

# Action research: Collecting and analysing data

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IATEFL ReSIG webinar

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# Outline for this webinar

- Introduction to action research
- **Collecting data**
- **Analysing data**
- Links to useful resources

\* If you are interested in the initial stages of planning an action research project, please also see the ReSIG webinar recording 'Getting started with action research':

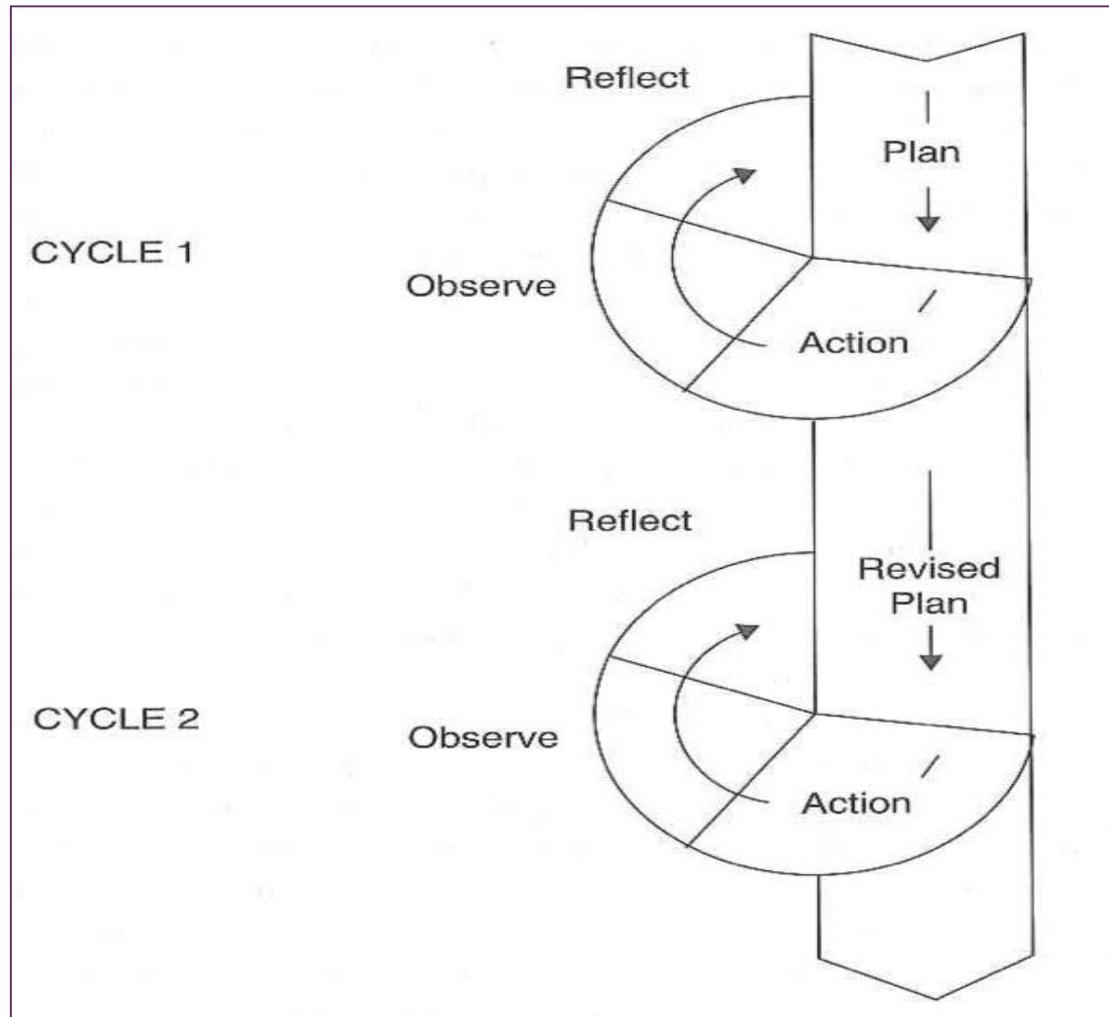
<http://resig.weebly.com/webinar-by-emily-edwards1.html>

