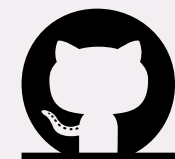# Applied Linguistics

LG 451/456 — Semester 2, 2021 (Jan-May 2022)

CLASS 6: QUANTITATIVE RESEARCH IN APPLIED LINGUISTICS

Sakol Suethanapornkul

Outline: Week 6

- Recap: Language attrition

- Quantitative research in AL

    - Methodological frameworks

    - Quantitative research process

- Method: Wong et al. (2018)

- Installment 1: Final project

- Looking ahead: Week 7

Recap: Language attrition

Defining language attrition

Defining language attrition turns out to be extremely difficult!

> *[Attrition is defined as]* **the non-pathological** *decrease in a language* **that had previously been acquired by an individual**. *Attrition would hence reflect a situation whereby a speaker is losing proficiency in a language he or she previously mastered,* **not due to any brain degeneration or an age-related cognitive impairment** *but as a result of "a change in linguistic behavior due to a severance of the contact with the community in which the language is spoken" (Schmid, 2008, p.10).*

Gallo et al. (2021)

Defining language attrition

In short, language attrition is:

the (total or partial) forgetting* of a language by healthy individuals

In other words, attrition:

- *is an **individual change** at cognitive/psycholinguistic level*

- *affects not only the amount of use but also the **linguistic performance***

- *is **not a pathological** process*

Factors affecting L1 attrition

- Individual attitude toward L1

  - German Jewish refugees abandoning German (Schmid, 2002)

- Exposure to L1 in a non-L1 environment

  - Frequency of L1 use associated with better retention (Schmid & Köpke, 2017)

- L2 exposure (and L2-L1 interaction)

