Assessing the effectiveness of training: *Teaching digital skills to researchers*

Presented by Pablo Franco

THE UNIVERSITY OF MELBOURNE

Centre for Brain, Mind and Markets

OUTLINE

THEORETICAL FRAMEWORK

EXPERIENCE

BEYOND LEARNING
OBJECTIVES:

ASSESSING IMPACT

THEORETICAL FRAMEWORK:

KIRKPATRICK MODEL OF TRAINING EVALUATION

REACTION:
How learners react to the training; the relevance and usefulness of the training

LEARNING:
The knowledge and skills gained by learners. Were the learning objectives met?

BEHAVIOUR:
Is the learner performing research differently?

RESULTS:
Measure the impact; institutional outcomes.

Kirkpatrick (1976); Kirkpatrick & Kirkpatrick (2006)

THEORETICAL FRAMEWORK:

KIRKPATRICK MODEL OF TRAINING EVALUATION

+

OUTREACH

1. OUTREACH:

Extent to which the training is being deployed

2. REACTION:

How learners react to the training; the relevance and usefulness of the training

3. LEARNING:

The knowledge and skills gained by learners. Were the learning objectives met?

4. BEHAVIOUR:

Is the learner performing research differently?

5. RESULTS:

Measure the impact; institutional outcomes.

RESBAZ EXPERIENCE AT UNIMELB

1. OUTREACH

Number of researchers

Diversity of researchers (e.g., disciplines, career stage)

Extent of interaction

- E-learning: Number of views
- Face-to-face: Total student-hours delivery

2. REACTION

Post-training surveys: Quantitative and qualitative

3. LEARNING

During-training exercises and quizzes (Kahoot, Pollev)

4. BEHAVIOUR

Interviews with students.

How to assess impact objectively?

3. LEARNING

- Pre- and post-training tests.

4. BEHAVIOUR

- Surveys/interviews with stakeholders: Supervisors, Colleagues, IT teams.

5. RESULTS

- Improvement in the efficiency of output generation (e.g., quantity of publications?)
- Improvement in the novelty and/or quality (e.g., citations?, Altmetric of papers?)
- Encourage explicit acknowledgement of training (like funding acknowledgements)

REFERENCES

- Kirkpatrick, D. L. (1976). Evaluation of training. In R. L. Craig (Ed.), Training and development handbook: A guide to human resource development (2nd ed., pp. 301–319). New York: McGraw-Hill.

- Kirkpatrick D. L, & Kirkpatrick J. D. (2006). Evaluating training programs: The four levels (3rd ed.). Berrett-Koehler Publication.

Thank you! Questions/Comments?

How do YOU assess training impact?

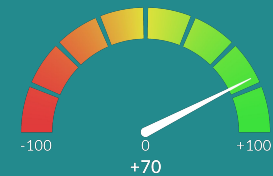Please do get in touch to discuss this and related topics.
Would like to hear from you.

EMAIL: jpfranco@unimelb.edu.au

Twitter: @jpablofranco

INTERSECT TRAINING 2022

HISTORICAL TRENDS

EVALUATION

How likely is it that you would recommend Intersect training courses to colleagues?

😀 **Promoters:** 9 - 10
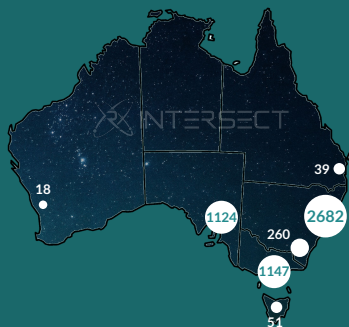😐 **Passives:** 7 - 8
☹ **Detractors:** 0 - 6

Net Promoter Score = %**Promoters** - %**Detractors**

-100 · 0 · +100
+70

Based on 2521 survey responses

QUALITY

	Average
Welcoming atmosphere	9.3
Comfortable interacting	9.2
Knowledgable instructors	9.3
Clear answers	9.1
Good communicators	9.1

Average (0-10 Scale, (0: Not at all, 10: Extremely))
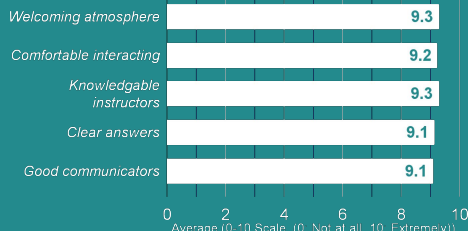
ATTENDANCE

2022 ATTENDANCE PER STATE

18
1124
2682
260
39
1147
51

+343 participants from national organisations.

