

# Re-Connecting with Researchers: Assessing effectiveness of eResearch training



INTERSECT

A U S T R A L I A

Dr Frankie Stevens

# Research technology impact.



productivity



diversity



longevity

expertise

sharing



**Data**

solving



**Energy**

infrastructure



**Space**



**Time**

Lean on us

# May our force be with you

Power up your eResearch capability with expertise, consulting,  
software engineering and training from Intersect Australia



**Energy**

[.intersect.org.au](https://www.intersect.org.au)



# Membership

# Sector Training Needs

# Identifying Training Needs

## National

- **Cochrane's (2015)** NRCIS Status Report on eResearch Capabilities in Australia:  
Outreach and awareness raising  
Upskilling and eResearch training
- **ACOLA Report (2016)** Review of Australia's Research Training System:  
Digital competence for HDR students  
Provision of Transferable skills

## Member driven

- Member Requests
- Consultation

## Preemptive

- Anticipating key skills relevant to the digital revolution



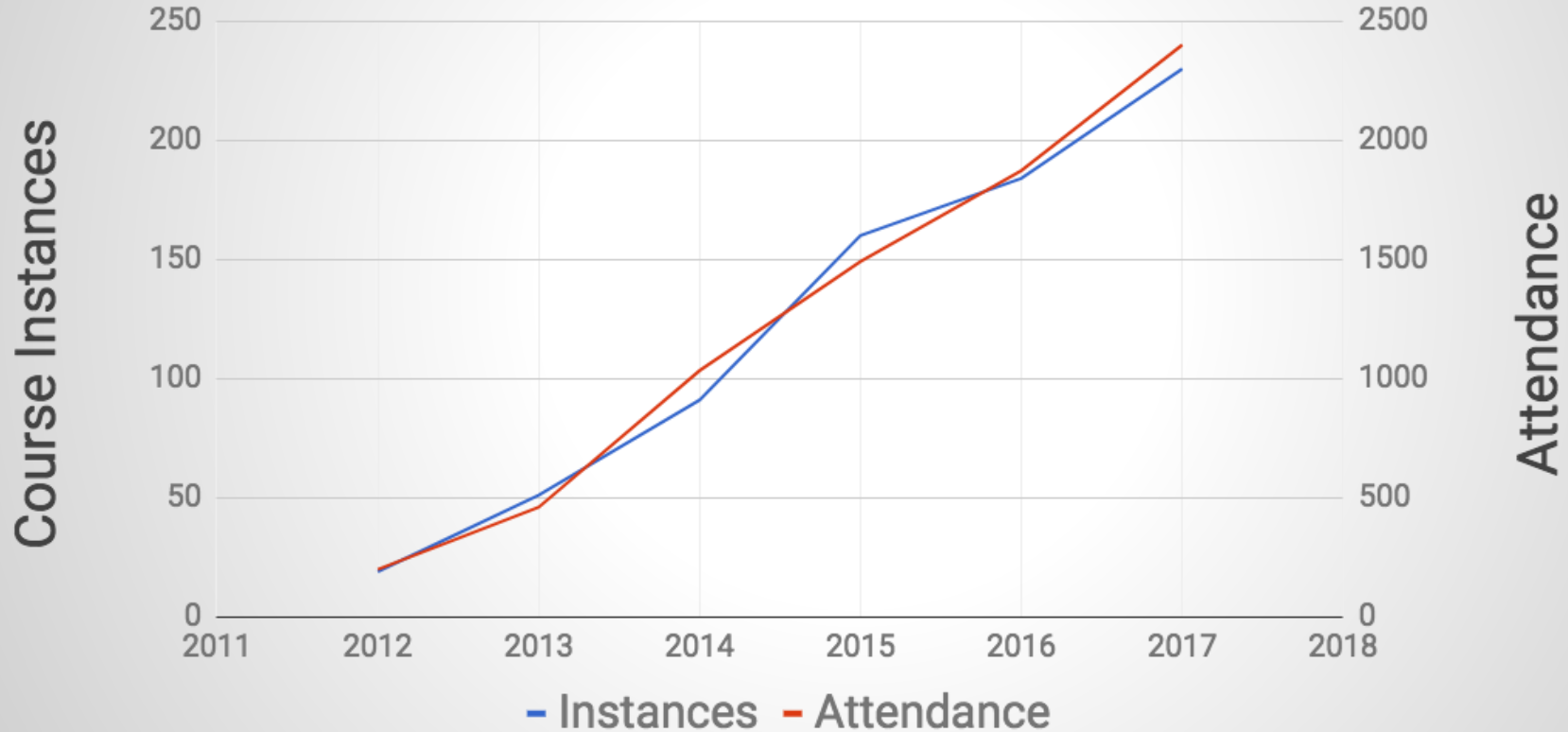
# Learn

[.intersect.org.au](https://www.intersect.org.au)

