

Management of expectations

As with most endeavors, success in research training depends on the mutual efforts of faculty and student to work diligently and form a productive professional relationship. Graduate students must be aware of program guidelines and expectations including timelines for the successful completion of their duties, such as research projects, teaching assignments, and thesis work.

Supervisors' expectations of students

Early contact between Supervisor and student is essential, and you should continue to meet frequently throughout the year. You, the student, should expect to initiate the supervisions by making an appointment to see the Supervisor.

- Plan appointments and be punctual and well prepared for supervisions.
- Present work to be discussed at least one week during meetings that are a great opportunity to receive feedback.
- Maintain your experimental plan/schedule to reflect your progress and effective time management.
- Describe how you allocate your time to professional activities and career development.
- Share your career plans and goals.
- Discuss your encounters with your department, college, and the university.
- Ask for your mentor's observations and feedback.
- Make time available to meet your mentor's circle of professionals and contacts.
- Keep the content of your conversations confidential between the two of you.
- Re-evaluate the mentoring agreement on an annual basis by submitting a *progress report* annually to your thesis committee to monitor your progress.
- Don't fall into the trap of assuming someone has the same understanding of a situation, project, deadline, or task that you do. You can avoid this pitfall by having a conversation in which you openly discuss what's expected, how it might be accomplished, and how success will be measured.

Students' expectations of Supervisors

The supervisor's role is to give advice, encouragement and constructive criticism to research students. The supervisor should normally:

- Ensure that the student has received, read and understood the PhD program expectations and guidelines.
- Assist the student in drawing up a research topic and a viable written research timetable, preferably in the initial meetings with the student.
- Ensure that the student is aware of relevant lectures and seminars in the field (these are generally advertised by the department through email announcements).
- Ensure that the student is aware of relevant training programs and opportunities
- Ensure that the student is aware of the range of facilities available for research and potential collaborators.
- Introduce the student to other senior and graduate members working in a similar area.
- Assist the student in preparing research trips and archival visits within the UK and/or abroad.
- Encourage the student to keep systematic records of the research, including back-up copies of electronically-stored material.
- Discuss the research in person and offer constructive written comments and criticism.
- Consistently monitor progress and time management.
- Provide the student with adequate indication of his or her progress and challenges still to be met.
- Encourage the student to present his or her work at appropriate internal and national conferences, seminars and workshops.
- Advise on the writing up and presentation of the dissertation.
- Assist the student's applications for funding by the writing of letters of reference.

- Give the student guidance on the publication of their work.
- Supervisors normally also play a major role in assisting the job applications of students, by giving advice and writing references, especially if the student is contemplating an academic career.
- Meetings should involve discussion of the progress of the student's research. A written timetable needs to be established and followed by the graduate student.
- Supervisors should in a formal manner ensure that each student is aware of the workshops, skills training and research seminars available. Supervisors should review at least annually the student's training to date and their further needs for the forthcoming year, with the student maintaining a progress report.

For postdoctoral Trainees:

One powerful tool that can assist you in planning for your career is the Individual Development Plan (IDP). Soon after your arrival, you should make an appointment to sit down with your supervisor to discuss your project, your expectations for the research experience and those of your mentor, and your career goals. Together you should agree on the steps you will take to complete your project and reach your goals effectively. Your goals may still be vague or they may be specific and detailed. If you are not certain of your goals, one of the steps you will need to include is career exploration. If you are interested in an academic career, steps might include learning to write grants and developing a teaching portfolio. All IDPs should include a strategy for improving oral and written communication skills. Your discussion should also cover the ways in which your supervisor will assist you in taking each step. After your session, draft a document that outlines your plan and make certain that you and your supervisor agree on it. Once a year, you need to revisit the IDP and revise it as necessary and confirm that you are making appropriate progress towards your goals. The NIH requires that all postdoctoral trainees have IDPs. Depending on your supervisor and Institutional requirements, you may have to initiate this process

Additional Information can be found in the following links:

- [Making the Most of Mentors: A Guide for Mentees \(PDF\)](#)
- [NIH Postdoc Handbook \(PDF\)](#)

Scientific Integrity

Consider what it means to be a responsible researcher. What does it mean to maintain research integrity? An important aspect of training and emerging into a scientist, it is crucial to learn and maintain a scientific integrity. It is defined by conducting science without any bias, restraining from any scientific misconduct, and ensure quality science. The National institute of Health (NIH) expects everyone involved in research, including investigators, trainees, administrators and NIH staff, will promote research integrity in fulfillment of NIH's research mission. National Institutes of Health promotes the highest level of scientific integrity, public accountability, and social responsibility in the conduct of Science.

