

MENTORING IN HIGHER EDUCATION - AN OVERVIEW

Mentoring is recognized as an effective way to improve the recruitment, retention, and performance of graduate students, junior faculty, and professionals, and to introduce them into the norms, practices, and expectations of an academic institution or profession. Mentoring can be a means for inclusion of those from underrepresented and racially-culturally diverse backgrounds. An effective mentoring program requires buy-in from academic leaders, faculty, and students.

"Departmental and institutional leaders play an important role in bolstering and reinforcing the prevalence and quality of mentoring relationships in any academic milieu." - Brad Johnson, On Being a Mentor: A Guide for Higher Education Faculty

What Is Mentoring?

There are many understandings of mentoring. Generally, the roles and activities of mentoring focus on providing support and encouragement to a junior person, and can encompass such things as advising, guiding, teaching, tutoring, counseling, sponsoring, training, and/or supervising.

"Mentoring" is often used interchangeably with "coaching." Although it is often hard to distinguish them in practice, coaching can be characterized as practical training, focused on imparting and improving specific skills in a specific context—as in training in sports. Mentoring is a broader concept, devoted to career advancement, psychosocial support, and/or personal development of the junior partner. The mentoring relationship may be limited to a defined time period, or extend to a lifelong commitment to the mentee.

With so many understandings of mentoring, a successful program requires clear and specific goals. The content, duration, structure, and participants in a program will differ, sometimes significantly, depending on whether the goal is to promote career advancement, personal development, introduction into the culture and core values of a profession or organization, to instill the organization's core values, or some combination of these factors. Both graduate students and early-career faculty may benefit from having mentors.

Mentoring: Primary Functions

In one of the earliest and most influential books on mentoring, *Mentoring at Work* (1986), Kathy Kram identified the two major functions of the mentoring relationship: (1) career development and (2) psychosocial support.

For career development, a mentor can provide sponsorship, exposure, visibility, and coaching. The mentor may provide connections and introductions to others in the profession to help the mentee seek employment and advance in the institution and his or her career. The mentor can suggest conferences, journals, courses, and training programs; impart knowledge of appropriate methods; guide research; and supervise writing of manuscripts and dissertations.

In the psychosocial function of mentoring, the mentor provides role modeling, social acceptance and confirmation, emotional support, counseling, and may (or may not) extend friendship. In this relationship, the



mentor listens actively and provides advice, and encourages professional development

Formal vs. Informal

Formal mentoring relations are established within the structure of an institution; they are planned and coordinated, involve faculty recruitment, and are usually established at the beginning of a program or job. Partners are often assigned. Assigned mentorship relationships can fail or undercut the benefits of mentoring if the partners are not well matched by research interest, topic, or methodology.

Informal mentoring relationships are generally thought to be the most common in higher education. They emerge from spontaneous and mutual involvement, interaction, and shared interest without formal institutional involvement. Informal relations can be especially beneficial and rewarding to the junior partner.

Traditional vs. Alternative

The traditional form of mentoring is a one-onone relationship between a senior, experienced person and a junior partner—as in a master and apprentice relationship.

More recently, there have been challenges to the traditional way of mentoring as excluding those of diverse populations, being too authoritarian and male-oriented, and giving mentorship rights only to those in power. These critics claim traditional forms of mentoring can perpetuate norms of culture, class structure, gender and sexuality, religion, and hierarchy.

There is no question that mentoring can be done without falling prey to these weaknesses, and the literature has valuable resources to offer on this point (see, in particular, Moody 2012).

Non-traditional forms put mentoring practice in a broader context of personal development, social justice, and socialization. Advocates claim these new mentoring practices embody values of collaboration, inclusion, shared leadership, and learning from others.

Common Alternative Forms

Peer mentoring (or co-mentoring) brings together individuals or groups at similar stages of their careers. The peers share experiences, information, learning, and sometimes research methods, supporting and encouraging each other. Examples can include cohort interactions, such as an "assistant professor lunch club," periodic grad student mixers, or department chair interest groups.

Another approach is self-initiated, as when individuals pair with a colleague at a similar career stage and research interests. Such a pairing may simply provide a support network, and may extend to cross-fertilizing each other's research groups, say through holding joint lab meetings and participating in crossdevelopment of students and postdocs across the groups. Peer mentoring can be a way to bring underrepresented minorities into networks and increase social equality.

