The Fundamental Principle of Productivity: What they DON'T teach you in graduate school

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Recommended Citation
A long time ago … I was an enthusiastic graduate student in mathematics. I had finally figured out that mathematics was what I would be doing with myself. I would continue to learn more mathematics and I would finally be doing mathematics without any other distractions (or so I thought …) And the best part was that eventually, I figured, I’d be getting paid doing this thing that I enjoyed so much.

Today, I am still almost in the same place. My enthusiasm for matters mathematical has not waned (except for that one unbearable stretch of time toward the end of graduate school when I would have preferred to be doing anything else but mathematics …) I am now older but no wiser, in more ways than one … and yet the trip so far has been amazing!

Still there were many times I was anxious, scared, frustrated, overwhelmed. Some of these times were, now that I think about it, normal and natural. And many such instances and issues have been raised in this blog before: the typical expectations and realities of the first year in graduate school, the stressful times before the qualifying exam, dealing with illness and loss, looking for that first or second job after graduate school, the emotional challenges of being on the tenure track, and so on. Personal reflections and thoughtful recommendations are generously offered to the readers of this blog in these and many other posts. And I know that I would have benefited from them immensely if I had received these suggestions at the relevant junctures of my professional and personal life. Instead, being of an earlier generation, I chugged along at my own pace and within my own means. Some things naturally came to me easier than others. And at others I have utterly failed.

But through the years, I have read many books, ranging from self-help guides to creative writing manuals, attended workshops, frequented relevant websites, and reflected upon my own personal experiences. As a result, I have collected together a few ideas and tools on productivity and time management that have been working well for me. In this post I want to share with you the most basic of these principles, with the hope that it may assist you in your life, at whatever stage you are. Whether you are a graduate student, a postdoctoral researcher, a junior mathematician on the tenure track, or wherever else you may find yourself within the world of mathematics, I hope that this one basic idea will give you a sense of control in the crazy-making, soul-sucking times which will invariably come up.

The big deal about life is … that there are always a ton of things to do! For instance if you are in graduate school you have to:

- attend classes
- do your homework
- learn stuff
- attend seminars
- meet your advisor regularly
- talk to other students and faculty
- keep in touch with college friends
... And maybe you have a life outside of grad school?

So what do you do? How do you handle all of this stuff?

Everyone knows you just need to make a to-do list and then just follow through ... Right? If only it were so easy ... But the to-do list is indeed a good start! So the basic principle I want to offer you in this blog post is the following:  

**Fundamental Principle of Productivity: Write it down!**

A list is a simple idea, but done right, its impact on your life might be phenomenal.

So how do you do it right? The main goal here is to get everything down. I mean everything. Include the cat food to be purchased, the homework to be completed or graded, the paper to be refereed, the rent check to be written, the summer school course schedule to be consulted, the fridge to be cleaned, the garage door to be repaired, the sister to be called, taxes to be filed, and ... I hope you get the point. You write everything down. This is what the productivity gurus will call a mind sweep. You want to clear and clean your mind, get everything that needs to be done out of your mind onto your list.

Take some time to do this. It is not trivial. And even if you take an hour to create your first list, you may later on remember things that you did not include the first time around. That is fine. Just patiently go ahead and add those to your list as well.

It is important that initially you impose no constraints on yourself. No telling yourself “this is too silly / trivial to write down” or “that is not relevant to my work”. But eventually you will have this ginormous list. In fact, if you are like most people I know, by the end of this process, you will have a huge list, perhaps with over a hundred items. And then comes the natural question. What do I do with this unorganized mess of items?

There are several ways to organize a to-do list. There is the “one-minute to-do list”, there is the “world-class to-do list”, and once you start looking, you realize that all kinds of people want to help you with your to-do list (and most likely will want some money for it). There are several software packages for desktop / laptop computers, a wild range of apps for smart phones, and of course there are many attractive options if you want to keep things simple and on paper. You might wish to look at these various offerings to figure out what will work for you.

But here a confession (and a warning) is in order: I have fallen down into many a rabbit's hole trying to find the best way to implement any one productivity / time management idea. The search for the optimal productivity / time management tool can ironically become a huge time suck on its own. So I am here to tell you, after all the hours I have wasted on all this stuff, that the ideal method is the one that will work for you. It is not what works best for so-and-so on the web, or what works best for your advisor or your fiancee, but what works for you. Indeed just jumping in and getting started is the best thing you can do in this realm. And for that, there is perhaps no better alternative to stacks of paper stapled together or a new folder on your computer that contains a handful of text-files. Or if you like, you can go out and splurge on a neat agenda or download some app that looks intriguing and has good online reviews and give it a go. You can always change your method, but you do want to get started. Soon.

The productivity gurus and time management experts alike wax poetic about how the mind sweep relieves anxiety and how it allows you the space to think creatively and plan ahead. I agree. The mind is not meant to store all that
stuff. It is not meant to be your storage pod of tasks to be done. It is meant to be your creativity machine. It is where the math is supposed to be done. It is where the problems are supposed to be solved. So you need to get all the tasks out of your mind and onto some other storage space. So that your mind is free to do its thing.

There you have it. The Fundamental Principle of Time Management, the First Theorem of Productivity, if you will: *Get things out of your mind and onto paper. Make a list.* Nothing too ground-breaking, I know, and it probably sounds too simplistic, but please humor me, and give it a try. Set apart an hour this weekend and do a mind sweep. My guess is that you will find it makes a difference. And with the sense of serenity and control it offers, you can make progress in any aspect of your life.

Gizem Karaali is associate professor of mathematics at Pomona College and a founding editor of the *Journal of Humanistic Mathematics*. Since May 2013, she is also the associate editor of the *Mathematical Intelligencer*.

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2 Responses to *The Fundamental Principle of Productivity: What they DON’T teach you in graduate school*

**James F. Epperson** says:

04/13/2014 at 6:59 pm

I frankly think that some departments should offer a seminar class on “How to be a Professor.” To the faculty it seems obvious, but they have been doing it for 20+ years. By definition, a first-year assistant professor, aka recent graduate student, has not. The existing paradigm is that you will figure all this out by learning from your advisor, but most of my sessions with my advisor were on how to prove the error estimate that was the core element of my dissertation. In theory, senior faculty should mentor junior faculty, but that often does not work out in practice as well as it might in theory

**Lily K** says:

06/02/2014 at 4:08 pm

Thanks to Gizem Karaali for this advice! Here’s an amusing (yet sage) supplement to the list method, courtesy of Ms. Mentor’s Chronicle of Higher Ed column:

Harken, too, to Ms. Mentor’s Mighty Maxims for Time Management:

- Each night, make your Must Do list for the next day. List your daily Writing Time as an appointment.
- Rank your Must Do’s in order of importance.
- Write a Should Do list of things you might do if you had time, such as “wash the floor” or “shop for good china” or “worry about what other people think.”
- Burn the Should Do list.