

# Romance Corpus Phonology: from *(Inter-)Phonologie du Français Contemporain (I)PFC* to *(Inter-)Fonología del Español Contemporáneo (I)FEC*

Elissa Pustka<sup>1</sup>, Christoph Gabriel<sup>2</sup>, Trudel Meisenburg<sup>3</sup>

<sup>1</sup>Institut für Romanistik, Universität Wien, Spitalgasse 2, 1090 Vienna, Austria / <sup>2</sup>Romanisches Seminar, Universität Mainz, Jakob-Welder-Weg 18, 55128 Mainz, Germany / <sup>3</sup>Institut für Romanistik/Latinistik, Universität Osnabrück, Neuer Graben 40, 49069 Osnabrück, Germany  
elissa.pustka@univie.ac.at, christoph.gabriel@uni-mainz.de, tmeisenb@uos.de

## Abstract

The corpus project *(Inter-)Fonología del Español Contemporáneo (I)FEC* aims to document the pronunciation of Spanish in the world, including L1 and L2 speakers as well as learners of Spanish as a foreign language. Our starting point is the French research program *(Inter-)Phonologie du Français Contemporain (I)PFC*. On the basis of its nearly 20 years of experience and several pilot studies on Spanish, we present for the first time the guidelines we developed for the data collection in this project. (I)FEC works with a modular system: the basic design elicits data via a reading task (word list and text), a discourse completion task and a semi-focused interview. For some types of speakers (learners, illiterates, multilinguals), we provide supplementary tasks. In doing so, we take into account variation in both segmental and suprasegmental phenomena such as regionally confined oppositions (e.g., /s/:/θ/), the weakening of coda consonants (particularly coda /s/), word stress, syllabification and intonation.

**Key words:** Corpus Linguistics, Phonology, Spanish, French, Foreign Language Learning, Second Language Acquisition (SLA), Third Language Acquisition

## 1. Introduction

For Spanish, there is not yet a research program comparable to *(Inter-)Phonologie du Français Contemporain (I)PFC*, which documents the variation of French pronunciation worldwide, provides an open access database for the international research community as well as for school and university education and disseminates the results to a large public ([1], [2], [3], [4]). The existing corpora of spoken Spanish only provide (hardly comparable) spontaneous data (e.g., [5], [6], [7]) or data from just one speaker per location (e.g., [8]), or they focus exclusively on prosody ([9], [10], [11]). None of them elicits phonological features systematically.

For this reason, we have revised the PFC method (section 2) and adapted it to Spanish. So far, we have tested different versions of the new guidelines in pilot studies with 9 L1 speakers (originally from Madrid, Tenerife, Mexico, Nicaragua, Cuba, Peru, Paraguay, Chile and Argentina, but living in a German-speaking environment today), with 15 L1 speakers in and around Seville (Spain), and with 12 learners of Spanish as a foreign language from Osnabrück (Northern Germany) and Vienna (Austria), respectively. The resulting method box of (I)FEC is presented in section 3.

## 2. Experiences from (I)PFC

PFC aims to provide the largest corpus of spoken French and sees itself as a prototype for other projects: Before (I)FEC, the method had already been transferred to *Phonologie de l'Anglais Contemporain (PAC)*, for the phonology of English, [12]) and to *Interphonologie du Français Contemporain (IPFC)*, [4]), which aims at learners of French as a foreign language. Since 1999, data from 418 speakers (corresponding to 36 survey points) have been integrated into the constantly growing online database ([1]).

### 2.1. Guidelines for data collection and analysis

PFC provides easily accessible guidelines for data collection and analysis, which also encourages students and non-phonologists to join the program and to contribute to an efficient expansion of the world-wide corpus.

#### 2.1.1. Fieldworker(s) and informants

The PFC guidelines recommend working in teams of two fieldworkers, one of them knowing the speech community well, the other one less or not at all. In doing so, PFC attempts to overcome the observer's paradox in spontaneous discussions and to create a contrast with the semi-focused interview (see 2.1.2). At each location, approximately 12 speakers are recorded, who ideally have lived there throughout all their life. There should be an equal number of male/female speakers belonging to at least two generations and, if possible, to different social environments. Socio-demographic information is collected via a questionnaire. The informants sign an agreement allowing the anonymized data to be used for research and didactic purposes.

