



Group Discussion #1

1. When you first began doing research, what was your experience like? What did you enjoy? What were some challenges?
2. As you started in research, was there a person who helped you? Share stories how this person helped you. (This person doesn't have to be an official mentor or advisor.)

Group Discussion #2

- A. **Individual Activity:** adapted Myers-Briggs test for introverts/extroverts < www.humanmetrics.com >
- o Select the answer that more accurately reflects your preferred behavior.

Yes	No	
		⚡ You enjoy having a wide circle of acquaintances.
		⚡ You're usually the first to react to sudden events and surprises.
		⚡ You easily tell new people about yourself.
		⚡ You spend your leisure actively socializing with groups of people, attending parties, shopping, etc.
		⚡ You rapidly get involved in the social life of a new workplace.
		⚡ The more people with whom you speak, the better you feel.
		⚡ It is easy for you to speak loudly.
		⚡ You enjoy being at the center of events in which other people are directly involved.
		⚡ You feel at ease in a crowd.
		⚡ It is easy for you to communicate in social situations.
		Totals

- o Scoring: add up the number of statements with which you answered "Yes" and "No". Extroverts will tend to answer Yes to most of these statements, and Introverts will tend to answer No.

Success Types by John Pelley < <http://www.ttuhs.edu/SOM/success/> >

<i>Well-developed type skills</i>		<i>Underdeveloped type skills</i>	
<u>Extraversion</u>	<u>Introversion</u>	<u>Extraversion</u>	<u>Introversion</u>
Active approach	Reflective approach	Hyperactive	Withdrawn & secretive
Bring breadth	Bring depth	Superficial	Overly serious

What the Types Can Offer Each Other

EXTRAVERTS

- Provide the outwardly directed energy needed to move into action
- Offer responsiveness to what is going on in the environment
- Have a natural inclination to converse and to network

INTROVERTS

- Provide the inwardly directed energy needed for focused reflection
- Offer stability from attending to deep ideas, and listening to others
- Have a natural tendency to think and work alone

B. **Group Activity with Case Study:** Please read the case study and answer the questions.

Joseph has been feeling intimidated and overwhelmed with his research professor, and isn't sure how to improve his communications with her. He had heard many wonderful and positive things about Professor Madden, and so had wanted to join her lab. She publishes regularly in high impact journals, and recently won a couple of prestigious awards for her research and teaching. So when Joseph applied to join her lab, he was pleasantly surprised when she welcomed him into her group.

But Joseph has been feeling overwhelmed during his weekly individual meetings with her. She is very friendly and talkative, and even shares personal stories about raising her young kids. But she also gives him so many ideas, resources, and tasks to complete, that he has trouble writing down everything in his notes. He's constantly afraid that he's forgotten to record important tasks or items to complete. She also regularly spouts many terms and acronyms that are unfamiliar to him, but he's afraid to ask too many questions because he doesn't want to look incompetent and because she seems so busy with her own work and travel. He's thought about asking if he could audio-record their meetings, but he's concerned that she might think it would be a little awkward, or an invasion of her privacy to record their meetings. He's also thought about asking for advice from other members of the research group, but they all seem to have their cliques and he's feeling too timid to approach others. His past research group had felt more comfortable with only 3 members, but his new group has 18 people and feels so big to him.

Questions:

- 1) Share your results from the test for introverts and extroverts. Do you think the test and the tables helped you to determine or confirm your preference to be an introvert or extrovert?
- 2) Do you think Joseph is an introvert or extrovert? Is the professor an introvert or extrovert? *Explain your reasoning by referring to their specific interactions.*
- 3) What exactly are the problems that Joseph is facing with his research mentor? Try to specifically identify his difficulties.
- 4) How might Joseph adapt, to work better with his professor? How can he improve his understanding of her expectations for his research?
 - a) How might Joseph use his strengths to help resolve his problem?
 - b) What underdeveloped type skills (see tables above for some ideas) might Joseph need to address as he considers how to improve the communication with his professor?
- 5) How would this relationship differ if Joseph and his professor had their opposite types? This is a tough, but important question! Think carefully and hard. What conflicts and miscommunications might arise? How would they address their conflicts?

