Mentoring Master Class

Maximizing Trainee Success in Career Transitions

Society for Neuroscience

Webinar Moderator and Speakers

Chiara Manzini, PhD

Moderator

George Washington University

Joanne Kamens, PhD

Speaker

Addgene

Tracy J Costello, PhD

Speaker

National Postdoctoral Association and Moffitt Cancer Center

Caleb McKinney, PhD

Speaker

Georgetown University Medical Center

A post-doc is a temporary position. What's next?

In a fast-paced and changing job market, it can be difficult for academic scientists to guide trainees through career options. Today's webinar will outline strategies and approaches for both mentors and trainees to prepare for careers in any setting.

For mentors:

- Gain tools and strategies to guide trainees through successful career transitions outside academia

For trainees:

- Understand how to establish an effective advisor-trainee relationship to achieve your career goals

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Outline

Today's webinar will cover:

- the value of establishing a strong mentor/mentee relationship
  Joanne Kamens – Mentoring Excellence: Best Practices for Mentees, Mentors and Organizational Mentoring Programs

- what career exploration entails and how to promote it
  Tracy Costello – The 10 Components of Career Exploration that Every Mentor and Trainee Should Understand

- the importance of identifying and developing transferable skills in the laboratory
  Caleb McKinney – Transferable Skills: Developing Research Skills that Work Across Industries

Q&A at the end. Feel free to ask questions throughout!

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Resources

Several resources are provided in a document you can download

SfN resources for skill development and career transition in the Career Skills Toolkit series available on Neuronline

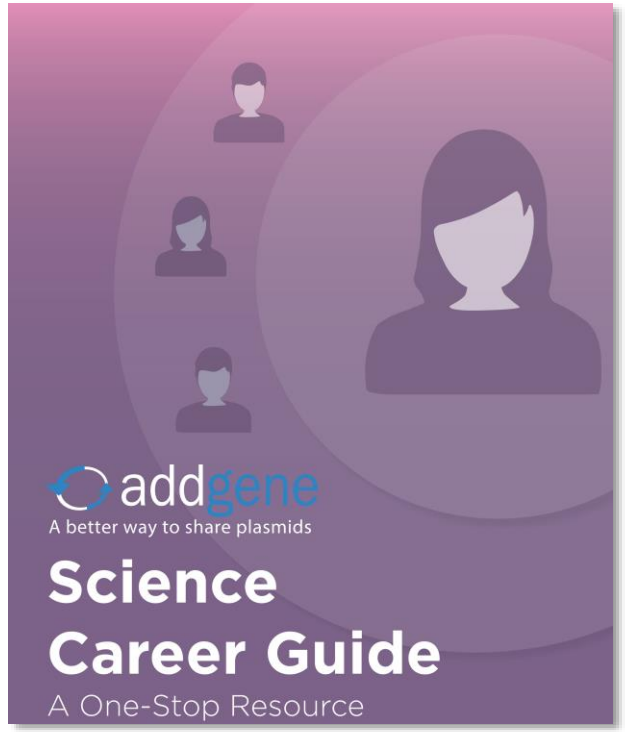
- Leadership, Management and Team Building
- From PhD to Postdoc
- Transitioning Out of Your Postdoc

SOCIETY *for* NEUROSCIENCE

Mentoring Excellence:
Best practices for Mentees, Mentors and Organizational Mentoring Programs

Joanne Kamens, PhD
Executive Director Addgene
Founder, MASS Association for Women in Science

Follow @addgene on Twitter Instagram, Facebook and LinkedIn for science and career content



Download Addgene's eBook
Mentoring for Scientists

blog.addgene.org

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a better way to share science

What is Mentoring?

- Get past the “big word”!
  - Not always a formal relationship—A mentor can be anyone who teaches a technical skill, shares career advice, inspires as a role model
  - Not to “solve” a specific problem—a mechanism to focus on a plan for reaching future goals and skill development to get there

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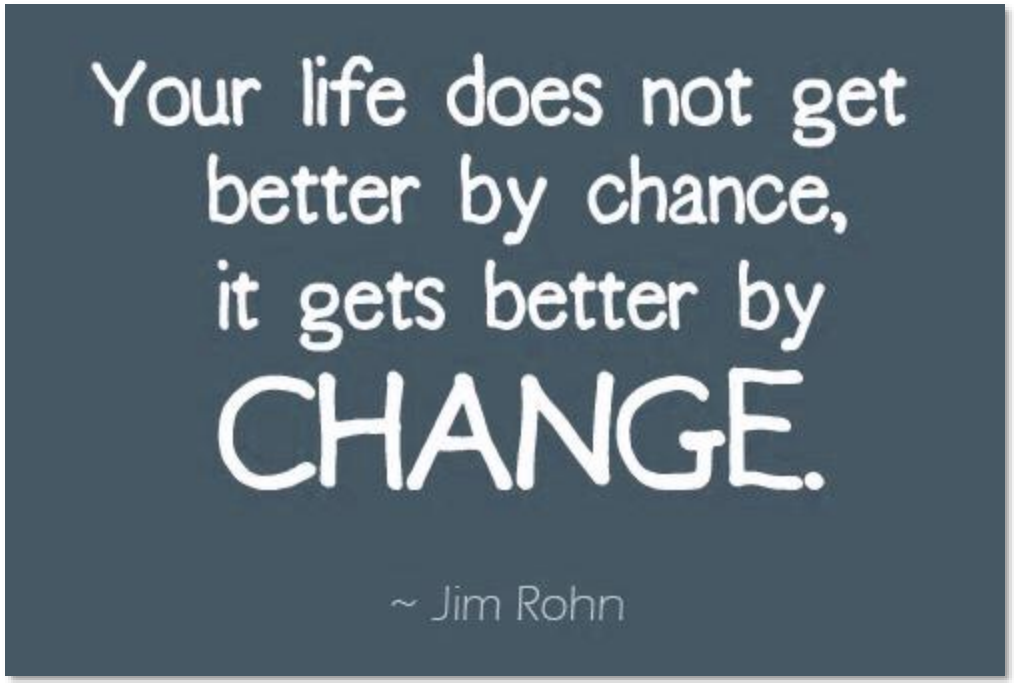
Why Mentoring?

“Support for Making Change” *–LifeMoxie.com*

- Self-imposed change
- Imposed change
- New options/opportunities

Main types of change

- Work effectiveness
- Job movement/change
- Leadership readiness
- Network savvy



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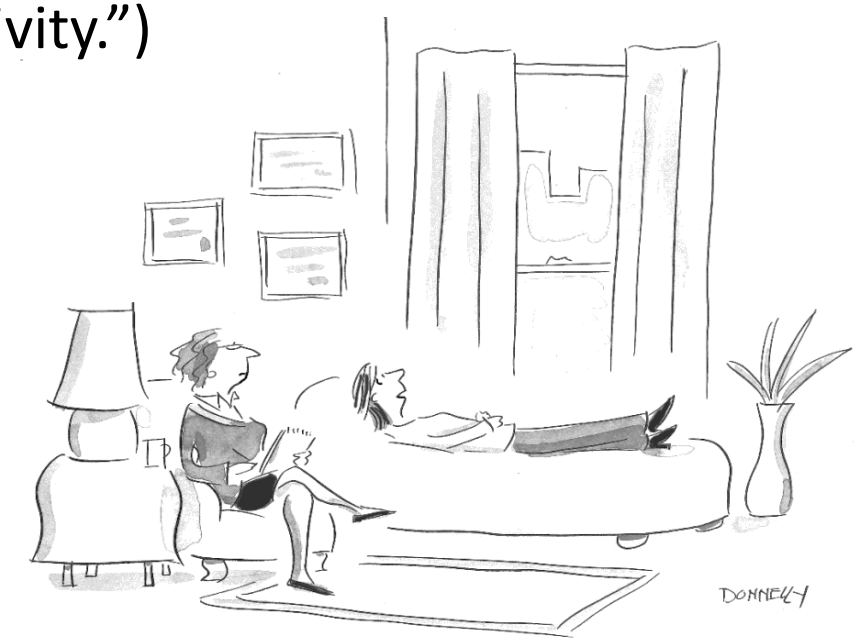
Mentoring Develops Leaders

- **Absolutely the most effective way to execute effective leadership development and succession planning**
- "66% of companies using mentoring programs found that they created new leaders and fostered new career development." (Goldstein, Seth. "Company Finds Working Together Helps Productivity.")



"I think I am supposed to have a mentor…but I don't know why."