#### 2.1.2. Speech recordings

PFC collects recordings in four tasks, which cover the continuum between formal and informal situations and styles as well as the medial gap between read and (more or less) spontaneous speech ([13]): reading of a word list (94 items), in which five minimal pairs are repeated at the end; reading of a fictitious newspaper article containing several items from the word list; a guided interview and a free conversation. This methodological mix aims at satisfying the requests for comparability and authenticity. Furthermore, it presents an economical advantage: If an opposition that is prescribed by the pronuncia-

tion norm is not realized in the word list, it is highly probable that this opposition is not realized in any other task either.

The minimal pairs at the end of the PFC word list test regionally confined oppositions, among others /a:/a/ in *patte* 'paw' vs. *pâte* 'pasta'. The words of the minimal pairs already appear individually in the randomly arranged word list, which tests numerous other phenomena, too. The informants often comment on this task, which gives valuable evidence about their representations and attitudes towards language variation and the norm as well as their phonological awareness. Some words of the list reappear in the text *Le Premier Ministre ira-t-il a Beaulieu ?* (393 words). For certain regions (e.g., Switzerland, Canada) additional word lists and text passages exist. In the IPFC project, the learners not only read the list, but also repeat it after a model speaker, which allows testing their phonetic and phonological competencies independently from the graphic forms and their reading capacities.

In addition, PFC requests two types of spontaneous speech, an interview conducted by the fieldworker the subject does not know yet (*entretien guidé*; 20 min.) and a conversation with the other one or among informants (*discussion libre*; 30 min.). In total, the PFC recordings take approximately 60 min., the IPFC recordings about 90 min. per informant.

### 2.1.3. Transcription and Analysis

The recordings are aligned to the sound and transcribed orthographically in Praat ([14]) following the (I)PFC conventions. In addition to the transcription of the text, 10 min. from each, the interview and the conversation, are transcribed. The text and 5 minutes of each type of spontaneous speech are further annotated with the PFC coding system for liaison and schwa (e.g., *grand11t honneur, pe0212tit*). Using the PFC tool Dolmen ([15]), the coding allows the quantitative exploration of these phenomena in the online corpus and the correlation of the realization rates with external (region, age, gender, education) and internal factors (e.g., position in the word).

## 2.2. Problematic issues

### 2.2.1. Fieldworker(s) and informants

Experience has shown that the PFC ideal of teams of two is in practice often hardly feasible. We thus plan to work with single fieldworkers in (I)FEC.

Another problem is that the PFC guidelines, despite their openness, imperatively prescribe the reading of the word list and the text. Illiterates are thus a priori excluded ([2], p. 29), which is problematic with respect to the representativeness of the data, particularly concerning older rural people, migrants and other multilinguals such as parts of the speakers in the overseas departments or in francophone Africa. In the case of Spanish, the problem already arose in our pilot study in and around Seville, where elderly speakers in a small village had serious problems with reading. For this reason, we plan to use a picture list and a picture story as a supplement or in extreme cases as a substitute for the word list and the text (see 3.2).

Another shortcoming of the PFC guidelines is that the linguistic skills of multilingual informants are not entirely documented. Especially in the IPFC learner corpus, the absence of L1 data makes the detection of interferences difficult, but the problem also concerns the L2 French in numerous francophone regions. Spanish is also spoken alongside other languages, such as indigenous languages in the Americas (e.g.,

Quechua, Nahuatl), co-official languages in Spain (e.g., Catalan, Basque) or migrant languages (e.g., Italian or Chinese in Argentina). Multilingual informants will thus be recorded in all their languages using Aesop's fable *The North Wind and the Sun* ([16]), either as a reading task or – in the case of illiterates – by retelling an orally presented version of the text. Further supplement tasks are optional.

Finally, we adapted the agreement form to current ethical standards ([17]) by including the address of a responsible person and the name of the fieldworker. Each speaker is attributed a non-traceable code, which ensures *anonymization* rather than mere *pseudonymization* (as is the case for the current PFC practice using the initials of the subject's first and last name).

