

Building a(n) (almost) sustainable institutional training culture

eResearch NZ 2021

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Overview

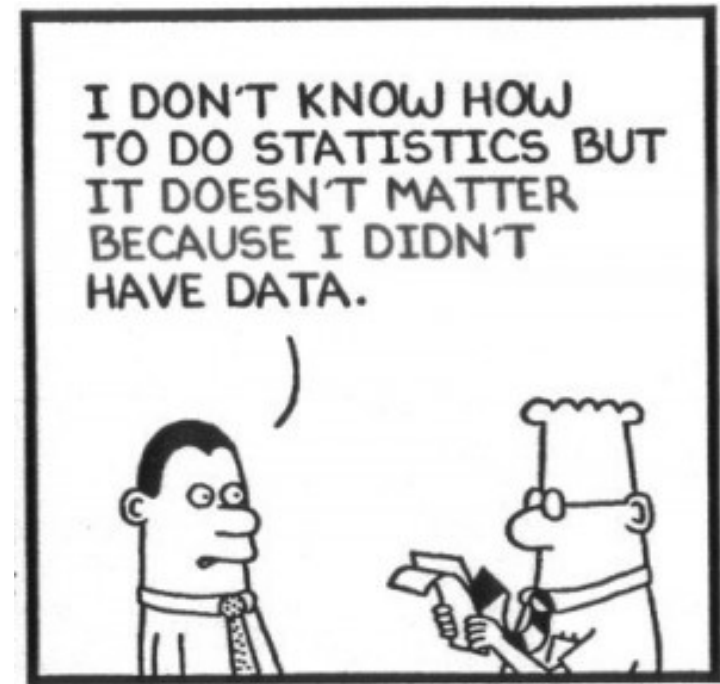
- Five years ago (!!) at this meeting, I gave a talk entitled:

Opening the Science: Using a Mozilla Study Group to help grow an open science culture

- Detailed my (extended) research group's efforts to increase our digital literacy, and share our expertise to accelerate the process of learning about research-relevant digital tools and techniques.

A bit about me...

- My background is statistics
 - collaborative genomics research
 - Linux and R for data analysis
 - research group with eclectic skill set - lots of co-supervised students
 - undergraduate/post-graduate teaching to “biology-focused” students
- Infrastructure initiatives: building resources
 - NZ Genomics Ltd (NZGL) / Genomics Aotearoa (GA)
 - NZ eScience Infrastructure (NeSI)



Today's talk

- Over the past five years, Otago has been strongly involved in a number of eResearch activities:
 - Carpentries training
 - Development and delivery of digital literacy/skills training material
 - Research Bazaar
 - Bioinformatics training
 - Local and national community building
- Goal of this talk to is to share some of the “secrets” that have helped to sustain this initiative.

Goals: Improved digital literacy

- Shell usage
- Version control
- Data analysis and visualisation
- Good coding practice
- Reproducible research
- Efficient and effective use of HPC

eResearch activity at Otago: 2015-2021

- Carpentries workshops
- Non-Carpentries workshops/sessions
- Tidy Tuesday / Hacky Hour / Study Group
- Carpentries instructor training
- Research Bazaar
- [eResearch@Otago](#) events
- eResearch NZ involvement
- Bioinformatics Spring School (2020)
- Health Sciences strategic funding for training
 - Carpentries affiliate membership (2018-2020)
 - Dedicated training position(s) (2018-2021)



Sustaining the effort

- There is always initial enthusiasm for Carpentries training
 - instructors tend to be in a space where they have time to train and then teach, and really enjoy their initial experience with the Carpentries environment
 - and learners are always happy to have workshops to attend!
- And then...
 - priorities change
 - commitments change...
 - availability changes...
- How to keep the party going?



A few sneaky tricks

- Find a “champion”
- Food
- Build a community of instructors
- Food
- Find people employed to deliver training/support:
help them do their job
- Food
- Try to find dedicated (partial) funding for at least
one trainer
- Food
- Get money for food



Finding a “champion”

- “Champion”: someone who can make stuff happen, preferably long-term.
- Desirable characteristics...
 - Consistent presence / ongoing commitment
 - Financial resources + influence within institution/entity
 - Local and national connections
 - Helpful: alignment with research and/or institutional goals
- To the Champions: find a “deputy champion” and a “partner in crime”



Challenges: Funding

- People
- Food
- Venue costs
- Travel
- Conference attendance (e.g., Carpentry Connect)



Potential funding sources

- Local (institutional) strategic funding
- Grant funding
- Linkages with national initiatives
 - Centres of Research Excellence
 - National Science Challenges
 - NeSI / Genomics Aotearoa
- Benevolent champion...



Building a community

- Regular meetups
- Workshop environment that instructors want to participate in
- Workshops that fulfill instructors' own job requirements
- Connection into national community
- Connection into international (Carpentries) community



Instructors (and ther challenges)

– Our instructors:

- Research students/fellows: enthusiastic... but transient
- Academic/Research staff: stable... but over-committed
- Teaching/Support staff: skilled... but constrained

– Need to work within these limitations

- accept that instructor pool is transient
- hopefully with a semi-stable core...



The benefits of teaching

- Value to potential instructors is not obvious
 - CV benefits
 - Reinforcement of concepts
 - Wider recognition in field
 - Engagement with training/eResearch communities
- Teaching can be hard
 - Developing material
 - Other commitments/priorities
- GA and NeSI developing “workshop workshop”



Selling the Carpentries

- Often difficult to convince institutions/superiors of the value of Carpentries activity.
- A few sneaky tricks
 - Make Carpentries workshops an “encouraged” activity
 - Sell the “community-building” aspect
 - Incorporate Carpentries material into teaching (and be vocal about where the content came from).



Teaching

- Material added to courses:
 - GENE 315, GENE 360, BIOC 352, PATH 301
 - BIOC 461, STAT 435, QGEN 401
- Carpentries-style lab/tutorial lessons (R markdown documents)
- Data Carpentry training for incoming fourth year students



Closing thoughts...

- Building (and maintaining) a lasting institutional training infrastructure is not easy.
- We've made good progress at Otago, but there is still (always) a lot of work to do.
- We've managed to create a fun and rewarding (I hope) environment for delivering training at Otago.
- Hopefully we can continue to keep the party going...



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