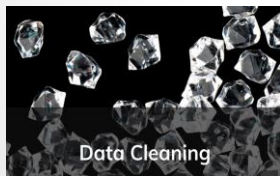
## Training Capability



# From little things...



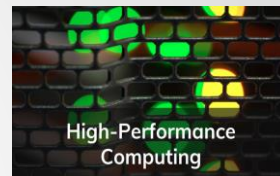
## Data



## Software



## Compute



# Learn

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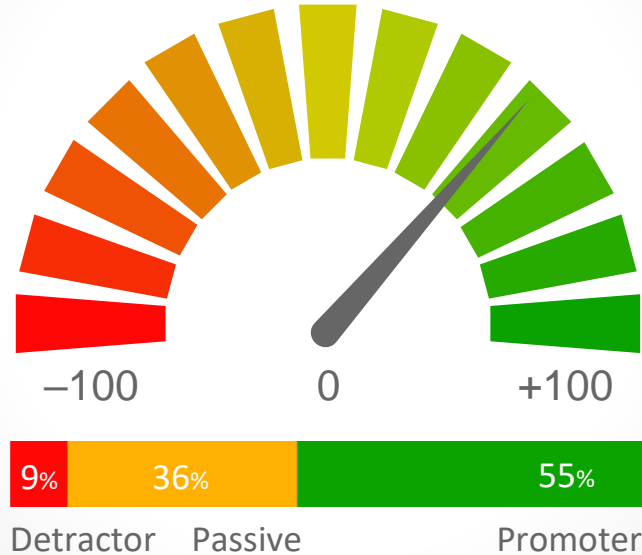


# Hands On

# Assessing Researcher Benefit

# Would you recommend this course?

On a scale from 0...10  
the respondent percentage  
answering 9-10 'promoters'  
less those answering 0-  
6 'detractors'.



## +46

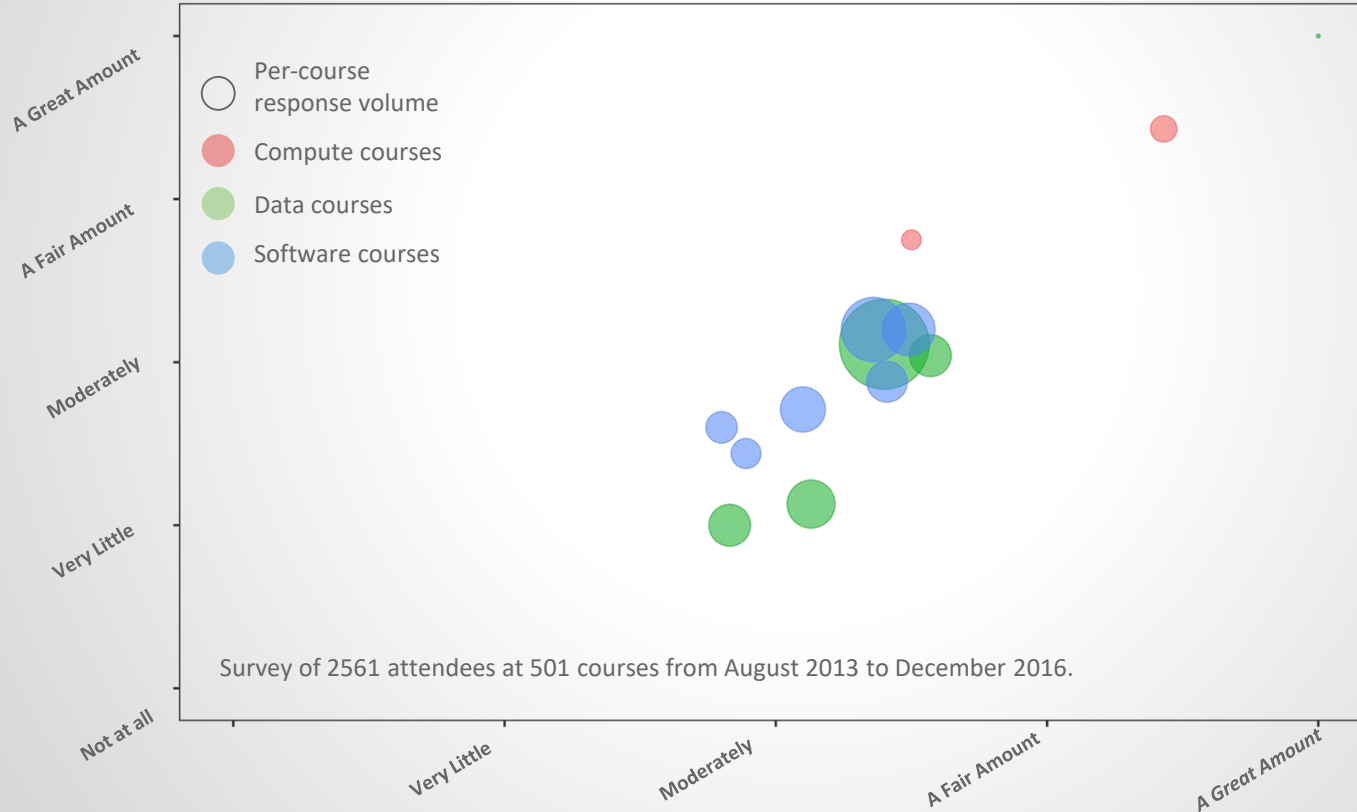
Net Promoter Score  
2017 courses YTD  
(+50 is considered excellent)

