Effective Mentoring of Laboratory Animal Science Professionals

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Abstract | Laboratory animal science can benefit by active oversight and cultivation of beginning professionals in the field by individuals with accumulated knowledge and experience. Such mentoring activity may occur optimally when mentors and protégés both engage this challenge with enthusiasm and when participants possess certain characteristics. Goals for the protégé include acquisition of knowledge, skills, insight and values, and self-reliance. Although potential obstacles exist to a successful mentoring relationship, specific strategies may be used to overcome such hurdles.

Laboratory animal science is continuing to grow and develop as an important career pathway. This requires that individuals entering such a career are encouraged to develop personal professional excellence. Formal education and instruction programs can supply quality training but are frequently limited to a somewhat logistically oriented approach. As individuals mature and develop professionally, they may benefit from thoughtful, constructive, and active personal guidance and oversight by those who are established leaders in the field (1, 2). Mentorship can be described as that kind of oversight. Mentorship is not to be confused with "management," nor does it imply merely enhanced "motivation." Rather, successful mentorship has its basis in effective interpersonal interaction that leads to the individual being mentored becoming an individualized professional, rather than a clone of a "model" laboratory animal scientist.

The word "mentor" is derived from Greek mythology. Mentor was the faithful companion of Odysseus, the King of Ithaca, and was instructed to raise the King's son, Telemachus, to be a person fit to eventually ascend the throne. In this role, Mentor had to serve, among other things, as a teacher, a trusted and approachable adviser, a challenger, a role model, and an encourager. In this way, Mentor can be seen as having responsibility for the safe and proper development of the potential of his young charge.

The protective aspect of the mentor role has given rise to the use of the word "protégé" from the French verb "protéger," to protect, for the one who is the recipient of mentor interest. Protection and development of the protégé make up the core of what is classically meant by mentoring.

Important Characteristics for Mentors and Protégés

Although protégé-mentor matching programs have been attempted in some professions (with variable degrees of success), the most successful matches often are made serendipitously. The congruity of the match frequently depends on the proper mesh of protégé personality with mentor personality. Nonetheless, protégés and mentors may wish to consider certain characteristics as desirable when choosing one another.

Key characteristics of the mentor

1. The mentor should be accessible. Close physical proximity of mentor and protégé is key to proper oversight of the protégé. In addition, the mentor must make sufficient time available for the protégé. Although scheduled appointments provide some opportunity for interaction, the mentor should ideally be available for nonscheduled interactions as well. Matters that may seem of crisis proportion to the protégé will come up without regard for the mentor's schedule. Mentoring requires physical and temporal proximity and flexibility.

2. The mentor needs to be a communicator. Protégés do not need to receive confusing or conflicting signals from the mentor. The mentor should be very clear regarding what he/she wants and expects and should be able to articulate clearly his/her knowledge.

3. The mentor should have a high degree of integrity and commitment to the profession. He/she should approach mentoring not only from the standpoint of helping the protégé, but also from the standpoint of developing and nurturing the profession by identifying and cultivating young talent. The mentor should not allow his/her values to be easily compromised. It is important that he/she understands that growth and active support of the profession is as much a goal as individual success.

4. The mentor should be knowledgeable and experienced. It is important that the mentor have a critical mass of knowledge and experience and that he/she knows the best way for the protégé to learn those things. In this regard, the mentor should be recognized as competent and expert by his/her peers.

5. The mentor should have high expectations for the protégé. Initially, the mentor should attempt to recognize what the protégé is capable of accomplishing, while realizing that the protégé may simply be unable to meet some expectations. What is possible for the mentor or some protégés may not be possible for others. Nonetheless, once the mentor has decided the capability of the protégé, the mentor should demand no less than that.

