Strategies for managing your research team

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Hai Dang Nguyen, PhD
Assistant Professor
Department of Pharmacology
Masonic Cancer Center
University of Minnesota – Twin Cities

Email: hdnguyen@umn.edu; Twitter: @DangH_Nguyen; Website: www.dangnguyenlab.com
Q1: What does a successful Research Team mean to you?
Q2: How comfortable are you with leading a team? 1 - least, 5 - very comfortable

Score: 3.4
Q3: What would you like to take away from today's seminar?
Objectives

3x P’s in Research Management
• Personal
• People
• Projects
Planning Innovative Research is challenging

- Research findings are usually unknown and unpredictable.
- Many different areas of expertise required.
- Many failures ($$$) before something is right.
- Managing research progress and people are challenging.
• What is your motivation?
• How do you solve problems? – think out loud, brainstorm, etc...
• What kind of research do you like to do?
• How much risks/uncertainties can you cope with at work?
• How many people & projects can you manage at the same time?
• Leadership style: leader vs supporter
Projects

- Understand the goal of the research project

Quadrant model of Scientific Research

- Pure basic research
- Use-inspired basic research
- Pure applied research
- Tinkering

Stokes et al 2005
Projects

• Evaluate potential risks of projects
Projects

- Evaluate potential risks of projects

- What if the project is too big to plan (ie. multi-year, high-risk)?
  - Breakdown the Quadrant Model of Scientific Research & SWOT analysis
  - MECE Frameworks
People

- What is your motivation?
- How do you solve problems? – think out loud, brainstorm, etc...
- What kind of research do you like to do?
- How much risks/uncertainties can you cope with at work?
- How many people & projects can you manage at the same time?
- Leadership style: leader vs supporter

- What is an individual’s motivation?
- How much risks/uncertainties can an individual cope with at work?
- How does an individual solve problems? – think out loud, brainstorm, etc...
- How many projects can an individual manage at the same time?
- How flexible or adaptive to change is the individual?
- How do trainees work in teams?
Tolerance for Failure but **No Tolerance for Incompetence**

- Competent people will fail, but performance standards should be high. No sloppy execution.

Willingness to Experiment but **Highly Disciplined**

- Having a clear idea of what you are doing and why. Kill bad ideas quickly and keep moving.

Psychologically Safe but **Brutally Candid**

- Innovative cultures blend both. “In high-individual-accountability environments, decisions can be traced back to specific individuals.”

Collaborative but **Individually Accountable**

- Innovative cultures blend both. “In high-individual-accountability environments, decisions can be traced back to specific individuals.”

Flat but **with Strong Leadership**

- “Paradoxically, flat organizations require stronger leadership than hierarchical ones.”

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**Prof. Gary Pisano**

*Harvard Business School*

[https://www.leadershipnow.com/leadingblog/2019/03/how_big_companies_can_and_do_i.html](https://www.leadershipnow.com/leadingblog/2019/03/how_big_companies_can_and_do_i.html)
Projects: Planning stage

- What’s the research strategy map?
- What resources or technical challenges must be met to complete the project?
  - Training? Establishing new protocols/assays? Collaborators?
- What’s the timeline?
- What’s the end result?
  - New assays, new publication, new clinical trial, etc…
Projects: Planning stage – MECE Frameworks

- The **MECE principle** is used to break down a concept, topic, or question into separate, smaller parts.
  - Being mutually exclusive
  - Being collectively exhaustive

![Mutually Exclusive Diagram](image1)

- Mutually Exclusive Definition

![Collectively Exhaustive Diagram](image2)

- Collectively Exhaustive Definition

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- **People**
- **Projects**
- **Personal**
What do you want to eat for dinner?

• Do you want to eat Chinese food?
• Do you want to cook dinner instead?
• Do we want to order take out?
• Do you want to eat pasta?
• Do you want to eat sushi?
• Do you want to eat tacos?

Projects: Planning stage – MECE Frameworks
Projects – Progress monitoring

- Write campaign brief
- Finalize launch plan
- Develop messaging framework
- Create marketing materials
- Hold kickoff meeting
- Review campaign assets
Projects – Progress monitoring

LAB PROGRESS UPDATE
Name:
Week #:
Date:

Current experiments
• Update here... See example below
• Exp #1: to determine PAR status in U2AF1<sup>S34F</sup> cells.
• Exp #2:

Progress update
• Update here... See example below
• Exp #1: to determine PAR status in U2AF1<sup>S34F</sup> cells.
  • Collected samples, will run gel for analysis by...
• Exp #2: Same as Exp #1 but by IF

Results
• Exp #1: U2AF1<sup>S34F</sup> cells showed higher PAR level than U2AF1<sup>WT</sup> cells by western blot (see HD001)
  • Collected samples, will run gel for analysis by...
• Exp #2: samples need to be imaged

Next experimental plans
• Exp #3: to determine PAR status in U2AF1<sup>S34F</sup> cells. (replication #2)
  • Brief experiment setup: Seed # of cells/6-well in 3mL. Next day add olaparib 10uM for 24h.
• Exp 2 – data analysis completed by...

Challenges
• Make any notes for challenges that you are facing that may need help with (so I can make sure to be able to help you or find someone who can help).
Individual

- What is your work habit?
- What motivates you about this job?
- How would you like your tasks to be assigned?
- How should we discuss about timeline or deadlines on assigned projects?
- How do you like to track your progress?
- How would you like to receive and to provide feedbacks?
- How do you work in teams (under or over 5 people)?
- How would you like to communicate challenges to be discussed?

Team

- How do we discuss and decide on goals of the projects?
- How would you like your tasks to be assigned?
- How should we discuss about timeline or deadlines on assigned projects?
- How do you like to track your progress?
- How would you like to receive and to provide feedbacks?
- How do you work in teams (under or over 5 people)?
Key Takeaways

• Managing a team is tough!!!
  • Aligning priorities (academic vs career), personalities
  • A diverse teams – cultural differences, learning styles, languages, age differences

• No one way fits all!!!
  • Managing a research team has to be dynamic
  • Must be authentic to you. Find what managing styles work for you and your team
LAB PROGRESS UPDATE

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Example Goal
Create and send applications for my seven top college choices, meeting all deadlines.

Actions / tasks
This week
☐ Review application requirements for each school
☐ Gather common information needed for all applications
☐ Identify different specific requirements needed for each school
☐ Create application schedule with deadlines, including financial aid dates

This month
☐ Complete common/basic application portions
☐ Gather school-specific application information
☐ Draft personal and school-specific essays
☐ Contact teachers and employers for recommendations
☐ Prepare information needed for financial aid applications and send by deadlines.

Within 6 months
☐ Complete personal and school-specific essays, including proofreading
☐ Complete school-specific application portions
☐ Follow-up on recommendations; send thank you notes
☐ Submit applications by deadlines!

Inspiration
What does success look like?
All applications completed and submitted on time.

Reward
Bike trip!

Resources
• Official test scores and grades
• Work/volunteer history, with dates and people
• Extracurricular activities
• Recommendations
• School Web sites and contact information
• Financial aid sites and contact information

Reflection
* When it’s all over, reflect on the process and the outcome. *
Goals
You can easily customize this goal template with your own information. To replace any placeholder text (such as this), just select it and enter your own.

Actions / tasks
This week
- Add text

This month
- Add text

Within 6 months
- Add text

Inspiration

What does success look like?
Add text

Reward
Add text

Resources
Add text

Reflection
Add text