

Effective Mentoring

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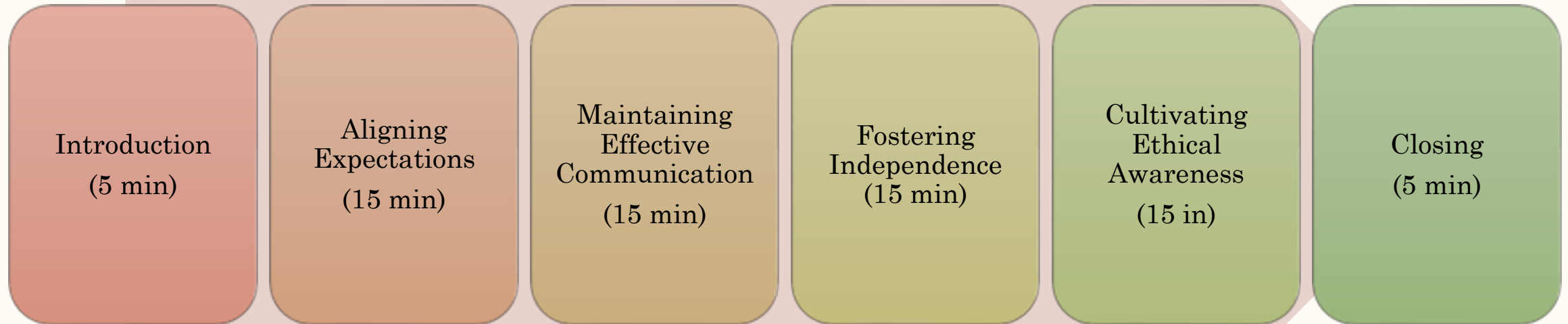
University of Missouri

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Overview



Group Agreements

- What expectations or ground rules should we hold ourselves to in order to create an open and safe environment?
 1. Stories stay, lessons leave
 2. Challenge the idea, not the person
 3. Resist the temptation to multitask while participating online (e.g., email, texting)
 4. Right to pass with dignity. You do not need to share if you do not want to.



What is a Mentor?

- The original mentor was described by Homer as the 'wise and trusted counselor' whom Odysseus left in charge of his household during his travels.
- Athena, in the guise of mentor, became the guardian and teacher of Odysseus' son Telemachus.



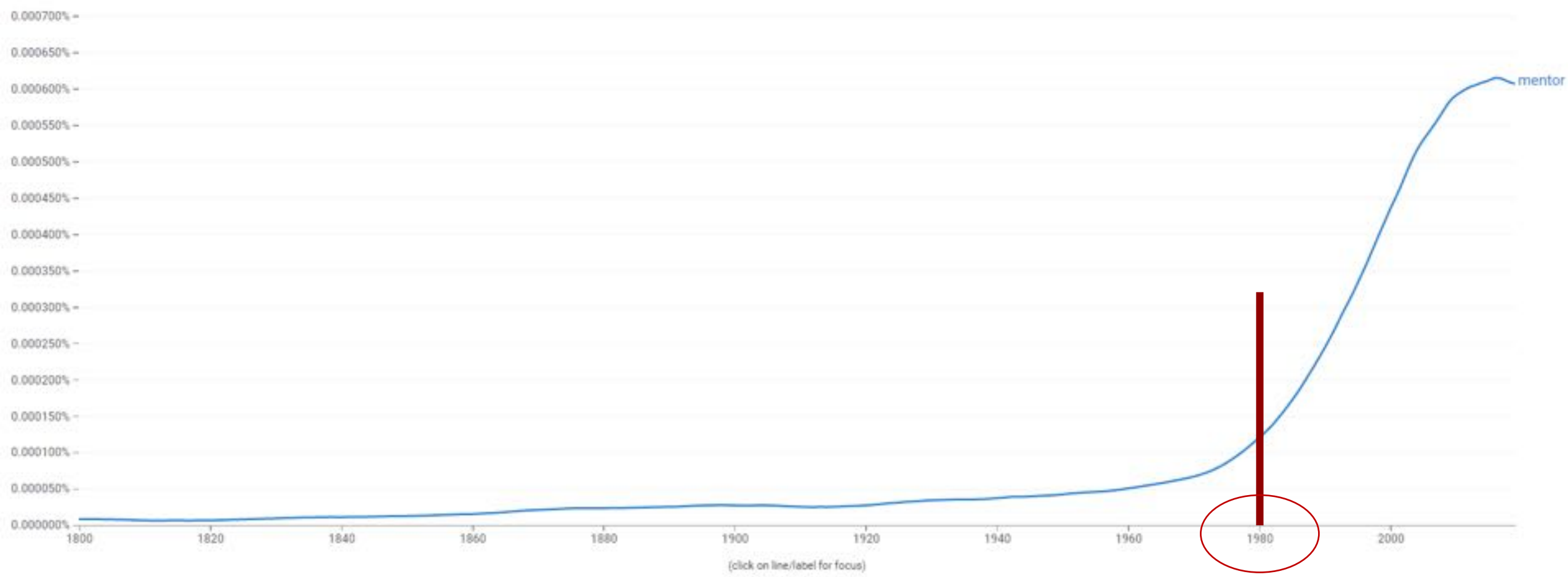
https://upload.wikimedia.org/wikipedia/commons/0/04/Telemachus_and_Mentor1.JPG