Research integrity includes:

- The use of honest and verifiable methods in proposing, performing, and evaluating research
- Reporting research results with particular attention to adherence to rules, regulations, and guidelines.
- Following commonly accepted professional codes or norms.
- Let the facts speak for themselves and avoid improper bias.
- Maintain confidentiality during the process of peer review of manuscripts and not to disclose any review material.

Why does Research Integrity Matter?

The scientific research enterprise is built on a deep foundation of trust. Failure to uphold research integrity undermines confidence and trust. Whether you are a researcher or a member of the public, research integrity affects you. Here are some of the reasons:

- Researchers rely on trustworthy results of other researchers to make scientific progress.
- Researchers rely on public support, whether through public investments or their voluntary participation in experiments, to further science.
- The public relies on scientific progress to better the lives of everyone.
- Researchers who are dishonest and act without regards to integrity could actually harm the public.

What can be done to Promote Research Integrity?

Everyone has a role and responsibility to play in promoting a healthy and positive research culture that is conducive to the training of young scientists and the realization of scientific innovations for the benefits of humankind. Here are some suggestions:

As Researchers

- Attempt to uphold the shared values in your work and in your conduct.
- Adhere to good scientific practices & ensure scientific rigor.

As Mentors

- Set good examples for mentees: provide meaningful guidance for conduct and standards expected of scientists.
- Be attentive to mentees; be ready to confront and correct aberrant behavior.

As Junior Researchers

- Know and uphold the shared values in scientific research.
- Keep good scientific records.
- Know and understand your institution's policies, standards and expectations on research.

As Science Administrators

- Annunciate policies clearly, standards and expectations for researchers and staff.
- Provide education and support to researchers to promote responsible conduct of research.

- Establish transparent procedures for receiving and investigating scientific misconduct.

What is the Responsible conduct of research?

Responsible conduct of research (RCR) refers to policies and guidelines that insure scientific and integrity standards in research and scholarship.

There are nine issues or core topics in the responsible conduct of research:

- Collaborative science
- Conflicts of interest
- Data management
- Mentor-trainee relationships
- Peer review
- Publication practices and responsible authorship
- Research misconduct
- Use of human subjects
- Use of animal subjects

Ethical dilemmas in research are complex. As you think about your own behaviour, your decisions about responsible conduct of research are likely based on:

- Professional code of ethics
- Regulations from governmental funding agencies
- Policies and standards of institutional sponsors

These areas are most frequently mentioned in training requirements by funding and regulatory agencies, which have increasingly focused their attention on greater expectations and requirements for disclosure, accountability, and regulation of research. In addition, NIH has given special attention in this module to identifying and developing appropriate responses to observed misconduct and the reporting of violations of these nine areas of RCR.

Additional Reading information are found at the following links:

- http://grants.nih.gov/grants/research_integrity/whatis.htm
- <http://www.scientificintegrity.net>
- <http://www.nature.com/jes/journal/v17/n2/full/7500573a.html>
- <http://www.nih.gov/about/director/sci-int-nov2012.pdf>
- For more information on Responsible Conduct of Research (RCR), please visit the website of the Office of Research Integrity (ORI) at <http://ori.hhs.gov>
- Watch [ORI's "The Lab - Avoiding Research Misconduct"](#)
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Becoming a supervisor:

