

RSC 10: PROGRESS REPORTING

Why does anyone need to report progress? Progress reporting on any project helps stay on top of the tasks, it is a planning & monitoring tool and it can help identify roadblocks. In a research team, this is also a self-management and communication tool. What is a project? Well, maybe the most important projects for readers of RSCs are PhD projects. It can be research projects and it can be any task that could be a construction project, building a prototype, or a field trip. At IAMT we have a specific progress report that is individual for each team member. The idea was 'stolen' from a colleague at IIT Chennai (T. Pradeep) who commented in one of our many, often quite philosophical, discussions that the most productive (and inevitably busiest) team members never fail to deliver their reports on time. This is counter-intuitive, as one would think the busiest fail to deliver more often. Here is the secret, let us explore!

- ◆ **REQUIREMENTS:** At IAMT the progress reports (PRs) are due on the 1st and 15th of each month, at 6 pm. It is the role of each team member to organise themselves such that these arrive before, not after the deadline, at a reasonable time, rather than a minute before the deadline. Of course, it is fine, as with any other deadline, if this is sent before midnight (this used to be the deadline before it was adjusted to 6 p.m. to not have a flood of emails at midnight every fortnight!), even if the deadline falls on a Sunday night. But one may want to reflect on what this communicates – to leave it to the last minute or a weekend every time. No one is expected to work on a weekend or until midnight (of course, many of us do, especially when real deadlines loom) but a PR ought to be routine and not major stress. Progress reports are about self-management and two weeks are a long time, yet it is always surprising how fast two weeks pass.
- ◆ **PURPOSE:** A self-management tool, rather than progress monitoring (or controlling). A researcher is expected to be busy; this is the nature of the task and there is never enough time in a day, and if a researcher needs to be controlled then they are probably in the wrong place. It is about being effective, not about clogging time, and taking responsibility for the work. At IAMT there is a template that describes how the PR is to be filled in great detail. It is a matter of discipline and serves many purposes. The first is communication. As an experienced supervisor, I have held many meetings with team members. Usually, such meetings last about an hour and we discuss various topics that need dealing with. Motivated candidates come prepared, others dread the 'interrogation'. Some take notes, others nod dutifully and I am left to wonder if they understand a thing of what I say (not all speak fluent English and not all have the confidence to interrupt a professor to ask questions, or heaven forbid, disagree). Note that even though the PRs are a communication tool, I do not read PRs when they are sent (I may if I am concerned about progress or attitude), I ask that they are brought to the next meeting (this is usually several) and then they can be the basis of discussion. A PR has three main sections, which all ought to be about one page in length, and lots of other sections to help with keeping track of things.
- ◆ **SECTION 1 OUTCOMES:** So, the first section of the progress report is the summary of the last meeting. Over time this has expanded to encompass an in-person meeting (that may or may not take place in a fortnight), but also a summary of corridor conversations, email or online discussions or other feedback. Usually, this is a page in bullet points and may require a substructure for separate PhD chapters, publications or other activities. The point is to communicate what was discussed and that allows i) the busy supervisor to remember the last meeting, ii) identify potential misunderstandings (be that due to language or perceptions) and iii) keep track of what is going on for all. Note that this is particularly important in interdisciplinary projects where several supervisors are involved. Every supervisor has their own view on things and consolidating this can be a daunting task: use the progress report and explain the different views, with a suggestion of how these can be best accommodated (don't just pick what you like more and ignore the other, you will head for conflict!).
- ◆ **SECTION 2 PROGRESS:** This part is actually about progress. It is what happened since the last discussion. It is not about having to have everything completed; it is about what was done, what was the outcome, and what are the challenges or roadblocks. Results can be brought along in whatever form for discussion. This is exciting! Usually, we discuss results in a concept note (CON) where they can be presented in the context of the research questions and a coherent story. Progress may involve problems, but this is where

a supervisor's heart tends to sink (see also separate section OBSTACLES) below). Yes, we can help solve some problems, but it really helps if the person who stumbled across a problem has already considered a solution. This is the heart of the discussion in a meeting, ideally balanced between exciting research findings, what this means for the future path and obstacles. A supervisor can help with ideas about what the results may mean (or what not), if validation is required and at times a result that may look non-ideal may turn out to fit really well. This is the point where the experience of the supervisor can be drawn on, so come prepared! Some team members go into hiding when they reach an obstacle, be that not having achieved enough, something not working, results not turning out as maybe expected or some other insurmountable roadblock being in the way. Come and ask for help and do not be ashamed. Every supervisor knows that the line is not straight and in ground-breaking research, the low-hanging fruit has already been harvested. This is where experience can help unstuck, even though the 'just keep going' message can be exasperating. Good research is incremental, so don't expect a breakthrough with every set of experiments, most of it is about learning and understanding better.