# Introduction to action research

# What is action research?

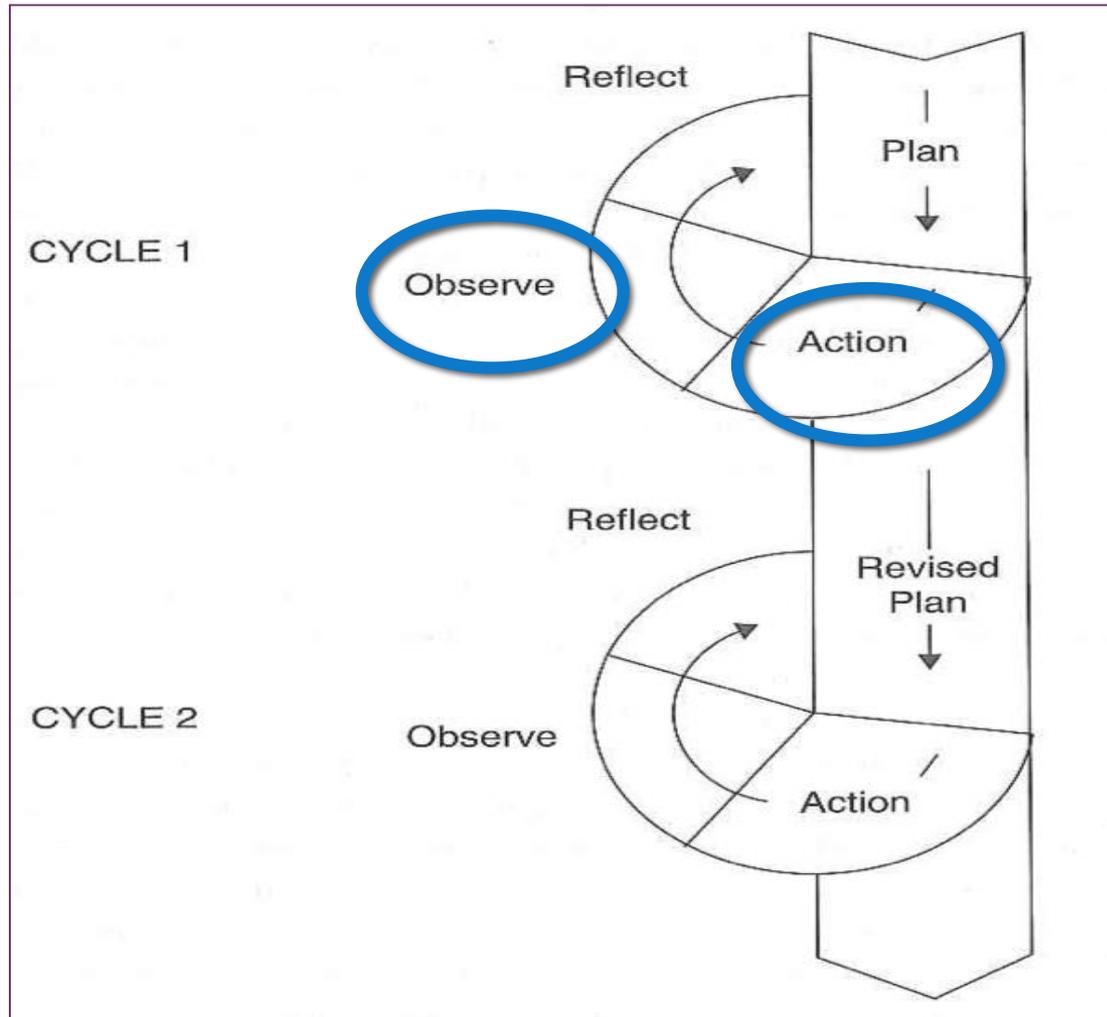
- Action research “involves taking a **self-reflective, critical** and **systematic** approach to exploring your own teaching contexts.” (Burns, 2010, p.2)
- “Action research is a form of practitioner research which is characterized by particular procedures, which broadly involve the **introduction and evaluation of new practices**, typically through a **number of cycles.**” (Borg, 2010, p.394)

# Action research cycles



Kemmis &  
McTaggart's  
action research  
spiral  
(Burns, 2010, p.9)

# Action research cycles



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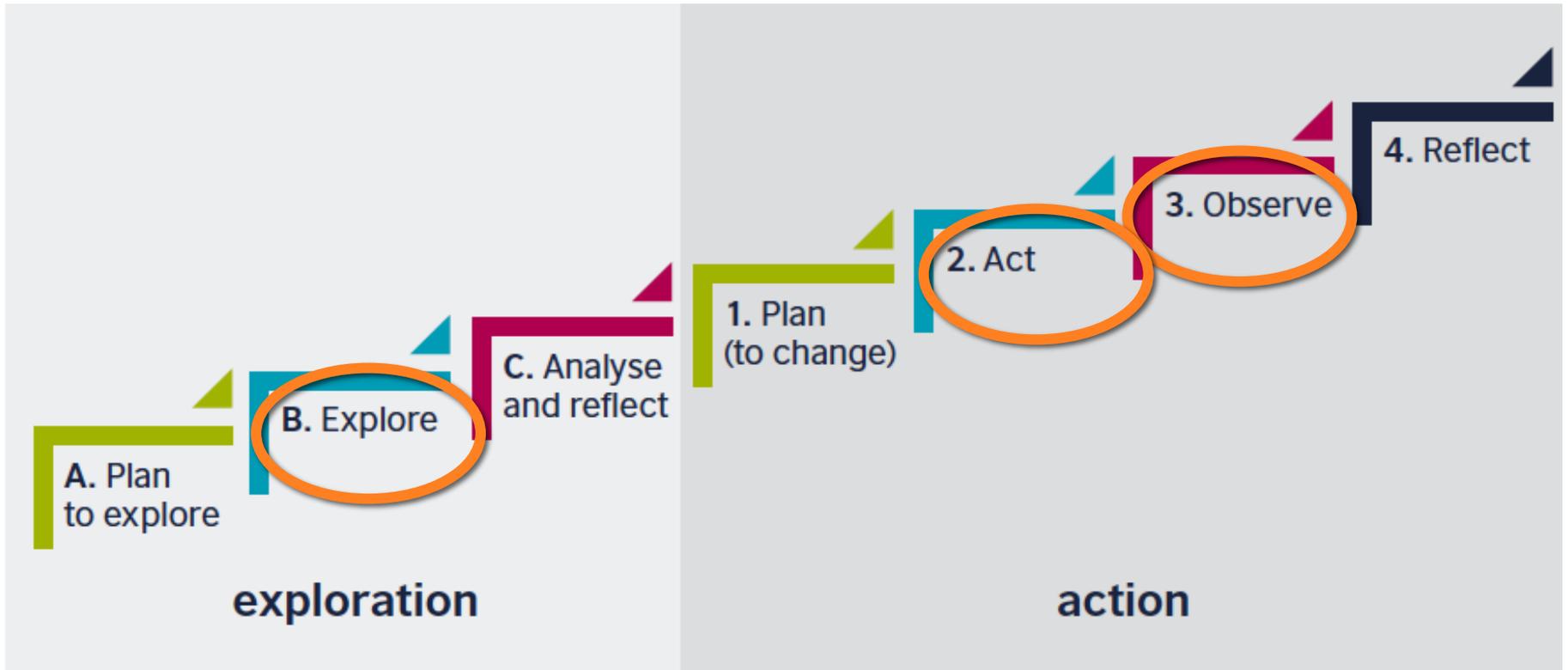
# Exploratory action research

