

Examples of Research Group and Personnel Management/Communication Strategies

1. *“Traditional” Weekly group meeting of all team members*

- Advantage: everyone informed and (ideally!) participating
- Disadvantage: in practice, some students sit bored while one topic not central to their research is discussed; some students come to dislike these meetings which are seen as a “waste of time”

2. *Weekly presentation by team member (rotating)*

- Enforce requirement that each person must ask at least one critical question of the speaker
- Slides placed on common drive or Dropbox (cloud)
- Advantage: Provides good practice for speaker, and critical examination skills by audience
- Advantage: Everyone stays abreast of the progress of all group members
- Disadvantage: With a smaller group, information in presentations soon becomes repetitive

3. *Intensive one-on-one meetings every 2 to 3 weeks*

- Advantage: Very good focus on directing/motivating individual student’s work
- Does not achieve as much cross-pollination within the group, therefore best used in conjunction with other management approaches, or used only for struggling students

4. *“Wander to lab” and chat informally on a frequent basis*

- Advantage: A low stress meeting that often provides good communication and builds stronger relationships
- Disadvantage: lack of structure and meeting frequency may lead to some projects being overlooked

5. *Standup meetings or “scrums” held nearly every day*

- Maximum length 2 minutes for each person
- Loosely follows the “scrum” method of project management (see Wikipedia.org)
- Can be done as a team, in sub-teams, or individually.
- Questions: What have you done yesterday, what are you going to do today, what major problems do you have?
- Might be construed as micromanagement, but students learn how to approach problems and keep themselves on track.
- Significant goals and progress tracked by index cards taped on the wall.

Methods for Student Motivation

1. *Conference*

- In discussion with the student, devise a plan for that student to attend a significant conference
- Put in place hard milestones for experiment completion, data compilation, presentation draft and dry run
- Disadvantage: must be prepared to abort or have backup plan if experiments do not work out

2. *Publication*

- Motivation comes from a plan to submit to a high impact journal: get their buy-in to this plan
- Student to prepare paper sketch that outlines key literature, data/figures, and significance
- Consequently you can place high expectations on effort, data quality and interpretation, and writing quality