### 2.2.2. Spontaneous speech

According to the reports of the fieldworkers and the results of many quantitative analyses, the original idea of the PFC program, which intended to contrast spontaneous speech in two situations, proved to be difficult to achieve. Further criticism shows that the free conversation does not meet the sociolinguistic requirements of a natural environment. Autobiographical topics as suggested by the PFC guidelines present difficulties for open access publishing of the corpus and didactic applications. Finally, the large data samples have only partially been transcribed and coded until now. This experience leads us to reducing the amount of spontaneous speech in (I)FEC to a 20 min. long interview about civilization and linguistic awareness (see 3.1.4).

### 2.2.3. Repetition task

In the case of Spanish, the repetition task is particularly challenging due to the pluricentricity of the language. Like English, Spanish is usually taught following both European and American models; several varieties (among them, e.g., Madrid, Mexico City, and Buenos Aires) can thus be considered as pronunciation norms ([18]). This linguistic diversity is mirrored in ordinary teaching practice, where learners get input from speakers of different origin. For this reason, the 24 subjects tested in our pilot study (Osnabrück and Vienna, 2015) were presented with a mixed auditory input containing productions from model speakers of the three above-mentioned varieties. As might be expected, the learners tried to reproduce the items independently of their individual target pronunciation and, e.g., repeated *vainilla*, produced as [baj'niʃa] by the Argentinean model speaker (which is quite easy for germanophone learners due to phonemic /ʃ/ in their L1), even if they otherwise had no contact with this variety. In order to avoid choosing one model variety, we shall substitute the repetition of Spanish words with a reproduction task involving the repetition of appropriate logatomes, aiming to test the learners' aptitude to perceive and produce the sounds of (various dialects of) Spanish. A disadvantage of such a task, however, consists in the fact that it abstracts from language-specific frequency effects (e.g., /s/-weakening in frequent *gracias* vs. infrequent *ciempiés*).

## 3. (I)FEC guidelines

(I)FEC works with a modular system: the basic design (see 3.1) follows PFC in eliciting data via two reading tasks (word list and text) and a semi-focused interview. An innovation is the discourse completion task for eliciting prosodic data. Like

in PFC, the informants fill in a socio-demographic questionnaire (different versions for L1 speakers and learners) and a (German and Spanish) agreement. For some types of speakers (learners, illiterates, multilinguals), we provide supplementary tasks (see 3.2). Concerning the recordings as well as digitization and (partial) transcription of the data, we are currently testing the software SpeechRecorder ([19]).

### 3.1. FEC basic design

#### 3.1.1. Word list

The FEC word list includes 125 words, among them 6 (pseudo-)minimal pairs, which makes it slightly longer than the PFC list. We systematically consider the realization of Spanish phonemes in (nearly) all positions. Special focus lies on the regionally confined oppositions. Furthermore, we test phonological processes, word stress and the influence of the graphic form on the pronunciation ([20], [21], [22], [23]).

Among the phenomena related to the phoneme system, one of the most common neutralizations is *seseo*, i.e. the loss of the opposition /s:/θ/ in favor of /s/. One test ground for this is the minimal pair *la casa* ‘the house’ vs. *la caza* ‘the hunt’. The traditional norm, postulating the Castilian model for the whole Spanish-speaking world, distinguishes [ˈkasa] and [ˈkaθa]. However, speakers of almost all American varieties as well as informants from parts of Andalusia and the Canary Islands consistently produce homophonic [ˈkasa]. Other tested oppositions comprise /j:/ɰ/ (which is abandoned in favor of /j/ in so-called *yeísmo* varieties) and /r:/ɾ/ (tap vs. trill).

In addition to the phoneme oppositions, the word list elicits phonological processes. Regarding /s/-weakening, it contains e.g. the items *la casa* [laˈkasa] ‘the house’ and the corresponding plural form *las casas* [lasˈkasas]. Since final /s/ is not only aspirated (realized as [h]), but often elided in various regions of the Spanish-speaking world (e.g., Andalusia, Canary Islands, *tierras bajas* ‘lowlands’ of Latin America), the opposition between singular and plural may become inaudible with [laˈkasa] serving for both. Among other phonological processes to be tested are vowel-weakening, hiatus resolution, glide formation and the spirantization of voiced stops.