= when exploratory research is followed by action research



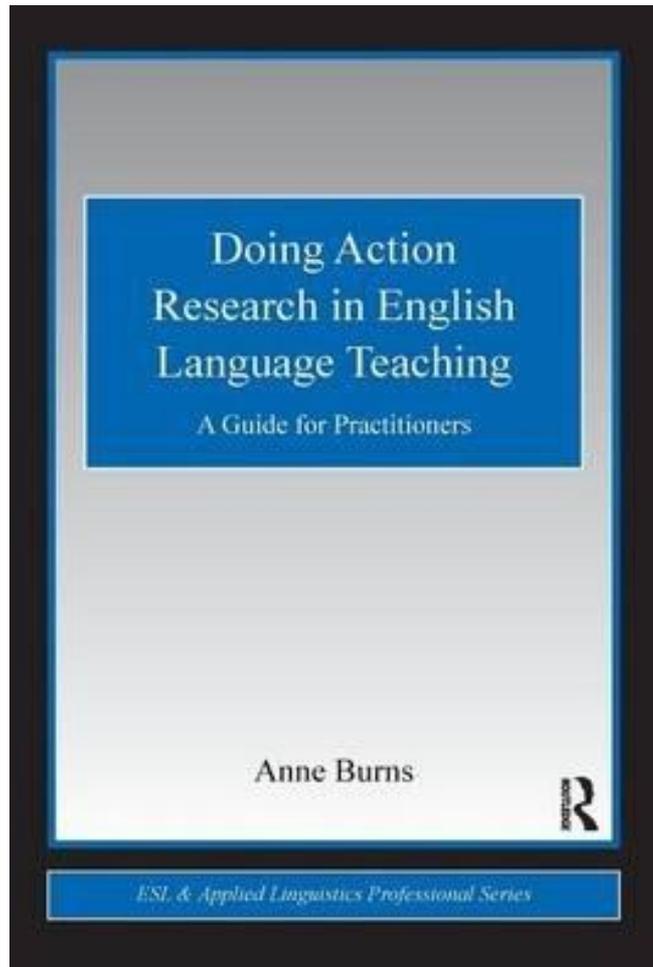
(Smith & Rebolledo, 2018, p.27)

# Exploratory action research



(Smith & Rebolledo, 2018, p.27)

# Action research resource



Burns, A. (2010). *Doing action research in English language teaching: A guide for practitioners*. New York & London: Routledge.

# Exploratory action research resource

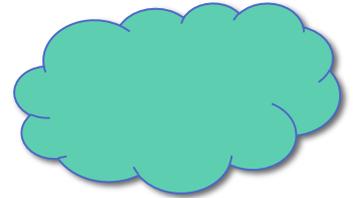
Smith, R. & Rebolledo, P. (2018). *A handbook for exploratory action research*. London: British Council.

<https://www.teachingenglish.org.uk/article/a-handbook-exploratory-action-research>



# Collecting data

# How familiar are you with collecting and analysing action research data?



- A. I don't know much about this at all
- B. I know a bit about this but need more examples and/or explanations
- C. Quite confident – I have a plan for collecting and analysing data but am interested in knowing more
- D. Confident – I have collected and analysed action research data before

# Types of data

Surveys

Focus groups

Interviews

Assessment scores

Observations

Samples of student work

Pre and post-tests

Teachers' diary/  
reflection notes

Any others?

# How do I know which types of data to collect?

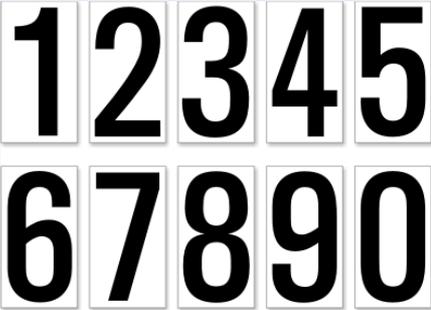
Think  
about...

- What do I need to 'see' to answer my research questions?
  - How can I combine information from a few different sources?
  - What is practical and time-efficient in my context?
- Think about the distinctions between different data collection types on the next few slides...

# Ways of thinking about data

- 1) Qualitative vs. quantitative
- 2) Perceptions vs. behaviour
- 3) Observation vs. non-observation

# 1) Qualitative vs. quantitative

Type of data	Examples
<b>Qualitative</b> 	interviews, focus groups, open-ended surveys, observation notes, photos, teacher's diary, analysis of student work
<b>Quantitative</b> 	closed question surveys, analysis of assessment scores, observation with tally or scores

## 2) Perceptions vs. behaviour



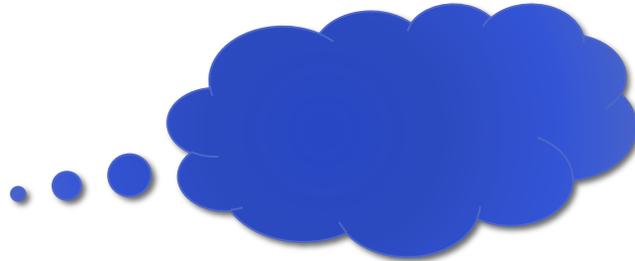
(Smith & Rebolledo, 2018, p.53)