298 COURSES
Online

2 COURSES
In Person

5620 ATTENDEES
Online

44 ATTENDEES
In Person

4419 ATTENDEES
At their local university

1245 ATTENDEES
At other Intersect members

REASON FOR ATTENDING
>80% of participants register to Intersect training to **learn skills that they can apply to their work now or in the future**
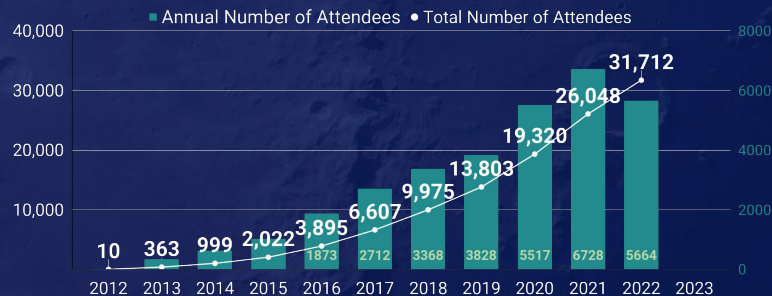
Tool/Technology	Number of Attendees
R Programming	1532
Python Programming	1407
NVivo	532
MS Excel	527
REDCap	431
Qualtrics	269

ATTENDANCE

Legend: ▪ Annual Number of Attendees ● Total Number of Attendees

Year	Total	Annual
2012	10	
2013	363	
2014	999	
2015	2,022	
2016	3,895	1873
2017	6,607	2712
2018	9,975	3368
2019	13,803	3828
2020	19,320	5517
2021	26,048	6728
2022	31,712	5664
2023		

EVALUATION

Legend: ▪ Annual NPS ● Average NPS

Year	Average NPS	Annual NPS
2017	46	46
2018	49	51
2019	52	58
2020	58	70
2021	63	75
2022	64	70
2023		

Net Promoter Score
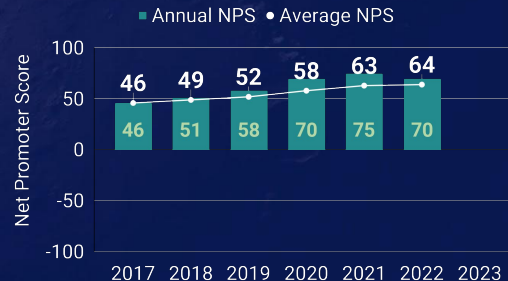
For more information about Intersect Training please contact us at
training@intersect.org.au

Training at scale

Learn

- ■ Annual Number of Attendees
- ● Total Number of Attendees

Year	Annual Number of Attendees	Total Number of Attendees
2012		10
2013		363
2014		999
2015		2,022
2016	1873	3,895
2017	2712	6,607
2018	3368	9,975
2019	3828	13,803
2020	5517	19,320
2021	6728	26,048
2022	5664	31,712
2023		
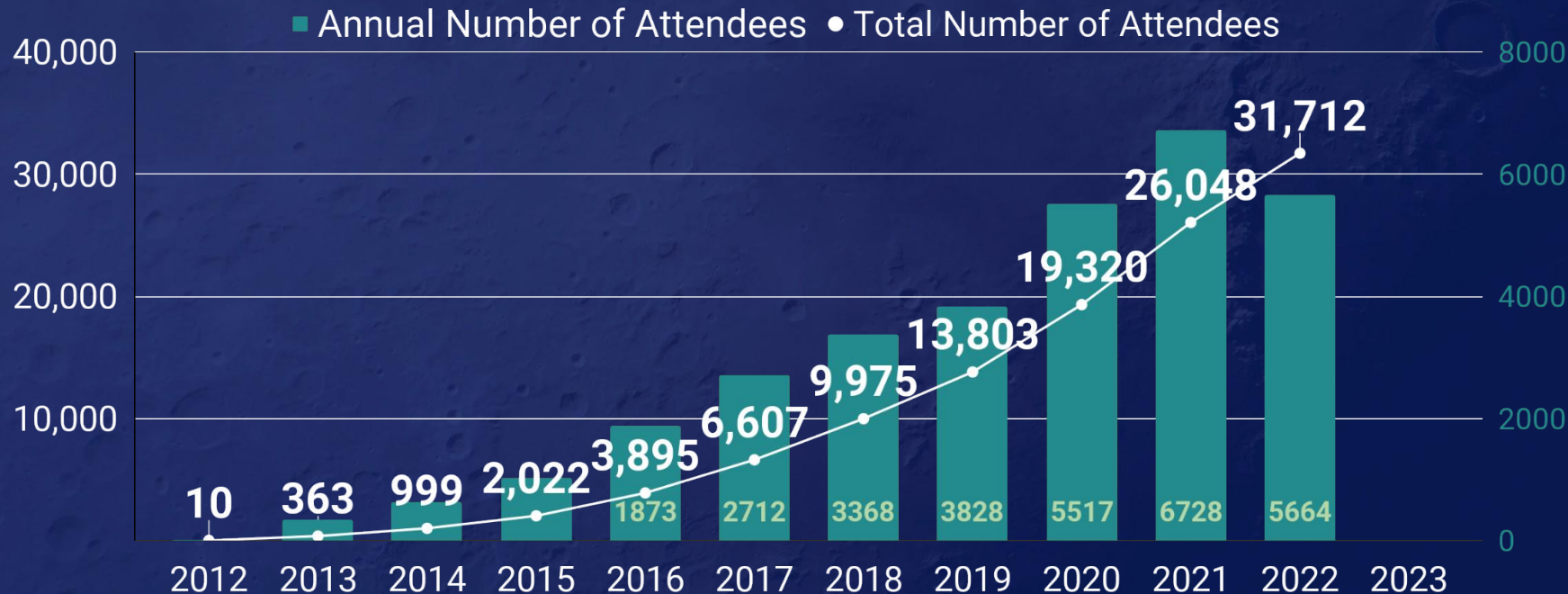
People