  - L1 attrition = "collateral damage" due to transfer

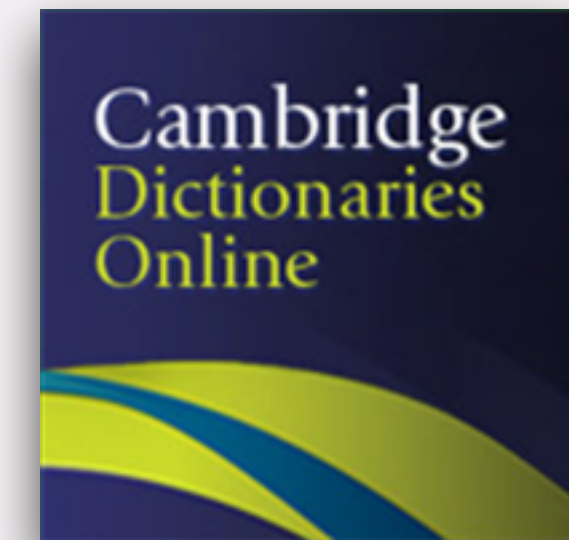# **Quantitative research in AL**
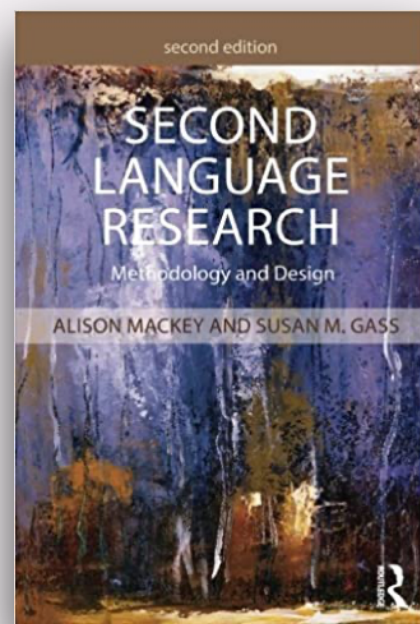
A wealth of resources...
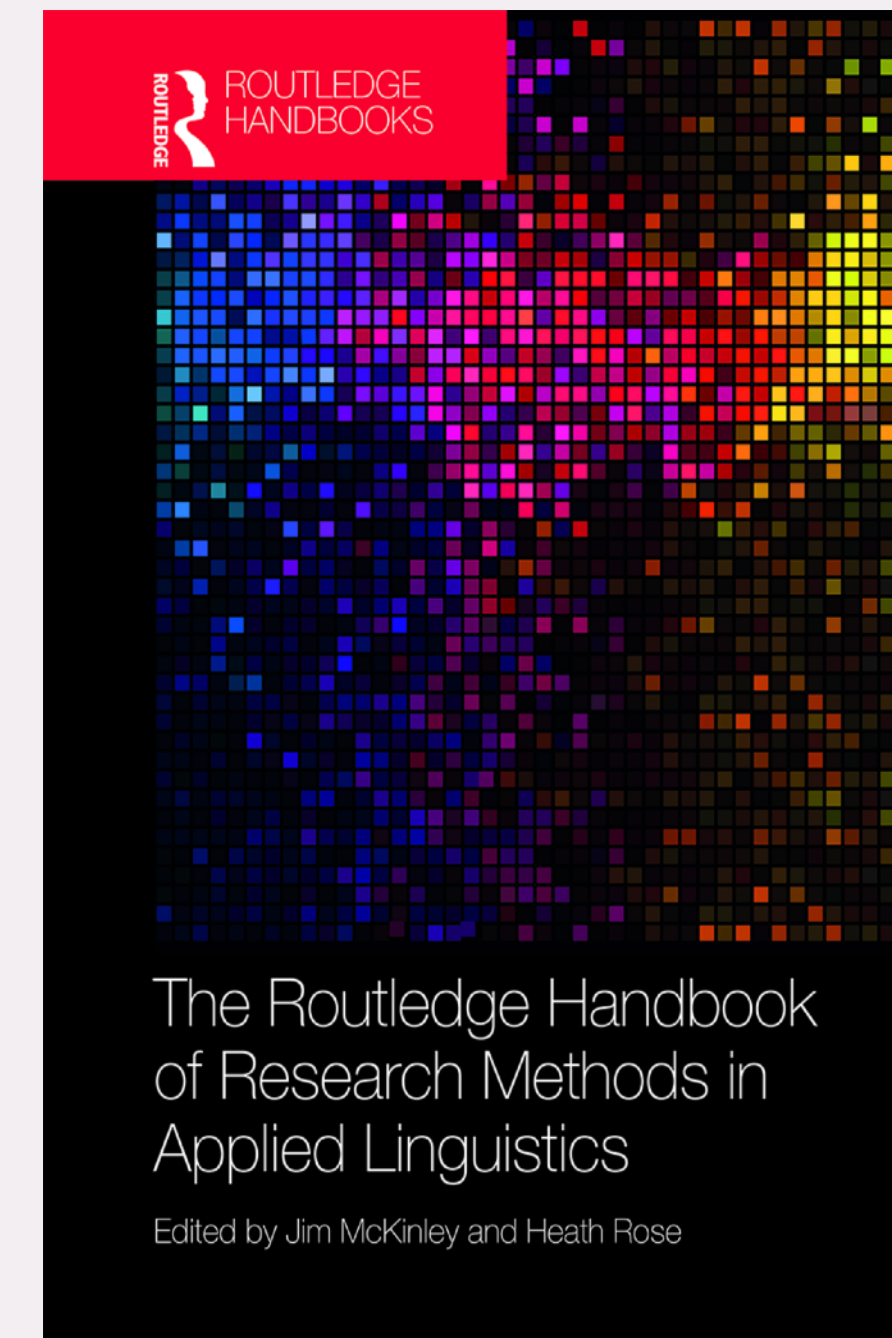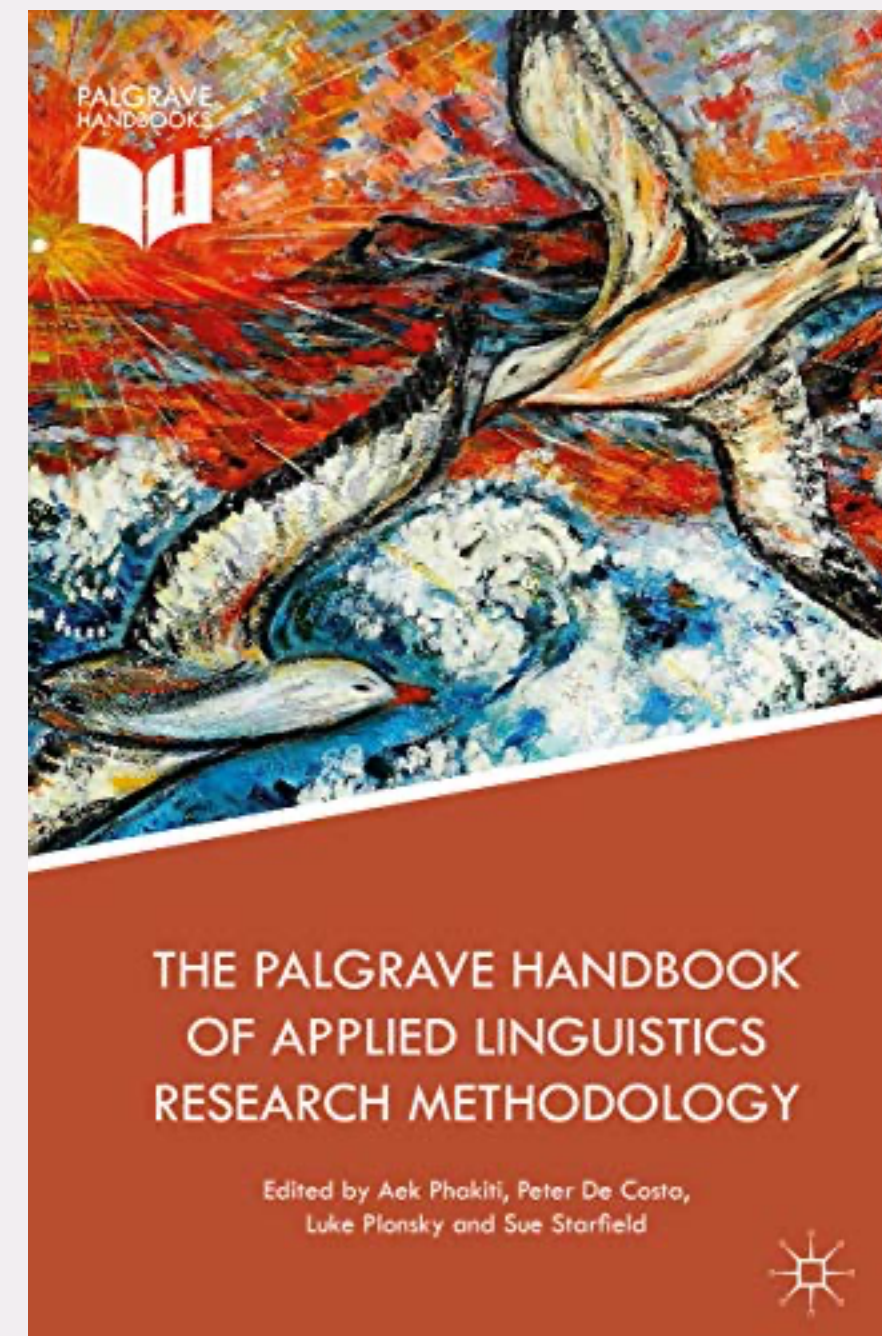