

What makes a good RA?

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What do you think?

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What Development Economics Faculty say:

I polled Professors Estefan, Iyer, Kaboski, Piraino, Fernando, and myself for responses. Remarkable overlap in answers!

What Development Economics Faculty say:

- ① Attention to detail
- ② Independent thinking/ability to trouble-shoot/problem solve
- ③ Being organized/managing up

Note what is **not** on this list: Being a content expert.

What does “Attention to Detail” look like?

- Obsession to detail!
- LOOK at your work before sending it to the professor. Here are some typical examples:
 - When reading in data from Excel, some variables get recorded as "AB" or "CW" or some such. Fix this!
 - Check whether numerical variables are read in as numbers. If not, check the original data about why this did not happen.
 - Check for missing data. If there are 237 obs and the town name is missing for 45 of them, check why!!!
 - Do the summary statistics, and LOOK at them. check whether the means are weird (e.g. average years of education being 50) or whether there are outliers. Check whether fractions are between 0 and 1 (or 0 and 100), that dummy variables are indeed dummies and so on.
 - When running regressions, check how many observations get dropped due to missing values. If specification 2 has only half of the observations of specification 1, check why!

What does “Attention to Detail” look like?

Tools to help you pay attention to detail, and to help transitions between RAs over time:

- Document everything e.g. write do-files for everything, never over-write any datasets that you cannot recreate, document your code extensively (“here I merge file A and file B”)
- Maintain a logical folder structure for your files, name your do-files and variables to indicate what they are i.e. do not call them “analysis.do” as I did during my student days :-).
- If you are data cleaning, maintain a word/text file to document anomalies, common errors you noticed, alternative sources you used to fix weird observations etc. Parts of this may turn into a data appendix folder
- Keep in mind: the PI will want to replicate all results in a paper at some later date. How do you make it easy to do that?

What does “Independent thinking” look like?

- Have some interest in the project. What is the big question the project is trying to answer, and how will your efforts at data cleaning and analysis be used. Can you think of better ways to measure certain things? Can you relate this to other things you have read? This kind of thinking can often lead to independent research ideas and/or being asked to be a coauthor rather than an RA!
- It's great when an RA comes up with a new solution to a problem that doesn't require me to show them exactly what to do (at which point it is just easier to do it on my own). Showing this kind of initiative also sounds great in letters , e.g. I have a RA who learned python and wrote a bunch of code to process satellite data.

What does “Being organized” mean?

- Managing “up” on a weekly basis is important, especially in semesters when Professors are teaching. Useful to have a pre-meeting update (email and also in a google doc) of “what I did this week”. Take notes throughout meetings. Clarify what the next steps are if you don’t understand.
- Timeliness of work: if the professor does not specify, ask when they need the work done by. If you are given multiple jobs, ask how you should prioritize.
- Please communicate. If you are super busy during a particular time, please let the professor know. We understand time constraints and can adjust our work and expectations, but non-response is just frustrating.

What does “Being organized” mean?

Further examples

- I have my RA's maintain a google doc where they document tasks that are assigned and provide updates when they complete them. The really good RAs note down tasks and provide updates religiously; the not so good ones have lists that look identical to what they started.
- My best RA would take notes about what had to be done each week, and repeat them back to me. Then, 1-2 hours before our next meeting, she would email me the list of to dos along with what she had done, and questions about next steps. This was fantastic for keeping things moving forward, and making the most of meeting time.
- Keeping track of tasks using software like Monday, or Friday, or Asana. Frankly, even a google doc works better than email. [For perspective: Some research projects can take 5-10 years to complete.]

Benefits/advantages of working as an RA

- Learn how new research is born: not always a linear or clear process
- Learn how to work in a team: sometimes you'll work w/ other undergrad RAs, sometimes with grad students in different years
- Gain skills in data cleaning and analysis: valuable in the market (pre-docs and PhD programs in academia, data science outside of academia)
- If you like the research process: be in a good place to write a senior thesis!
- Develop a relationship with a faculty member; someone who can speak knowledgeably about your career plans, desire/ability to go to grad school, suitability for data science-type jobs

Good luck!

Thank you for joining us for this second year of the DevData Bootcamp. We hope this will become a regular offering for students who are serious about working as research assistants in Development Economics.

You are in good hands - please feel free to email Ge Sun or myself (tdinkelm@nd.edu) with comments/suggestions on the class.