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Mentoring Supports Diversity

- **Mentoring is a key strategy for inclusion**
  - I hope I don’t have to make the business case for diversity any more
  - Mentoring works better than diversity training and networking in increasing the number of women and minority leaders in management

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Mentoring Improves Communication

- **Mentoring teaches and encourages knowledge sharing**
  - 96% of consulting clients implementing internal 1-to-1 mentoring programs state their programs have resulted in increased cross-functional communications. (Menttium program survey, many other studies)

Mentoring Grows Talent, Strengthens Any Workplace

Showing respect for your people by having a mentoring culture is an excellent way to promote productivity and retention

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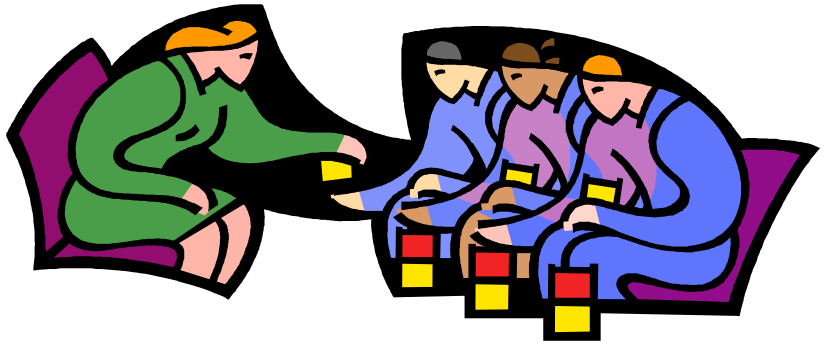
A Not So Hidden Secret

- **Mentoring is good for mentors too and, therefore, good for any hosting organization**
  - Enhances leadership, coaching and management skills
  - Increases job satisfaction and self-awareness
  - Expands perspectives and creative thinking and supports diversity and inclusion
  - Strengthens communication networks



"We exist temporarily through what we take, but we live forever through what we give." –Douglas M. Lawson

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Poll Question - Who has access to formal mentoring?

- Formal mentoring programs for early career scientists can help instill mentoring skills and best practices that can be used for the rest of a trainees career.
- Do you have access to a formal mentoring program?
  - At your institution of work or study?
  - Via a different local or online organization?
  - I have no such access

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What Makes a Good Mentoring Program?

CHARACTERISTICS OF EFFECTIVE FORMAL MENTORING PROGRAMS

- Commitment from senior leaders
- Mentors and mentees matched based on development needs
- Formal goals are outlined and tracked
- Minimum time commitments are designated
- Formal process for monitoring
- All parties held accountable
- Training for mentors/mentees is mandatory

CHARACTERISTICS OF INEFFECTIVE FORMAL MENTORING PROGRAMS

- Leadership not publicly supportive
- No data collected to match mentors and mentees
- No formal goals or objectives
- No clear time frames or time commitment
- No monitoring or check-ins
- No accountability
- No training for mentors or mentees

Derived from the 2010 Catalyst Report "Making Mentoring Work"

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We Want a Mentoring Program – How Do We Get Started?

Get this sourcebook: "Creating a Mentoring Culture" by Lois Zachary

Creating a mentoring culture (and/or effective program) takes time, intention and energy.

Organizations must:

- Think systematically about mentoring
- Show public support for the process
- Build the right infrastructure to support mentoring efforts
- Create safety nets –support mentoring relationships and programs so everyone has the best chance for success
- Bring accountability – define success factors and determine in advance how to measure impact

Support must come from organizational leaders—they must lead by example

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The Group Mentoring Format – A Structure that Works

- Mentoring group dramatically reduce “mismatch failure”
- Adding peer advice increases diversity of input and perspectives
- One of the best ways to learn to be a good mentee, is to be a mentor (lead and learn at the same time)
- Mentors from underrepresented groups (there are never enough) reach multiple mentees efficiently

CONTACT ME FOR SUPPORT ON STARTING A PEER/GROUP MENTORING PROGRAM IN YOUR ORGANIZATION.

My written manual will get you started!

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A Few Mentoring Best Practices

- Good mentors ask good **questions** (it's not usually about giving easy answers)
- Train and practice to both give and get honest, productive **feedback**
- Formality is a good thing for driving change…use agendas and **content** to steer discussions
- Always set concrete **goals** and track progress

Photo by rawpixel on Unsplash

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Mentoring Best Practice—“High-Gain” Questioning

- It’s easy to feel that the best way to help is to offer answers and recommendations
- Disciplining yourself to ask questions before jumping in with ready answers dramatically changes the mentee's experience
  - Ensures two-way communication in the mentoring relationship.
  - Helps mentee think through issues instead of having you do it all
  - Discloses your mentees' thoughts, giving you a greater opportunity to help them clarify courses of action

- High gain questions don’t have yes or no answers:
  - *Tell me more about that…*
  - *O.K., when was another time when…?*
  - *What led you there?*
  - *What have you learned?*

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Mentoring Best Practice—Giving (and Receiving) Feedback

- Feedback is help and should result in authentic assistance for the mentee to become more effective and successful
- Gets easier with practice! So practice…

Tips for Giving Feedback

- Focus on specific issues, not the person or personality
- Focus on developing strengths, also praise
- Be complete and honest
- Offer suggestions for change
- Avoid assumptions, be aware of your biases

Tips for Receiving Feedback

- Always be coachable!
- Listen and avoid a defensive reaction
- Seek clarification and ask for specific examples
- Reflect and prioritize

"Well a pop-up doctoral dissertation is certainly an original idea…"

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Using Content—What Are We Going to Talk About?

Do not write furiously during this slide…these resources and more in the Addgene Mentoring and Career e-Books

- Topics:
  - Your Career Journey
  - Lab administration
  - Grant writing
  - Increasing Visibility
  - Raising Your EQ (Emotional Intelligence)
  - Conflict Management Style
  - Influencing Others Through Leadership
  - Networking for Success
  - Building Working Relationships
  - Sharing Organizational Knowledge
  - Life Effectiveness
  - Time management

- Books!
  - Too many to list-ask me for specific topics
- Scientist Blogs
  - blog.addgene.org
  - bitesizebio.com
  - thesiswhisperer.com
  - tenureshewrote.wordpress.com
  - 50 popular science blogs (Google it)
- Websites
  - Harvard Business Review http://hbr.org/
  - http://www.CoachforGrowth.com
  - http://www.Mindtools.com
  - nationalpostdoc.org
  - thepostdocway.org

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Content Drives Discussion

- Forced Choice Analysis example

Choosing Task Priority

Things I need to do today	Slash marks	#
1. Give AWIS Talk		
2. Respond to HBA Mentor issue		
3. Read articles on nanoparticle delivery		
4. Call collaborator to check on project status		
5. Make dinner		
6. Review contract edits and respond to lawyer		
7. Prepare slides for quarterly BoD meeting		
8. Call my parents		
9. Meet with Dmitry about outreach priorities		

Choosing Task Priority

Things I need to do today	Slash marks	#
1. Give AWIS Talk	xxxxxxxx	8
2. Respond to HBA Mentor issue	xxxx	4
3. Read articles on nanoparticle delivery	xx	2
4. Call collaborator to check on project status	xxxxxxx	7
5. Make dinner		0
6. Review contract edits and respond to lawyer	xxxxxxx	7
7. Prepare slides for quarterly BoD meeting	xx	2
8. Call my parents	x	1
9. Meet with Dmitry about outreach priorities	xxx	3

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Figuring Out What I **LIKE**

Things I need to do today	Slash marks	#
1. Give AWIS Talk	xxxxxxxx	8
2. Respond to HBA Mentor issue	xxx	3
3. Read articles on nanoparticle delivery	xx	2
4. Call collaborator to check on project status	xxxxxx	6
5. Make dinner	xx	2
6. Review contract edits and respond to lawyer		0
7. Prepare slides for quarterly BoD meeting	xx	2
8. Call my parents	xx	2
9. Meet with Dmitry about outreach priorities	xxxxxx	6

What if I also ranked these by what I was **GOOD** at?

*Wouldn't it be great to be doing something that you liked **and** were good at, at least some of the time*

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Mentoring Best Practice—Goal Setting and Tracking

- Set goals, track progress
  - For real. It makes a difference
  - Create mechanisms for tracking goals
    - Mentoring notebook
    - Shared google.doc
    - Development Plans
    - http://myidp.sciencecareers.org/
  - Review progress at each meeting, adjust as necessary and celebrate successes!