Expectations from a supervisor

- Stay aware of the big picture.
- Spend time interacting with and learning to work with people from other parts of the organization to develop collaborations.
- Create a productive environment for your employees.
- Make decisions on your own.
- Implement new programs and methods.
- Inform your people about company policies and procedures.
- Teach effectively.
- Knowledge of the role(s) mentors can play at various career stages
- Ability to evaluate trainee's strengths and weaknesses, and help guide them to build on strengths and improve on weaknesses.
- Motivate and develop employee's skills.
- Knowledge of how to provide feedback, constructive criticism, and advice.
- Knowledge of how to listen to someone to understand their perspective on their own situation.
- Knowledge of the rules and procedures related to mentee's situation - e.g., as a student, postdoctoral fellow, or junior colleague.
- Knowledge of the job market and the opportunities therein.
- Ensure the work gets done and maintain a positive attitude even when circumstances would make it easy to be negative
- Be concerned about the quality of the entire team's work.
- Be the 'gatekeeper" of information and attain privacy of trainee information.
- Lead by example and be a role model for trainees by displaying leadership skills such as time management, meeting deadlines and meetings.

For additional information:

<http://www.flexstudy.com/catalog/schpdf.cfm?coursenum=96015>

Communication

It is important to maintain effective communication in a work situation, a professional relationship, personal interactions, educational exchanges, meetings or group settings.

Presentations

- Ability to organize ideas in a useful fashion.
- Ability to use graphics effectively to communicate ideas.
- Knowledge of how to develop poster presentations.
- Knowledge of how to develop various types of oral presentations.
- Ability to convey complex information in simple manner to audiences with different levels of knowledge.
- Ability to speak before large and small groups.
- Ability to assess audience response to determine how will ideas be conveyed.
- Ability to make persuasive arguments in oral presentations.
- Ability to handle audience questions.
- Ability to speak clearly in English.

Technical writing

- Ability to write logical instructions.
- Ability to write at all levels: brief abstracts to book-length manuscripts.
- Ability to use graphics effectively to communicate ideas.
- Ability to revise one's own work to make a document or presentation clearer or more persuasive.
- Ability to edit and proofread.
- Knowledge of publication process for scientific journals and other publications.
- Ability to cite and critically analyse the scientific literature in written work.
- Ability to convey complex information in appropriate fashion to audiences with different levels of physiology knowledge.

Grant writing

- Knowledge of how to identify various funding sources and grant review processes.
- Knowledge of types of grants and different approaches to writing them.
- Ability to develop clear and testable hypothesis, objectives, and research plan.
- Proficiency in developing grants' budgets.
- Ability to use scientific literature effectively in writing grant proposals.

Peer review

- Ability to give and receive appropriate constructive criticism in writing, evaluating manuscripts, grant applications, abstracts, and other types of writings.
- Ability to give and receive appropriate constructive criticism in giving and evaluating oral and poster presentations.

Networking

- Knowledge of how to develop a base for possible collaborations.
- Knowledge of how to contact other researchers at national and international meetings.
- Knowledge of how to contact with other researchers via email.

Working in teams

- Ability to work well with a diversity of people and cultures.
- Respect for and placing value on different perspectives.
- Ability to provide and respond to constructive criticism.
- Ability to work well under pressure, maintain positive attitude, and willingness to work hard.
- Ability to apply oneself to a variety of tasks simultaneously.

- Knowledge of how to work with the committee process.

Internationalization

Internationalization has become a key factor in graduate education to meet challenges of globalization. Establishing International linkages helps define and solve society problems in response to developments in higher education outside their national borders. The emergence of such international systems of doctoral education confer openness to innovation and expansion and holds enormous potential for advancing a more effective future-oriented PhD programs.

Among the benefit of internationalization is to increase diverse graduate student population worldwide. International doctoral students provide considerable knowledge about their culture, which is a critical transferable skill and can enhance PhD graduate employability. Moreover, International collaborations are crucial in research in particular in projects that allow exchange of Information and recourses. Many of these global research projects are fostered by international collaborations.

Please find additional reading material:

- <http://depts.washington.edu/cirgeweb/wordpress/wp-content/uploads/2012/11/Nerad-2010.-Globalization-and-Internationalization-of-Graduate-Education.-A-macro-and-micro-view..pdf>
- <http://www.psc.isr.umich.edu/pubs/pdf/rr09-675.pdf>

1. Interpersonal skills

Interpersonal skills are those necessary for relating and working with others – such as verbal and non-verbal communication, listening, giving and receiving feedback. The ability to communicate within an organization depends heavily upon people's interpersonal skills. Howard Gardner described it as one of the multiple intelligences: *interpersonal intelligence* or the ability to be able to understand and work effectively with others. When problems arise you use your interpersonal skills to resolve conflict with others. Healthy interpersonal skills reduce stress, resolve conflict, improve communication, enhance productivity, increase understanding, and promote success.