- ◆ **SECTION 3 PLANS:** This section is about forward planning. What do you think should be done next? Discuss the why and how, with an open mind as your supervisor may have other ideas and suggestions. If you disagree, then argue your case! Be professional, most supervisors have not been in the lab for some time (they all did a PhD at some point) and may not be able to judge how much work this forward plan will involve. Communicate concerns, if something really needs doing for scientific discovery, then usually a solution can be found. Have the number of experiments, duration, method requirements and costs available such that a meaningful discussion can be held. Imagine you are trying to build a house – you will want to know what the options are, how long it will take and what it will cost. Planning research is similar, but of course, a lot more prior knowledge (reading!) is required to have a good conversation. Remember, your supervisor hopefully will have a good idea of what is going on, but cannot read every new (or old) paper on a particular topic. Share the most exciting discoveries you made and think about how you can use these to advance the field.
- ◆ **OBSTACLES:** In experimental research, there is no way that one can navigate a project without major and horrendously frustrating obstacles. Equipment needs setting up, instruments fail, and result validation may show major interferences with real waters. It is a daily routine to solve these problems and an integral part of the training. Many problems can be solved within the team (it is really encouraging for supervisors when they hear that they are not needed, so communicate that too!), some few the supervisors can have ideas and it is incredibly confidence-building to be able to solve your own problems. Possibly one of the trickiest aspects of research is suppliers that have delivered equipment that does not work properly, they fob off, don't reply, are not reachable or keep you busy with endless 'try this or that tasks (that are often unrelated with the problem)' – or show up happily and demand that you sign a report that triggers a major service bill. From my experience, this requires a 'bad cop'. Bad cop calls a supplier, shouts into the phone (if need be) and pulls out all tactics they can access to get such suppliers to deliver. This is a very, very common problem and most junior researchers are not comfortable with the required strategies. Most are extremely quick to judge the bad cop who is trying to help them for their aggressive 'tone'. Don't forget one can 'be' or 'act' angry and the task here is to help you! It really is not funny, and on occasion, a legal department is required if the carefully specified targets are not met (provided we were careful enough in the specifications, this is where trust or being sloppy for wanting something quick can really backfire). Legal proceedings are neither pleasant nor known to be fast, so be creative as to how you can achieve what you need. Either way, if you were able to fix it by asking nicely then the issue was not on the desk of the supervisor.
- ◆ **WORKPLAN:** The work plan is a really important document in research, make this your friend and helper! There will be a separate RSC on this topic, but timing matters in progress and very long projects (such as a PhD) need mindfulness about time from the very beginning. Splitting the projects into milestones, chapters, publications etc. helps a lot in making the white elephant that looms at the end a little smaller. The project being long tends to result in a very relaxed attitude, which is an illusion that usually results, in various forms of procrastination, tremendous stress later on, or unpleasant (usually unfunded) extensions. It is very reassuring for a supervisor to know that a team member is responsible with their schedule and on the ball.

These are the main sections, the remainder of the PR is keeping track of main works in the form of **CON UPDATES, COLLABORATIONS, FUNDING APPLICATIONS, SUPERVISION, MEMOs, TO DOs, ADMIN** tasks and some notes on possible **APPENDICES**, how we handle **RESULTS** and the encouragement of keeping track of

multiple tasks and achievements separately for the sake of **CAREER**. These sections are self-explanatory and once they are filled with all the small stuff, firstly nothing gets forgotten, trying to remember does not clutter our mind and secondly ticking off the TO DO or ADMIN lists gives feelings of satisfaction.