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Why Mentoring Works—The Secret Sauce

*Good mentoring provides **accountability** to drive growth, change and personal development*

Photo by Filipe Dos Santos Mendes via Unsplash

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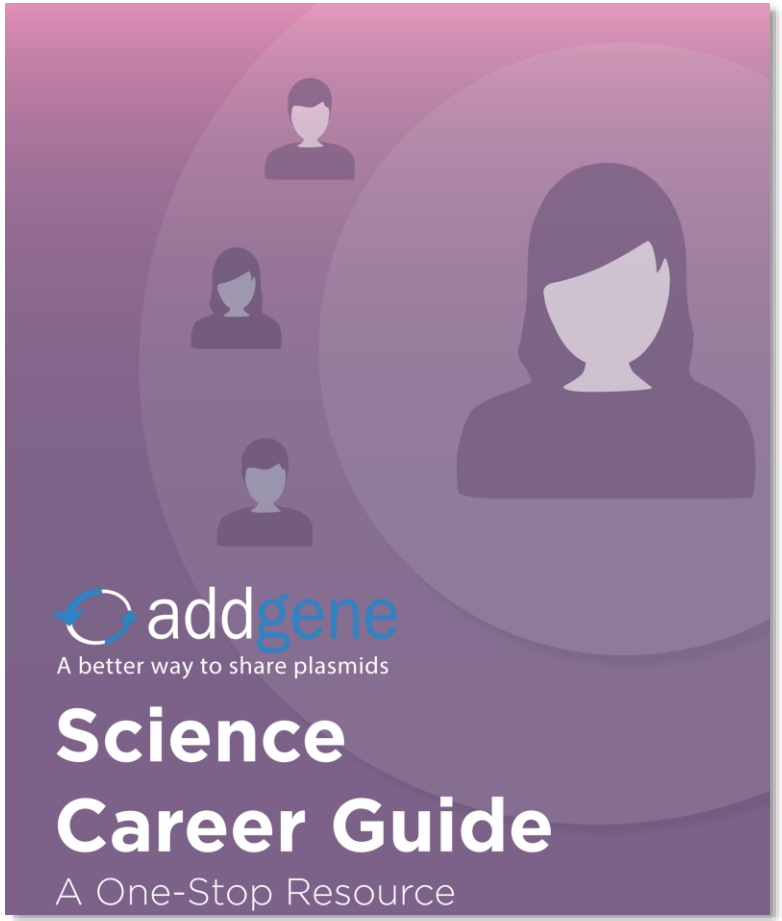
Thanks for Listening

- Questions?
- Twitter: @jkamens



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Question & Answer

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The 10 Components of Career Exploration that Every Mentor and Trainee Should Understand

Tracy Costello, PhD
Chair, Board of Directors, National Postdoctoral Association
Director, Postdoctoral Affairs, Moffitt Cancer Center

MOFFITT CANCER CENTER

NATIONAL POSTDOCTORAL ASSOCIATION

10 components of career exploration

- Self assessment
- Networking
- Identify potential career paths
- Informational interviews
- Identify skill gaps
- Skill development
- Identify potential positions
- Prepare application materials
- Prepare for Interviews
- Negotiation of offer(s)

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Your trainees are at the crossroads

WHAT WOULD YOU ATTEMPT IF YOU KNEW YOU COULD NOT FAIL?

WHAT'S WORTH DOING EVEN IF YOU FAIL?

MEASURING CAREER SUCCESS IS EXCEPTIONALLY CHALLENGING

THE TRAINEE DEFINES WHAT SUCCESS IS!

There are no self driving careers

Know Thyself…

- Assess the trainee's skills
  - Self evaluation / myIDP.sciencecareers.org
  - Mentor(s) feedback
  - Peer(s) feedback
- What are the trainee's strengths and preferences?
  - StrengthsFinder
  - Strong Interest Inventory
  - VIA Survey of Character Strengths
  - Myers-Briggs Type Indicator
  - Birkman
- Critically evaluate all feedback

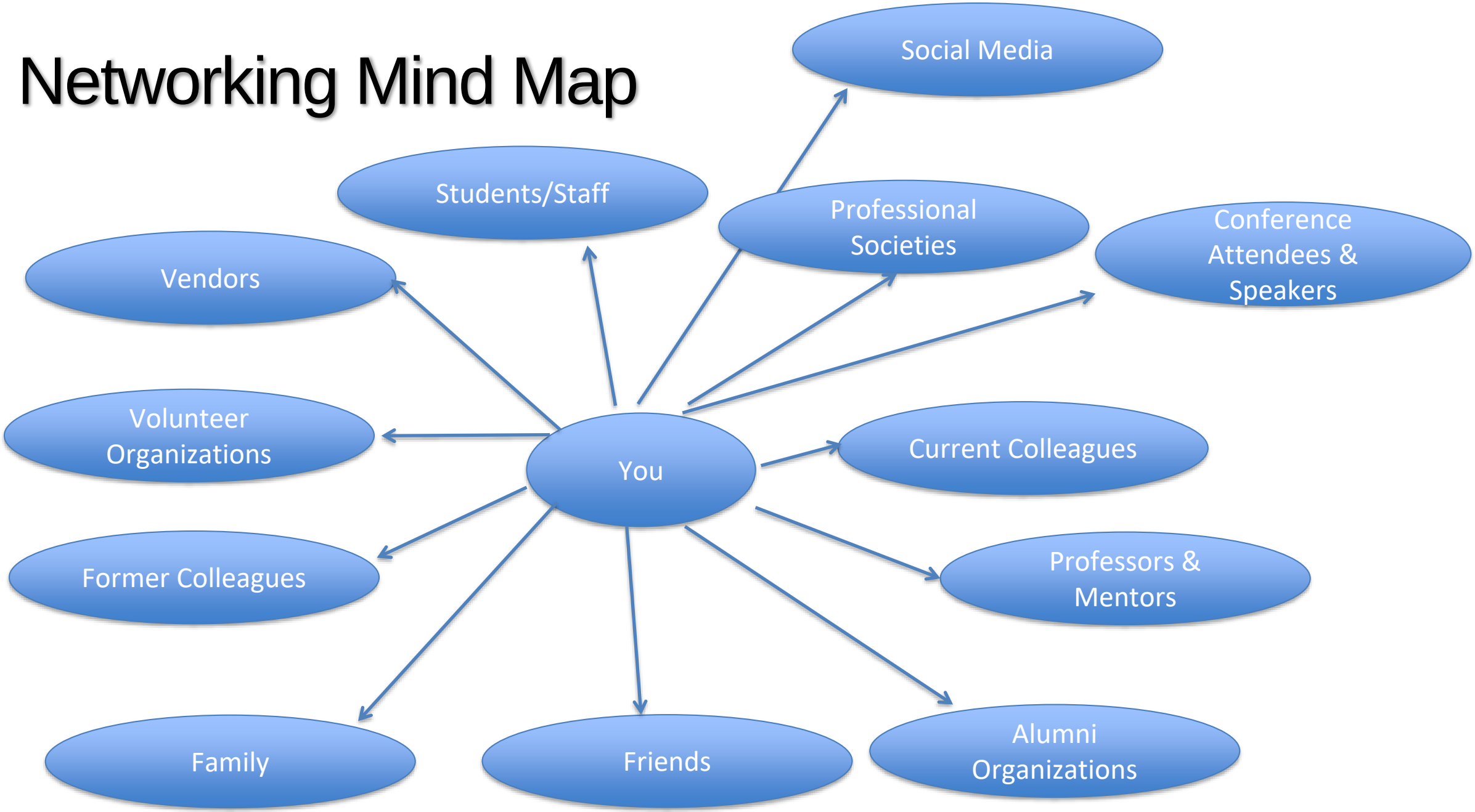
(poll question: What is the best tool for networking?)

- LinkedIn
- Email
- Mentor sponsoring the trainee
- Handwritten notes
- Coffee
- Introductions from colleagues
- Cold calling
- Business Cards
- All of the above

Always* be networking

- Networking = building relationships
- Number one rule of networking:
  - You never know who you meet today who will impact your career in the future
- Five Word Pitch
- Follow up or Forget about it
- Show value to the network
- They own their online presence
- Their network is bigger than they think

Networking Mind Map



Practical Networking

- Smile (They are FREE! Give them to everyone!)
- Have a firm handshake
- Visible badge
- Business cards
- Plan their first impression
- Be themselves
- Ask questions & actively listen
- Intentionally separate from their friends and meet someone new
- Offer to help instead of ask: e.g. What can I do for you?

Clearly defined skills and interests from self assessment

Share… “I’m seeking opportunities”

Seek out information

- Mentor(s)
- University career office
- Postdoctoral affairs
- Professional societies
- Special interest groups (AWIS, NPA)
- Regional or virtual career symposia

Identify potential career paths

Gather career data (informational interviews)

IDENTIFY POTENTIAL CONNECTIONS WITHIN EACH POTENTIAL CAREER PATH

KEEP IT SHORT (COFFEE!)

CAREER PATH RESEARCH

PREPARE QUESTIONS

ACTIVELY LISTEN

TAKE NOTES

“WHOM ELSE WOULD YOU RECOMMEND I SPEAK WITH?”