6. The mentor should have the ability to act as a catalyst. The mentor might act as a catalyst, for example, by pointing the protégé in the direction of individuals or resources needed to accomplish a task, or the mentor might suggest ideas to keep the protégé moving on a particular project, or in a specific direction. This may require that the environment of the mentoring relationship be such that the mentor or the institution is able to furnish the protégé with any specialized equipment, supplies, or other resources required for successful completion of projects and assignments.

7. The mentor should be adept at listening and questioning. Mentors need to listen to protégés. The protégé may have ways of disguising a request for help, so as not to appear inadequate and thus fall into disfavor with the mentor. A good mentor will be able to interpret situations and further define problems by asking appropriate questions. It is often the protégé who least requires assistance that is most forthcoming in asking for it.

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8. The mentor should be accepting. The protégé is fearful, not only of professional setbacks, but also of how the mentor's perception of the protégé will change with setbacks. The mentor should make it clear that professional setbacks are common, even expected. The mentor should further be able and willing to help the protégé learn and recover from professional mistakes and misfortune.

9. The mentor should have a sense of humor. In laboratory animal science, tension often arises over setbacks in research, looming deadlines for major projects, and the many other demands for the time of a laboratory animal science professional. An appropriate touch of humor sends the message that, although there is very important work to accomplish, the mentor still recognizes his protégés and coworkers not merely as equipment, such as a computer or centrifuge, but as valued colleagues.

10. The mentor should be willing and persistent. The idea of nurturing beginning members of a profession may sound initially appealing. However, mentorship is not necessarily clean and easy; it can be very demanding. The lack of progress or loss of interest by a protégé can be frustrating. Mentors should not be forced or coerced into participation in a mandated mentorship program. The mentor should approach the relationship responsibly and willingly. He or she should embrace the goals and objectives of the arrangement, and should be prepared to, at times, encounter frustration.

11. The mentor should be enthusiastic. Often, enthusiasm is infectious. If the mentor is enthusiastic, he/she is likely to pass their professional zeal on to the protégé. Conversely, lack of enthusiasm by the mentor may result in failure of the protégé to develop professional vigor. Enthusiastic mentors find even the smallest bit of progress encouraging and are not overly discouraged by setbacks. The mentor should readily acknowledge achievement by the protégé. If the mentor lacks enthusiasm, the protégé likely will also. More than anything, the protégé needs the enthusiasm of the mentor.

Key characteristics of the protégé

Because protégés are by definition beginners, selection should not be based principally on pre-existing skills. Rather, selection should be based on state of mind of the protégé. Although skills frequently may be taught, other traits key to success of the protégé may be more intrinsic. In this regard, there are several characteristics typical of a protégé who is likely to succeed.

1. It is important that the protégé have a sense of team spirit. It is rare that one will succeed in laboratory animal science based on individual effort. Instead, collaborative and team efforts enhance the likelihood of success. The protégé should enter the mentoring relationship with existing interpersonal skills, although such skills often require further development.

2. The protégé should have professional vision. It is important that the protégé be able to view laboratory animal science from the standpoint of how one profession relates to other professions and to society. The ability to view the present position of the individual and the profession, and the potential role one can play in the future, is a desirable trait in the protégé.

3. Ideally, the protégé will be goal oriented rather than task oriented. In this regard, the protégé should be oriented toward substantive accomplishment that contributes to the overall operational objectives of the institution and the profession. In contrast, narrow focus on detail and routine tasks will divert the attention and efforts of the protégé away from broader objectives.

4. It is important that the protégé be motivated. An individual driven to succeed and contribute likely will if given the opportunity and resources. An unmotivated protégé rarely has such a mindset and is likely to fail regardless of the effort of the mentor. A professionally hungry protégé stands a good chance of succeeding.

5. As with the mentor, the protégé should have a high degree of enthusiasm. This enthusiasm should permeate all his/her professional endeavors. Because it may be difficult for the mentor to impose a change in attitude on the protégé, it is important that the protégé enter the relationship as a willing and enthusiastic participant.