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Q mentor X ?

1800 - 2019 English (2019) Case-Insensitive Smoothing of 7



What is a Mentor? (cont)

- In modern times, the concept of mentoring has found application in virtually EVERY forum of learning.
- In academics, mentor is often used synonymously with faculty adviser.
- A fundamental difference between mentoring and advising is more than advising; Mentoring is a personal, as well as professional relationship.
- In general, an effective mentoring relationship is characterized by mutual respect, trust, understanding, and empathy.



What is Mentorship?

- Mentorship is a professional, **working alliance** in which individuals work together over time to support the personal and professional growth, development, and success of the relational partners through the provision of **career** and **psychosocial support**.

The National Academies

“The Science of Effective Mentorship in STEMM” (2019)



Strong Mentorship is Linked to Important Outcomes

- **Enhanced science identity, sense of belonging and self-efficacy** (Palepu et al, 1998; Garman et al, 2001; Paglis et al, 2006; Lopatto, 2007; Bland et al, 2009; Feldman et al, 2010; Cho et al, 2011; Chemers et al, 2011; Thiry and Laursen, 2011; Byars-Winston et al, 2015)
- **Persistence** (Gloria et al, 2001; Solorzano 1993; McGee and Keller, 2007; Sambunjak et al, 2010; Williams et al, 2015; Bordes-Edgar et al, 2011; Campbell and Campbell, 1997)
- **Research productivity** (Steiner and Lanphear, 2002; 2007; Wingard et al, 2004)
- **Higher career satisfaction** (Schapira et al, 1992; Beech et al, 2013)
- **Enhanced recruitment of Underrepresented Minorities (URMs)** (Hathaway et al, 2002; Nagda et al, 1998)

The Uneven Mentorship Landscape

- White investigators significantly more likely than Black and Hispanic investigators to win R01 awards; minority investigators indicate that **inadequate mentoring posed obstacles to obtaining funding** (Ginther et al, 2011)
- Science faculty **rated male applicant as more competent** than identical female applicant; offered male ~\$4,000 more in salary, more career mentoring than to the female (Moss-Racussin et al, 2012)
- URM and White women's **mentorship requests more ignored** than those by White men (Milkman et al, 2014)
- Male biologists **less likely to hire and train women** in their laboratories (Sheltzer & Smith, 2014)
- URM typically **receive less mentoring** than their non-minority peers (Thomas et al, 2001; Helm et al, 2000; Morzinski et al, 2002)



Aligning Expectations

Learning Objectives

1. Listen to and consider the expectations of mentees in the mentoring relationship
2. Clearly communicate expectations for the mentoring relationship

Introduction

- One critical element of an effective mentor-mentee relationship is a **shared understanding** of what each person expects from the relationship.
- Problems between mentors and mentees often arise from misunderstandings about expectations.
- Importantly, expectations change over time, so frequent reflection and clear communication about expectations are needed on a regular basis.