### 3) Observation vs. non-observation

Observation: What do I need to see?	Non-observation: What do I need to know?
<p><b>Examples:</b></p> <ul style="list-style-type: none"><li>• Audio or video recordings of classroom interactions</li><li>• Observation by teacher or colleague on particular aspects of classroom action</li><li>• Maps or layouts of the classroom that trace the interactions between students and teachers</li></ul>	<p><b>Examples:</b></p> <ul style="list-style-type: none"><li>• Interviews</li><li>• Class discussions/focus groups</li><li>• Surveys</li><li>• Diaries, journals</li><li>• Classroom documents – e.g. materials, samples of student writing, assessments, self-evaluations</li></ul>

(Burns, 2010, p.57)

# What ideas do you have so far...?



- Which types of data are you thinking about collecting in your action research project?
- Why have you chosen those types?

# Example 1: Mauro, Chile

How do my students behave when they are sitting individually?

How does the seating arrangement affect individual work?

How do students feel about individual work?



(Smith & Rebolledo, 2018)

# Example 1: Mauro, Chile



How do my students behave when they are sitting individually?

- Observation by colleagues
- Video-recording of class

How does the seating arrangement affect individual work?

- Student surveys

How do students feel about individual work?

(Smith & Rebolledo, 2018)

## Example 2: Kerry & Jade, Australia



How can **social networking media** be used to facilitate students' **critical engagement** with **extensive reading** of the news in English?

## Example 2: Kerry & Jade, Australia



- Student surveys

How can **social networking media** be used to facilitate students' **critical engagement** with **extensive reading** of the news in English?

- Facebook user engagement data

- Video recordings of class discussions

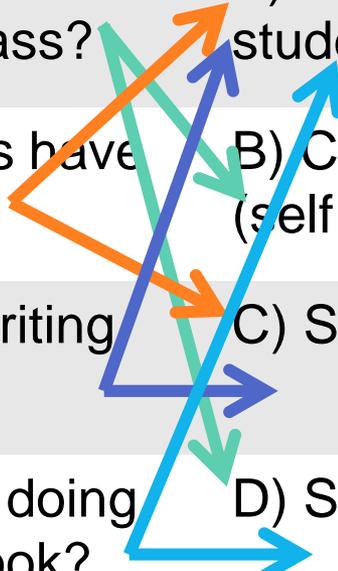
- Teacher journals

# Match the following research questions with possible data collection methods

Research question	Data collection method
1) Why is it that my students seem reluctant to speak in English in class?	A) Focus groups with students
2) What difficulties do my students have with the class listening activities?	B) Classroom observation (self or peer)
3) How does blogging help with writing fluency and creativity?	C) Student work samples
4) How do my students feel when doing grammar activities from the textbook?	D) Student survey

# Match the following research questions with possible data collection methods: **Answers**

Research question	Data collection method
1) Why is it that my students seem reluctant to speak in English in class?	A) Focus groups with students
2) What difficulties do my students have with the class listening activities?	B) Classroom observation (self or peer)
3) How does blogging help with writing fluency and creativity?	C) Student work samples
4) How do my students feel when doing grammar activities from the textbook?	D) Student survey



# Tips for collecting data

- 1) Consider what forms of data collection are most appropriate for your **context**
- 2) Try to integrate data collection into your **normal teaching**
- 3) Collect data from **multiple sources**
- 4) Ask **colleagues** to assist
- 5) Plan ahead for the **equipment** you may need (e.g. recording devices)
- 6) Plan ahead and **'test' your data collection tools** (e.g. survey questions, audio recorder) with a colleague first

# Surveys, focus groups and interviews



- Surveys can have **closed-ended items** (e.g. yes/no, rating scales, multiple choice) and **open-ended items** (short response)
- Consider the survey layout, length and format (paper or online) carefully



- Interviews and focus groups are often **semi-structured** with a list of pre-designed questions, but they can also be more open-ended and flexible