Goals for the protégé in laboratory animal science

The mentor should understand that in addition to overall professional growth of the protégé, there are certain specific goals for the protégé within the mentoring relationship (3). In general, these goals are for the protégé to acquire: knowledge, skills, insight and values, and self-reliance.

Knowledge

Laboratory animal science is not different from other disciplines in the sense that certain core knowledge is essential to success. A beginner must learn the important theories, concepts, and facts needed for competent performance. Examples of the kinds of knowledge that would be useful for a beginning professional in laboratory animal science would include:

1. Information pertinent to the day-to-day functioning of a facility housing animals used in research, teaching, and/or testing. This might include factual information concerning animal care-and-use regulations, appropriate use of anesthetics and analgesics, maintenance of immunodeficient rodents, or any of the other thousands of factual bits of information that one needs to know to assist in the ongoing operations of such a facility. It is important that beginners have a clear idea of how competency is defined in the field and how he/she can achieve that level of competency.

2. Information regarding professional organizations. Individuals beginning their careers in laboratory animal science are confronted with an alphabet soup of acronyms including AALAS, LAMA, ASLAP, AAALAC, and others. Newcomers need to know the role(s) such organizations have in their profession. They need to know which organizations to join, what might be derived from membership, and how they might contribute to the organization.

3. Knowledge concerning sources of information. Protégés should know, for example, that AALAS publishes two periodicals. They should also know which other organizations, agencies, and periodicals are important sources of information. They should also be sensitized to the increasing importance of electronic communication in laboratory animal science and how they might access such resources.

4. Information regarding the power structure/hierarchy of the animal facility, the institution, and professional organizations. It is useful for protégés to learn how to identify the formal and informal leaders and the source of their power, the strategic sources of support, and where the potential problems and sources of sabotage may exist.

Skills

Although knowledge is indeed important, learning to apply that knowledge and development of skills is equally important. An objective of the mentoring relationship then should be to answer the questions "What should I be able to do?" and "How do I do it?" Abilities should, preferably, be developed and manifested in performance. Learning by doing is an important teaching tool. Examples of the kinds of skills that a mentoring relationship might foster in a laboratory animal science professional include:

1. Skills centered around the practical knowledge relating to the ongoing operations of a research animal program. Examples of such skills might include operation of a cage washer, learning how to obtain a blood sample from a particular species, how to manage a budget, or even learning how to use the phone system.

2. Oral and written communication skills. Protégés should learn how to prepare and present effective talks for diverse types of
audiences. They might be coached to develop the ability to write research grants, research papers, or other written reports. It is important that protégés learn how to communicate with colleagues in laboratory animal science as well as those in other disciplines.

3. Skills needed to facilitate regulatory compliance. Newcomers should learn how to achieve compliance in a scientifically nonobtrusive manner. In this regard, protégés should learn to blend their knowledge of regulatory requirements with that concerning the scientific method. They also need to develop skills to deal with a variety of individuals ranging from the totally compliant to the thoroughly difficult.

Insight and values
Effective professional insight and values are central to making proper judgments and good decisions. In a sense, insight and values are ideas and thoughts derived from an ability to understand the nature of things. From that standpoint, mentorship should seek to develop insight and values that serve the individual and the profession. For example, the mentoring relationship should attempt to answer questions such as:

1. How does one generate ideas and sustain professional concentration and drive?
2. What are the standards that should govern professional behavior? What informal norm is one expected to follow?
3. In any given situation, which problems are important and which are not? How does one decide which are the important questions, and how does one design an experiment to answer those questions?
4. How can one effectively deal with and learn from failure?
5. What does the community and society expect of and deserve from laboratory animal science professionals?
6. What is one expected to do beyond his/her job to advance the profession?
7. How does one say "no" to demands on his/her time? How does one pace oneself to avoid burnout?
8. How can one deal with emotions that arise when working with animals and related issues such as euthanasia?
9. How might one deal with family and friends and others who question the ethics of animal research?
10. How can one maintain his/her enthusiasm and the enthusiasm of others?