If you have a supervisor who delegates tasks to the team, then two things are really important, Firstly, responsible team members receive more tasks. This is simply because busy people like delegating to people who are reliable and get things done. It is a compliment, if it gets too overwhelming, communicate this and negotiate a more workable distribution or prioritizing. Secondly, there is a 'black hole' phenomenon when delegating. This means a task is allocated (by email) and there is no response. Some ignore requests, others forget, and yet again others are busy working on it, but fail to tell anyone. The person sending the request then has no idea if this was received or if it will get dealt with. My most appreciated team members usually send a message along the lines 'I'm really busy right now, but I'll be onto in on XX day. Is this ok with you?' Such communications result in either supervisor relaxation or allow to look for another solution before it is too late!

To come back to the counter-intuitive observation that productive (and inevitably busiest) team members never fail to deliver their reports on time? It is obvious: to be productive one knows that time needs to be managed well and organize oneself and the interactions with the supervisor effectively. The PR is a tool, especially for those for whom this does not come naturally.

ATTACHMENT

1. Research Progress Report Template

1. Personal Details

Name:		Report Number	[Month/year-number]
Research Topic:			
Meeting Date:		Contract Start Date:	
Last Meeting: <i>(meetings are requested by researcher)</i>		Participation in Career Development Date:	
Date of last Risk Assessment Update:		Training Courses Completed:	
Publications this year <i>(give month/year of acceptance)</i>		Funding Applications submitted this year <i>(give month/year and scheme)</i>	

2. Report

Please note that progress reports must be submitted per email to your supervisor(s) on the 1st and 15th of each month by **6 pm**. Sending PRs on time is mandatory and shows that you are able to respect a deadline.

If you are absent, please ensure that this is taken care of in a report before/ after such there are no gaps. The purpose of PRs has been explained in detail in the RSC#10 and various teachings about self management & communication. The expectations for PhDs and postdocs are clearly specified at IAMT (see RSC#4 and RSC#5).

Preparation of a PR should not take any more than 1 hour and should be filled continuously as discussions take place. The report must be printed and brought to personal meetings which can be requested on a need basis (the frequency should be about 1 per month, be proactive and seek supervision to achieve your goals!).

Outcomes last meeting (other interactions or activities):	<ul style="list-style-type: none"> ◆ INTENTION IS TO ENSURE YOU HAVE UNDERSTOOD WHAT WAS DISCUSSED AND ALL SUPERVISORS INVOLVED KNOW WHAT IS GOING ON ◆ summarize in bullet points key outcomes of last activities and conversations (with various supervisors if applicable), corridor conversations, email discussions (e.g. actions, planned experiments, tasks to be completed, experimental methods, discussions with co-supervisors, other collaborators or suppliers) ◆ reflect the detail of discussion and allow for misunderstandings to be recognized (please take notes in meetings and clarify if you do not understand or disagree (in our culture this is expected and not a sign of disrespect) ◆ GIVE THIS SECTION A STRUCTURE (Subheadings) - SORT BY TOPIC (publications/chapters in a PhD; different publications or projects for a postdoc; etc.) ◆ THIS SECTION IS NORMALLY 1 PAGE LONG (use bullet style language that is easy to read in a meeting)
Progress:	<ul style="list-style-type: none"> ◆ summarize in bullet points any progress since last meeting (e.g. equipment set-up, calibration, interesting literature reports, literature reviews, new results (append graphs below) ◆ have all previously decided actions completed (candidate/supervisor) and if not by when will they be? (don't feel afraid to remind your supervisor that they forgot something important, it happens!) ◆ Do not list the endless number of small things we all do (focus on scientific content and academic progress rather than showing how busy you are (it is normal to be busy and this requires organization to be effective ☺))
Plans:	<ul style="list-style-type: none"> ◆ outline key actions (e.g. research plans, experiments, conference deadlines, reviews, collaborator conversations, publication outlines, etc.)
Obstacles:	<ul style="list-style-type: none"> ◆ indicate any major problems (preferably with possible solutions) or requirements (always with implications such as suppliers/costs) ◆ Think beyond expensive service visits: what can be solve internally, is an 'online' service possible or have all possible issues been resolved. Consult the instrument books, has a previous user had the same problem?

