



# A cross-disciplinary study of scholars' multilingual research-oriented literacies

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# 1. Introduction: rationale

- International communication in higher education has been reported to be primarily in English, no matter academics' native language backgrounds (Ferguson, 2007; Pérez-Llantada, 2012; Plo and Pérez-Llantada 2015)
- Even if English plays a prevailing role in international communication, there exists linguistic diversity if we take a closer look at 'localized communities of practice' (Becher and Trowler 2001; Kuteeva, 2015)
- Part of the international research project aimed at finding and describing linguistic diversity in international campuses "Linguistic diversity in the international campus"

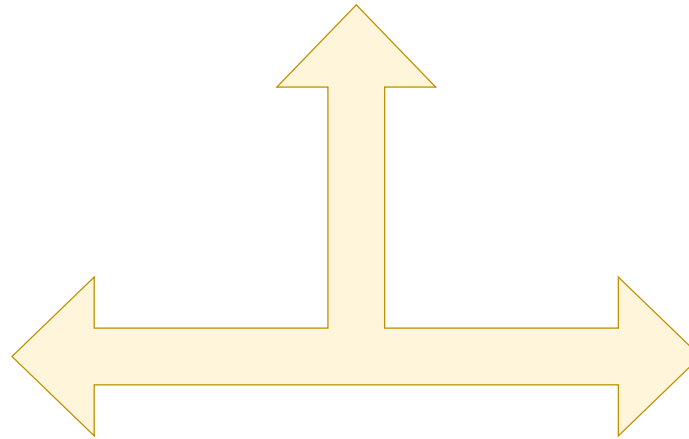
# 1. Introduction: research questions

To what extent are other languages than English used/accepted in language practices?

RQ 2

RQ 1

Do disciplinary differences influence the choice of languages?



What are the overt/covert English language expectations of/made of students and staff?

RQ 3

# 1. Introduction: literature review

- English in international scientific discourse

The impact of globalisation and the use of English **for the construction, transmission and exchange of scientific knowledge** (Ammon, 2007).

"English is used **extensively by non-Anglophone scientists**, passively and actively, for written and oral publications (printed materials and conference presentations)" (Ammon, 2007, p. 124)

Englishisation vs. "today's growingly complex linguistic situation calls attention to the development of competence of an additional language" (Pérez-Llantada, 2012, p. 166)

# 1. Introduction: literature review

- English in international scientific discourse
- Scientific community

A discipline is formed by an academic culture with its **particular norms and practices that "describe and distinguish topics, knowledge, institutional structures and individuals in the world of scholarship."** (Hyland, 2012, p. 22)

"Government and European policies have had important effects on the ways that disciplines work, re-shaping practices." (Becher and Trowler, 2001, p. 37)

"Becher's (2001) earlier classification of disciplines into **"pure hard", "pure soft", "applied hard", and "applied soft"** + Airey's three different angles of literacy are the **academy, the society, and the workplace**, each with a local and international dimension > **affect language uses within any given discipline"** (Kuteeva, 2015, p. 273)

# 1. Introduction: literature review

- English in international scientific discourse
- Scientific community
- English and disciplinary differences

The preference for English is much stronger in the pure or theoretical sciences (pure hard) than in the applied sciences (applied soft) and especially the humanities (pure soft) (Ammon, 2007)

"The choice of language of (publication) is influenced by factors such as author's **attitude, degree of localisation of the topic discussed, genre, departmental publication culture, and discourse community addressed**" (Ferguson, 2007, p. 18)

## 2. Case study

Following Dörnyei (2007) a [questionnaire on academic-oriented practices](#) was administered to scholars in two disciplinary communities. After that, some follow-up semi-structured interviews were conducted to extend the questionnaires' answers.

Business	50	January 2016
Natural sciences	19	January to April 2016

Junior and senior researchers from the University of Zaragoza, a medium-size primarily monolingual Spanish university specialised in teaching and research.