Self-reliance
Self-reliance is the culmination of full development of knowledge, skills, and insight and values. At some point, the protégé should become able to function independent of the mentor, and eventually, to act as a mentor himself or herself. One role then of the mentor should be to help the protégé develop abilities and establish standards to govern his or her own independent professional behavior. Generally, this can be achieved by incrementally increasing the professional responsibility and accountability of the protégé. Such responsibility should be delegated slowly and thoughtfully as the protégé gradually masters key skills and concepts. It is ill-advised to throw the protégé "off the end of the pier" and let him or her learn how to swim or drown.

Potential obstacles to effective mentoring
Several potential obstacles to effective mentoring exist, including:

1. Lack of opportunity for professional growth. Frequently, individuals in laboratory animal science are trained for and charged with very specific professional duties. Such situations limit the chance for protégés to learn and grow. Opportunities can be increased for such individuals by various means; attendance at professional meetings and continuing education programs, active participation in professional organizations, rotation with respect to job duties and responsibilities, nominations for awards or other recognition, and actual hands-on participation in specific research projects. Additionally, protégés should be encouraged to interact with professional colleagues via the information superhighway. It is the role of the mentor to identify appropriate opportunities for the protégé and to then guide (and even cajole when necessary) the protégé to take advantage of such circumstances.

2. Lack of time. It is not uncommon for protégés to feel deluged, if not completely overwhelmed, by personal and professional responsibilities. Such circumstances result in little available time and energy for the protégé to partake of opportunities for professional growth. For this reason, a responsible mentor will attempt to identify ways in which the protégé can avail himself or herself of growth opportunities. This could be accomplished, for example, by freeing an individual for time to attend seminars or meetings, or to pursue individual professional projects of interest. An alternative might be to incorporate learning and mentoring through routine interactions, such as staff meetings or lunch/break time conversations.

3. Favoritism by the mentor. Although some protégés may clearly excel in contrast to others, it is important that the mentor maintain perceptibly equivalent support for any individual protégé. Although some protégés may require special/unique treatment, it should be made clear that such attention will be accorded to any protégé who seeks it.

4. Identification of the mentor. It is not unusual for some mentors to fail to recognize themselves as fulfilling that role. In this scenario, the protégé may or may not recognize the mentor as a mentor. In any event, it is important for the mentor to actively engage the challenge of mentorship. This is more readily achieved when individuals consciously conclude that at least some interactions with others could be characterized as mentorship. Although reaching this conclusion may require some deliberate consideration on the part of the mentor, the process can be initiated by others suggesting that a mentoring relationship exists. In this context, those who already recognize themselves as mentors can further mentorship in laboratory animal science by directly pointing out to unwitting mentors the influence they have on particular protégés.

Although both mentor and protégé will, on occasion, encounter frustration, it is inevitable that some mentor/protégé relationships will fail. It is important that the dissatisfied party allow time and opportunity for rectification of problems. Mediation by a third party may prove useful. However, once it is clear that no true intent to change or improve the situation exists, dissolution of the relationship may be indicated. In such circumstances, both mentor and protégé should mutually agree that the situation is at an impasse and the relationship is best terminated.

Conclusion
The future of any organization or profession is of course tied to the proper development of upcoming leaders and contributors. It is in this way that laboratory animal science needs active mentoring. Mentor training programs have been attempted in other professions (4–7); however effective mentors often arise by consequence of their own experience. Mentors need to recognize the strengths of each protégé and build on those strengths. Published material such as that found in Contemporary Topics in Laboratory Animal Science or Laboratory Animal Science can provide written facts and perhaps some degree of insight. However, those making the climb up the professional ladder of laboratory animal science will also benefit greatly from a helpful boost by someone willing to share their time, knowledge, and insight.
Footnote

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References