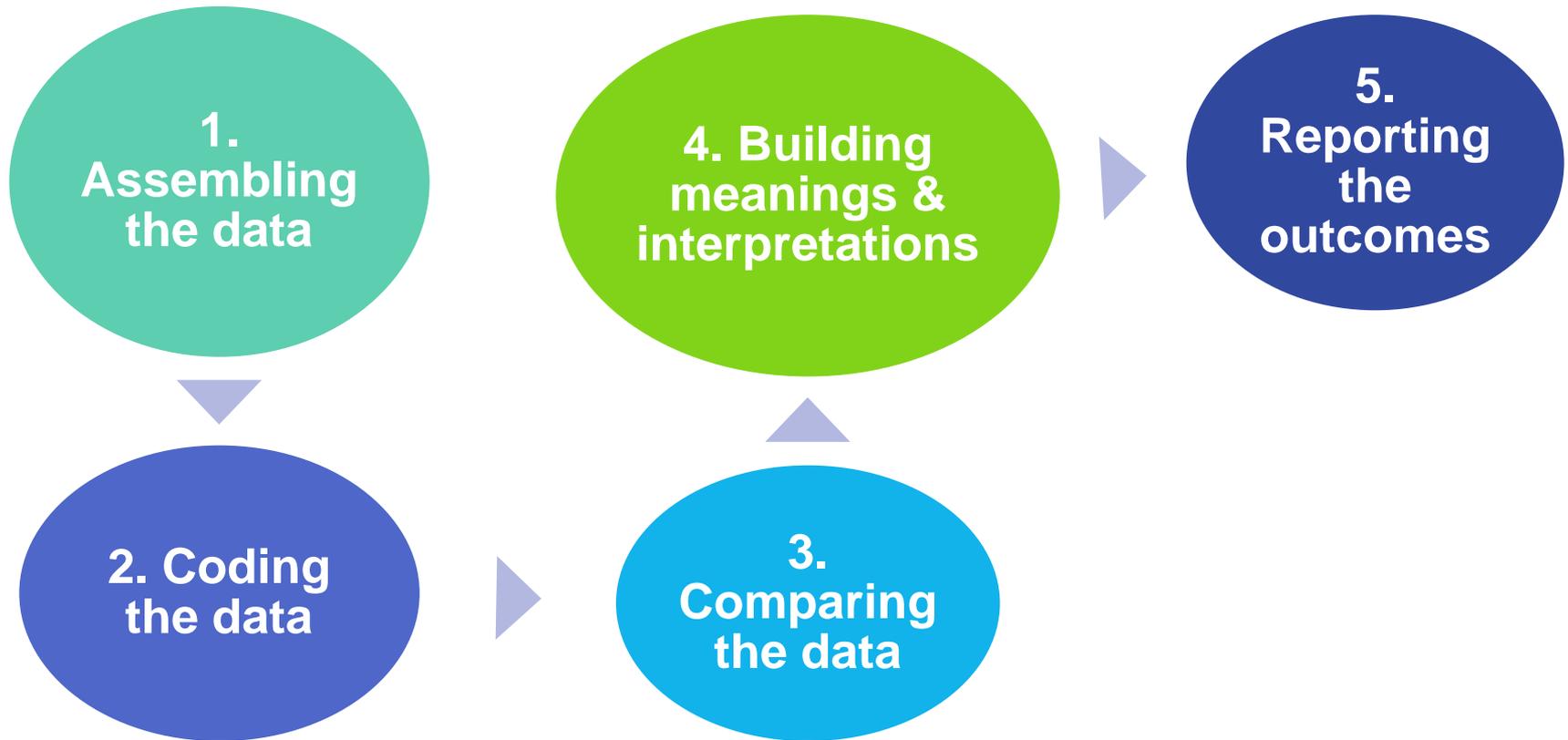
# Classroom observations

- Peer observation or self-observation?
- Observation sheets (e.g. behavior checklist or events checklist)?
- Observation notes (reflective, analytical, narrative)?
- Recording and transcribing – how?
- Maps and photographs?



**Analysing data =**  
**Organising the data**  
**+ Interpreting the data**

# A framework for analysis



(Burns, 2010, p.104-105)

# Organising qualitative data

- **Focus group/interview data**: if practical, write out a transcript of the answers to some questions of particular interest
- **Open-ended survey data**: copy the answers into a document (e.g. Excel) or print out for easier analysis
- Then -> **'Coding'** = labelling the data so that you can group recurring comments together into categories or themes
- Also see Smith & Rebolledo (2018, pp.62-65)

# Organising qualitative data: themes

Theme	Student comments
1) Goals develop awareness	It's fundamental to set goals because it allows me to be aware of my progress and my difficulties.
2) Goals provide a focus to improve	It helps me to focus on my needs and to do the activities that really will improve my knowledge.  If you don't know where do you want to go, you will not go anywhere.
3) Goals provide motivation	Setting goals provide you the motivation to reach a target, in that case improving English.

*Table 1: Student comments about the importance of goal-setting.*

(Edwards, 2013, p.26)

# Organising quantitative data: tables

Student	Week 2 (goal-setting instance 1)	Week 4 (goal-setting instance 2)	Week 6 (goal-setting instance 3)	Total change over period
1	No change	+1%	N/A	+1%
2	-1%	+6.5%	N/A	+5.5%
3	+2%	-1%	N/A	+1%
4	+1%	+3%	+3%	+7%
5	+2%	+2.5%	+4.5%	+9%
6	N/A	+5%	+2%	+7%
7	+5.5%	N/A	N/A	+5.5%
8	+1%	No change	+2%	+3%
9	+4%	N/A	N/A	+4%
10	+1%	+2%	N/A	+3%
11	+1%	+1%	N/A	+2%

*Table 3: Focus area score % increase and decrease patterns (over six weeks)*

Key: Light grey = above average increase in score; dark grey = decrease in score; N/A = not applicable as student was not in the class at this point.