THANK YOU NOTE = GRATITUDE, NOT DEMANDS

Identify skill gaps and actively learn

GROWTH MINDSET IS CRITICAL

SKILL GAPS ARE OPPORTUNITIES

SET A SMART GOAL

LEARN -> APPLY -> TEACH

Preparation

- CV or Resume
- Cover Letter
- Reference Letter
- Teaching Statement / Research Statement
- 30-60-90 day plan

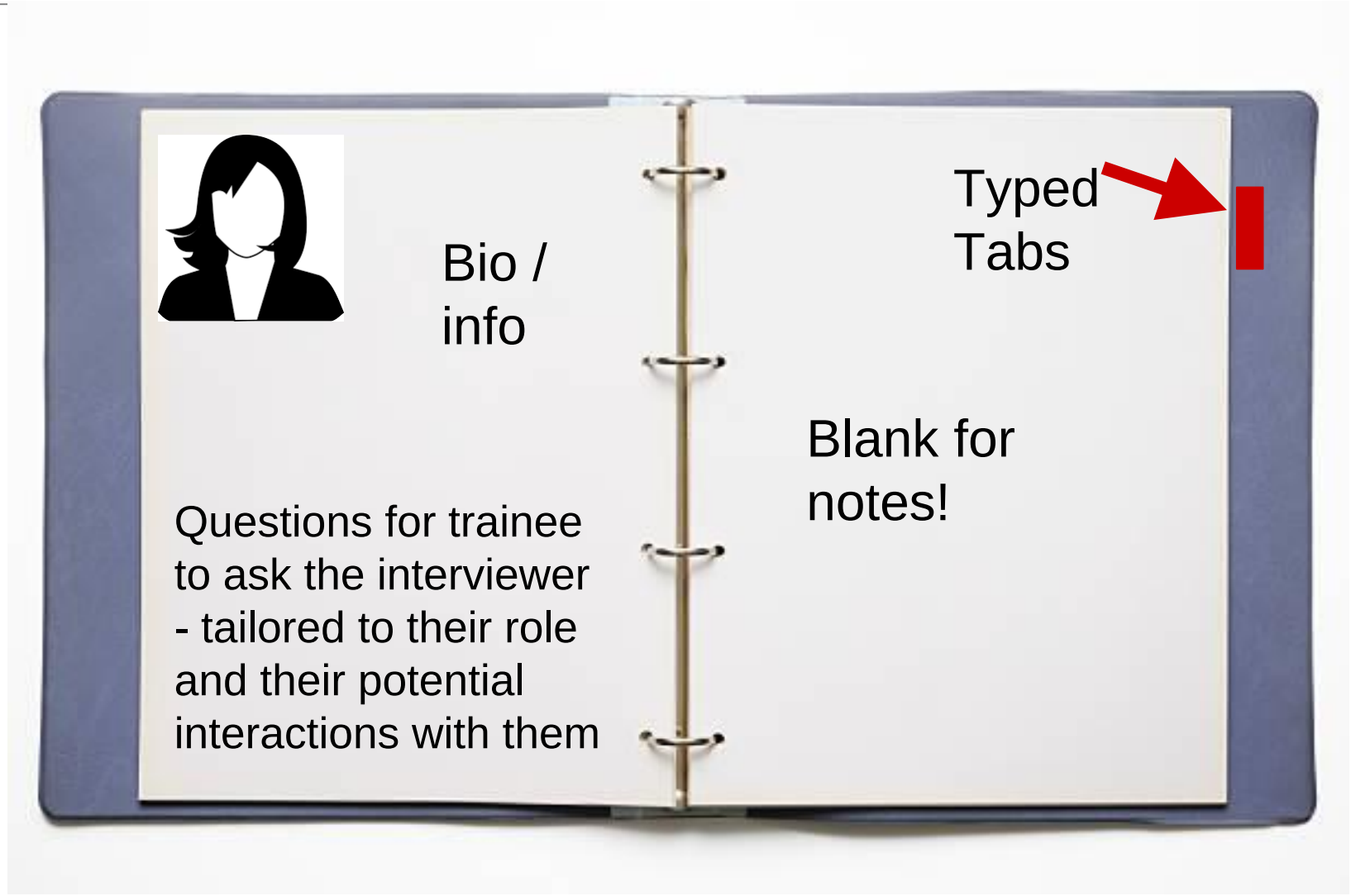
Impactful Interviewing

- All the details matter
- Never get second chance at a first impression
- Be authentic, honest, positive
- Dress For Success!
- Psychology of color
- Turn off your cell phone
- Early is on time; on time is late

Impactful Interviewing

- Be Organized
- Do your research – company; interviewers
- Keep It Positive
- Avoid politics or religion
- Conversation not Interrogation
- STAR = Situation, Task, Action, Result
  - Examples of solutions, accomplishments
- Brief, focused responses; Enunciate

Organized without saying a word



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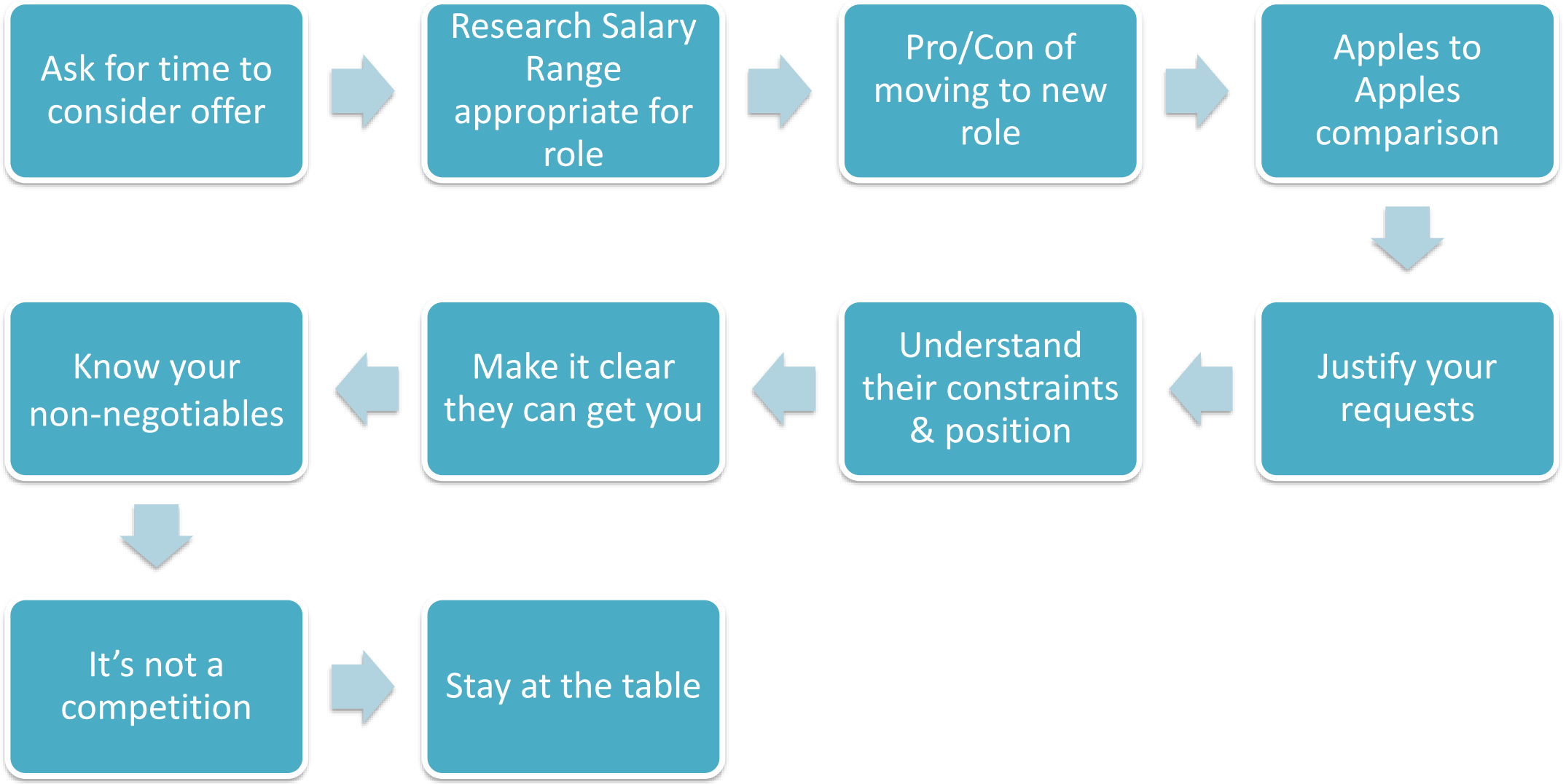


