

Project Management for Graduate Studies

NOTES

Preface

Let me begin assuring anyone who is reading this—undergraduates, graduate students, junior faculty, or senior faculty—that the stress you feel is real, a function of attempting to work within the often ambiguous constraints and resources of the academy. The goal of this document is to offer one or two paths that might be helpful: use what works; ignore what doesn't. Do not add any more stress to your life!

All that noted, the academy is built on projects, many of them personally realized and without that much input from others. Such projects include courses taught as well as essays written and, with luck, submitted for publication. Administrators love outputs, because outputs are easier to count. That is the environment within which so many of us work.

All that noted, project management is about process, not product. It's about developing a process that reliably produces an acceptable product. (Please note the qualifier there: acceptable, not perfect. Done is better than all the other alternatives.)

What follows is the document I have used to teach a number of workshops introducing the idea of project management to and for graduate students.

The key takeaways for this presentation are, first and foremost, externalities matter and should not only be a part of a workflow but can actually drive the workflow. (This is built into David Allen's GTD methodology as well as project management.)

Getting Started

Visualization. Imagine a future day. You are working the job you want. You wake up, get dressed, and go to work. What does your day look like?

Agenda

- Who am I?
- Ground rule? (Chatham House!)
- Project management versus time management versus productivity.

- Project Management

Project versus Time

- Stephen Covey's urgent versus important (Eisenhower's Grid) in *The 7 Habits of Highly Effective People*.
- David Allen's *Getting Things Done*.

Ike's Grid. Having introduced the important/urgent grid, ask participants to fill out a grid for themselves. Compare notes in groups about what activities fall where.

Project Management Simplified

Project management is about process, not product. It's about having a process that reliably produces acceptable product.

Brainstorm. Ask participants to brainstorm a project which they are currently working on: a chapter in a dissertation, a paper for a conference, an article for a journal. What are all the things that need to get done? Are there others that are part of the process?

There are 12 steps to managing any project, which are further part of two phases in any project, planning (Steps 1-8) and action (Steps 9-12). Before we discuss modifications for academics and/or individuals, let's make sure we understand the basics:

Planning

1. Define the project.

- (a) Projects have two primary dimensions: they have a ***finish date*** and they are ***something new***. (If it is something you do on a regular basis, it's a process, not a project.)
- (b) They also have two requirements: a certain level of quality and resource constraints (time and money): see the ***iron triangle***. *How does being your own customer change the iron triangle?*
- (c) The idea of ***kick-off meetings*** may either seem repugnant, especially for those of us with preferences for introversion, but also beside the point in those instances of where you are working alone, but you should really consider this as setting an appointment with yourself, an actual block on your calendar, where you make very clear what your expectations are and what the timeline is. Not being explicit usually results in things not getting done and/or a project not having a tangible result.

- (d) The **key driver** in most instances for academic projects is quality, but considering how much time to invest to achieve a viable quality is tricky. That is, most academics I know don't "ship product" because they are unwilling to sacrifice quality and so they keep throwing time at the project, instead of drawing a line for the amount of time they are able to spend on a project.
- 2. **List the tasks.**
 - (a) Tasks are the raw materials of a project. Croft believes there are three ways to create lists: a creative, brainstorming, wide-open session, then a logical session which organizes tasks in hierarchies (a work breakdown structure), and then ask others. (Others include insiders, outsiders, experts, literature.) *Does everyone remember the literature review?*
 - (b) **Granularity** describes the size of the tasks: getting tasks down to imaginable actions that have estimable time allotments is key here. Granulate tasks down to the level they can be tracked on a weekly basis.
- 3. **Plan the running order.**
 - (a) This is the most important step in the planning phase.
 - (b) Use sticky notes both to organize and sequence tasks and later append or annotate the notes with the times involved.
 - (c) The **critical path** is the longest path in the various series of tasks. It doesn't mean that the most important tasks are on that path. Every task has to be done, but tasks on the critical path are the ones that could derail the overall timeline of the project.
- 4. **Add contingency.**
 - (a) Every plan needs to have a contingency dimension. This is more about project planning when reporting to others, but it's not a bad idea to consider contingencies when planning projects for yourself. The way to do it is to pad the overall project by your estimate and then to add that padding to individual tasks. But you have to start with the worst case. *What is the worst case for you?*
 - (b) An alternate to this is to add up the worst case for all the individual tasks, total up that worst case, and then give yourself half that amount to "go long."
- 5. **Consider crashing.**
 - (a) Crashing a project really means how do you speed a piece when your planning reveals that your project is going to take more time than you initially imagined.
 - (b) One way to resolve this is to work tasks in parallel. Otherwise it's money up or quality down.
- 6. **Make a Gantt chart.**

- (a) Gantt charts are simply visualizations of the time involved in reaching milestones.
- (b) 4 reasons to use Gantt charts: communications, resource planning, checking progress, interpreting costs. (Don't underestimate the value of communication, even to yourself. So much of what goes wrong in productivity is that people aren't clear on what's involved even, and especially, with themselves.)
- 7. **Calculate resource requirements.**
 - (a) One Project.
 - (b) Multiple Projects might be a better way to think about all the activities of which you are a part.
- 8. **Assess risks and prepare action plans.**
 - (a) As academics, we don't this at all, but we should. And Croft's barbecue is actually a great case study, because are risk factors are for more likely to be akin to rain or wasps than budget changes.
 - (b) What are our risks? Distraction. Family/partner needs. Other work demands on our time.
 - (c) I would argue that one of our risks is also allowing a project to go on too long and thus its timeline upsetting the timelines of other possible projects that now become less likely. Missed opportunities are, I would argue, a category of risk we should take more seriously.