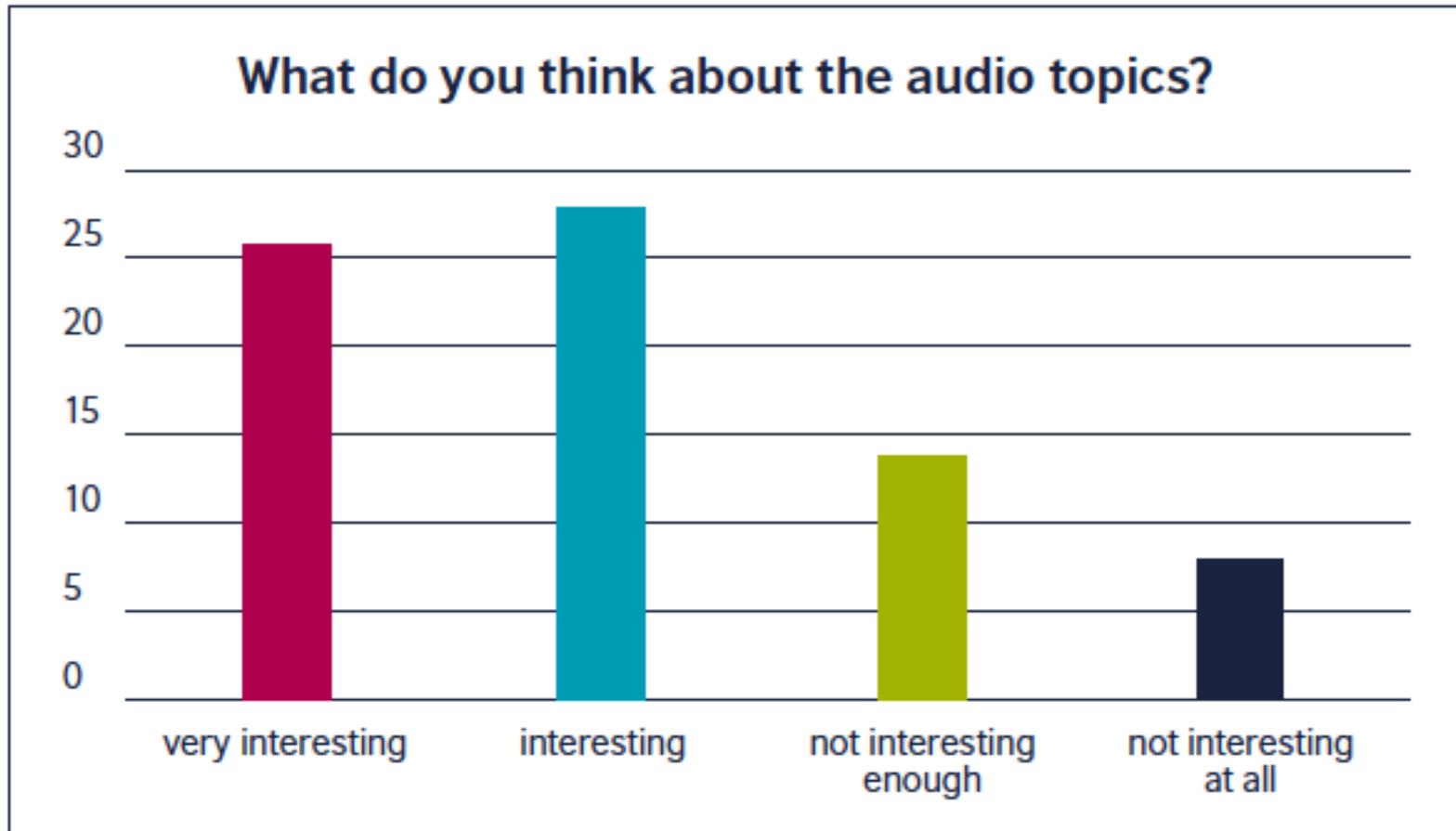
(Edwards, 2013, p.29)

# Organising quantitative data: tables

<b>1. What do you think about the audio topics?</b>	very interesting	interesting	not interesting enough	not interesting at all
	26	28	14	8
<b>2. Which activities do you like best?</b>	songs	activities from the course book		films
	48	1		27
<b>3. How clear are the teacher's instructions?</b>	very clear	clear	clear enough	not clear at all
	35	31	10	0

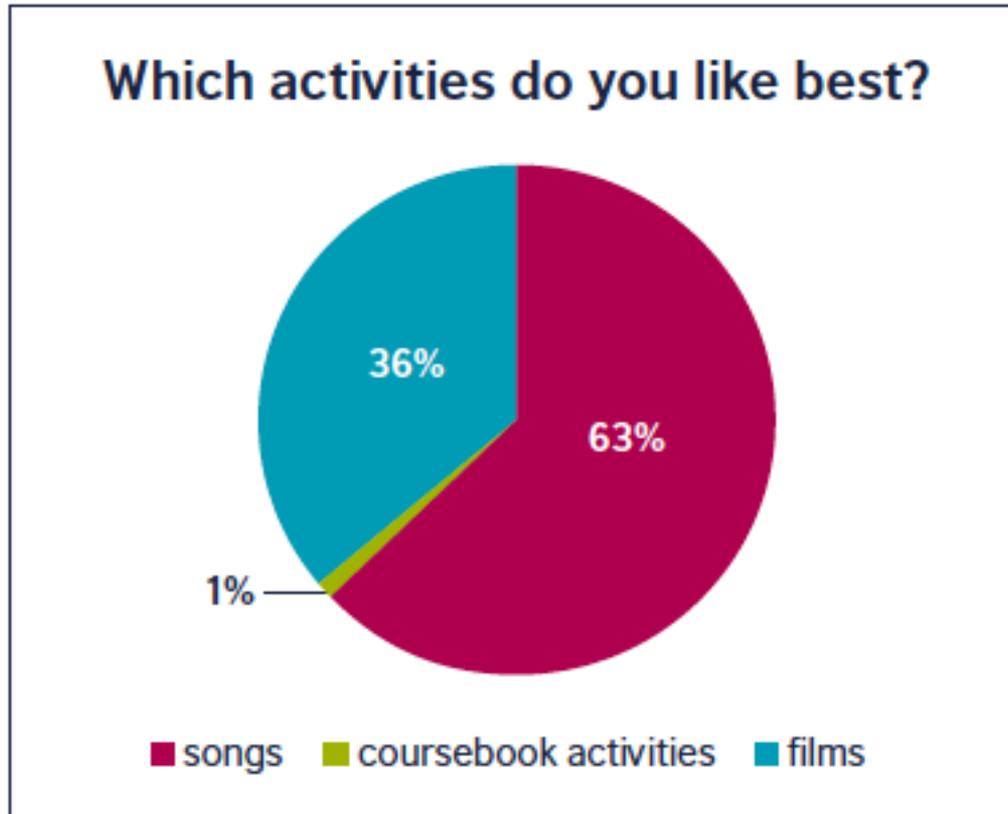
(Smith & Rebolledo, 2018, p.65)