Navigating Negotiation

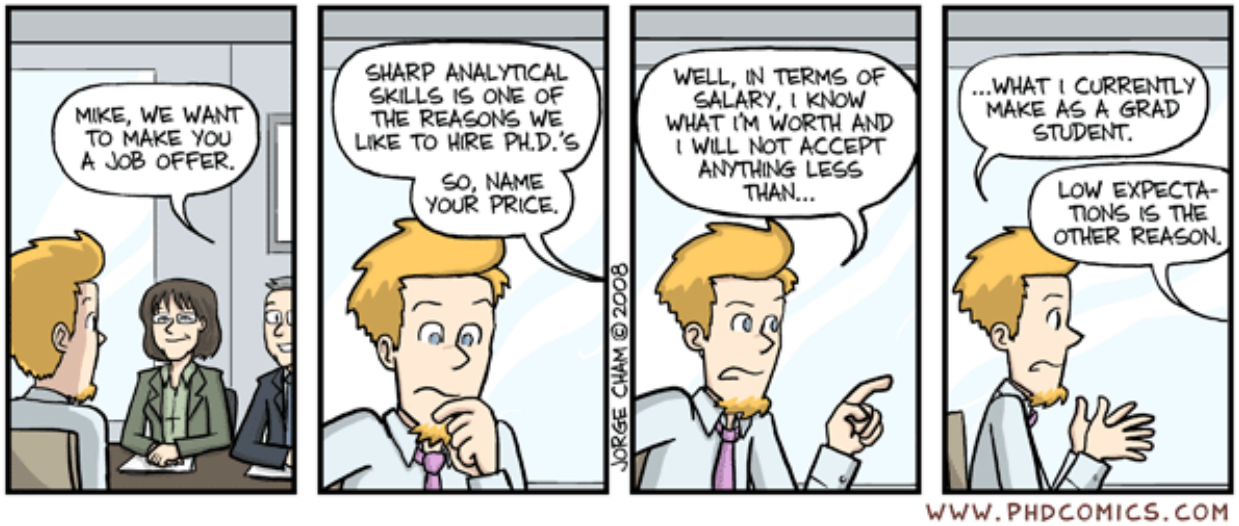
Resources

- http://www.nationalpostdoc.org/ National Postdoc Association
- http://www.nihbest.org/ NIH Broadening Experiences in Scientific Training
- https://nrmnet.net/ National Research Mentoring Network
- Professional Societies

- https://www.insidehighered.com/advice
- http://blog.addgene.org/
- http://www.workitdaily.com/
- http://themuse.com/
- http://www.sciencemag.org/careers
- http://www.nature.com/nature/careers/

- http://hbr.org Harvard Business Review
- http://forbes.com

- http://www.phdcomics.com/comics.php



- Tracy.Costello@Moffitt.org
- Linkedin.com/in/tracycostello
- Twitter: coach4postdocs

- If it's both terrifying and amazing then they should definitely pursue it!

Feel free to follow up!

Question & Answer

SfN Society for Neuroscience

Transferable Skills:

Developing Research Skills that Work Across Industries

Caleb C. McKinney, PhD

Assistant Dean,

Graduate and Postdoctoral Training & Development

Biomedical Graduate Education

Georgetown University Medical Center

GEORGETOWN UNIVERSITY

Georgetown University Medical Center

Biomedical Graduate Education

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Learning Objectives

After this talk, attendees will be able to:

- Identify transferable skills in a research setting
- Research and utilize project management methodologies in a research setting
- Develop communication strategies to engage project stakeholders

Agenda

- Outlook of skills needed in the workforce
- Identifying transferable skills
- Building transferable skills: a special look at project management

Introduction

- Research is collaborative and multidisciplinary
- Science trainees also have to be prepared to work on cross-functional teams
- Using skills that are transferable to other situations allows trainees to more seamlessly integrate scientific thinking across industries (enriching the biomedical workforce)

Outlook of skills needed in the workforce

Top Skills Needed by Employer across industries that hire PhDs!

- Teamwork and Collaboration
- Budgeting
- Writing
- Oral Communication
- Research
- Project Management

2017 Workforce Data Report- Boston University BEST Program

Examples: skills that trainees can use across industries

Supervising

Mentoring junior trainees and students. Start with what they know to acclimate them to the lab, then teach them new procedures. Track progress, monitor skills development, and provide constructive feedback

Presenting

Presenting findings to either a committee to defend a dissertation or to investigators during an annual department meeting. Trainees can answer confidently and persuasively, because they have been trained to review the scientific literature, analyze data, and identify the shortcomings and limitations of their work.

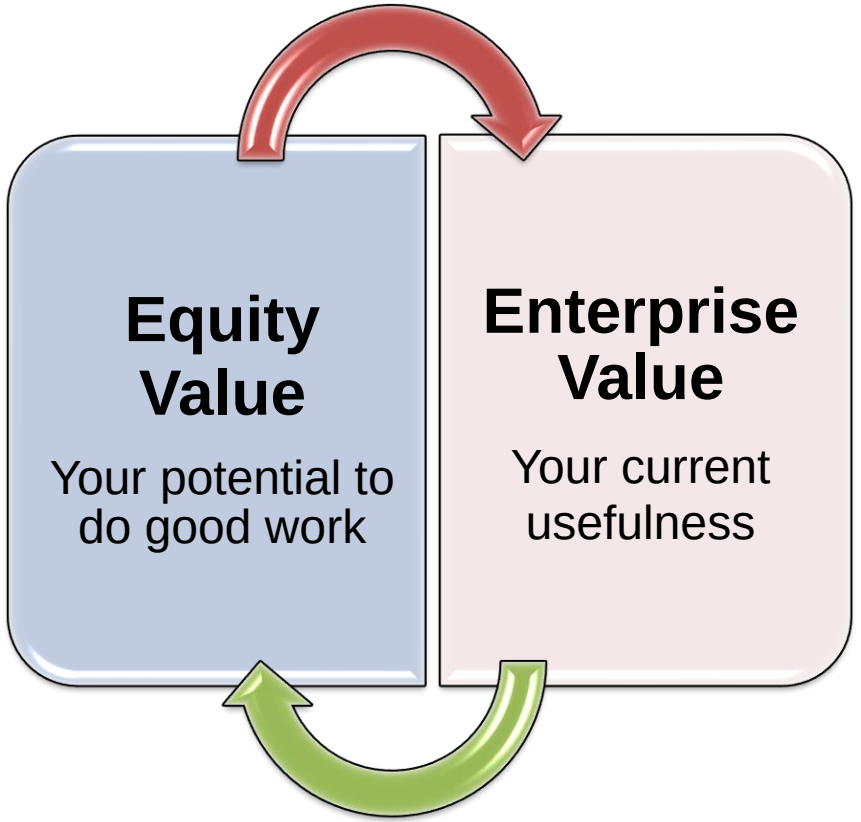
Project Management

Trainees break up experiments into discernable protocols that they plan from start to finish; managing multiple experiments at once for more than one project; sometimes need to delegate parts of the project to core facilities or to junior trainees

Ask me for our worksheet!

Identifying transferable skills is half the battle

The knowledge vault- what trainees learn in the research context.

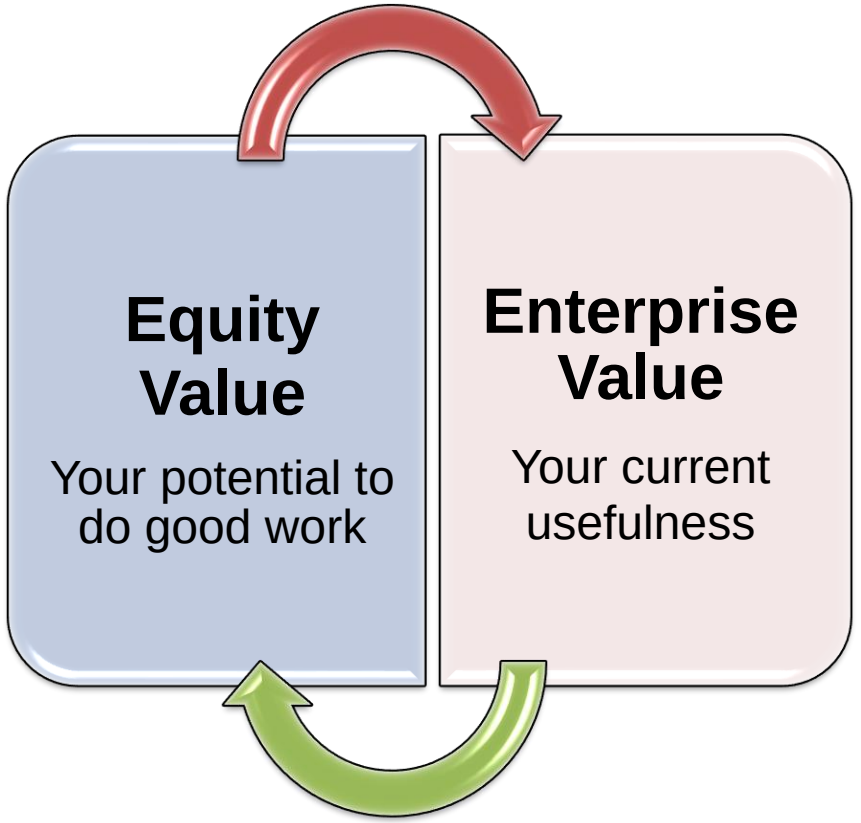


How well they “hit the ground running”; Abilities that are immediately accessible

Identifying transferable skills is half the battle

Learning skills in a way that is immediately translatable shortens this learning curve