# 3. Methodology

- Online questionnaire (e-encuesta) of 26 questions to measure the activities and language practices.
- The questionnaire was administrated by email.
- **Relevant items:**
  - **Academic activities** you have participated in the last 2 years and language(s)
  - Level of **linguistic competence**
  - Number of **published papers** in the last 5 years and in which languages
  - Participation in **mobility** programmes in the last 2 years
  - **Teaching** in a foreign language (not Spanish) in the last 2 years
  - Possible future **participation in an (E)MI** course (needs and threats)



# 4. Data analysis: business

Academic activities	Spanish	English	French	German	Italian	Portuguese	Other
Administrative management	64,0%	14,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Scientific literature	62,0%	100,0%	6,0%	0,0%	0,0%	2,0%	0,0%
Experiments and procedures	56,0%	48,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Communication with experts and collaborators	78,0%	68,0%	4,0%	0,0%	0,0%	0,0%	0,0%
Communication with teachers and researchers	96,0%	74,0%	4,0%	0,0%	2,0%	0,0%	0,0%
Funding proposals	64,0%	22,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Work trips	80,0%	72,0%	4,0%	0,0%	0,0%	0,0%	0,0%
Reviewers and editors	42,0%	90,0%	48,0%	0,0%	0,0%	0,0%	0,0%
Presentations and posters	58,0%	80,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Lectures, seminars and tutorials	100,0%	48,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Materials and proposals	86,0%	56,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Review and evaluation	60,0%	86,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Partners and funding	32,0%	32,0%	0,0%	0,0%	0,0%	0,0%	0,0%

4. Activities for administration, research and teaching in business involve the following languages: Spanish and English. There is also some French

## 4. Data analysis: business

6. In BUSINESS, academics are competent in the following foreign languages: English (B2-C1) and in a lower level in French (max. B1). Other languages mentioned are A1-A2 Italian, German and Chinese

LANGUAGE	A1	A2	B1	B2	C1	C2	NONE
GERMAN	3,2%	2,2%	0,5%	0,0%	0,0%	0,0%	94,1%
SPANISH	11,7%	0,0%	0,0%	0,0%	1,3%	74,4%	12,5%
FRENCH	14,4%	6,4%	6,9%	7,4%	5,5%	1,9%	57,5%
ENGLISH	0,4%	5,6%	13,6%	35,6%	34,0%	10,8%	0,0%
ITALIAN	3,2%	2,1%	0,0%	0,0%	0,0%	0,0%	94,7%
PORTUGUESE	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%

## 4. Data analysis: business

Nº ARTICLES	SPANISH	ENGLISH	FRENCH	GERMAN	ITALIAN	PORTUGUESE
0-10%	44,0%	10,0%	72,0%	72,0%	70,0%	72,0%
10-20%	12,0%	2,0%	0,0%	0,0%	2,0%	0,0%
20-30%	12,0%	4,0%	0,0%	0,0%	0,0%	0,0%
30-40%	4,0%	0,0%	0,0%	0,0%	0,0%	0,0%
40-50%	10,0%	10,0%	0,0%	0,0%	0,0%	0,0%
50-60%	2,0%	2,0%	0,0%	0,0%	0,0%	0,0%
60-70%	0,0%	4,0%	0,0%	0,0%	0,0%	0,0%
70-80%	4,0%	14,0%	0,0%	0,0%	0,0%	0,0%
80-90%	2,0%	22,0%	0,0%	0,0%	0,0%	0,0%
90-100%	4,0%	32,0%	0,0%	0,0%	0,0%	0,0%

10. The next question is concerned with the languages used for publication (in the last 2-5 years). In business, English is the complete protagonist (50-100% of published articles are written in English) followed by Spanish.

