

# Mixed methods research in Applied Linguistics and its pragmatic foundation

Research Methodology in European Modern Languages and Literatures

## *Session IV*

Miley Guimarães  
*Universidad de Salamanca*

## Today's lecturer

Assistant Professor - Faculty of Philology (USAL)

**Research interests:** SLA, sociolinguistics, language ideologies and attitudes towards non-standard varieties, teaching/learning Portuguese as an Additional Language

- PhD Modern Languages – Portuguese (USAL, Spain)
- MA Philology and Portuguese Language (USP, Brazil)
- BA Portuguese and English Language and Literature (USP, Brazil)

# What is research?

## What is research?

“In the most profound sense ‘research’ simply means trying to find answers to questions, **an activity every one of us does all the time** to learn more about the world around us.”

(Dörnyei, 2007, p. 16)

In the scientific sense, research is the **organized, systematic search for answers** to the questions we ask.

(Hatch & Lazaraton, 1991)



*disciplined inquiry*

(Dörnyei, 2007, p. 15)

## Finding answers to questions...

What others have said:

SECONDARY / CONCEPTUAL / LIBRARY RESEARCH

OR

One's own data-based ('empirical') investigation:

PRIMARY RESEARCH

# PRIMARY RESEARCH

# CONTENTS OF THIS SESSION

## DIFFERENT TYPES OF RESEARCH

Quantitative

Experimental

Qualitative

Ethnographies

Case study

Mixed methods

QUAN-QUAL CONTINUUM

Importance of the RESEARCH  
QUESTION

# QUANTITATIVE RESEARCH



+ QUAN

**Experimental research**

Survey research

## Experimental Research

*“a way of of determining the **effect** of something on something else.”*

(Gass, 2010, p. 7)



**“(...) experimental research is a way of determining to the extent possible, what the source of the rash is.”**

(Gass, 2010, p. 7)

## Experimental Research

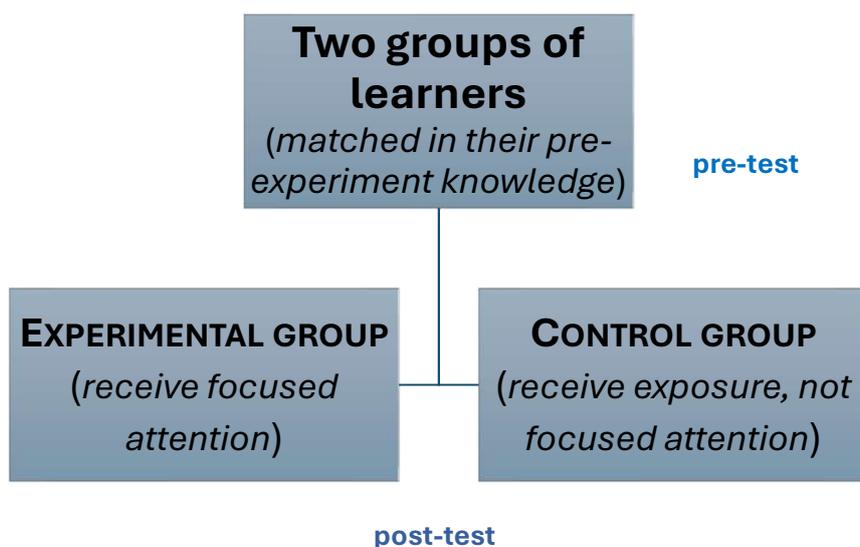
You begin with **an idea** of why something happens → **manipulate** (at least) one variable, **control** others → **determine the effect** (on some other variable).

### Example

We'd like to know whether **focusing a learner's attention on some aspect of language INCREASES** that person's **learning** of that aspect of language.

(Gass, 2010, p. 7)

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## Example of research question

Does ***focused attention*** on noun-adjective agreement in Italian **promote learning to A GREATER EXTENT** than ***focused attention*** on wh-movement in Italian for beginning learners of Italian?

PRIOR RESEARCH: Focused attention promoted learning in some parts of the grammar and not in others.

(Gass, 2010, p. 9)

## Example of research question

Does ***focused attention*** on noun-adjective agreement in Italian **promote learning** to A GREATER EXTENT than ***focused attention*** on wh-movement in Italian for beginning learners of Italian?

**INDEPENDENT VARIABLE:** FOCUSED ATTENTION [on the two aspects of grammar]

**DEPENDENT VARIABLE:** LEARNING

## What about this research question?

*Should language classes be introduced early in school's curriculum?*

### Interesting question, but not researchable:

- Vague
- Use of the word 'should': implies some sort of right or wrong (cannot be empirically evaluated)
- Questions must be feasible (in relation to the time and budget): never-ending number of variables involved here

## Variables → explicitly stated

- **How will focused attention be operationalized**  
by colouring? by explicit grammatical instruction? by frequency??
- How is learning measured? (**by a paper/online test?** [of what kind?], **by spontaneous use?** [if so, *how to elicit it and how many instances of the structure/sound/lexical item are being investigated? What do you mean by spontaneous use?*])

## Variables → explicitly stated

- Is learning being operationalized only through a test given immediately following the treatment? (or/and one week later? a month later?)
- About *noun-adjective agreement*: Are only feminine or only masculine nouns to be included, a combination? Will nouns that do not obviously indicate gender (e.g., *ponte*) be included?
- About *wh-movements*: Will questions with prepositions be included (e.g., *for whom*, *with what*)?
- If the form is not being used, is it because the learner doesn't know it or because he/she thinks it's not necessary to use it?

