. New faculty members in most universities traditionally had to learn by themselves how to - devise stimulating lectures, motivate students to learn and make them active participants in the learning process [5].

Clear goals should be stated for mentoring which involves mutual understanding of the process by mentors and mentee. A process should be defined for matching mentors and mentees with expected time commitment as a means of measuring outcomes [6]. Mentoring provides new faculty with an explicit connection to more senior faculty members to provide guidance, advice, and socialization to the new department and institution [7].

Mentoring and supporting in early career is critical to develop pipeline and encouraging career, A critical component of a successful career plan is developing an effective mentoring relationship early in one's career. The steps involved in developing that relationship are not always well defined, and there is no "one-size fits all" approach[8]. Johnson and Grider[9] lay out simple, straightforward advice to the early career faculty (mentee) as the primary driver in establishing and cultivating a mentoring network that builds on several types of

mentoring relationships spanning a variety of professional and personal needs. The authors suggest that the best way to get the most out of a mentoring relationship is to establish a formal general partnership agreement with defined parameters.

4. The Approach

The first step to introduce Faculty mentoring programme was to take stock of the current situation. A team of professors attended classes of all junior faculty members, to observe teaching and record the same.

Following observations were made by the professors:

1. Blackboard usage: The usage of board was not effective; the board space was not properly managed. Content on the board were written so small that it was not visible to the students who were sitting in the last bench.
2. Body Language: Body language was not appealing to maintain discipline in the class, lack of proper postures, not facing students.
3. Voice: voice not audible to last benches, usage of repeated words.
4. Notes: Frequent reference to notes, reading notes in front of students.
5. Content delivery: Lack of interaction, insufficient preparation, improper flow of contents, poor vocabulary, ineffective oral communication.

After the final reports of these observations were made, a brain storm session with Principal and professors was held where everyone felt the need to mentor junior faculty members. It was decided that senior faculty members would be better persons to mentor junior faculty, because of their interest in the institution and mentee's growth and development, willingness to commit time and attention to the relationship and the proximity.

The strategy planned was:

1. Each junior faculty must choose a senior faculty of their choice as their mentor
2. Junior faculty must attend a minimum of 4 classes of their mentor in the first month of the semester
3. Faculty must attend the first introductory class of their mentor, because of its importance. It is very much essential to paint the big picture of the course with its relevance to real life applications in first few classes. This is guaranteed to create an interest for the course.
4. Faculty must submit a report of their learning experience using ICT tool.
5. Senior faculty must attend one or two classes of their mentee during second month of the semester. And they must appreciate the improvements and give suggestions for further steps to elevate in teaching.
6. It was suggested to have several informal communications between mentor and mentee, giving a personal touch.

The general observations and learning by mentees by attending their mentor's classes are summarised below:

1. Understood a good way to introduce a course to the students.
2. Learnt to better relate the concepts taught to real life applications.
3. Found a way to keep all students attentive in the class by using innovative methods to randomly pick to answer question.
4. Found several methods to Interactive teaching.
5. Use of appropriate videos in the classroom to drive basic concepts and to share videos with student friends.
6. Use of physical models and demonstrations for effective teaching.
7. Mentioning the topics to be covered in day's class.
8. Managing the time while covering the topics.
9. Effective way of giving introduction to the course, black board usage, Voice Modulation, Class Management, Questioning the students, and Time management.
10. Giving questions from previous topics that are covered in classes.
11. Flow should be maintained so that it will go like a story; interconnection between the topics should be planned.

5. Outcome

After the successful conduction of mentoring program, feedback was collected from both mentees and mentors. Mentors found that their mentees have improved their presentation skills by adopting suitable modifications in their teaching methods, body language, and discipline. This was also verified by taking the feedback from students before and after mentoring program. The students' feedback asserted that there was noticeable improvement in the overall performance of mentees.

A. Responses from Mentors

It is particularly critical that the mentoring of a junior faculty member be open, two-way, and fluid. The mentor should be available to the mentee, perhaps at regular meetings, or informal lunches. Dropping in on the mentee for a chat from time to time is certainly acceptable and encouraged. These informal visits assist the mentee in developing visibility and prominence within the profession. Successful mentoring enhances the reputation of the institution and the mentor within the discipline and college.

The process provided an opportunity to senior faculty members to guide juniors with the below aspects:

1. Best practices in teaching
2. Tips on teaching, research, and personal issues.
3. How to achieve career advancement to the mentee.
4. Insight into funding and help in access to funds.
5. Familiarize the mentee with the campus, facilities in the college and its environment to ensure new faculty members can effectively fulfill their responsibilities.
6. Educate the new faculty member about the system of shared governance between the administration and teaching. .

7. Mentoring relations can develop into collaborations and friendships.
8. Constructive criticism and encouragement, compliment professional growth and achievements.

B. Responses from mentees

In general, teaching faculties are conservative. Teaching is considered as a 'private activity' by many of them. The root of mentoring should be from Academic middle managers such as Deans, Heads of institution, who must encourage changes in favour of mentees and students. Future endeavours like promotions must be possible on the primary basis of excellence in teaching which was felt by mentees. Support and encouragement must be available from credible practitioner peers. There were difficulties to attend the mentor's sessions due to their own regular theory class, laboratory sessions and departmental work.

Collective responses from mentees after the mentoring sessions are listed below.

1. It was a useful and an interesting exercise
2. Learnt how to correlate various areas of engineering fields.
3. Developed good relation with senior professors, who taught us how to balance profession and personal life
4. Professors enlightened the path to career advancement.
5. The relationship with the professor matured to give the warmth of family.

6. Conclusion

Mentoring program provided a good opportunity for young faculty to get valuable guidance, and advice from senior professors. Both mentors and mentees actively participated in the programme and have found a progress in the mentees' overall performance. Mentee were significantly benefitted from this program. They are now more confident to better deliver the course. Mentors had a unique experience of mentoring young faculty, which had a feel of self satisfaction and it was beneficial to the institution. The administrators appreciated the outcome of this venture. This programme can be extended to all interested faculty members, since teaching is lifelong learning.

References

- [1] Peter J Goodhew, "Teaching Engineering", The School of Engineering's Active Learning Lab at The University of Liverpool, September 2010.
- [2] "Mentoring of Junior Faculty, a Guide for Faculty Mentoring" the University of Maryland. 2008.
- [3] Richard M. Felder and Rebecca Brent, "How to improve teaching quality" Quality Management Journal, 6(2), 9-21 (1999).
- [4] Rachel Thomas, "Exemplary Junior Faculty Mentoring Programs", March 2005.
- [5] Rebecca Brent and Richard M. Felder, "Helping New Faculty Get Off To A Good Start" North Carolina State

University, Proceedings of the Annual ASEE Meeting, ASEE, St. Louis, June 2000.

[6] Diana Bilimoria, "Achieving Equity through Leadership Development of Women and Men Faculty" University of California Davis ADVANCE Roundtable- April 2015.

[7] Tierney, W. G., and Bensimon, E. M., Albany, "Promotion and tenure: Community and socialization in academe", New York: State University of New York Press 1996.

[8] Juliette B. Bell, "The Need for Effective Research Mentoring of Early Career STEM Faculty at HBCUs", proceedings of A Research Mentoring Guide for Early Career STEM Faculty at HBCUs, February 2016.

[9] Casonya M. Johnson, Arthur Grider, "A Mentee's Guide to Establishing, Maintaining, and Evaluating a Mentee/Mentor Relationship", proceedings of A Research Mentoring Guide for Early Career STEM Faculty at HBCUs, February 2016.