Developmental networks (also called constellations or mentoring mosaics) carry out the mentoring function through a network, usually within an organization. The network substitutes group learning and support for individual relationships and facilitates team or group projects. The distinction between mentor and mentee blurs. Success depends on the diversity and strengths of the members of the network.

E-mentoring: the functions of mentoring are increasingly being carried out electronically via email and the internet (social media, chat rooms, blogs, web conferencing). E-mentoring offers possibilities of greater and easier access to the mentor; convenient, asynchronous communication; reduction of the effects of class, social, or status; and a widespread and personalized community of support.

Successful Mentoring

A successful mentoring relationship does not usually happen by chance; it cannot be a "marriage of convenience." A good relationship will involve a good match and, likely, a commitment from both partners. Ideally:

- both partners receive some training or preparation for their roles
- the junior partner is open to having a mentor and brings a willingness to learn and change
- mentees have some choice in matching with the mentor
- interaction styles and personalities of mentor and mentee are compatible
- mentor had appropriate degree of knowledge and expertise, position, experience, and influence
- partners establish trust, confidence, and have common interests; they make certain their expectations and understandings agree
- mentor and junior partner share a commitment to improving professional development and advancement
- mentor is a model of good practice and is knowledgeable, supportive, and committed
- mentor does not have role of evaluating or assessing the mentee's professional performance, in order to maintain trust and confidence
- mentor encourages the mentee's own critical self-awareness; the mentor provide suitable challenges and autonomy
- the relationship adapts to the needs of the individual mentee, taking into account individual learning styles, personal characteristics, and level of professional development.

Some Concerns

Despite the widespread benefits claimed for mentoring programs, concerns can arise. Some mentors may be seen as using the relationship to advance their own careers by taking advantage of the work and ideas of their junior partners. Some mentors may be too controlling and protective, or too committed to a single style of scholarship or methodology.

Those who advance with the support of a mentor may be resented by peers and perceived as advancing from favoritism or influence, not merit. Those without mentors may be anxious that their training is incomplete and careers are hampered.

For cross-gender mentoring pairs, the relationship may lead to unintended romantic relations that may have unfortunate consequences; the public visibility of the pair may lead to unwarranted scrutiny and suspicions of a non-existent romantic relationship, which may damage reputations or cause one partner to abandon the mentoring relationship.

Mentoring in STEM

The general principles of mentoring described above apply to all fields, including STEM. Mentoring in some STEM disciplines, though, involves particular challenges. Special soft skills such as communication and interpersonal sensitivity may be needed to welcome and encourage some students in the program. Since increasing recruitment and retention of underrepresented minorities and women is a priority in STEM, mentoring programs could include alternative forms of mentoring and be attentive to making available mentors who reflect some of the same background characteristics of these students. Mentors in STEM need to be especially sensitive to cultural and ethnic differences and biases of students.



Appendix A: General Guidance for Mentees

Arrange for your first meeting with your mentor.

As a mentee, your primary goal is to get to know your mentor well and establish a professional relationship for advice and development.

Topics to consider during your initial mentee-mentor meeting:

- Initiate a discussion about what you hope to accomplish from this mentee-mentor relationship: seeking advice and guidance, sharing ideas all within agreed-upon conditions of boundaries and confidences. Are there topics you will not or cannot discuss with each other? (Example: it would not be appropriate to have conversations with your mentor about your directly reporting officer.) Who will know about the content of your conversations? Are there conditions that would involve others in your discussions without prior agreement?
- Share your specific, measurable and realistic individual development goals for your program; seek your mentor's feedback.
- Develop some thoughtful questions for the meeting:
 - What was your leadership career path/journey like what were some of the leadership lessons you learned along the way?
 - What goals do you set for yourself?
 - What difficulties and uncertainties did you experience?
 - What resources did you find to be beneficial?
 - How do you manage your time and balance roles and responsibilities?
- Set your future calendar of meetings agree upon time, places, occasions and general agenda items.

(Adapted from *Conversation Ideas with your Mentor*, prepared by the NCRPE for Nanyang Technological University, Singapore, 2017.)