Group Discussion with Case Study

- We will move you into breakout rooms (2 per room) for 10 min.
- Once in the breakout rooms...
 - Introduce yourselves in your small group (1 min, 30 seconds/person)
 - Name, institute, one sentence to describe why you decided to participate in this session
 - You can access the case study via the link provided in the chat room (1 min)
 - Share your initial reactions to the case (4 min, 2 min/person)
 - Discuss the guiding questions, if time permits (4 min)
- We will return you to the main room and a couple of groups will share with the larger group
- If you need help in the breakout room, send a chat to me/Megan.



Case Study 1: Student Blues

- Amy is beginning her senior year and is planning to write a thesis for a departmental honors certificate. To date, she has enjoyed talking with her mentor who has agreed to be a thesis supervisor but is becoming anxious that she has not yet started an independent research project. She wants to bring up her concerns, but it seems her mentor never has enough time to have a discussion focused on Amy's research goals. This situation is becoming frustrating for her, as she likes her mentor and she understands that the past few months have been extremely busy for her mentor due to a host of factors, e.g., many undergraduate and graduate advisees, budget cuts (a.k.a. no graders), writing a grant application, etc. Amy is reluctant to make a misstep with her well-established, senior mentor, yet she knows the clock is ticking. She wants to stop feeling stuck.

Case Study Small Group Discussion: Guiding Questions

- 1.What are the main themes raised in this case study?
- 2.What could have been done to avoid this situation?
- 3.How do you establish and communicate your expectations of your mentee?
- 4.How do you find out your mentee's expectations of you?
- 5.What are strategies for uncovering the unspoken expectations mentees and mentors may have about issues?



Case Study Large Group Discussion: Guiding Questions

- Please share 1 to 2 highlights from your small group discussion.

Tools for Aligning Expectations

- A mentor-mentee compact is an agreement between two parties and is a common tool for aligning expectations.
- It allows for the systematic sharing of goals and expectations with each other.
- The process of developing and reviewing together leads to a shared understanding.

Mentoring compacts can address expectations across a range of issues

- **Productivity:** Projects, Assignments, writing, timelines
- **Time:** study/work hours
- **Communication:** Frequency of meetings, preparation for and follow-up for meetings, method of communication, semester reviews
- **Respect:** Being a good team member, acknowledging work of others
- **Professional development and networking:** Attending meetings, conferences, department/campus seminars, Individual Development Plans (IDPs)
- **Resolving conflicts:** When to bring up issues and with whom, negotiating institutional resources



Example Contracts

- Developing Shared Expectations
- Pre-determined list - Compact Between Postdoctoral Appointees and Their Mentors
- Team-based: Team Mentoring Contract
- Individual lab:
 - Sample Compact from McMahon Lab
 - Ramsay Guide for Research Students
- Question-based: UAB Mentor Contract
- General purpose: Mentorship Agreement Template



Developing Shared Expectations

(select and adapt from these suggested topics, as relevant to your discipline)

- 1. Communication and meetings.**
 - a. What is the best way/technology to get a hold of each other? What is the appropriate time frame to expect a response?*
 - b. When do you plan to meet (be as specific as you can), is an agenda required, how long will the meeting be?*
- 2. Student's role on project:** *Describe student's primary area(s) of responsibility and expectations (e.g. reading peer-reviewed literature, in-lab working hours, etc.).*
- 3. Participation in group meetings (if relevant).** *Student will participate in the following ongoing research group meetings. What does this participation look like?*
- 4. Tentative papers on which student will be an author or coauthor.** *Discuss disciplinary norms around authorship; list the papers and the likely order of student's authorship, e.g., first, second, etc.*
- 5. Opportunities for feedback.** *In what form and how often can the student expect to receive feedback regarding overall progress, research activities, etc.? How much time is needed by the mentor to provide feedback on written work, such as chapter and publication drafts?*
- 6. Professional meeting(s) that the student will attend and dates:** *What funding is available to attend these meetings?*

Mentorship Agreement Template

The purpose of this template is to assist you in documenting mutually agreed upon goals and parameters that will serve as the foundation for your mentoring relationships. While mentors and mentees may find mentorship agreements to be useful, they are optional. This template is expected to be altered to meet individual needs.