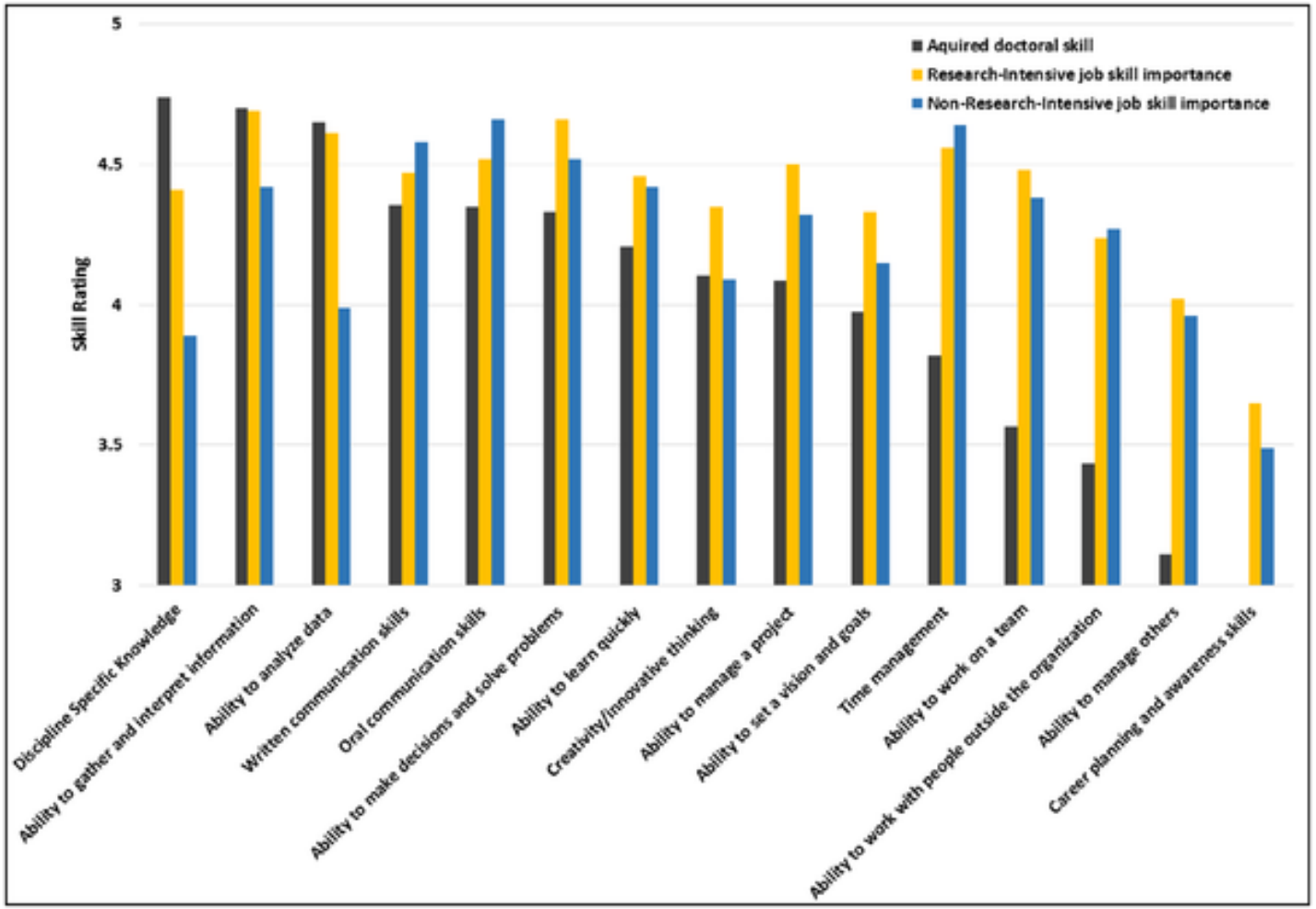
The knowledge vault- what trainees learn in the research context.



How well they “hit the ground running”; Abilities that are immediately accessible

Skills you learn while working enrich the knowledge vault

Equity to enterprise value disparity: a great study



Transferable skills: Acquired doctoral skills and skill importance ratings in research-intensive and non-research-intensive careers (means).

Sinche M, Layton RL, Brandt PD, O'Connell AB, Hall JD, et al. (2017) An evidence-based evaluation of transferable skills and job satisfaction for science PhDs. PLOS ONE 12(9): e0185023.

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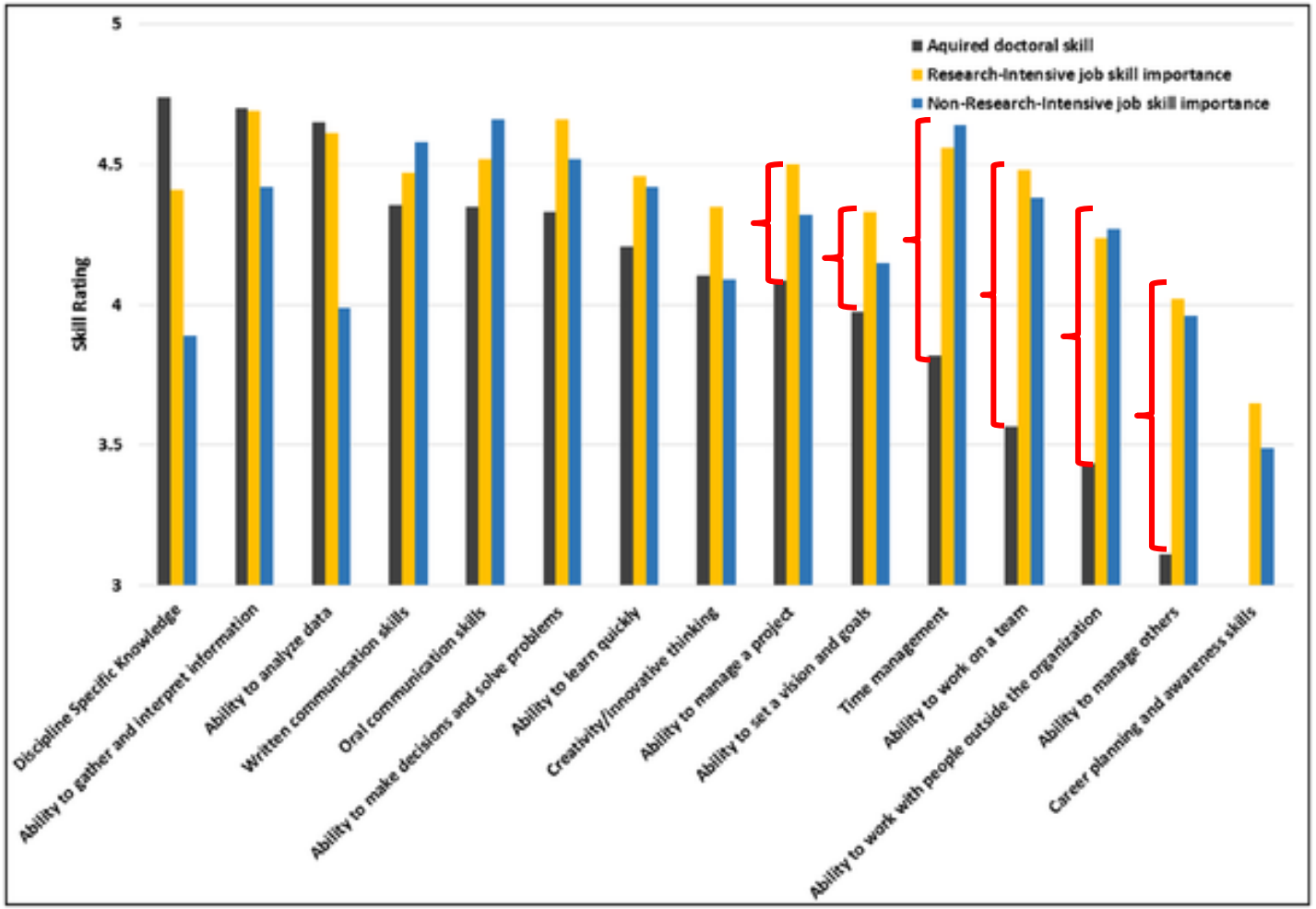