Appendix B: General Guidance for Mentors

As a mentor, your primary role is to get to know your mentee and provide guidance and support based on his or her developmental needs. At points during your relationship, you will probably take on some or all of the following roles:

As an advisor

- Giving advice and guidance, sharing ideas, and providing feedback all within agreed upon boundaries and confidentialities: are there topics you cannot or will not discuss with the mentee?
- Sharing information on the rules for success within your academic environment

As a source of encouragement and support

- Acting as a sounding board for ideas/concerns, and providing insights in to possible opportunities
- Encouraging your mentee to discuss difficulties and uncertainties they are experiencing
- Helping to challenge your mentee to think through important decisions and strategies

As a resource person

- Identifying resources to help your mentee enhance personal development and career goals; recommending resources within your institution or professional discipline
- Expanding your mentee's network of contacts people they should seek out and meet; and serving as an advocate whenever opportunities present themselves

(Adapted from *Ideas for Conversations with your Mentee*, prepared by the NCRPE for Nanyang Technological University, Singapore, 2017.)



References

Allen, T.D., & Eby, L.T. (Eds.) (2007). *The Blackwell handbook of mentoring: A multiple perspectives approach*. Oxford: Blackwell.

Bland, C.J., & Ruffin, M.T. (1992). Characteristics of a productive research environment: Literature review. *Academic Medicine*, *67*,385-397.

Brent, M., & Dent, F. E. (2015). *The leader's guide to coaching and mentoring: How to use soft skills to get hard results*. Harlow, UK: Pearson.

Career Toolkit: Mentoring. Nature. Retrieved from https://www.nature.com/naturejobs/ science/career_toolkit/mentoring

Columbaro, N. L. (2009). Online doctoral students: A literature review. *Adult Learning, 20*(3-4), 9-15.

Committee on Science, Engineering, and Public Policy. (1997). *Advisor, teacher, role model, friend: On being a mentor to students in science and engineering*. Washington, DC: National Academy Press.

Cooke, N. J., & Hilton, M. L. (Eds.) (2015). *Enhancing the effectiveness of team science*. Washington, DC: National Academies Press.

Fletcher, S. J., & Mullen, C. A. (Eds.). (2012). *The SAGE handbook of mentoring and coaching in education*. Los Angeles, CA: Sage.

Garvey, R., Stokes, P., & Megginson, D. (2009). *Coaching and mentoring: Theory and practice*. Los Angeles, CA. Sage.

Gratton, L., & Erickson, T. J. (2007, November) Eight ways to build collaborative teams. *Harvard Business Review*. Retrieved from https://hbr.org/2007/11/eight-ways-to-buildcollaborative-teams Haggard, D., et al. (2011). Who is a mentor? A review of evolving definitions and implications for research. *Journal of Management, 37*, 280-304.

Johnson, B. (2016). *On being a mentor: A guide for higher education faculty* (2nd ed.). New York, NY: Routledge.

Kram, K. (1985). *Mentoring at work: Developing relationships in organizational life*. Glenview, IL: Scott Foresman.

Lee, A., Dennis, C., & Campbell, P. (2007, June 14) Nature's guide for mentors. *Nature, 447*, 791–797. Retrieved from http:// www.nature.com/nature/journal/v447/ n7146/full/447791a.html

Mendoza-Denton, R., et al. (2017) Differences in STEM doctoral publication by ethnicity, gender and academic field at a large public research university. *PLoS ONE,12*(4), e0174296. Retrieved from https://doi.org/10.1371/ journal.pone.0174296

Moody, J. (2012). Faculty mentoring: Replacing dysfunctional practices with good practices. In J. Moody, *Faculty diversity: Removing the barriers* (2nd ed.; pp. 158- 191). New York, NY: Routledge.

Mullen, C. A. (2006). *A graduate student guide: Making the most of mentoring.* Lanham, MD: Rowman & Littlefield.

Mullen, C. A. (Ed.). (2008). *The handbook of formal mentoring in higher education: A case study approach*. Norwood, MA.:

Mullen, C. A. (2005). *Mentorship primer*. New York, NY: Peter Lang.

Murrell, A. J., & Blake-Beard, S. (Eds.). (2017). *Mentoring diverse leaders: Creating change for people, processes, and paradigms*. New York, NY: Routledge.



NIH. Broadening experiences in scientific training. http://www.nihbest.org and http:// www.nihbest.org/2017best-practicesworkshop/

Snyder, K.M., & Acker-Hocevar, M. (2003). Building international cultures of synergy through online social networks. In F. K. Kochan & J.T. Pascarelli (Eds.), *Global perspectives on mentoring: Transforming contexts, communities, and cultures* (pp. 311-334). Greenwich, CT: Information Age Publishing,

Zachary, L. J. (2000). *The mentor's guide: Facilitating effective learning relationships*. San Francisco, CA: Jossey-Bass.