- [1] **Goals** (what you hope to achieve as a result of this relationship; e.g., gain perspective relative to skills necessary for success in academia, explore new career opportunities/alternatives, obtain knowledge of organizational culture, networking, leadership skill development, etc.):

- [2] **Steps to achieving goals** as stated above (e.g., meeting regularly, manuscripts/grants, collaborating on research projects, steps to achieving independence, etc.):

- [3] **Meeting frequency** (frequency, duration, and location of meetings):

- [4] **Confidentiality:** Any sensitive issues that we discuss will be held in the strictest of confidence. Issues that are off limits for discussion include:

Maintaining Effective Communication

Learning Objectives

1. Provide constructive feedback
2. Use multiple strategies for improving communication (in person, at a distance, across multiple mentees, and within appropriate personal boundaries)
3. Engage in active listening
4. Communicate effectively across diverse dimensions, including varied backgrounds, disciplines, ethnicities, and positions of power
5. Identify different communication styles

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 - Discuss the guiding questions (5 min)
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Communications Strategies: What barriers to communication between a mentor and mentee might emerge?

- Personality
- Power differential
- Language & culture
- Assumed shared beliefs/expectations
- Mentee fear of exposing ignorance
- Life event
- Lack of time together/lack of meetings
- Lack clarity about how and when communication should happen
- Modes of communications (online vs. in-person)



Case Study 2: Projects

“I mentored an undergraduate student who came from another university for the summer. I explained the project to him and taught him how to do data cleaning in R by calculating descriptive statistics and creating frequency tables, because I did not think he had sufficient statistics background on statistical modeling. He was very quiet for the first week of the project and then he came to me complaining about the project. He said he wanted to do a work like ‘Mark’s’. Mark was a student with a strong Statistics background and his work was fitting a regression model. As the summer went on and he didn’t get any of progress to fix any errors on data file, I began to wonder if he understood what we’re doing or even cared about it.”



Case Study Small Group Discussion: Guiding Questions

Case Study

1. If you were the mentee, how would you feel?
2. If you were the mentor, what would you do?
3. Who should be involved in dealing with problems that arise between the mentor and mentee (if there should be any)?
4. How does this situation affect the research group environment?

Communication Strategy

- With your partner, come up with solutions to at least one barrier.



Case Study Large Group Discussion: Guiding Questions

- Please share 1 to 2 highlights from your small group discussion.
- Which barrier did your pair select and what solutions did you come up with for that barrier?



Fostering Independence

Learning Objectives

- Define independence, its core elements, and how those elements change over the course of a mentoring relationship

Introduction

- An important goal in any mentoring relationship is helping the mentee become independent yet defining what an independent mentee knows and can do is often not articulated by the mentor or the mentee.
- Defining what independence looks like and developing skills to foster independence is important to becoming an effective mentor.
- Defining independence becomes increasingly complex in the context of team science.



Group Discussion with Case Study

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Case Study 3: Independence

- An experienced undergraduate researcher was constantly seeking input from the mentor on minor details regarding his project. Though he had regular meetings scheduled with the mentor, he would bombard her with several e-mails daily or seek her out anytime she was around, even if it meant interrupting her work or a meeting that was in progress. It was often the case that he was revisiting topics that had already been discussed. This was becoming increasingly frustrating for the mentor, since she knew the student was capable of independent work (having demonstrated this during times she was less available). The mentor vented her frustration to at least one other colleague and wondered what to do.

Handelsman, J., & Handelsman, H. (2009). *Entering mentoring: A seminar to train a new generation of scientists*. Board of Regents of the University of Wisconsin System.

Case Study Small Group Discussion: Guiding Questions

1. If you were the mentee, how would you feel?
2. If you were the mentor, what would you do?
3. How does this situation affect the relationship between mentor and mentee?
4. How do you know the mentee understands what you are saying?



Case Study Large Group Discussion: Guiding Questions

- Please share 1 to 2 highlights from your small group discussion.