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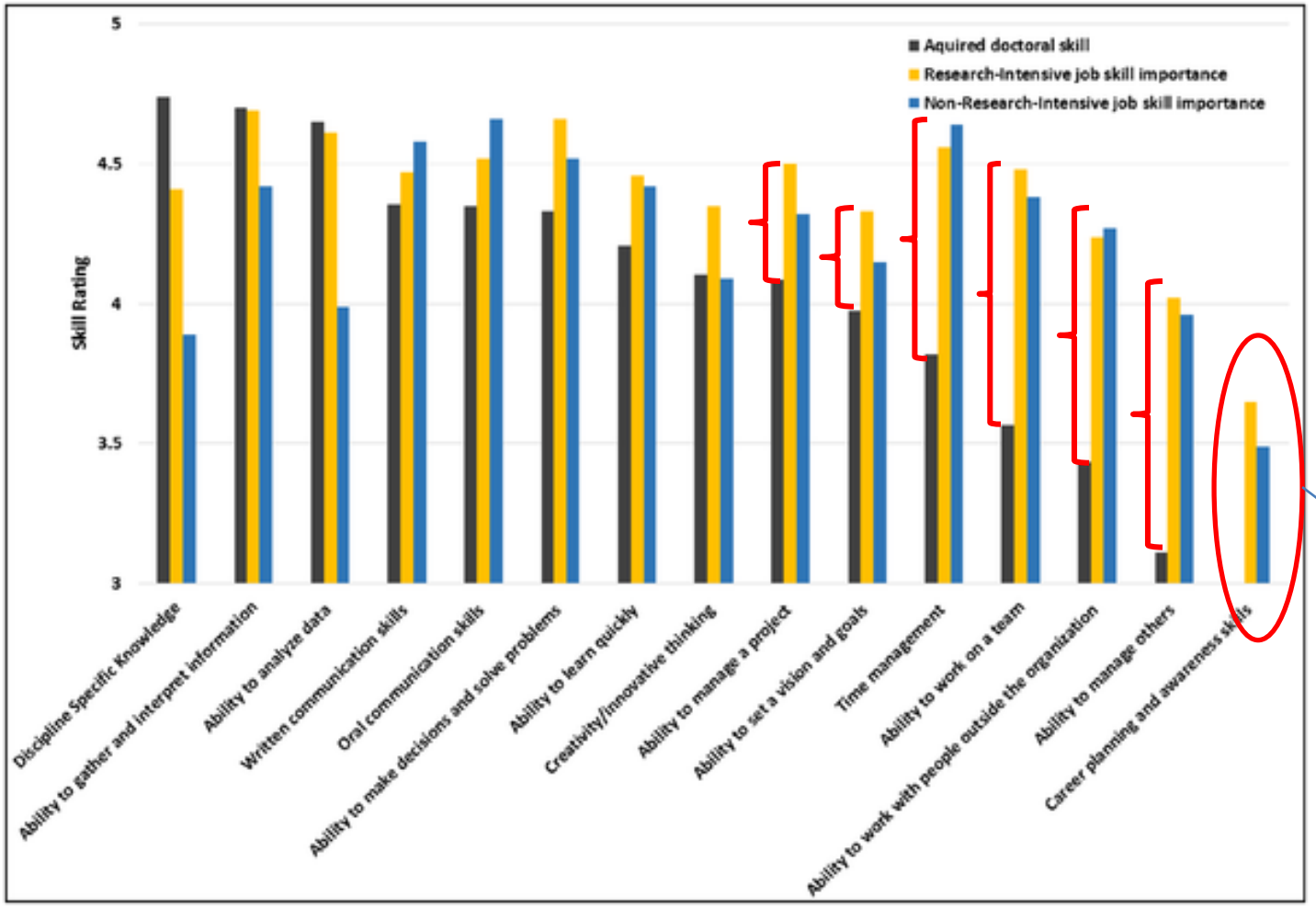
The "activation barrier" between Equity to Enterprise value conversion (ie the knowledge to ability gap)

Equity to enterprise value disparity: a great study



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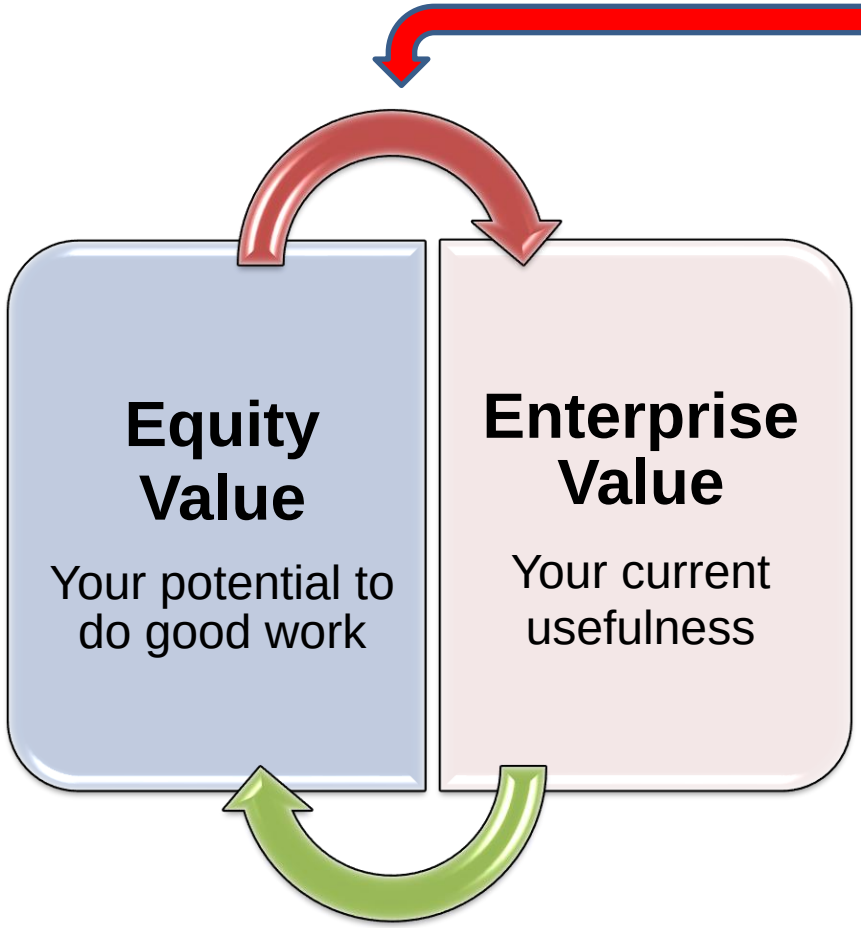
I'm sure this doesn't help

The "activation barrier" between Equity to Enterprise value conversion (ie the knowledge to ability gap)

Develop transferable skills in a way that makes them more… transferable

Potential catalysts to speed up the conversion



- **Informational Interviews:** how is good work done in your trainee's industry of interest
- **Volunteer**: strengthen transferable skills by using them in a different context
- **Trainings:** learning frameworks that are useful across industries (we'll take a deep dive in project management in a moment)

A case for project management frameworks in research

Project management frameworks can address common research pain points

- Makes project management a deliberate exercise
- Gives trainees a framework to explain HOW they manage projects
- Encourages trainees to see where their work fits into the big picture
- Translates SMART goals into visual plans to help stay organized
- Encourages communication
- Provides a framework for rigor and reproducibility

Project Management Cycle

We'll briefly touch on FIVE key phases as they relate to conducting research

- **Initiation**- Define scope and feasibility
- **Planning**- Figure out the work needed
- **Execution**- Do the work and maintain communication
- **Project Monitoring and Control-** managing risk
- **Project Closing-** document and learn

Poll Question

Do you (or your trainees) have access to training in project management?

A. At your academic institution

B. Through a professional organization

C. Through a formal paid program

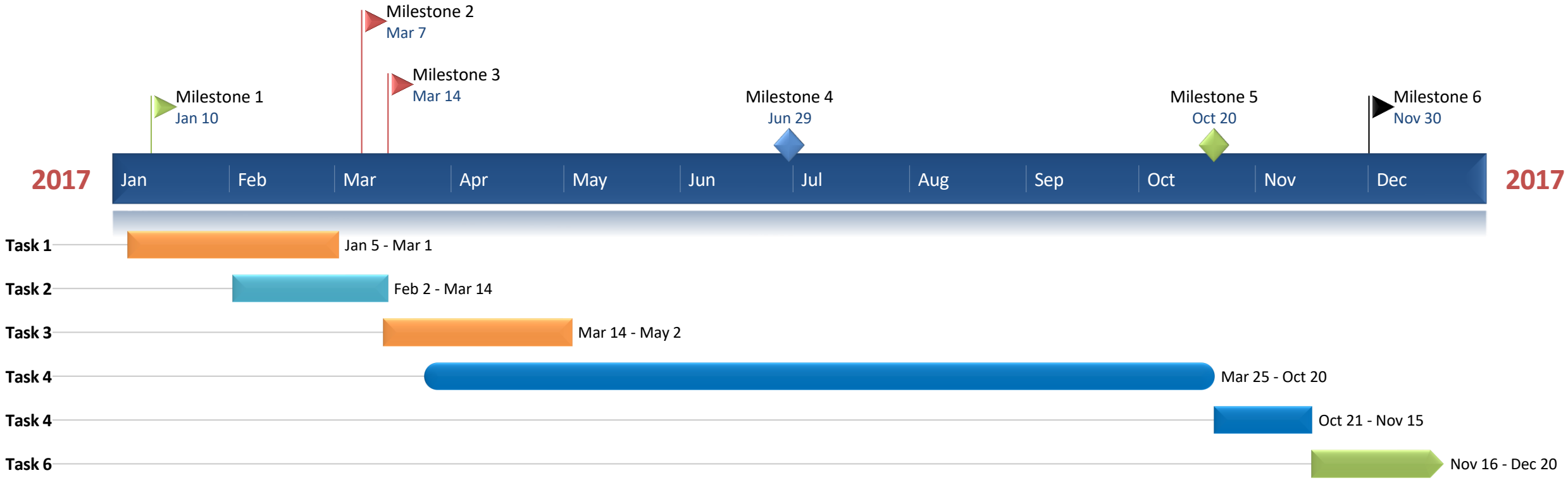
D. I do not know of any project management training programs