Acting

- 9. **Monitor progress** (using the Gantt chart).
 - (a) Milestones are important and an objective view that reveals not only what you have done but what you were supposed to have done by a certain date is incredibly useful.
 - (b) Objective measures are useful for you. Let's work on making things external, out of our brains and onto paper.
 - (c) BCG study on university productivity.
- 10. **Monitor costs.**
 - (a) While most of work now, and may potentially will work, in an environment where we don't need to think about monetary costs, that doesn't mean costs do not play a role in our work.
 - (b) We need to think of time as a cost, and in particular as an *opportunity cost*.
 - 1. For most of us, when we are running behind on a project—usually because we have not estimated our time well enough (because often we just don't know how much we will need to read, and process!)—we simply pour more time into it.

2. And that means we are not spending time elsewhere.
This means we spend less time with family and friends or on our health (physical and mental) in general.
 3. It also means we are not getting much needed breaks from the work in order to return to the work rested and ready.
- (c) The idea that we can simply throw more time at a project is actually something considered in management studies: it's called the mythical man month and what such studies have revealed is that there is actually a diminishing return as you add more people to a project beyond a certain number. The same is true for hours in a week.
- (d) Croft: progress versus spend.
- (e) Forecasts of cost and date.
- 11. Readjust your plan.**
- (a) Croft believes in adjusting your plan in the middle third of the project.
- (b) Six possible responses:
1. More resources.
 2. Reduce quality or scope.
 3. Overlap tasks.
 4. Let project (timeline/deadline) slip.
 5. Abandon the project.
 6. Overspend.
- (c) Don't do nothing.
- (d) One of the things the exam emphasizes is that when you have overspent on a project, which here we will take to mean spent too much time, you need to reduce the quality or the scope. This is an important lesson to learn early. It's also an important decision to make early: too often we wait until just before the project is due and throw our hands up and say "well, that's all I can do." It would be better to make that decision earlier.
- 12. Review.**
- (a) Why people don't review:
1. No time.
 2. Too stressful.
 3. Can't admit mistakes.
 4. Stored in memory. (Really?)
 5. It went well.
 6. Project was unique.
 7. No one will read the review.
- (b) You review because the process itself is important. (E.g., Alan and my poster.)
- (c) Reviewing a project
1. Bring food (companionability), even if it's just you.
 2. Frame things as continue, improve, try (new), avoid.

3. Take notes because writing is processing.

Tangibles & deliverables.

What the game and social media industries have done is harness everything to one task: **engagement** (aka addiction). And they can do so because they are running experiments 24/7 on a massive scale, with A/B testing automated and constantly being refined. Nothing like this has ever been seen before. Imagine academic research at this scale, or industrial research like drug trials on this scale.

The levers involved have all emerged out of psychological research:

- **goals** – Goals are a 20th century invention, but they are now everywhere, embedded into technologies like smart phones and watches and practices like Inbox Zero.¹ The effect is the same: reach a goal and get a (dopamine) reward.
- **variable reinforcement** – the best way to create addictive behaviors. (It's the reason slot machines are designed to perform as they do.)
- **active orientation** – also known as escalation is the human impulse to build and/or value the fruits of one's own behavior. E.g., self-shocking experiment. This manifests as the next level in game design, more likes in social media, or whatever steps in activity goals. (Often this looks like productivity.)
- **proximal development** – Lev Vygotsky was the first to explore the idea that children learn best when a task is just beyond their abilities: he termed it the zone of proximal development. Games reproduce this through carefully incremented escalations of difficulty. Social media produces this through the natural progression of numbers of followers.
- **flow** – Mihaly Csikszentmihalyi was not the first to describe the power of immersive experiences — John Dewey explored it in *Art as Experience* — but it was his work that kicked off the modern exploration of how to develop such experiences as commodities.
- **stopping rule** – losses are concealed through the appearance of a reachable goal: it feels like you almost won when the slot machine comes up BAR, BAR, cherries, but really you lost.
- **cliff hangers** – take advantage of the Zeigarnik effect to defeat the human impulse toward closure, and, more importantly, the effect closure has on our memory. (Closure makes it possible to forget things, which is why the best way to cure an ear worm is to listen to the piece of music all the way through.)

¹ A study of Army civilians revealed that when denied email ... people got more done, were more focused, spent more time outside, and were generally healthier.

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