# 4. Data analysis: business

- **36,00%** business academics participated in mobility programs in the last 2 years for research.
- Have you taught in a foreign language? **Yes: 40,00%** No: 60,00 %
- **English and French** in bachelor degree and bilingual ADEI degree, master, mobility with PhD and undergraduate students.
- Do you intend to teach in a foreign language? **Yes: 72,00%** No: 28,00%
- Would you need linguistic support for teaching? **Yes: 83,70%** No: 16,30%
- “**More support** for teaching training, queries, continued language support

"Para mejorar mi competencia en inglés (en mi caso) necesitaría **apoyo lingüístico** continuado y cursos de ESP todos los años. [...] La forma de asentar y aprender más sería in situ, en **países que hablan en inglés**, pero eso es complicado, circunstancias laborales y familiares" + compartir **experiencias** con los compañeros"

## 4. Data analysis: natural sciences

Academic activities	Spanish	English	French	German	Italian	Portuguese	Other
Administrative management	84,20%	21,10%	10,50%	0,00%	0,00%	0,00%	0,00%
Scientific literature	68,40%	100,00%	31,60%	0,00%	10,50%	10,50%	0,00%
Experiments and procedures	63,20%	89,50%	15,80%	0,00%	0,00%	0,00%	0,00%
Communication with experts and collaborators	84,20%	89,50%	21,10%	0,00%	5,30%	0,00%	5,30%
Communication with teachers and researchers	94,70%	94,70%	21,10%	5,30%	15,80%	0,00%	5,30%
Funding proposals	73,70%	42,10%	0,00%	0,00%	0,00%	0,00%	0,00%
Work trips	84,20%	94,70%	26,30%	0,00%	15,80%	0,00%	0,00%
Reviewers and editors	42,10%	89,50%	0,00%	0,00%	0,00%	0,00%	0,00%
Presentations and posters	63,20%	89,50%	0,00%	0,00%	0,00%	0,00%	0,00%
Lectures, seminars and tutorials	94,70%	52,60%	0,00%	0,00%	0,00%	0,00%	0,00%
Materials and proposals	78,90%	94,70%	0,00%	0,00%	0,00%	0,00%	0,00%
Review and evaluation	52,60%	73,70%	0,00%	0,00%	0,00%	0,00%	0,00%
Partners and funding	36,80%	26,30%	0,00%	0,00%	0,00%	0,00%	0,00%

4. Activities for administration, research and teaching in the natural sciences involve the following languages: Spanish and English. There is also some French, Italian, German, Portuguese and Euskera

## 4. Data analysis: natural sciences

6. In sciences, academics are competent in the following foreign languages: English (B2-C1) and in a lower level in French and Italian (max. B1). Other languages mentioned are Euskera, and in A1-A2 Italian, German and Arabic.

LANGUAGES	A1	A2	B1	B2	C1	C2	NONE
GERMAN	10,2%	2,6%	1,3%	0,0%	0,0%	0,0%	86,0%
SPANISH	11,1%	0,0%	0,0%	0,0%	0,0%	66,7%	22,2%
FRENCH	15,6%	22,2%	26,7%	10,0%	4,4%	1,1%	20,0%
ENGLISH	3,3%	5,6%	7,8%	32,2%	44,4%	6,7%	0,0%
ITALIAN	7,5%	17,5%	8,8%	2,5%	1,4%	0,0%	62,5%
PORTUGUESE	2,5%	0,0%	0,0%	0,0%	0,0%	0,0%	97,5%

## 4. Data analysis: natural sciences

Nº ARTICLES	SPANISH	ENGLISH	FRENCH	GERMAN	ITALIAN	PORTUGUESE
0-10%	52,60%	5,30%	84,20%	84,20%	84,20%	84,20%
10-20%	21,10%	0,00%	0,00%	0,00%	0,00%	0,00%
20-30%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
30-40%	15,80%	0,00%	0,00%	0,00%	0,00%	0,00%
40-50%	0,00%	5,30%	0,00%	0,00%	0,00%	0,00%
50-60%	5,30%	10,50%	0,00%	0,00%	0,00%	0,00%
60-70%	0,00%	5,30%	0,00%	0,00%	0,00%	0,00%
70-80%	0,00%	10,50%	0,00%	0,00%	0,00%	0,00%
80-90%	0,00%	5,30%	0,00%	0,00%	0,00%	0,00%
90-100%	5,30%	57,90%	0,00%	0,00%	0,00%	0,00%

10. The next question is concerned with the languages used for publication (in the last 2-5 years). In sciences, English is the complete protagonist (50-100% of published articles are written in English) followed by Spanish.