# Follow-up Survey

- To what extent has your **confidence** in using “X” improved as a result of taking this course?
- To what extent has your **use** of “X” increased since taking this course?
- **Open** Feedback

# Quantitative Survey Results

To what extent has your **confidence** in using “X” improved as a result of taking this course?



To what extent has your **use** of “X” increased since taking this course?

# Qualitative Survey Results

“The programs were great. They provided a **very good first immersion** into the software”

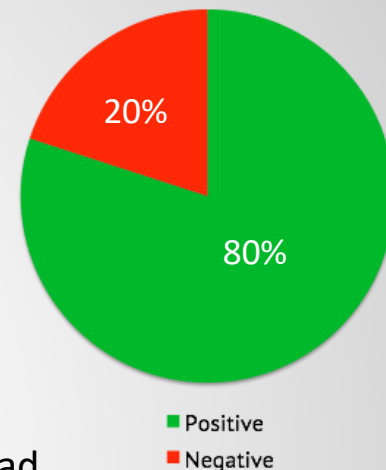
“The training was good/useful in keeping me up touch with available freeware opportunities and it **didn't take up too much of my time.**”

“The training course has been **very informative and interactive!** It had been useful for my research by upgrading my knowledge I have become **faster at getting results.**”

“The workshops were excellent, and gave me a **real understanding of alternative methods**, which I am preparing to tackle now.”

“The training was **fantastic**, as was **the presenter and his assistants**”

“I had a lot of **trouble keeping up** with the instructor... Very **frustrating** for a techno dinosaur!”





# Responding to Feedback

# Course Development

“The course was great ... but my research **doesn't** fall into using the **Google Fusion Table**.”



**Data Visualisation with Google Fusion Tables**

2.5 hours No Prerequisites At your campus No cost to members

**Why do this course?**

Have you got data in different forms that you want to compare directly? Do you want to show your data in a map to improve your research message?

This workshop is an introduction to data visualisation techniques using hands-on activities in Google Fusion Tables. The course is ideal for participants who work with larger data sets and want to convey their research outcomes clearly and persuasively in a visual manner. By merging geospatial data and crime statistics to create a heat map, participants will gain skills in visualisation that they can apply to their research.

**You'll learn how to:**

- Import data into Google Fusion Tables
- Merge multiple data sets in Fusion Tables
- Create interactive heatmaps on a Google Map
- Vary the way the visualisation is presented in Fusion Tables

**Preparation**

Google Fusion Tables is an experimental Google Drive app. A personal Gmail account is required to participate in this course. Institutional accounts, such as those at universities, will not work.

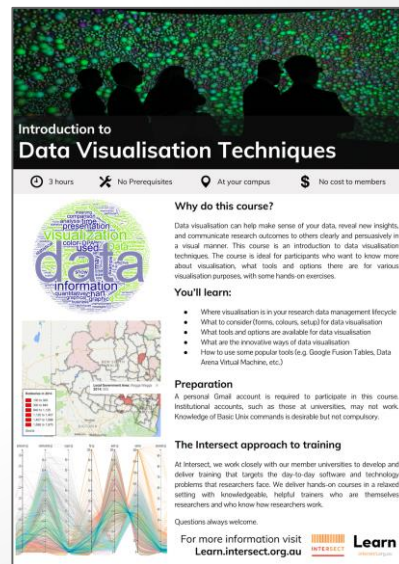
**The Intersect approach to training**

At Intersect, we work closely with our member universities to develop and deliver training that targets the day-to-day software and technology problems that researchers face. We deliver hands-on courses in a relaxed setting with knowledgeable, helpful trainers who are themselves researchers and who know how researchers work.

Questions always welcome.

For more information visit [Learn.intersect.org.au](http://Learn.intersect.org.au)

Upgraded to



**Introduction to Data Visualisation Techniques**

3 hours No Prerequisites At your campus No cost to members

**Why do this course?**

Data visualisation can help make sense of your data, reveal new insights, and communicate research outcomes to others clearly and persuasively in a visual manner. This course is an introduction to data visualisation techniques. The course is ideal for participants who want to know more about visualisation, what tools and options there are for various visualisation purposes, with some hands-on exercises.