- Digital Research Analysts
- Training Admin Team (subcommittee of DRAs)
- Digital Research Trainers

People – Digital Research Trainers

Learn

Ali Afrasiabi
Digital Research Trainer
E: training@intersect.org.au

Charlotte François
Digital Research Analyst - University of Adelaide
E: charlotte@intersect.org.au

Gavin Cooper
Digital Research Trainer
E: training@intersect.org.au

Sesa Singha Roy
Digital Research Trainer
E: training@intersect.org.au

Soujanya Narayana
Digital Research Trainer
E: training@intersect.org.au

Heela Popal
Digital Research Trainer
E: training@intersect.org.au

Laura Haidar
Digital Research Trainer
E: training@intersect.org.au

Natalie Wall
Digital Research Trainer
E: training@intersect.org.au

Susan Luo
Digital Research Trainer
E: training@intersect.org.au

Thomas Michael Kabelitz
Digital Research Trainer
E: training@intersect.org.au

Ravikiran Parameshwara
Digital Research Trainer
E: training@intersect.org.au

Seng Hansun
Digital Research Trainer
E: training@intersect.org.au

Seren Gulucak
Digital Research Trainer
E: training@intersect.org.au

Stanislav Pozdniakov
Digital Research Trainer
E: training@intersect.org.au

Toyin Abdulsalam
Digital Research Trainer
E: training@intersect.org.au

Learn

Scale can only (maybe) be achieved through:

- Mature systems for managing the minutiae
- A workforce of trainers that are remunerated for their efforts providing continuity