5 Keys to Fostering Independent Learning

- Mentee must learn how to
 - find and assess the quality of information.
 - develop new lines of inquiry.
 - collaborate and learn from others.
- Mentor must learn to shift their roles & should challenge students with authentic problems and open-ended questions.

5 keys to fostering independent learning. The Edvocate. Retrieved May 20, 2022, from <https://www.theedadvocate.org/5-keys-fostering-independent-learning/>



Cultivating Ethical Awareness

Learning Objectives

- Manage the power dynamic inherent in the mentoring relationship

Group Discussion with Case Study

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Case Study 4: Free Labor

I was thrilled when my undergraduate mentee won a fellowship for an independent summer research project. Her small fellowship project was directly related to my thesis project, and so I was optimistic about getting great data from her, as well as being able to complete my project because I had an extra pair of helping hands. My advisor did not have funds to pay for any assistance for my project, and so if my mentee had not gotten a fellowship, I would have had to split my project between two summer field seasons because the workload was not possible with only me working on it.

Case Study 4: Free Labor (cont)

One day, my undergraduate asked why she wasn't paid extra for the hours she worked on my project outside of her fellowship research. I told her that most undergraduates who receive fellowships are expected to work on both their mentor's and their own projects as part of the training, which was true in my department. My undergraduate said that her fellowship requirements state that her stipend was only to be used for work on her own project. I didn't know what to say or how to handle issues of money, and so I just told her to talk to my advisor about it.

Case Study Small Group Discussion: Guiding Questions

1. If you were the mentor, how would you have handled this situation?
2. If you were the advisor, how would you have handled this situation?
3. What could have been done to avoid this situation?
4. What should the mentor do now? What courses of action are possible?
Which ones are preferable and why?



Case Study Large Group Discussion: Guiding Questions

- Please share 1 to 2 highlights from your small group discussion.

The Individual Development Plan (IDP)

Grad essentials. University of Missouri Graduate School. (n.d.). Retrieved January 27, 2022, from <https://gradschool.missouri.edu/grad-essentials/>



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- Job search strategies
- Preparing job search materials (resume, CV, cover letter)
- Strengthening interviewing & negotiating skills
- Building a personal brand and network
- Entrepreneurship.



- Designing curriculum
- Facilitating discussion
- Providing constructive feedback
- Training in teaching technologies & modalities
- Creating inclusive & supportive class environments



- Public speaking
- Explaining research to lay audiences
- Persuading others
- Learning specialized writing skills
- Digital literacy & responsibility
- Adhering to ethical conduct & integrity



- Maintaining physical, mental, & emotional health
- Adopting self-care strategies
- Building resilience & emotional intelligence
- Taking ownership of goal setting, organization, & decision making
- Managing financial resources



- Valuing differences & similarities
- Working across disciplines
- Engaging in new ideas & perspectives
- Being an ally & advocate
- Promoting equitable, inclusive, & respectful environments



Conclusion

Planning ahead makes a big difference.

One of the best ways your students can lay the groundwork for future success is by identifying a mentor.

We can support them by being a GOOD mentor!

Mindful Moment



Write down some ideas you have about the effective mentoring on your “Mentoring Action Plan” worksheet.

https://ninet.med.ubc.ca/files/2019/02/news_20181204_innerpeace.jpg

Communication Inventory

- Reflect on your personal characteristics as you read across each of the 15 lines in the inventory.
- Note: If you are filling this survey on a mobile device, you may be seeing groups of four words vertically. Select two in each group.



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Below are 15 lines, each with four descriptive words. Reflect on your personal characteristics as you read across each of the 15 lines. Of the four words per line, pick the TWO that best describes you.

This is a forced-choice task, so sometimes all four words will describe you, but you MUST select only two.

Sometimes none of the four words "best" describes you, however, you MUST select two words on each line.

Note: If you are filling this survey on a mobile device, you may be seeing groups of four words vertically. Select two in each group.

Adapted from: <http://www.whecare.com/tools.htm>

disputes the issue

unruffled

focused

sociable

will take a chance

flexible

rational

sympathetic



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Acknowledgement

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Thank you!

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