Initiation

Defining Scope

- Literature reviews and background research
- Discussions with mentor
- Brainstorm sessions with teammates and collaborators

Planning: Project Scheduling
Bringing SMART Goals to life



Free Scheduling Templates!
https://www.officetimeline.com/timeline-template

Easy to use online project management tools

To break down, track, and delegate specific tasks, try these easy online tools

- **Asana**
- **Freedcamp**
- **Trello**
- **Wrike**
- **Zoho Projects**

Execution:
Working hard and checking-in regularly

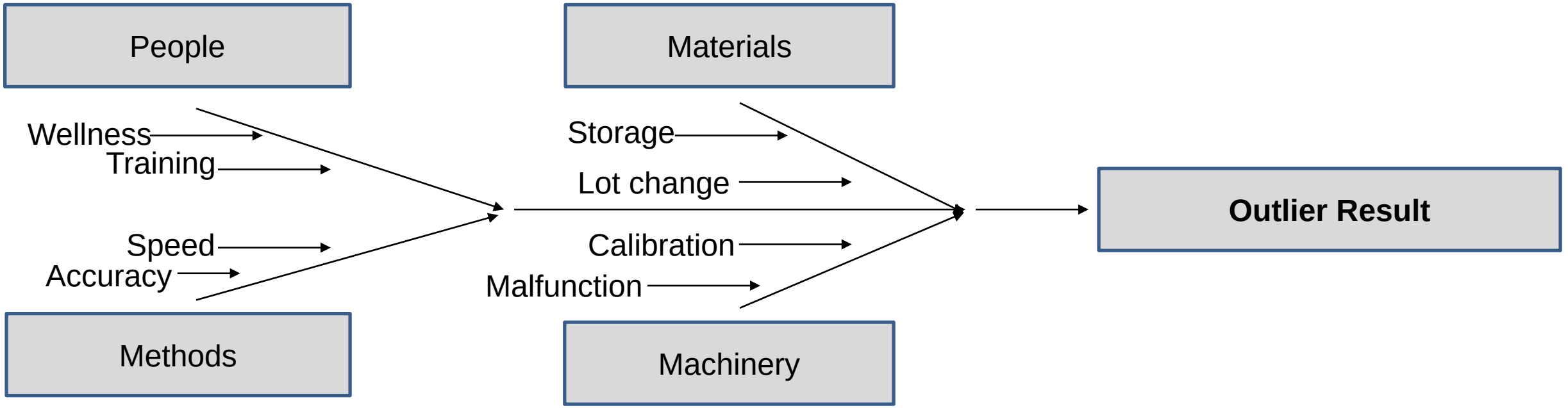
Communication Plan

- Set up regular communication sessions
- Be careful with results-driven sessions
- Discuss what went well and what went wrong
- Talk about other stuff too!
  - Stay abreast of other issues that may be impacting the trainees work!

Project Monitoring and Control:
Identify causes for potential problems or effects

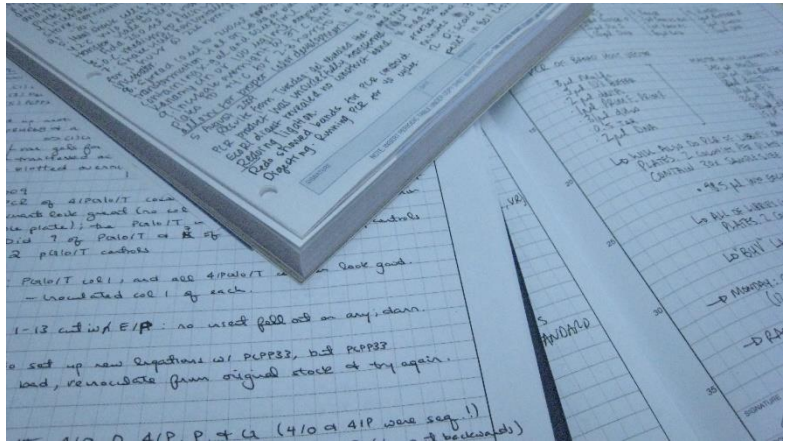
Project risk management can be used as a framework for rigor and reproducibility.

Lets conduct cause/effect analysis of a rogue replicate using an Ishikawa (also called fishbone) diagram



Project Closing

Update lab records!

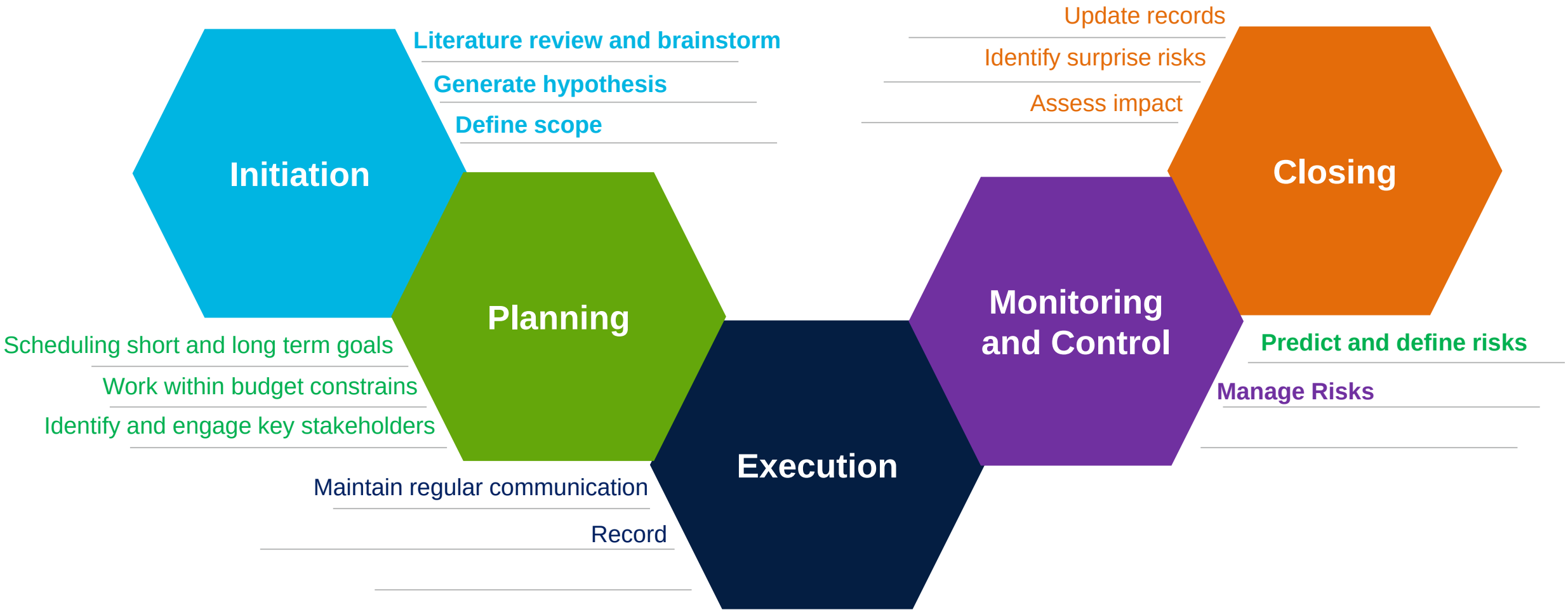


Identify surprise risks to target next time

Assess Impact

Summary of Project Management Cycle

Including some other considerations that we didn't discuss



Session Summary

- **Help your trainees realize the full scope of skills that they are developing**
- **Encourage your trainees to explore career options early**
- **Trainees need to develop skills in a way that makes them workforce-ready**

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Question & Answer

SfN Society for Neuroscience

Panel Discussion
Moderated by Chiara Manzini

Chiara Manzini, PhD

Moderator

George Washington University

Joanne Kamens, PhD

Speaker

Addgene

Tracy J Costello, PhD

Speaker

National Postdoctoral Association and Moffitt Cancer Center

Caleb McKinney, PhD

Speaker

Georgetown University Medical Center

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Thank You

Please take a moment to take the post-webinar survey.

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