Questionnaire for Aligning Expectations in New Mentoring Relationships

Mentor / Supervisor:		Mentee / Student:	
Time Period:		Dept / Program:	

Read each pair of statements and estimate your position on each. For example with statement 1, if you believe strongly that the ideal mentoring relationship focuses on the research interests, you would circle "1" or "2". But if you think that the ideal relationship focuses on the working and communication styles, you would circle "3" or "4".

The Mentoring Relationship						
1	For an ideal mentoring relationship, it's important for both mentor and mentee to have similar research interests	1	2	3	4	For an ideal mentoring relationships, it's important for both to have similar working and communication styles
2	Mentors should only accept mentees when they have specific knowledge of the mentee's chosen topic	1	2	3	4	Mentors should feel free to accept mentees from a broad range of disciplines, to provide overall guidance
3	A personal and friendly relationship between mentor and mentee is important for a successful relationship	1	2	3	4	A professional relationship is advisable to maintain objectivity for both mentee and mentor during their work
4	The mentor is responsible for providing emotional support & encouragement to the mentee	1	2	3	4	Personal counselling and support are not the responsibility of the mentor; mentees should look for these elsewhere
5	The mentor should develop an appropriate plan and timetable of research and study for the mentee	1	2	3	4	The mentee should develop their own plan and timetable of research and study, and seek input from the mentor as needed
6	The mentor should decide how frequently to meet with the mentee	1	2	3	4	The mentee should decide when she/he wants to meet with the mentor
7	The mentor should check regularly that the mentee is working consistently and on task	1	2	3	4	The mentee should work productively and independently, and not have to account for where time is spent
8	The mentor is responsible for ensuring that the mentee is introduced to the appropriate services of the department and university	1	2	3	4	It is the mentee's responsibility to ensure that she/he has located and accessed all relevant services and facilities
Research Topics						
9	It is the mentor's responsibility to select a research topic for the mentee	1	2	3	4	The mentee is responsible for selecting her/his own research topic
10	It is the mentor who decides which theoretical framework or methodology is most appropriate	1	2	3	4	Mentees should decide which theoretical framework or methodology they wish to use
11	When choosing research topics, I prefer to work on projects with potential for high payoffs, even if it involves high risk	1	2	3	4	When choosing research topics, I prefer to work on projects that have a high & safe chance of success, even if the payoff is low
12	I prefer to work on projects independently by myself	1	2	3	4	I prefer to work on projects collaboratively with other team members.
Dissertation, Papers, and Presentations						
13	The mentor should insist on seeing all drafts of work to ensure that the mentee is on the right track	1	2	3	4	Mentees should submit drafts of work only when they want constructive criticism from the mentor
14	The mentor should assist in the preparation of presentations & writing of the thesis, papers, and reports	1	2	3	4	The preparation of presentations & writing of the thesis, papers, and reports should be the mentee's own work
15	The mentor is responsible for decisions regarding the standard of presentations, the thesis, papers, and reports	1	2	3	4	The mentee is responsible for decisions concerning the standard of presentations, the thesis, papers, and reports

Using the “Questionnaire for Aligning Expectations in New Mentoring Relationships”

The Role of Expectations

Aligning expectations and goals is a constant theme in the literature on mentoring relationships and supervision. The expectations do not need to be identical for both sides (and would be unrealistic), but a thorough discussion of expectations can greatly increase the likelihood of a productive collaboration and minimize conflicts. Relevant expectations in the context of research mentoring and supervision can relate to:

- understandings of what research is
- appropriate roles of mentors and mentees, supervisors and employees, etc
- what is professional behavior and how respect is expressed to the mentor and mentee
- the likely consequences of asking questions or acknowledging problems
- how *both* the mentor and mentee can be pro-active and actively listen to each other
- and many other issues.

Mismatches of expectations are a constant theme in the literature on supervision and mentoring. To help bring some of these differences in expectations into the open for discussion, a possible strategy is using this questionnaire. This tool has been designed as a discussion starter for use by supervisors and students.