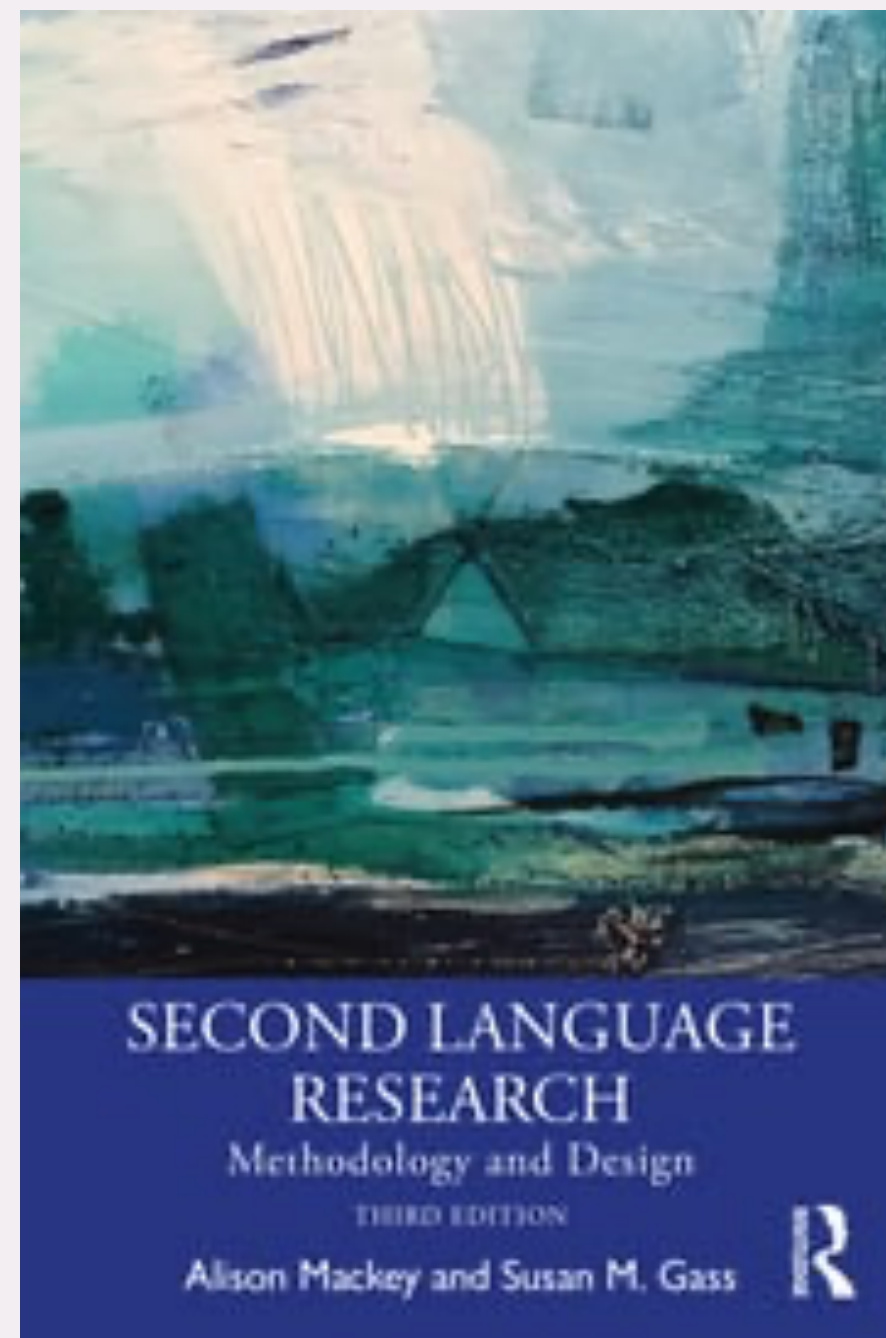
...and many many more!
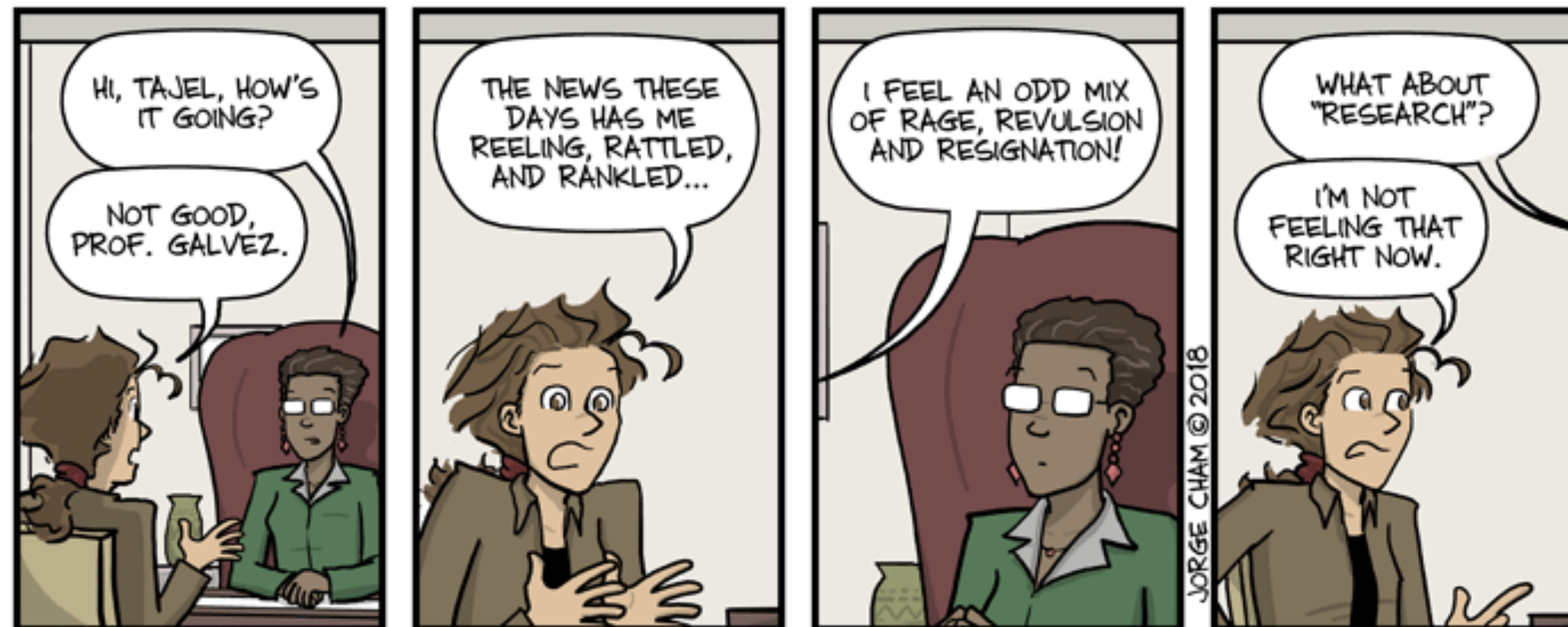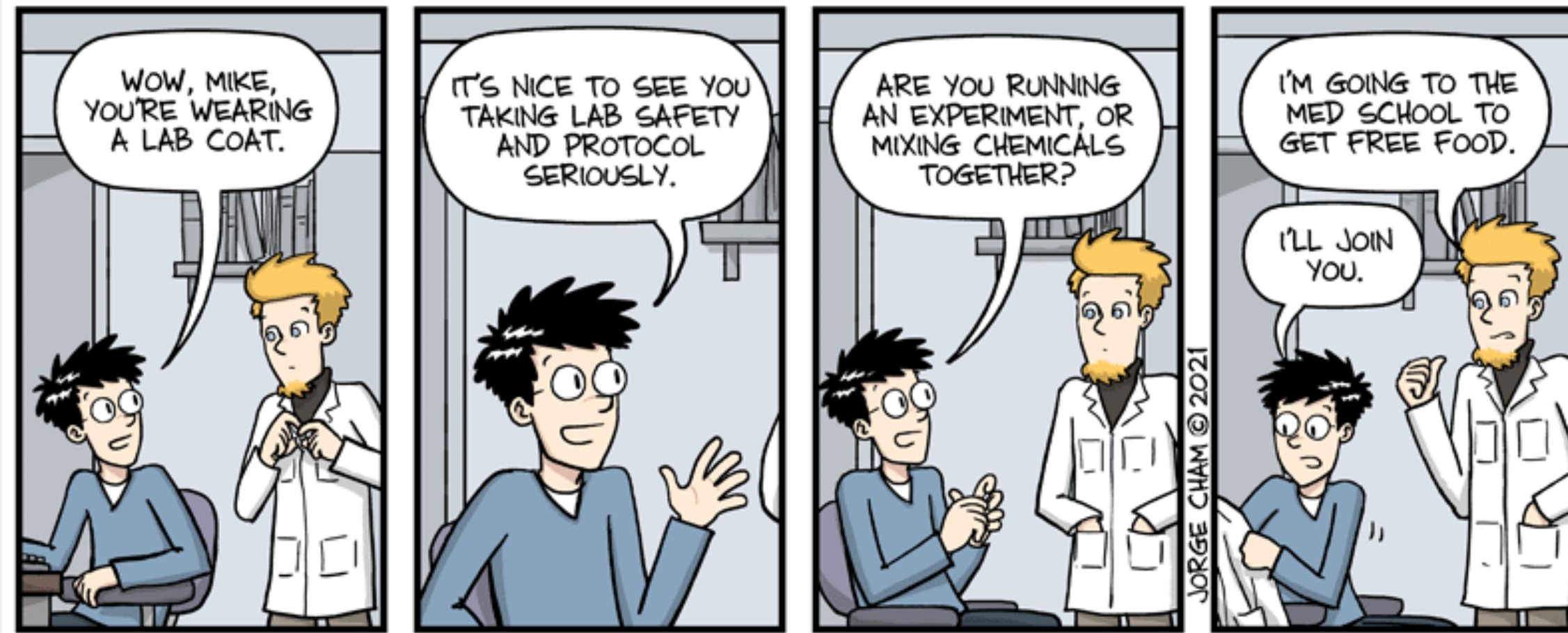
What is research?