# Organising quantitative data: charts



(Smith & Rebolledo, 2018, p.66)

# Organising quantitative data: charts



## Tips:

- Use an Excel spreadsheet to create a range of different charts to suit the data
- If using software like SurveyMonkey, charts are automatically created

(Smith & Rebolledo, 2018, p.66)

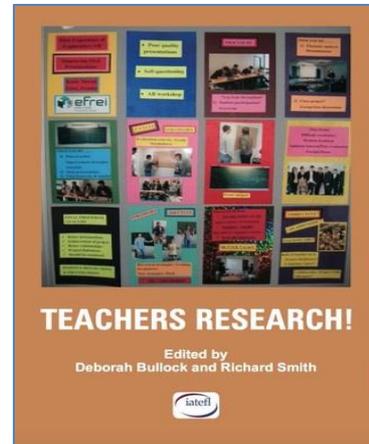
# Interpreting the data: What does it mean?

## And so what??

- Do these data answer my questions? If so, how?
- What are the main messages so far?
- What are the gaps in the messages I still need to fill?
- Am I still asking the right questions or are the data telling me that something else is more important?
- Do I need other kinds of data to help me really see what I am looking for?
- To answer my questions, are some pieces of data more important than others?

(Burns, 2010, p.104)

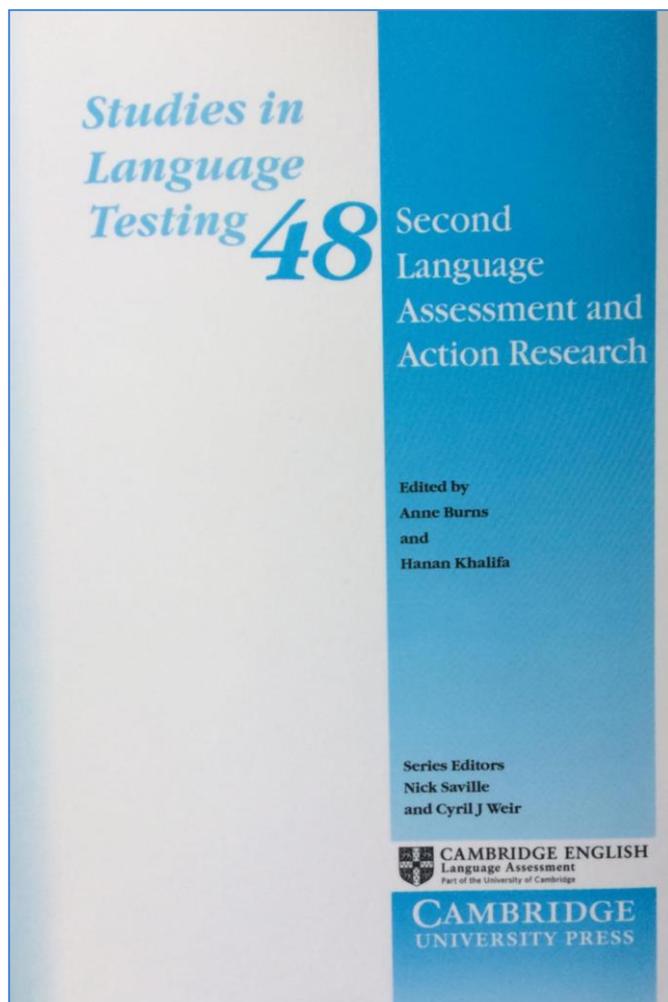
# Ideas for communicating the research



# Summary

- Collecting data
  - 1) Qualitative vs. quantitative
  - 2) Perceptions vs. behaviour
  - 3) Observation vs. non-observation
- Analysing data = organising + interpreting

# Examples of action research projects



Burns, A. & Khalifa, H. (2017) (Eds.). *Second language assessment and action research*. Studies in Language Testing, 48. Cambridge: Cambridge University Press.

# More examples of action research projects...



<http://www.cambridgeenglish.org/research-notes/>

# Exploratory action research in Chile

## Champion Teachers: stories of exploratory action research

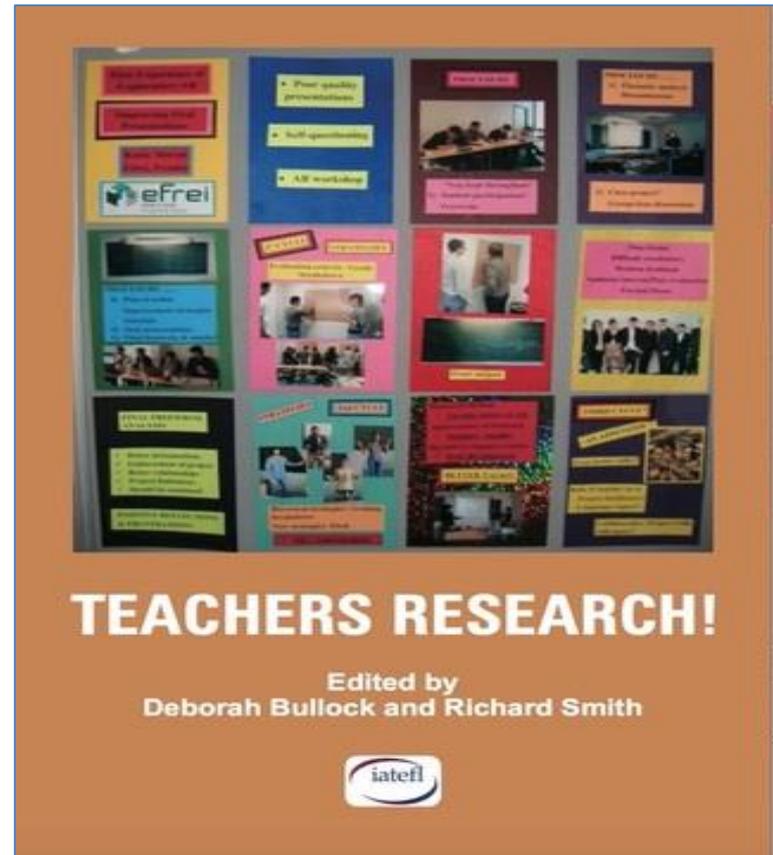
Edited by Paula Rebolledo, Richard Smith and Deborah Bullock