Active Listening

listening is a matter of concentration - the more attention paid the better the listening. Listening skills involve being receptive to others and being able to understand another person's perspective.

- Avoiding distractions: reduce noise not thinking about what to say
- Attention giving body language, *Attending* focuses on non-verbal behaviours to demonstrate you are actively listening to the speaker:
- Strategies to enhance effective listening:
 - Not interrupting the speaker – give them space and time to say what they have to say
 - Focusing – actively attend to the other person's words, ideas, and feelings.
 - Use paraphrasing - means providing a concise response to the listeners' words to reflect that you have understood their message using own words (rewording).
 - Use summarising – formulate a brief statement containing key words and/or feelings that person has said.
 - Use inquiry – to aid active listening by asking appropriate questions and using open-ended questions.
 - Listen to how something is said – too often we concentrate on the content or what is being said whereas the emotions and reactions behind the content may be more important.

Non-Verbal Communication:

- Stay professional- be at your best in every situation. Remember that the way you act reflects on your character. Learn to deal with situations in an appropriate way.
- Establish credibility- be sincere. If you are truthful and upfront with people, it will go a long way to gaining another person's respect and trust.
- Understand others' point of view- Remember to reflect on what others tell you. Even if you disagree, take the time to learn and understand another person's perspective.
- Learn about others-Take time talk with employees or clients. Conversations do not need to be work related. Sometimes simple conversations can help you learn about the person and build rapport.
- Be confident- Keep eye contact and a relaxed body posture. Be sure to speak clearly and at a moderate pace.

Interpersonal Skills to communicate effectively Includes:

- Verbal Communication - What we say and how we say it.
- Non-Verbal Communication - What we communicate without words, body language is an example.
- Listening Skills - How we interpret both the verbal and non-verbal messages sent by others.
- Negotiation - Working with others to find a mutually agreeable outcome.
- Problem Solving - Working with others to identify, define and solve problems.
- Decision Making – Exploring and analyzing options to make sound decisions.
- Assertiveness – Communicating our values, ideas, beliefs, opinions, needs and wants freely.

How to improve and develop your interpersonal skills including:

- Learn to Listen
- Listening is not the same as hearing. Take time to listen carefully to what others are saying through

both their verbal and non-verbal communication. Visit our Listening Skills page to learn more.

- Choose Your Words
- Be aware of the words you are using when talking to others. Could you be misunderstood or confuse the issue? Practice clarity and learn to seek feedback to ensure your message has been understood.
- Encourage others to engage in communication and use appropriate questioning to develop your understanding. Our page: Verbal Communication, introduces the subject, you may also be interested in Effective Speech for tips on how to use your voice to full effect and Questioning which can help you encourage communication in others and clarify what they have said.

Developing Effective Relationships

- Creating an atmosphere of openness with clear lines of communication is a key factor in training success. People with good interpersonal skills deal with difficult issues straightforwardly, listen well, share information fully, and stay receptive to bad news as well as good.
- Being able to understand and work with others in teams or groups is another important aspect of interpersonal skills. The focus is on facilitating teamwork, ensuring group effectiveness, decision making, running meetings and presenting work.
- These skills are also important in developing a successful career path which requires being able to communicate and collaborate with others. They are also useful to develop in college where more cooperative learning is taking place, requiring interpersonal and small group skills.
- Working in groups provides the opportunity to share ideas, hear other perspectives, to benefit from the experience and expertise of others and to receive help and support.
- The cornerstone of effective communication is the ability to listen and to accomplish this in an active manner. Often communication fails because people have not actually heard to the message or have only listened to part of it. As a result, they may have assumed or misinterpreted what was actually said.

Find more at: <http://www.skillsyouneed.com/ips/interpersonal-communication.html - ixzz3KQ2HYQMS>