Research is

Cambridge Dictionary

"In its most basic and simplest form, research is

Mackey and Gass (2015, p. 1)

Why do research?

Methodological frameworks

Two basic types of methodological frameworks in any areas of linguistics:

- **Quantitative methods**

  - identifying (systematic) patterns and/or structures from data

- **Qualitative methods**

  - interpreting meanings and/or relationships

Methodological frameworks: Example

Phil: So that like took me aback somewhat (0.3) so that was a good weekend for you (.)

Nigel: Is that good?

Phil: Well in his books yes you know=

Aaron: =hhhh.h [yeah]

Phil: [The thing] is you got so much stick for it

Aaron: Well yeah I could take the stick because it was almost like (0.2) a good ego trip taking the stick oh you got off with her ah ha ha

yep I did so what's your problem? [Oh, er...errr]

Methodological frameworks: Example

There are several ways to analyze this short transcript! We could:

- look for qualities or characteristics of the conversation

- see when speakers interrupt one another

- count the number of fillers, pauses, etc.

- calculate mean length utterance (MLU), etc.

Quantitative research approach

An approach used to explore or determine the relationship between variables

- correlation or cause-effect

- **deductive** (theory verification)

- objective measurement of variables (numbers, statistical analyses)

- **generalizability** (extension of findings from study conducted on a sample to the target population)
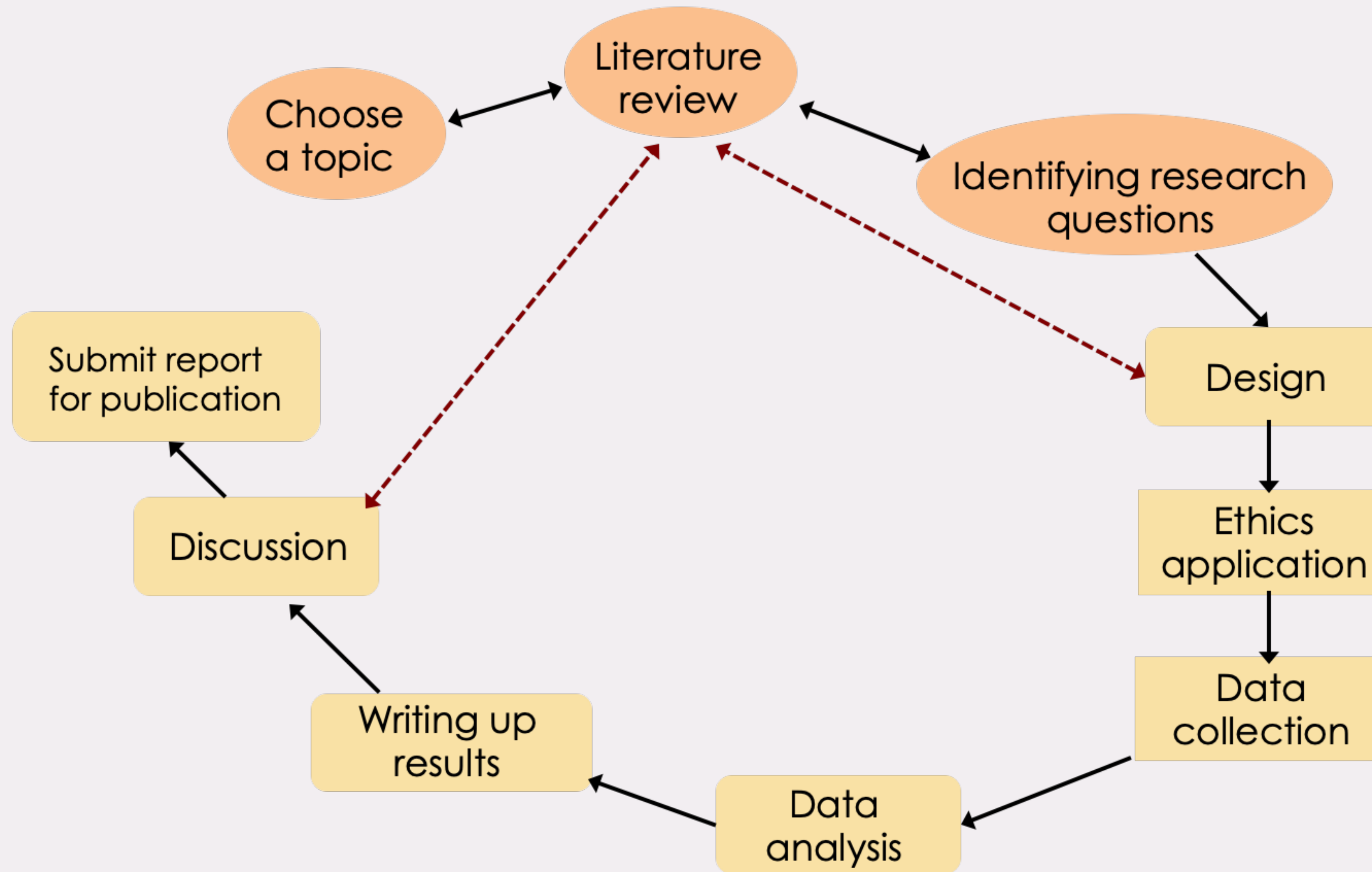
Variable

- a characteristic that differs from group to group or from person to person

- language proficiency, vocabulary knowledge

Deductive

- I start with a theory

- I have a hypothesis based on theory

- I seek evidence to confirm or reject hypothesis

A typical quantitative research process

Choosing a topic and identifying questions

A good research question should:
- address current issues
- lead to novel findings
- be researchable

IS CLASSROOM INSTRUCTION EFFECTIVE IN HELPING THAI STUDENTS LEARN ENGLISH?

| What is learned?: | Grammar? | Vocabulary? | Sounds? | Other things? |

| What do you mean by learning?: | *Knowledge of rules* | *Use in spontaneous communication* |
| | *Perception* | *Production* |

| What type of instruction?: | *Explanations of rules* | *Using words in context* |
| | *Practice during meaningful communication* | |

Researchable questions...?

Whole-class

1. Do high-anxiety Ss make fewer errors on compositions than do low-anxiety Ss?

2. How do American interns learn to communicate politely when interacting with Japanese colleagues?

3. What are the characteristics of a good language learner?

4. Does listening to short TED talk videos help Thai Ls learn new English words?

5. Should all NNS of English be required to take English classes in order to get a driver's license in the US?

Formulating your research questions

Most reasoned research questions come from a reading of the literature and an understanding of the history of current issues:

- Questions that have <u>not</u> been answered or have <u>only partially</u> been answered

- Suggestions made by other researchers at the end of research papers

- Limitations in previous studies

Reading recent studies related to your research topic in a good journal might save the time you spend on your literature review.

Method: Wong et al. (2018)

Method: Cognitive Linguistics Application

Dr. Ivy Wong

Department of English language and Literature

Hong Kong Shue Yan University

Interests:

cognitive linguistics, psycholinguistics, SLA, second language pedagogy, computer-assisted language learning

English prepositions are difficult....