Even a few prosodic features can be tested through the word list. We included the minimal triplet *número* [ˈnumero] ‘number’, *numero* [nuˈmero] ‘I number’ and *numeró* [numeˈro] ‘s/he numbered’, on which the graphic accent (or its absence) marks the stressed syllable. In contrast, the stimulus *¡TOMATELO!* lacks this information because of the expressive capitalization.

At the end of the word list, we put two words which do not form a minimal pair in any norm: *barón* ‘baron’ and *varón* ‘man’. Both should be pronounced identically [baˈron]. However, some American speakers present a distinction based on the graphics <b>:<v>, i.e. [baˈron] vs. [vaˈron] ([20], p. 3). The same is likely to occur in learner data due to the close intertwinement of orthography and pronunciation in instructed foreign language learning.

In what follows we reproduce the complete word list (which is not presented to the informants in this compact form, but as a list with one word per line or as a *PowerPoint* presentation with one word per slide):

1. *continúa*, 2. *reloj*, 3. *viuda*, 4. *tabúes*, 5. *estudiéis*, 6. *querría*, 7. *caída*, 8. *pacto*, 9. *miau*, 10. *chalet*, 11. *jinete*, 12.

*rehusa*, 13. *numeró*, 14. *toros*, 15. *guau*, 16. *muy*, 17. *flor*, 18. *rié*, 19. *hoy*, 20. *juzgar*, 21. *signo*, 22. *labio*, 23. *deuda*, 24. *queja*, 25. *ketchup*, 26. *o hay*, 27. *ladrón*, 28. *club*, 29. *vainilla*, 30. *la papa*, 31. *iceberg*, 32. *número*, 33. *vacuo*, 34. *ángel*, 35. *afgano*, 36. *plan*, 37. *la caza*, 38. *logro*, 39. *un yunque*, 40. *mismo*, 41. *coñac*, 42. *el vino*, 43. *admirar*, 44. *un sueño*, 45. *buey*, 46. *él vino*, 47. *tengo*, 48. *montón*, 49. *álbum*, 50. *esdrújulo*, 51. *bou*, 52. *yo lo sé*, 53. *un chico*, 54. *algo*, 55. *diurno*, 56. *ahí*, 57. *la tapa*, 58. *enfermo*, 59. *diablo*, 60. *caudal*, 61. *nadie*, 62. *¡TOMATELO!*, 63. *causa*, 64. *búho*, 65. *la tira*, 66. *llave*, 67. *perro*, 68. *caldo*, 69. *suntuoso*, 70. *guante*, 71. *cuidar*, 72. *óptimo*, 73. *ñandú*, 74. *baile*, 75. *drama*, 76. *vienes*, 77. *gracias*, 78. *oído*, 79. *la casa*, 80. *ración*, 81. *tan blanco*, 82. *ciempiés*, 83. *deshielo*, 84. *muchacho*, 85. *salud*, 86. *palas*, 87. *rosbif*, 88. *pastel*, 89. *con agua*, 90. *quería*, 91. *paz*, 92. *étnico*, 93. *champán*, 94. *honra*, 95. *un tío*, 96. *obtiene*, 97. *la quita*, 98. *baúl*, 99. *la pita*, 100. *pero*, 101. *la capa*, 102. *oye*, 103. *reír*, 104. *tenue*, 105. *lleno*, 106. *las casas*, 107. *Europa*, 108. *allí*, 109. *numero*, 110. *los otros*, 111. *cambiáis*, 112. *virrey*, 113. *diurético*

The list ends with the (pseudo-)minimal pairs:

114. *numero*, 115. *número*, 116. *numeró*, 117. *la caza*, 118. *la casa*, 119. *las casas*, 120. *ahí*, 121. *allí*, 122. *pero*, 123. *perro*, 124. *barón*, 125. *varón*

#### 3.1.2. Text

The 381 words text constructed for the FEC project on the basis of the word list (and especially the minimal pairs) is comparable to the PFC text. 16 words from the list reappear in the text (highlighted):

*Un sueño bastante animal*

Normalmente nunca me acuerdo de mis *sueños*. Pero lo de la noche pasada me *causa* una gran incógnita: Parece un día como otro y voy caminando hacia mi trabajo. De repente, escucho el fuerte ladrido de un *perro*, que viene de *la casa* de un vecino. Es un hombre bastante raro, de quien se dice que posee un gran *número* de animales: además de algunos *perros*, gatos y pollos, como cualquiera en el barrio, también tiene una admirable colección de insectos. Mientras más me acerco a *la casa*, más aumentan los ladridos y veo que causan un caos enorme, tanto así que los demás vecinos salen de *sus casas* para ver qué es lo que pasa.