## 4. Data analysis: natural sciences

- **36,80%** sciences academics participated in mobility programs in the last 2 years for research and research/teaching purposes.
- Have you taught in a foreign language? **Yes: 31,60%** No: 68,40%
- **English** in master programme, master programme with international students, bachelor degree and some seminars at doctoral level.
- Do you intend to teach in a foreign language? **Yes: 73,70%** No: 26,30%
- Would you need linguistic support for teaching? **Yes: 68,40%** No: 31,60%
- “**Linguistic support** should be institutional not private, good with languages but you can always improve”



## 4. Data analysis: business and sciences

Comment	N°
Study program curricula (possibility)	14
Workload and available time	11
Geostrategic factors or (students) needs	10
Institutional support and teaching staff approval	8
Incentives (economic, training, workload)	6
Employment opportunity (national or international)	5
Language competence	4
Internationalization of study programs (international students)	3
Compulsory (only if asked by the university)	3
Language policy of the university and faculty	2
Students' language proficiency	2
Coordination between teachers, visiting/guest professor	1, 1

23. Which factors would influence your willingness to teach in a foreign language at the UZ? Add extra comments (optional)

# 5. Discussion

Question	1st position		2nd position		Other languages	
	BUS	SCI	BUS	SCI	BUS	SCI
Administration	SP	SP	.	.	.	.
Research	SP	ENG	ENG	SP	FR	FR, IT
• Process	SP	ENG	ENG	SP	FR	FR, IT, +
• Product: articles	ENG	ENG	SP	SP	IT	.
Teaching	SP	SP	ENG	ENG	FR	.
Linguistic competence	ENG (B2)	ENG (C1)	.	FR (B1), EUSK	A1-A2	A1-A2

- **Administration:** mostly Spanish
- **Research:** Spanish and English are the dominant languages but it depends on the type of activity and to whom is addressed
- **Teaching:** Spanish is the main language of instruction and awareness of EMI

# 5. Discussion

- RQ1 Do disciplinary differences influence the choice of languages?
- RQ2 To what extent are other languages than English used/accepted in language practices?
- RQ3 What are the overt/covert English language expectations of/made of students and staff?

# 5. Discussion

- RQ1 Do disciplinary differences influence the choice of languages?
  - General trends are similar regarding the use of English and Spanish
  - English is the default language of technical and natural sciences (e.g. translating terminology, language switch) vs. More variety in social sciences (aware of typical methods of natural sciences e.g. empirical studies) (Schluer, 2015)
  - Disciplinary language variation “as a product of the different knowledge-making practices of the disciplines” (Kuteeva, 2015, p. 273)
  - Linguistic competence higher and more varied in natural sciences than in business

# 5. Discussion

- RQ1 Do disciplinary differences influence the choice of languages?
- RQ2 To what extent are other languages than English used/accepted in language practices?
  - English is the preferred foreign language in academia (reading and writing) specially in natural sciences
  - Southern European country with a strong national language visible in Business (Ferguson, 2007)
  - Spanish, French, Italian, local language (oral communication)
  - Depends on the researchers' personal **preferences, motivations, interests and beliefs** + the local/international **topic** of research and target **audience** (Schluer, 2015)

# 5. Discussion

- RQ1 Do disciplinary differences influence the choice of languages?
- RQ2 To what extent are other languages than English used/accepted in language practices?
- RQ3 What are the overt/covert English language expectations of/made of students and staff?

- General positive attitude towards the introduction of languages but:

More support (linguistic and institutional) and teaching training

It is a strategy of internationalization

If students ask for it and have sufficient linguistic competence

If it comes with incentives (economic, employability, workload, training)

## 5. Conclusions

In a world where English has become an international scientific language, “**disciplinary variations in the use of English are determined by pragmatic factors and often surpass recommendations of language policies**” (Kuteeva, 2015, p. 274)

A thorough analysis of the linguistic landscape and linguistic reality of a university should be done prior to the establishment of any top-down institutional language policy to avoid as much as possible mismatches between theory and practice.

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# Thank you for your attention!



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