I lean *into* the door to keep people from opening it

There is a big piece of metal leaning *against* the side of the barn

We drove *across* the country one time and it was fun

He jumped *into* the river to save his friend from drowning

Spatial meaning

The temperature usually cools down in December

Let's meet on Tuesday at 9 am.

He was born on June 23, 1941.

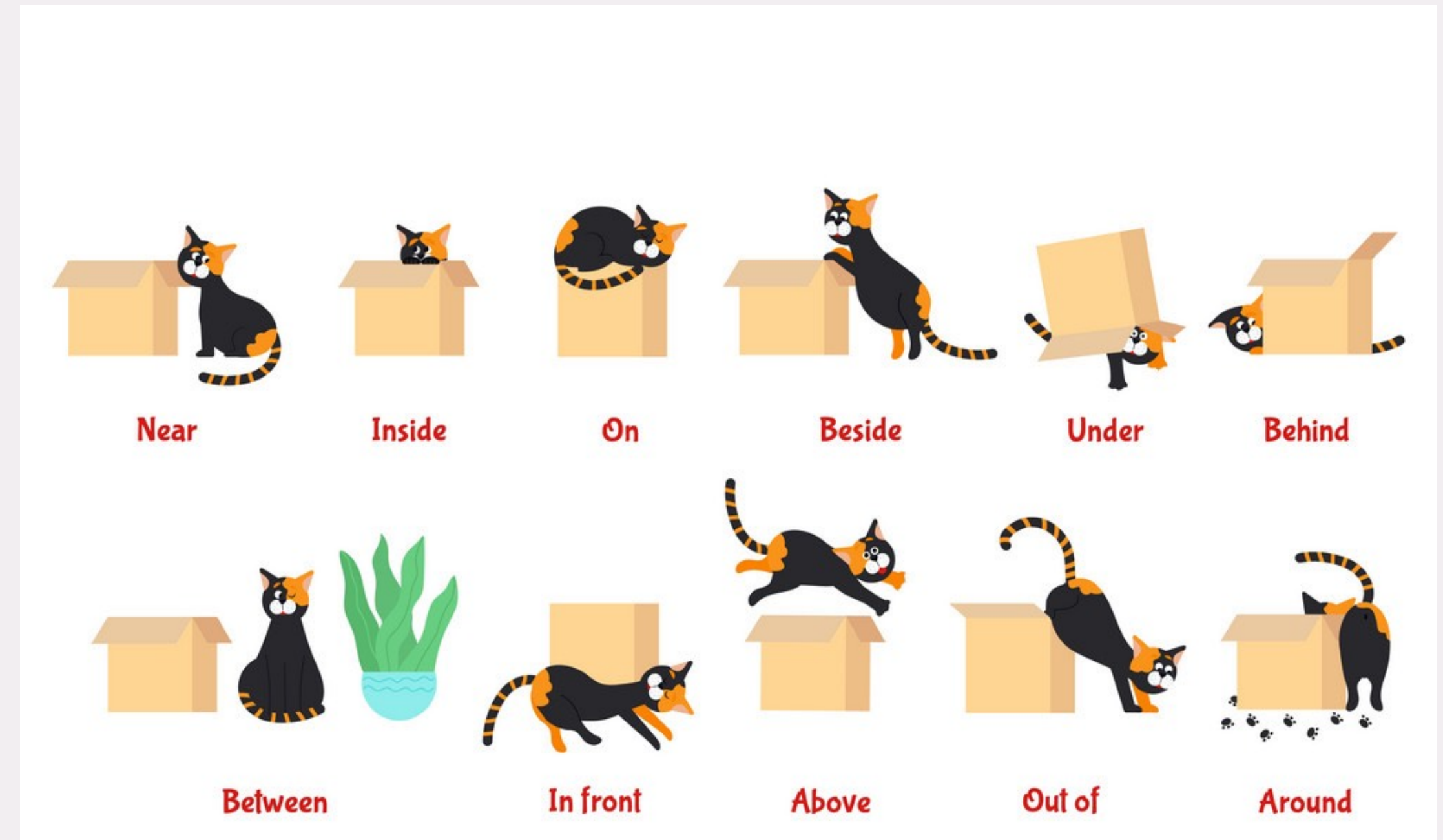Non-spatial meaning

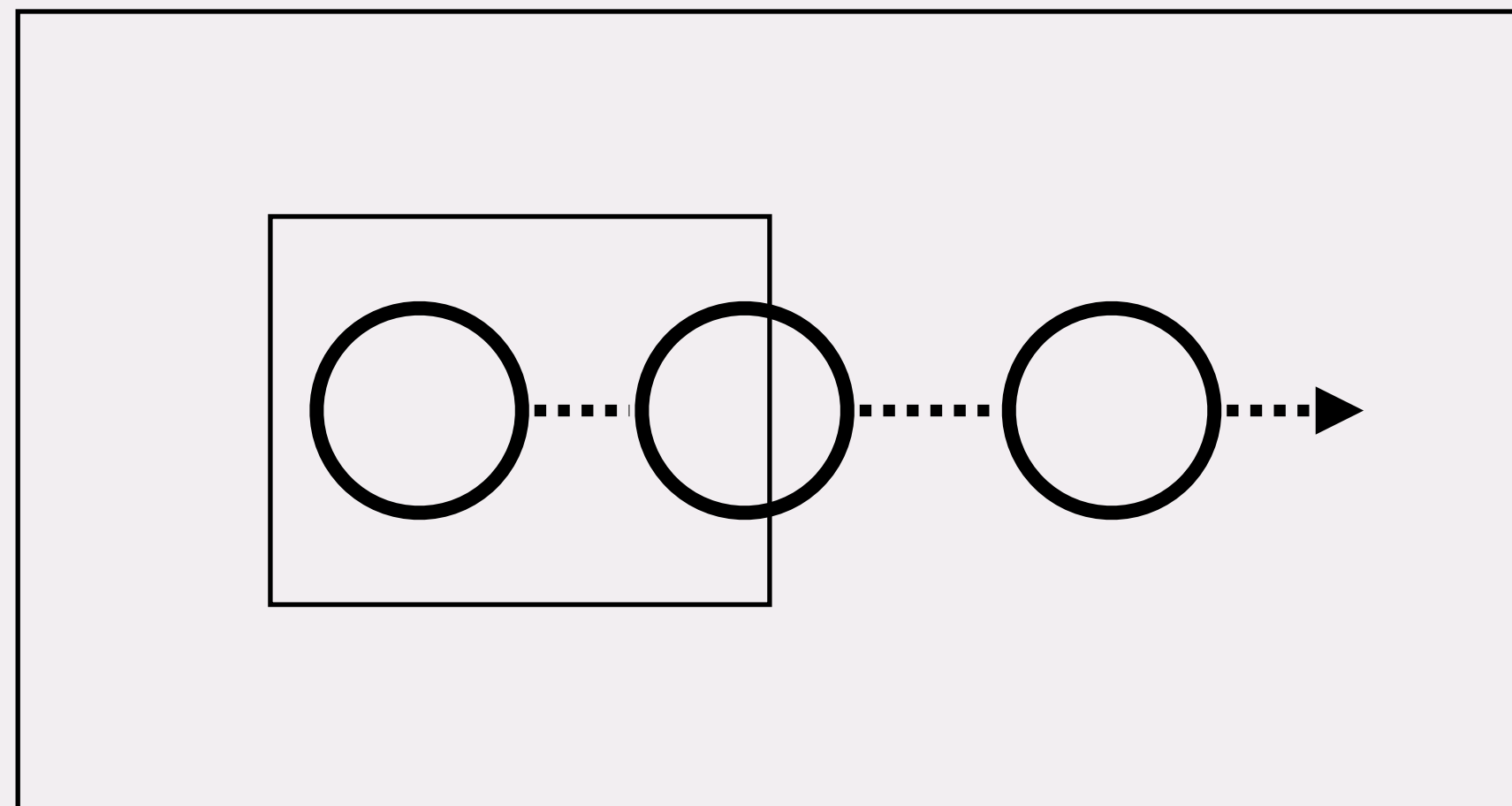# English prepositions are difficult....

Impetus

[Rote learning isn't great] and cognitive linguistics (CL) give us hope to do a more meaning-based learning...It (CL) brings confidence to learners.

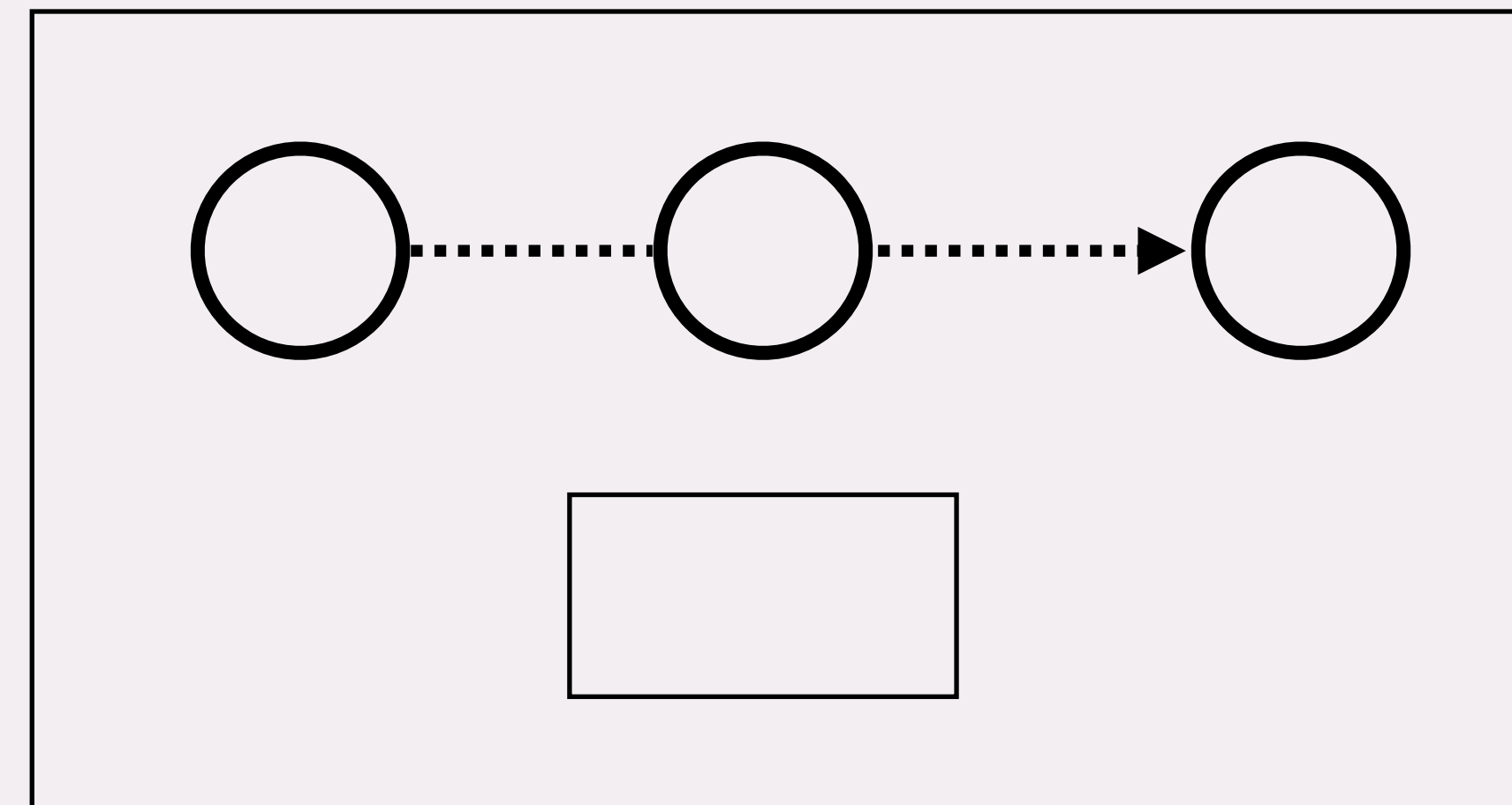# How do you describe various meanings?