**You'll learn:**

- Where visualisation is in your research data management lifecycle
- What to consider (forms, colours, text) for data visualisation
- What tools and options are available for data visualisation
- What are the innovative ways of data visualisation
- How to use some popular tools (e.g. Google Fusion Tables, Data Arena Visual Machines, etc.)

**Preparation**

A personal Gmail account is required to participate in this course. Institutional accounts, such as those at universities, may not work. Knowledge of Basic Unix commands is desirable but not compulsory.

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# Difficulty Development

“This is a training that needs to repeated and  
more advanced courses offered.”

**Introduction to Programming in R**

1 day No Prerequisites

**Why do this course?**

R is quickly gaining popularity as a programming language of choice for statisticians, data scientists and researchers. It has an excellent ecosystem including the powerful RStudio development environment and the Shiny web application framework.

But getting started with R can be challenging, particularly if you've never programmed before. That's where this introductory course comes in.

**You'll learn:**

- Programming concepts and techniques.
- Basic syntax, control structures and data types in R.
- How to load external data into R.
- Ways to visualise data.
- How to use factors for category data.
- Best practices for writing code in R.

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*Introductory*

Complimented  
by

**Intermediate to Advanced Programming in R**

1 day Prerequisites (see below)

**Why do this course?**

R is quickly gaining popularity as a programming language for statisticians, data scientists and researchers. It has an excellent ecosystem including the powerful RStudio and the Shiny web application framework.

We teach using RStudio, which allows program code, results, visualisations and documentation to be blended seamlessly.

Join us for this live coding workshop where we write programs that produce results, using the researcher-focused training modules from the highly regarded Software Carpentry Foundation (<http://www.datacarpentry.org/>).

**You'll learn:**

- Advanced programming concepts and techniques in R.
- Database manipulation in R using the dplyr and tidyr packages.
- Visualisation in R using the ggplot2 package.
- Best practices for writing code in R using RStudio.

**Prerequisites**

A good knowledge of the basic concepts and techniques in R. Consider taking our **Introduction to Programming in R** course to come up to speed beforehand.

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*Intermediate to Advanced*

# Member Requests



The screenshot shows a course page for 'Managing Data Capture and Surveys with REDCap'. The header features a background image of a survey form with checkboxes labeled 'Yes' and 'No'. Below the header, the course title is displayed. The page includes a metadata section with icons for duration (3 hours), prerequisites (None), location (At your campus), and cost (No cost to members). The 'Why do this course?' section describes the course's focus on REDCap, a web-based tool for secure data collection and management. The 'You'll learn how to:' section lists key skills such as getting started with REDCap, creating projects, designing forms, and entering data. The 'The Intersect approach to training' section highlights the hands-on, practical nature of the course. At the bottom, there is a table of contents and a footer with contact information for Learn Intersect.

**Managing Data Capture and Surveys with REDCap**

3 hours No Prerequisites At your campus No cost to members

**Why do this course?**

Would you like to enable secure and reliable data collection forms and manage online surveys? Would your study benefit from web-based data entry? Research Electronic Data Capture (REDCap) might be for you.

This course will introduce you to REDCap, a rapidly evolving web tool developed by researchers for researchers. REDCap features a high level of security, and a high degree of customizability for your forms and advanced user access control. It also features free, unlimited survey distribution functionality and a sophisticated export module with support for all standard statistical programs.

**You'll learn how to:**

- Get started with REDCap
- Create and set up projects
- Design forms and surveys using the online designer
- Define basic branching logic
- Enter data and distribute surveys
- Set up basic longitudinal projects

**The Intersect approach to training**

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*Coming soon...*

**SPSS®**

# HDR Digital Research Program

- Introduction to Digital Research
- Research data management
- Your Digital Footprint
- Citizen Science
- Big Data
- Database concepts



"Brilliant" "Exceeded expectations" "Excellent"



**“UNSW leverages the full range of Intersect's specialised eResearch training. We partner to schedule annual training calendars and have seen year on year growth in courses offered and attendance numbers. Our researchers experience consistent, high quality, research-relevant courseware delivered professionally. These courses are an important part of UNSW being a world-class research university with excellent support services.”**

**Luc Betbeder-Matibet**  
**UNSW Director Research Technology Services**



**UNSW**  
SYDNEY

## For **Member** Organizations

- Ask your eResearch Analyst
- Contact our Training Team [training@intersect.org.au](mailto:training@intersect.org.au)
- Visit [Learn.intersect.org.au](https://Learn.intersect.org.au)

## For **Non-Member** Organizations

- Contact our Training Team [training@intersect.org.au](mailto:training@intersect.org.au)
- Visit [Learn.intersect.org.au](https://Learn.intersect.org.au)

**Need  
training?**

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Intersect