Understanding Researchers
Encouraging academics to use eResearch tools by tapping into the researcher mindset

Joey Gerlach
Research Engagement Specialist
eRSA

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www.ersa.edu.au | @eResearchSA
About Me

Post-graduate research in conservation genetics 2012-2015

Research Engagement with eRSA since 2015 – South Australia’s digital research specialists
eRSA is the South Australian provider of high-performance computing, data management and storage, research collaboration, and visualisation services for researchers in SA.

eRSA is a collaborative joint venture between the University of Adelaide, Flinders University, and the University of South Australia.
About Me

Post-graduate research in conservation genetics 2012-2015

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Most of my friends are researchers, and keep me up to date on what they really think about eRSA and uni IT services
As research datasets get larger and more complex, most researchers can no longer escape having to learn how to manage remote storage and perform computation on remote servers using tools with only a command line interface. Most researchers have not been trained in informatics and are not prepared for learning this new set of skills.
Some research fields have always been at the forefront of information technology.

CERN: The CDC 6600 and CDC 3100 supercomputers in 1969.
Many disciplines have been able to perform research easily on their own computers.
Many disciplines have been able to perform research easily on their own computers.
These researchers feel a sense of control over their research.
Now, in almost all research disciplines
• There is much more data produced
• Computation becomes more intensive
• Rapid advances in analysis methods means using open source software on the commandline
National research data and computation infrastructure
Destination

New faster route

Familiar route
Understanding Researchers

• Time
• Language
• Trust
• Communication
Understanding Researchers

• **Time**
• Language
• Trust
• Communication
Dedicated to their research, they often struggle to find the time to do it
Researchers are often essentially self-employed

(they need to win grants to cover their salaries)
Researchers are highly focused individuals
I want you to know, I expect all my students to be in the lab during regular working hours.

You mean 9 to 5?

I mean 6 am to midnight.

But my stipend only covers 20 hours a week.

Of quality work, not grad student "work."

Tajel, it's perfectly ok for you to go on vacation.

I mean, you did take work with you, right?

You spent the whole time thinking and obsessing about your research project, I assume?

Excuse me?

Uh...

In academia, "vacations" just mean you're doing work somewhere else.

I don't think we're using the same dictionary.
As well as performing research, collaborating, and publishing papers:

- Teaching
- Administration
- Reviewing Others Research
- Supervising postgrad students
- Preparing for and attending conferences
- Etc.
Many of these activities are not what they are paid to do, but are “requirements” of being part of the research community.
HOW PROFESSORS SPEND THEIR TIME

How they actually spend their time:
- Teaching: 59%
- Research: 18%
- Service: 23%

Source: Higher Education Research Institute Survey (1999)

How departments expect them to spend their time:
- Teaching: 20%
- Research: 175%
- “Service”: 20%

How Professors would like to spend their time:
- Don’t tell me what to do

WWW.PHDCOMICS.COM
The research career is highly competitive.

There are very few permanent positions, and short-term contracts are rarely extended.
The academic pyramid

With the world economy struggling, physics graduates might be tempted to ride out the recession by doing a PhD or postdoctoral research. But as Margaret Harris reports, the academic sector has its own career problems
Some compared academic research to a pyramid scheme that produces a tiny handful of "winners" and a huge number of "losers" in the scramble for permanent posts.
PhD graduates.

Short-term contracts

Careers outside science

Non-university Research (industry, government etc.)

53%

17%

26.5%

3.5%

0.45%

Permanent Research Staff

Professor

ERSA

PROFESSORS
PhD graduates

Careers outside science

Non-university Research (industry, government etc.)

Short-term contracts

53%

30%

26.5%

17%

3.5%

0.45%

Professor

Permanent Research Staff
The short-term contract cycle

- 2 year contract
- Get a position in a new country, leave your friends etc.
- Start applying for grants to cover future salary
- No work in your city, apply around the world
- Grant doesn’t cover salary – apply for jobs locally
- 6mth
- 1.5 year
- 1 year
While there are lots of roles the researcher engages in:

- Research
- Publishing
- Teaching
- Administration
- Reviewing Others Research
- Supervising postgrad students
- Preparing for and attending conferences
- Public outreach
Only some of the tasks a researcher engages in contributes to their job security:

1. Grants
2. Papers
3. A little teaching
In this highly competitive environment, there is no room for the “absent-minded professor”
I know you must think this is all very unfair.
So most researchers are overworked, stressed, and very time poor...

What does this mean for provisioning eResearch services?
Learning to use new eResearch technologies is a large time investment
Many researchers will be reluctant to invest time unless they are certain it will be worthwhile.
And short grant cycles means the time investment has to be worthwhile in the **short term**
And short grant cycles means the time investment has to be worthwhile in the short term.
There will be some who wish to invest properly in learning all about the technology.

**Reasons:**

1. They want to specialise in informatics in order to increase their attractiveness in the job market
There will be some who wish to invest properly in learning all about the technology.

**Reasons:**

2. They know they have to accept the technology in order to keep up, and they like to fully understand everything involved in their research.
But there will be plenty who only want to learn as much as they need to know in order to get by.
When planning workshops to teach how to use services:
1. Make them short and simple
When planning workshops to teach how to use services:
2. Make them modular
When discussing eResearch solutions with a researcher, they will be more willing to try it if:

- It is easy to learn
- It increases efficiency (saves them time)
- Allows them to be more competitive in their research
Understanding Researchers

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LANGUAGE
Research Engagement

A translation service between researchers and IT professionals
Each have their own specialised language

Each have to work out how to communicate complex information for people who are not knowledgeable in their field
Each are very intelligent, and specialists in their field.

Specialists usually don’t have the time (or desire, sometimes) to understand the intricacies of other specialised fields.
Researchers may be very competent in certain computer-based procedures that they engage in ...

...but lack general knowledge (and interest) in the language of information technology
IT services are a tool for researchers

Unless they are specialising in informatics, they rarely have the time or inclination to learn the jargon
• And this is OK
• This doesn’t mean they are unable to learn, or not worthy of using the technology
Because they are required to be experts in the tools that they use, communication should be:

• Accurate

• Direct

• Clear and Thorough
Don’t dumb it down or be condescending
Don’t confuse with jargon and irrelevant information
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TRUST
• In large institutions, streamlining services can be prioritised over solutions tailored to the needs of a project

• Academics can view IT services as obstructive rather than providers of useful services
For eResearch service providers that are outside the institutions:

- Be clear and open about costs
For eResearch service providers that are outside the institutions:

- Try not to “Sell” or advertise
- Instead **inform** with accurate information and develop open and honest relationships
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COMMUNICATION
Email is the best method

But...
Academic staff get a lot of emails

They are included in many email groups within the university

which will they read?
Academic staff get a lot of emails

They are included in many email groups within the university

And there are also a lot of emails from outside the institution
Plus a diverse array of genuine spam

Much of which is specific to research and academia
How to make your message not look like spam?

How to get your email noticed?
It’s all in the subject heading and email signature
• Email from a person, not the organisation
• State your organisation if it a personal address
• Email from the same person in a consistent way
Don’t look like an advertisement or a sales pitch

Avoid background html – just text

Put all relevant information in the first sentence
• Whenever you mention a date for an event, include the day of the week

• Highlight important information – white space and dot points
• To be honest, most of the time none of this will work

• Accept that there is a high probability your email will be discarded or lost and forgotten in a long email list

• Try to work around it, but accept that you will often have to repeat emails