## Extraneous variables

Not controlled variable:

- you coloured **red** all instances of noun-adjective agreement in a reading passage, **but there are people who are colour-blind**



*uncontrolled variable that could have interfered with the interpretation of the results*

## Importance of the research question

First ask yourself, “*What am I trying to find out in my research project? What am I asking?*”

If you can answer these, you have the basis for a research question.

“... are vehicles that you will rely upon to move you from your **broad research interest** to your **specific research focus and project**, and therefore their importance cannot be overstated.”



(Mason, 2002, p. 20, as cited in Sunderland, 2018, p. 13)

## Hypothesis (H) vs. Research Question (RQ)

1. *In terms of school library use, students in the final level of French Primary Schools borrow more works of non-fiction than of fiction.*

H

2. *What are the borrowing practices of French Primary School final level students in terms of fiction and non-fiction?*

RQ

(adapted from Sunderland, 2018, pp. 14-15)

## Topic (T) or Research Question (RQ)?

1. *Teacher beliefs*
2. *The beliefs of UK primary school teachers about foreign language teaching and acquisition*
3. *Language testing*
4. *Testing foreign language use in genuinely communicative situations*

## Topic (T) or Research Question (RQ)?

- |   |   |
|---|---|
| 1. <i>Teacher beliefs</i>   | T |
| 2. <i>The beliefs of UK primary school teachers about foreign language teaching and acquisition</i> | T |
| 3. <i>Language testing</i>  | T |
| 4. <i>Testing foreign language use in genuinely communicative situations</i>                        | T |

## Overarching and subordinate RQs

Two or more RQs might be grouped hierarchically under a “higher” one, which together they address.

### **Find the overarching and the subordinate RQs.**

1. *How are the social actors nominalized in each newspaper report?*
2. *Which report uses the greatest proportion of agentless passive verb constructions?*
3. *What are some differences in the way [a given political event] is reported in newspaper X and newspaper Y?*

## Overarching and subordinate RQs

✓ *What are some differences in the way [a given political event] is reported in newspaper X and newspaper Y?*

✓ *How are the social actors nominalized in each newspaper report?*

✓ *Which report uses the greatest proportion of agentless passive verb constructions?*

✓ ...

✓ ...

(Sunderland, 2018, p. 19)

According to Sunderland (2018, p. 21),

[...] the rule of thumb is to ask only as many research questions as can *satisfactorily* be addressed, through substantial, in-depth, nuanced analysis and discussion. The issue is not the number of research questions, but what is needed (in terms of data, analysis, time and effort) to answer a given research question, that is, the scale of a given project.

**“What is the impact of communication technologies on learning worldwide?” → unanswerable RQ!**

## Quantitative Research | Qualitative Research

- Data collection → numerical data → analysed (primarily) by statistical methods
- More interested in the common features of groups of people (quest for facts that are **generalizable**)
- Specification of categories and values prior to research
- Data collection → open-ended/non-numerical data → analysed primarily by non-statistical methods
- **Sensitivity to the individual** (emphasis on the individual case)
- Categorizing practices not determined *a priori*

← Much research does not fit into neat categories →

# QUALITATIVE RESEARCH



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## Ethnographic research

*“(...) the rewards of prolonged engagement within a specific community and the richness of data generated via ‘fieldwork’ make it a methodology worthy of serious consideration by those seeking to engage in qualitative research.”*

(Starfield, 2010, p. 51)

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## Ethnographic research

- people's behaviour in everyday life rather than experimental contexts; natural settings
- data from a range of sources (esp. observation, relatively informal conversations)
- data collection not based on pre-set categories or explicit hypotheses → arise out (of a general interest in an issue/problem)
- typically small in scale and focused on a single setting or group
- prolonged engagement by the researcher in the research setting

(Starfield, 2010, p. 51)

## Ethnographic research

*“role of the researcher in the construction of the ethnographic account – a central preoccupation of post-structural approaches in which issues of identity, subjectivity and production of multivoiced accounts come to the fore.”*

(Starfield, 2010, p. 54)

**‘reflexive turn’ in ethnographic writing**

## Case study

According to Casanave (2010, pp. 76-77), if researchers want

to understand deeply a particular person or a site (a class, a programme), with the goal of understanding and interpreting rather than of comparing, experimenting, hypothesis testing or generalizing to other populations, then a case study is an appropriate choice of approach.

The case study approach benefits by being able to accommodate many different methods, **mainly qualitative but also quantitative.**

(Duff, 2018)

## MIXED METHODS RESEARCH

## Mixed Methods Research

- Collection or analysis of both QUAN and QUAL data in a **single study** with some attempts to **integrate** the two approaches at one or more stages of the research process.