Our experience suggests that the tool is especially effective when users of this form recognize that

- there are no “right” answers to the items on the questionnaire
- responses are likely to be different at different stages of academic or professional progress
- even identical numerical responses can correspond to different thoughts and expectations
- the purposes of using this form are:
 - to structure a fruitful discussion about the reasons why different responses may have been selected, and
 - to decide on appropriate ongoing actions for the current participants and stage

Suggestions for Use

We suggest the following process for using this form.

- make sure both parties have a blank copy of the questionnaire
- both parties fill out the questionnaire separately
- set up a meeting that will be focused on this questionnaire
- at the meeting, start by comparing the responses given for each statement by each person
- discuss thoroughly the significance of each response (i.e. answer what each response means for each person)
- provide suggestions on how you’ll address different responses and expectations
- consider repeating the process at various points (e.g. once per year, during critical transitions of the mentee’s academic timeline, etc)

This document was originally from work by Ingrid Moses (Centre for Learning & Teaching, University of Technology, Sydney); adapted by Margaret Kiley & Kate Cadman (Advisory Centre for University Education at the University of Adelaide); further adapted by Steve Lee (Graduate Diversity Officer for the STEM Disciplines at UC Davis), with input by Chris Golde (Stanford University).

Success Types in Medical Education by John Pelley

<http://www.ttuhsu.edu/SOM/success/>

Characteristics of each type: Comparison of well-developed skills and underdeveloped skills

Well-developed type skills and Positive Perceptions		Underdeveloped type skills and Negative Perceptions	
<u>Extraversion</u> Active approach Bring breadth	<u>Introversion</u> Reflective approach Bring depth	<u>Extraversion</u> Hyperactive Superficial	<u>Introversion</u> Withdrawn & secretive Overly serious
<u>Sensing</u> Practical Brings data	<u>Intuition</u> Imaginative Brings perspective	<u>Sensing</u> Slow & dull Narrow focus	<u>Intuition</u> Careless Impractical & dreamy
<u>Thinking</u> Analyze situations Bring consistency	<u>Feeling</u> Affiliate people Bring harmony	<u>Thinking</u> Cold & uncaring Overly competitive	<u>Feeling</u> Easily hurt Overly sentimental
<u>Judging</u> Decisive Bring a plan	<u>Perceiving</u> Inquisitive Bring options	<u>Judging</u> Overly opinionated Controlling	<u>Perceiving</u> Indecisive Procrastinating

Contributions of Opposite Types to Each Other: What the types can offer each other

<u>EXTRAVERTS</u> <ul style="list-style-type: none"> • Provide the outwardly directed energy needed to move into action • Offer responsiveness to what is going on in the environment • Have a natural inclination to converse and to network 	<u>INTROVERTS</u> <ul style="list-style-type: none"> • Provide the inwardly directed energy needed for focused reflection • Offer stability from attending to deep ideas, and listening to others • Have a natural tendency to think and work alone
<u>SENSING TYPES</u> <ul style="list-style-type: none"> • Have a mastery of the facts. • Bring a knowledge of what materials and resources are available. • Appreciate knowing and doing what works. 	<u>INTUITIVE TYPES</u> <ul style="list-style-type: none"> • Know by way of insight and attention to meanings. • Bring a grasp of what is possible and what the trends are. • Appreciate doing what hasn't been tried before.
<u>THINKING TYPES</u> <ul style="list-style-type: none"> • Take a hard look at the pros and cons of situations, even when they have a personal stake. • Have an ability to analyze and solve problems. • Want to discover the "truth" and they naturally notice logical inconsistencies. 	<u>FEELING TYPES</u> <ul style="list-style-type: none"> • Know what is important to and for people, and adhere to that in the face of opposition. • Have an ability to build relationships and to be persuasive. • Want to uncover the greatest "good" in a situation and they notice when people may be harmed.
<u>JUDGING TYPES</u> <ul style="list-style-type: none"> • Can organize, plan, and follow through on projects. • Push to get things settled and decided. • Appreciate well-oiled efficiency at work. 	<u>PERCEIVING TYPES</u> <ul style="list-style-type: none"> • Can respond quickly and flexibly to the needs of the moment. • Strive to keep things open so new information may be gathered. • Appreciate the need for spontaneity and exploration at work.