<https://englishagenda.britishcouncil.org/continuing-professional-development/cpd-teacher-trainers/champion-teachers-stories-exploratory-action-research>

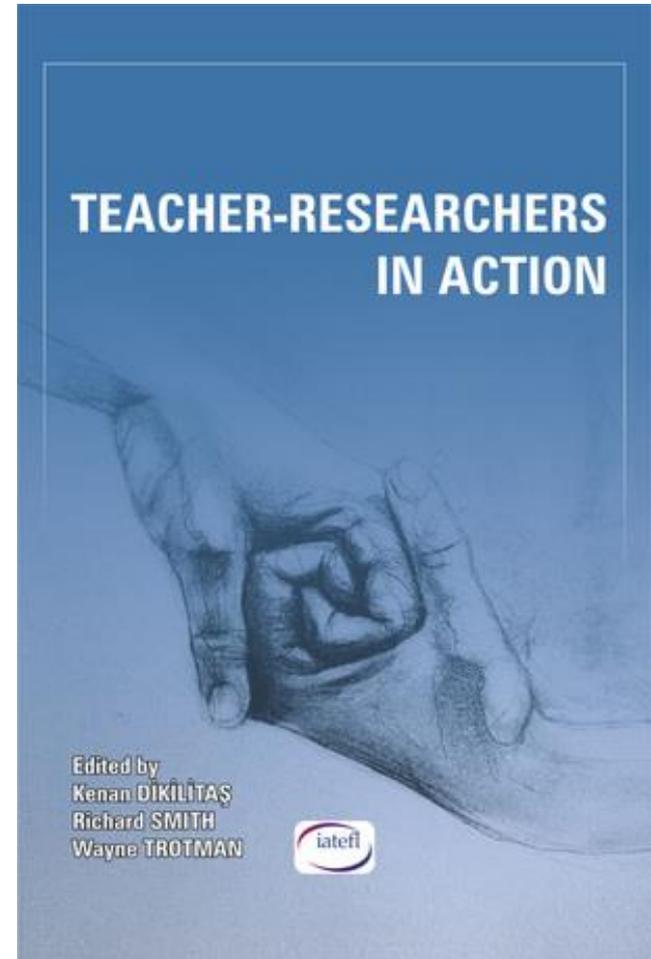
# A book of action research examples...

<http://resig.weebly.com/teachers-research.html>



# Another book of action research examples...

<http://resig.weebly.com/teacher-researchers-in-action.html>



# IATEFL book series on Teacher Research...

<http://resig.weebly.com/books.html>



# Useful action research resources

- Borg, S. (2017). Twelve tips for doing teacher research. *University of Sydney Papers in TESOL*, 12, 163-185.
- Burns, A. (2010). *Doing action research in English language teaching: A guide for practitioners*. New York & London: Routledge.
- Burns, A. & Khalifa, H. (2017) (Eds.). *Second language assessment and action research*. Studies in Language Testing, 48. Cambridge: Cambridge University Press.
- Cambridge Research Notes:  
<http://www.cambridgeenglish.org/research-notes/>
- Dikilitaş, K., & Griffiths, C. (2017). *Developing language teacher autonomy through action research*. Switzerland: Palgrave Macmillan.

# Useful action research resources (cont.)

- Smith, R., Connelly, T., & Rebolledo, P. (2014). Teacher-research as continuing professional development: A project with Chilean secondary school teachers. In D. Hayes (Ed.), *Innovations in the continuing professional development of English language teachers*. London: British Council. <http://englishagenda.britishcouncil.org/books-resource-packs/innovations-continuing-professional-development-english-language-teachers>
- Teachers Research! book: <http://resig.weebly.com/teachers-research.html>
- Teacher-Researchers in Action book: <http://resig.weebly.com/teacher-researchers-in-action.html>

# References

- Borg, S. (2010). Language teacher research engagement. *Language Teaching*, 43(4), 391-429.
- Burns, A. (2010). *Doing action research in English language teaching: A guide for practitioners*. New York & London: Routledge.
- Edwards, E. (2013). Applying action research to investigate the use of goal setting for ESL writing. *English Australia Journal*, 29(1), pp.19-38.

[https://www.englishaustralia.com.au/visageimages/colleges/Journal/EAJ29\\_1Final\\_web.pdf](https://www.englishaustralia.com.au/visageimages/colleges/Journal/EAJ29_1Final_web.pdf)

- Smith, R. & Rebolledo, P. (2018). *A handbook for exploratory action research*. London: British Council.

<https://www.teachingenglish.org.uk/article/a-handbook-exploratory-action-research>

# Any final questions?



To get in touch: [emily.edwards-1@uts.edu.au](mailto:emily.edwards-1@uts.edu.au)

**Thank you for joining the webinar!**