La situación se agrava aún más cuando la viuda del Doctor *Numeró*, un profesor de matemáticas ya jubilado, llama a la perrera, que llega de inmediato al lugar de los hechos para inspeccionar. ¡Qué sorpresa cuando entran en *la casa!* Tan suntuosa por fuera, y por dentro parece un zoológico obtenido por *la caza* nocturna en selvas y pantanos. Todo se sale completamente de control cuando el primero de los perreros entra a *la casa* y cae al suelo. En seguida comienza a gritar que *algo* lo pica: es un *ciempiés*. ¡*Gracias* a Dios, el resto de su familia ya se encuentra en el estómago de un bulldog! Cuando entran *los otros* perreros, el *perro* finalmente se calla. Todos los insectos restantes están esparcidos por el suelo y causan pánico entre los gatos y los pollos, que tratan de subirse a las estanterías.

Al final, el jefe de los perreros, preocupado por hacer una investigación perfecta, cuenta los animales, y se sorprende de que además de los perros, gatos y pollos se encuentran cinco tipos diferentes de insectos, o no, tal vez diez, o quince, o veinte: mariposas, abejas, libélulas, saltamontes, y además cerdos, ranas y elefantes, ranas rojas y elefantes amarillos, que

empiezan a hablar, sí, discuten sobre el peinado de los perreros y los *planes* de renovación de *la casa* ... y entonces yo me encuentro *allí*, entre todos, tratando de entender las diferentes discusiones. En ese momento suena mi despertador. ¿Qué *diablos* trata de decirme mi subconsciente con semejante *sueño* sobre mis traumas de niño y deseos ocultos?

### 3.1.3. Discourse Completion Task

In order to systematically elicit a certain amount of intonation patterns, we added a discourse completion task ([24]). This inductive method consists of confronting the speakers with a series of hypothetical everyday situations to which they are supposed to react verbally. The speakers may phrase their verbal reactions as they wish, e.g., Interviewer: *Entra en una tienda donde nunca estuvo antes y pregunta si tienen mandarinas.* ‘You enter a shop where you have never been before and you ask if they sell tangerines.’ Subject: *¿Tiene(n) mandarinas? / ¿Hay mandarinas, por casualidad? / Hola, ¿mandarinas, tenés?* etc. ‘Do you have tangerines?’ (possible responses). The learners are presented with a simplified version of this task consisting in the reproduction of a given answer.

### 3.1.4. Interview

The 20-minute interviews follow particular guidelines in FEC and IFEC. FEC focuses on civilization (e.g., *¿Qué lugares recomendarías visitar en tu ciudad o pueblo?* ‘Which places in your town/village would you recommend to visit?’) and linguistic awareness (e.g., *¿A través de qué características de la forma de hablar se reconoce a alguien de tu región?* ‘Which characteristics of speech reveal the origin of a speaker from your region?’). In the case of IFEC, language learning is particularly interesting (*¿Qué te parece difícil en español?* ‘What seems difficult to you in Spanish?’). The guidelines are adapted to the competence levels: A1, A2–B1 and B2–C2.

## 3.2. Supplementary tasks

In addition to the basic design, we currently develop supplementary tasks for learners (IFEC), illiterates and multilinguals. For learners, we plan a logatome list, the reading of a constructed text in German (accompanied by a short summarizing task), a detailed interview on linguistic representations and attitudes in German and, finally, a phonological awareness test in the course of which the learners are presented with their own productions and asked to comment on them (see [25]). For illiterates, a picture list and a picture story are in preparation, for multilinguals either the reading of *The North Wind and the Sun* or specifically constructed supplement tasks will be applied.