Looking at Type: The Fundamentals by Charles Martin, 1997, Center for Applications of Psychological Type

References and Resources

General Resources on Mentoring Relationships

- Research Mentor Training: <http://www.researchmentortraining.org/index.aspx>
- Handelsman, J.; Pfund, C.; Lauffer, S. M.; Pribbenow, C. "Entering Mentoring: A seminar to train a new generation of scientists" (the first edition is available for a free download)
 - http://www.hhmi.org/sites/default/files/Educational%20Materials/Lab%20Management/entering_mentoring.pdf
- "Biomedical Workforce Diversity: The Context for Mentoring to Develop Talents and Foster Success Within the 'Pipeline'" Richard McGee, *AIDS and Behavior*, July 2016.
- Beyond "Finding Good Mentors" to "Building and Cultivating your Mentoring Team"
 - Rick McGee, Steve Lee, Chris Pfund, and Janet Branchaw
 - book chapter in National Postdoc Association's "Advancing Postdoc Women Guidebook"; free pdf available at: <http://www.nationalpostdoc.org/?page=ElsevierGuidebook>

Mentoring Up:

- Gabarro, John and John Kotter. "Managing Your Boss" *Harvard Business Review*, 1980, pp 92-100.
- "Mentoring Up": *Learning to Manage Your Mentoring Relationships*. Lee, S.; McGee, R.; Pfund, C.; Branchaw, J. book chapter in *The Mentoring Continuum: From Graduate School Through Tenure*, Syracuse University Press, Glenn Wright, editor, 2015. <http://syracuseuniversitypress.syr.edu/spring-2016/mentoring-continuum.html>

Managing Up in Science

- "The Care and Maintenance of your Advisor" Hugh Kearns and Maria Gardiner, *Nature*, Vol 469, 2011, p 570.
 - <http://www.nature.com/naturejobs/science/articles/10.1038/nj7331-570a>
- "Managing Up: An industry skill you can learn in academia" David Jensen, *Science*, June 8, 2016.
 - <http://www.sciencemag.org/careers/2016/06/managing-industry-skill-you-can-learn-academia>

Self-Awareness

- Dunning, D. and Kruger, J. "Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments." *Journal of Personality and Social Psychology* 77 (1999): 1121-1134.
- Dunning, David. "We Are All Confident Idiots" Pacific Standard, Oct 27, 2014.
 - <http://www.psmag.com/health-and-behavior/confident-idiots-92793>
- Dierdorff, E. and Rubin, R. "Research: We're not very self-aware, especially at work" *Harvard Business Review*, March 12 2015. <https://hbr.org/2015/03/research-were-not-very-self-aware-especially-at-work/>

Self-Assessments

- A free, unofficial version of the Myers Briggs Type test: www.humanmetrics.com
- An introduction to the Myers Briggs types by John Pelley. He refers to this as "success types"
 - <http://www.ttuhsu.edu/SOM/success/>
- "Please Understand Me II" by David Keirsey
 - A more thorough explanation of Myers Briggs types
- StrengthsFinder materials: <http://strengths.gallup.com/default.aspx>
 - I recommend the book "Strengths Based Leadership", which provides a code to take the online test.
- myIDP website (IDP = Individual Development Plan): <http://myidp.sciencecareers.org/>

Mentoring Compacts and Evaluating Mentoring Skills

- Example Mentor Compacts: <https://mentoringresources.ictr.wisc.edu/ExampleMentoringCompacts>
- Fleming, M.; House, S.; Hanson, V. S.; Yu, L.; Garbutt, J.; McGee, R.; Kroenke, K.; Abedin, Z.; Rubio, D. M. (2013). The Mentoring Competency Assessment. *Academic Medicine*, 88(7), 1002–1008.
- Example Mentor Evaluation Forms: <https://mentoringresources.ictr.wisc.edu/EvalTemplates>
- "Defining Attributes and Metrics of Effective Research Mentoring Relationships" C. Pfund, A. Byars-Winston, J. Branchaw, S. Hurtado, K. Eagan, *AIDS and Behavior*, April 2016.