BUILDING COMMUNITY

Skills Summit 2023

09 Feb 2023

PRESENTED BY

DR PAULA ANDREA MARTINEZ
0000-0002-8990-1985
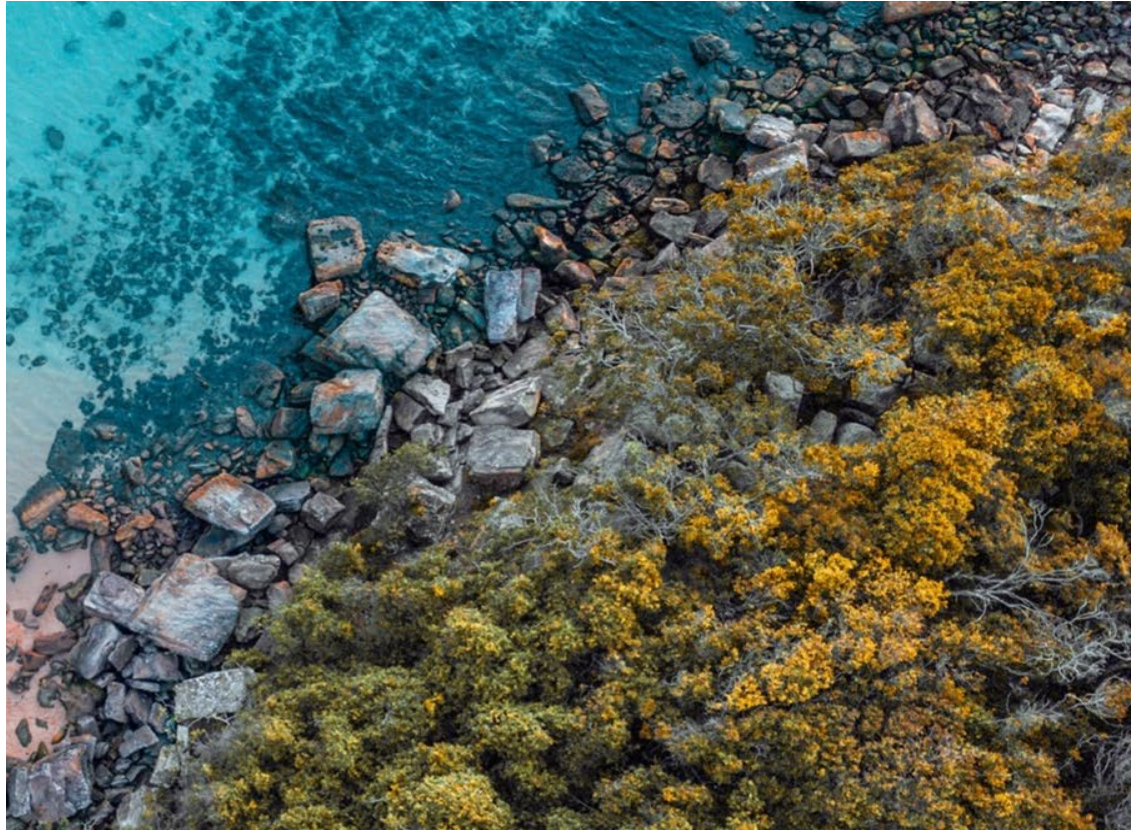Software Project Coordinator
Australian Research Data Commons
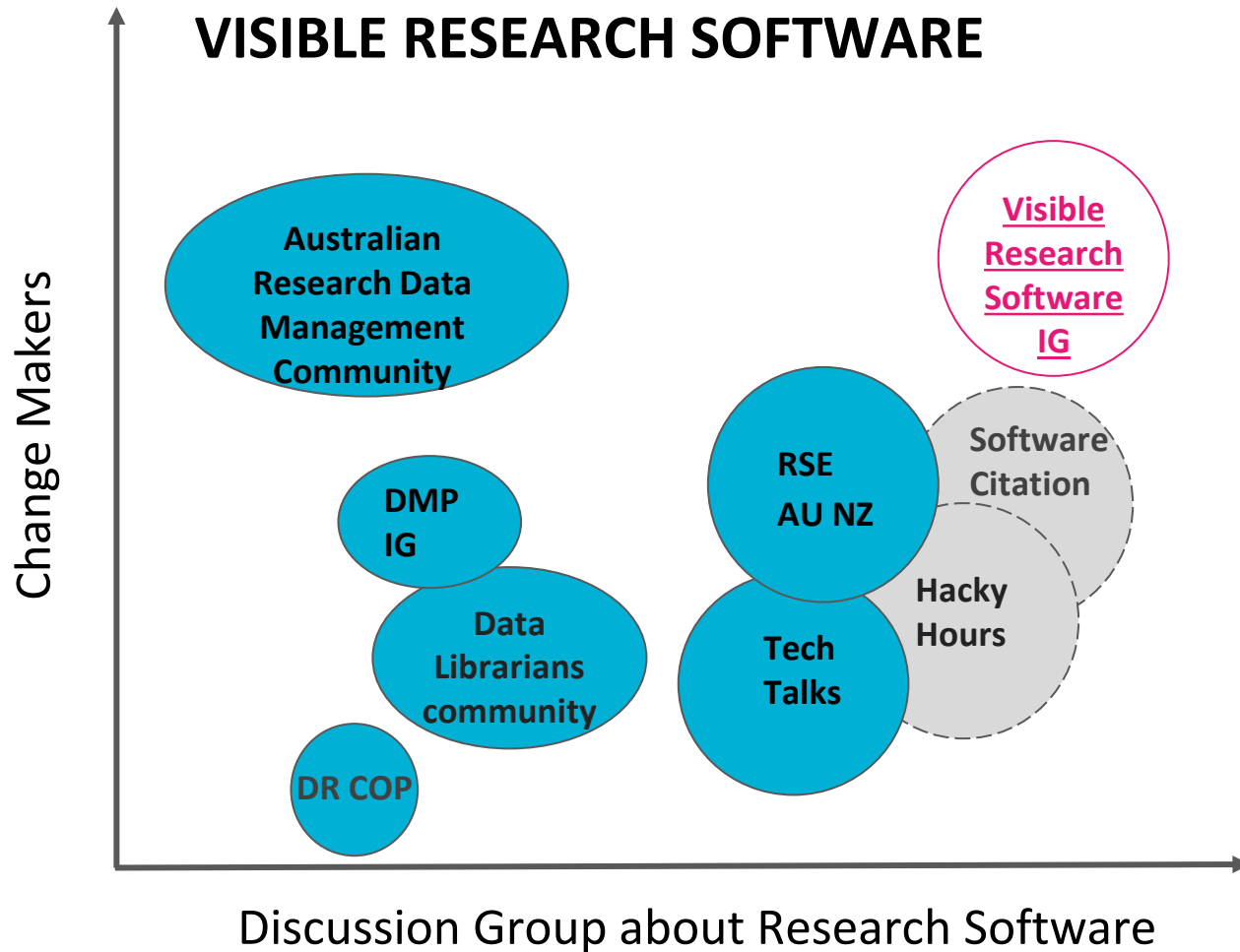
paula.martinez@ardc.edu.au