	<ul style="list-style-type: none"> For 'problematic' equipment it is wise to be in touch with your supervisor such that information if a machine is running or not is readily accessible, this allows for better timing and content of corrective actions 				
Workplan:	<ul style="list-style-type: none"> please attach your workplan (there is a template available at IAMT) and report here how your progress compares to plan: what is on schedule/delayed/ahead of schedule and what are action points so each of your 'projects' can finish on time Do not just adjust deadlines without discussion – of publications or other tasks – there may be funding implications and other consequences. No one wants a PhD deadline to be shifted to the indefinite! Deadline discussions always take place before the deadline is over – this is integrity. If deadlines always need to be extended then expect some difficult discussions that may involve you being over-loaded, underqualified or needing some help. Be proactive! 				
CON¹ Update <i>(revisions are expected within 2 weeks from receiving feedback to ascertain good progress)</i>	CON Name (Short Title)	Last Feedback (Date)	Status	Was delay authorized Y/N	Submission Deadline
Collaborations: <i>[List all]</i>	<ul style="list-style-type: none"> collaborations ought to be listed under CONs as usually a CON is prepared very early in a collaboration; for new collaborations please list here and add status and remove when CON is created On average, CONs are revised 15 times before they can be written up as full text and submitted for publication. If each revision takes several months, you can see where this will go! Of course, revisions are hard work and take time, but two weeks is a good amount of time too. 				
Funding applications: <i>[List all]</i>	Funding Scheme	Topic	Deadline	Budget	Status
Supervision: <i>[List all]</i>	<i>Detail which students you supervise or team members you work with on what project and deadlines (a master submission, PhD completion etc.)</i>				
MEMOs: <i>[List all]</i>	<ul style="list-style-type: none"> here please provide progress on current Memos where you have responsibilities (not everyone has responsibility to deal with a memo, usually these are tasks that affect many team members and thus need to be taken care of) 				
TO DOs: <i>[List all until tasks are completed]</i>	<ul style="list-style-type: none"> here please list minor things that you are dealing with as a reminder for you and communicate that you have not forgotten some of the small tasks that you often receive via email; ensure you do not omit anything here examples may be to place an order for a purchase, a progress report to a funding body, liaising with the building department to install a tap, get back to a collaborator or supplier, get a quote for something, prepare a tutorial, advertise for the student you need, etc. 				
ADMIN: <i>[List all until completed]</i>	<ul style="list-style-type: none"> here list/discuss administrative issues that need dealing with such as planned leave, contract extension deadlines, scholarship reports and evaluations, conference travel, PDRs, etc. so they are dealt with as much as possible during regular meetings (rather than email exchanges) or at least a separate meeting can be scheduled 				

¹ CON stands for 'concept note' and is the plan for a particular project at IAMT that usually evolves into a publication through regular revision and addition of results

APPENDICES	<ul style="list-style-type: none"> ◆ <i>the above progress report would normally not be longer than 4 pages; please do not repeat previously discussed results/actions (don't copy and paste, if something is ongoing, leave it in another colour and note that this particular action was put on hold for a given reason)</i> ◆ <i>if you wish to attach information, such as MSDS for new chemicals or an updated risk assessment, here is the place</i>
RESULTS	<ul style="list-style-type: none"> ◆ <i>results are not part of progress reports, those are summarized as main finding while the actual results are included in a CON where you get very thorough feedback that is the where it belongs rather than scattered through notes of meetings and PRs where you may not find it again when you write up your thesis at some point</i> ◆ <i>if you have exciting scientific results, feel free to send a what's app, no matter if week-end of holiday. A supervisor interested in research thrives on nice results and good news is always welcome!</i> ◆ <i>no matter what format, always giving experimental details of results in a comprehensive caption such that the conditions is clear (this avoids misunderstanding and misinterpretation)</i> ◆ <i>if you would like to discuss results feel free to bring these to meetings in whatever format you like (make your they are clear, captions with details are included such that a meaningful assessment of the results can take place); some bring power points, others a CON, it is your choice, so do what is most effective for you.</i>
CAREER (your separate file)	<ul style="list-style-type: none"> ◆ <i>most researchers work a lot over the course of a PhD or a postdoc phase and contribute many things to a team. While the PRs are only a snapshot of a 2-week period, keep track of your achievements and keep a list of publications, projects, student supervised and other major responsibilities. This will come very useful when you are asking your supervisor for a reference or when having a career conversation (do not expect a supervisor to know all the things you have contributed)!</i>