(Dörnyei, 2007, p. 163)

- Values **flexibility**, allowing researchers to **draw on the strengths of both numerical data and rich, contextual insights**.

### PRAGMATIST POSITION

prioritizes the research problem and the methods that best address it

## Mixed Methods Research

- **One method used to overcome the weaknesses of the other**

E.g. QUAN generalizing issue:

QUAL adds depth to QUAN results (“putting flesh on the bones”)

- Beneficial to corroborate (provide convergence in findings), provide richness and detail, offer new interpretations.
- **Applied linguistics:** research problems are multidimensional, context-sensitive, and may require both numerical and narrative evidence to address them.

## Mixed Methods Research

- Different combinations either at the **DATA COLLECTION** or at the **ANALYSIS** levels.
- Rich variety of possible combinations.
- Most widely typological principles: **SEQUENCE** and **COMBINATION**.
- Questionnaire and interviews dominate.

## COMBINATION - Sequence

QUAN → QUAL  
or  
QUAL → QUAN



**Topic: “Language attitudes among minority language speakers”**

large-scale survey to generalize about overall attitudes and reported practices followed by in-depth interviews to explore participants' experiences and beliefs behind those trends

## MOST PROMINENT BASIC COMBINATIONS

### SEQUENTIAL

1. QUAN → qual  
**Questionnaire survey** → *follow-up interview [to explain/illustrate patterns]*
2. qual → QUAN  
*Interview [source of ideas for preparing items]* → **Questionnaire survey**
3. QUAL → quan  
**Interview study** → *questionnaire survey [investigate its generalizability]*
4. quan → QUAL  
*Questionnaire survey [to select certain participants]* → **Interview study**

(Dörnyei, 2007)

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## MIXING METHODS: QUAL or QUAN?

### RESEARCH 1

A) Discourse analysis of political speeches with (B) survey data from audience members regarding their perceptions and reactions to the speeches.

The survey results establish broad trends in reception, while the discourse analysis investigates which features of the speeches led to those audience reactions, providing additional interpretive depth.

**A: QUAL**

**B: QUAN**

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## MIXING METHODS: QUAL or QUAN?

### RESEARCH 2

(A) A case study of a bilingual education policy uses administrative records and performance test scores to analyze policy outcomes. Additionally, (B) interviews with teachers, students and parents reveal how the policy is interpreted and enacted at a local level, highlighting factors that explain variations in outcomes.

**A: QUAN**

**B: QUAL**

## MOST PROMINENT BASIC COMBINATIONS

### CONCURRENT

1. QUAL/qual + QUAN/qual  
*Concurrent combinations of qualitative and quantitative research*
2. QUAN + qual  
*Experiments with parallel interviews*
3. QUAN + QUAL  
*Longitudinal study with mixed methods components*
4. QUAL + QUAN  
*Combining self-report and observational data*

## MIXING METHODS: Sequential or concurrent?

### Mixed method study on classroom gender dynamics

Researchers collect and statistically analyze frequencies of male and female student talk turns. Simultaneously, classroom observations and interviews examine how teachers and students perceive and explain these gendered participation patterns. This approach helps connect numerical participation patterns to underlying attitudes and classroom cultures.

CONCURRENT

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Theorists have written time and again that **mixed methods should not be seen as an unstructured ‘fusion’ of QUAL/QUAN research** or as just the additive ‘sum’ of the two. **In practice however, and especially outside research methodology literature, there is more conceptual ‘fusion’ than perhaps acknowledged.**

(Angouri, 2018, p. 39)

## Mixed Methods Research

“In accordance with the pragmatic foundation of Mixed Methods Research, the mixing process is **centred around the purpose of the investigation**, that is, the research topic or question.”

(Dörnyei, 2007, p. 167)

- **The good researcher:** real curiosity about their topic, common sense, good ideas and a combination of discipline, reliability, and social responsibility.  
(Dörnyei, 2007, p. 17)
- Today’s research scene: increasingly interdisciplinary and complex (does this require pushing methodological boundaries to integrate new perspectives?). MMR ideally suited to operationalize the “theoretical transcendence” of the micro and macro perspectives.

## SUMMARY TABLE

Approach	Core Feature	Paradigmatic Foundation	Typical Data
Quantitative	measurement, testing	Positivism	experiments, surveys, tests
Qualitative	depth, interpretation	Constructivism/ Interpretivism	interviews, narratives
Mixed Methods	integration	Pragmatism/ Complementarity	(both combined)

## Some useful links

- Writing good RQs: [Writing a Good Research Question - Center for Innovation in Research and Teaching](#)
- Linking RQs to Mixed Methods ["Linking Research Questions to Mixed Methods Data Analysis Procedures 1" by Anthony J. Onwuegbuzie and Nancy L. Leech](#)
- [NCRM videos | Research methods videos](#) The National Centre for Research Methods provides a wealth of online material on research methodology in general and mixed methods in particular.

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