DOI:

ACKNOWLEDGEMENT OF COUNTRY

We acknowledge and celebrate the First Australians on whose traditional lands we meet, and we pay our respect to their elders past, present and emerging.

VISIBLE RESEARCH SOFTWARE

Change Makers

Australian Research Data Management Community

Visible Research Software IG

DMP IG

RSE AU NZ

Software Citation

Data Librarians community

Hacky Hours

Tech Talks

DR COP

Discussion Group about Research Software

VRS IG was formed to affect change: boosting the visibility of research software to improve how it is cited, published and FAIR

COMMUNITIES COME IN DIFFERENT SIZES AND COLOURS

Communities of practice, task forces, project teams, quality circles, steering committees, special interests groups, working groups, focus groups, study groups, you name it.

Tackle challenges via a group of individuals

COMMUNITY BUILDING IDEAS

Shared Knowledge	Community Production/ co-develop-ment	Disseminate /Amplify	Deliberate Coordination

| Create rapport | Influence/ Seek to transcend | Participative, interactive, spirited and fun | Motivate eager participation / celebrate | Inclusive | Non-linear |

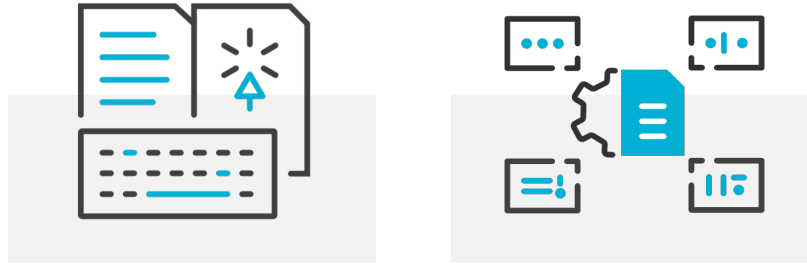| Resourcing | Enable different models of participation | Individual value / incentives | Champions/ ambassadors / advocates | Code of Conduct | Look back to move forward |

LOOK BACK TO MOVE FORWARD

- Visible Research Software Interest Group - VRS IG
  https://sites.google.com/ardc.edu.au/visible-
  research-software
- Attracted the right audience, by clearly stating who
  should join the group.
- Created an open online discussion forum to discuss
  actions in a public and transparent way.
- Proactive to change, try new things.
- Celebrated small victories!

  https://doi.org/10.5281/zenodo.5637353 and

  https://doi.org/10.5281/zenodo.7340034
DOI:

USEFUL RESOURCES

ARDC https://ardc.edu.au/get-involved/communities-and-groups
Feverbee https://www.feverbee.com/?s=community+building
The Center for Scientific Collaboration and Community Engagement (CSCCE)
https://www.cscce.org/
Carpentries https://carpentries.org/community/

Subscribe to the
ARDC CONNECT
newsletter

THANK YOU

🌐 ardc.edu.au

✉️ contact@ardc.edu.au

📞 +61 3 9902 0585

🐦 @ARDC_AU

in Australian-Research-Data-Commons

Bringing Training to Research Communities

Mark Crowe, QCIF Skills Development Manager

ResBazQld
RESEARCH BAZAAR 2022

Bringing Training Communities to Research

QCIF

qcif.edu.au   #QCIF