Image schemas: scenes depicting relationships between a trajector and a landmark

Where's Dave? He's out.

Schema: Out

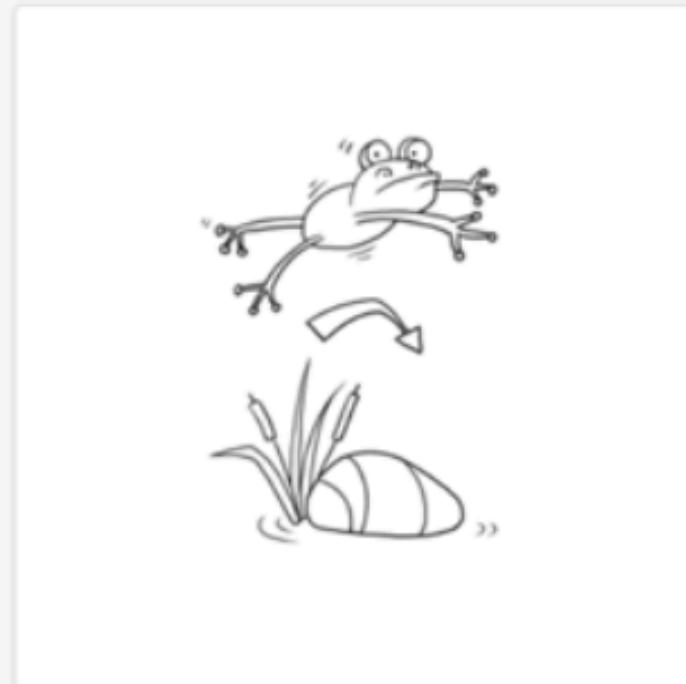The plane flew over Bangkok

Schema: Over

How can we test that?

- Compare two groups of learners:

  - One receiving traditional explanations (e.g., "use *in* in context X")

  - The other receiving CL explanations (diagrams, visualizations, etc.)

- Make sure we distinguish spatial from non-spatial scenes

  - I am in Room 456 vs. I was born in June

- Test both receptive and productive skills/knowledge

  - Cloze test and translation test

Study synopsis: Method

- Participants

  - Students in Hong Kong school

- Instructional designs

  - One control group and three experimental groups

- Materials

  - Three target prepositions

- Measurements

Study synopsis: Preposition Tutor

Study synopsis: Findings

- Effects of CL descriptions (vs. control)

  - Cloze test scores

  - Translation test scores

- Effects of different types of feedback

  - CL vs. traditional

- Spatial vs. non-spatial meanings

# In her own words....

> *Based on the findings I have so far.... the CL approach is particularly effective in promoting productive knowledge. The improvement for CL group is also more sustainable. The traditional approach can help boost receptive knowledge, doing mc cloze, gap fill, but when it comes to writing or translation tasks, the traditional training is not enough.*

Project: 1st Installment

Installment 1: A rough sketch

- This assignment should help you advance your project

  - Aim: get you closer to Installment 2: Question(s) and method

- Your job is to **locate and list references** in APA format

  - Clear idea/topic → most up-to-date list

  - Vague idea → more concrete idea/topic
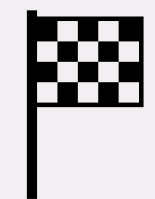
🏁 A reference list is the most important part of this installment

Installment 1: A rough sketch

- Identify relevant articles from **reputable international journals**

  - 4 references per group member

- Provide a two-paragraph background that situates your references

  - what topic?

  - what problem or research question?

  - in which context?

- Give your project a provisional title

Installment 1: A rough sketch

- A provisional title of your group's project

- Overarching research question(s)

- A background to your project (~ 2 paragraph maximum)

- A list of references (4 references per group member)

Browse through journals listed in List-of-journals handout (pdf)

Installment 1: More detailed suggestions

- Check out the syllabus and the textbook. If there is any reading precisely on your topic, read it first! Footnote chase from there to find out: important authors, good key terms, specialized journals where that topic appears a lot.

- Look at other textbooks and check out their Table of Contents (TOC) and their Subject Index and fast-read the sections or chapters on your topic. Note down key words, important author names, good journals to check out on the topic, and even some specific references if they seem to be important.

- Based on steps 1 & 2, you can now develop a list of key terms specific to your topic. Try to think of good terms that you believe will give you complete and accurate hits in your Scholar search.

- Decide if there are some journals that seem to have so many articles on your topic that is worth researching them separately, issue by issue (you can do this electronically). Always begin checking the most recent issue (2022, 1) and go down in time. Don't bother to go earlier than 2010 (for our initial searches newer is always better because it can lead you back to more things).

Next week...

- <u>**Topic**</u>: Language in interaction

  - 1st reading facilitation!

- <u>**Reading**</u>:

  - Wei Chapter 5

- <u>**Assignment**</u>:

  - Installment 1 due at the end of week