## 4. Acknowledgements

We gratefully acknowledge Duygu Durmus, Kristina Dziallas, Marie-Antoinette Goldberger, Isabella Rechberger, Laura Storkorb and Franziska Stuntebeck for collecting the data of the pilot studies as well as all speakers for their disposition to participate in these.

## 5. Bibliography

- [1] <http://www.projet-pfc.net/>.  
 [2] J. Durand, B. Laks and Ch. Lyche, “Le projet PFC. Une source de données primaires structurées”, J. Durand, B. Laks and C.

- Lyche (eds.), *Phonologie, variation et accents du français*, Paris, Hermès, pp. 9–61, 2009.  
 [3] S. Detey, J. Durand, B. Laks and Ch. Lyche, “The PFC programme and its methodological framework”, S. Detey, J. Durand, B. Laks and Ch. Lyche (eds.), *Varieties of Spoken French*, Oxford, Oxford University Press, 2016.  
 [4] I. Racine, S. Detey, F. Zay and Y. Kawaguchi: “Des atouts d’un corpus multitâches pour l’étude de la phonologie en L2. L’exemple du projet ‘Interphonologie du français contemporain’ (IPFC)”, A. Kamber and C. Skupiens (eds.), *Recherches récentes en FLE*, Bern, Lang, pp. 1–19, 2012.  
 [5] C-ORAL-ROM: E. Cresti and M. Moneglia (eds.), *C-ORAL-ROM. Integrated Reference Corpora for Spoken Romance Languages*, Amsterdam, Benjamins, 2005.  
 [6] CREA: Real Academia Española, *Corpus de referencia del español actual (CREA)*. <http://www.rae.es/recursos/banco-datos/crea>.  
 [7] *Corpus Oral de Español como Lengua Extranjera (ELE)*, [http://cartago.llf.uam.es/corele/home\\_es.html](http://cartago.llf.uam.es/corele/home_es.html).  
 [8] Piñeros, Carlos Eduardo, *Dialectoteca del Español*, <http://dialects.its.uiowa.edu/#>.  
 [9] E. Martínez Celdrán and A. Fernández Planas (coord.), *Atlas Multimedia de la Prosodia del Espacio Románico (AMPER)*, 2003–2015. <http://stel.uab.cat/labfon/amper/cast/index.html>.  
 [10] C. Gabriel, Hamburg Corpus of Argentinean Spanish (HaCASpa), 2011. [http://www.corpora.uni-hamburg.de/sfb538/en\\_h9\\_hacaspa.html](http://www.corpora.uni-hamburg.de/sfb538/en_h9_hacaspa.html).  
 [11] P. Prieto and P. Roseano (eds.), *Atlas interactivo de la entonación del español*, 2009–2013. <http://prosodia.upf.edu/atlasentonacion/>.  
 [12] J. Durand and A. Przewozny, “La phonologie de l’anglais contemporain: usages, variétés et structure”, *Revue française de linguistique appliquée* XVII, pp. 25–37, 2012.  
 [13] W. Labov, *Sociolinguistic Patterns*, Philadelphia: University of Pennsylvania Press, 1972.  
 [14] P. Boersma and D. Weenink, *Praat. Doing phonetics by computer*. <http://www.fon.hum.uva.nl/praat/> [Computer program. Version 6.0.10], 2016.  
 [15] J. Eychenne and R. Paternostro, “Analyzing transcribed speech with Dolmen”, S. Detey, J. Durand, B. Laks and C. Lyche (eds.), *Varieties of Spoken French. A source book*, Oxford, Oxford University Press, pp. D35–D52, 2016.  
 [16] International Phonetic Association, *Handbook of the International Phonetic Association*. Cambridge, CUP, 1999.  
 [17] DFG-Handreichung “Informationen zu rechtlichen Aspekten bei der Handhabung von Sprachkorpora”, [http://www.dfg.de/foerderung/antragstellung\\_begutachtung\\_entscheidung/antragstellen/de/antragstellung/nachnutzung\\_forschungsdaten/index.html](http://www.dfg.de/foerderung/antragstellung_begutachtung_entscheidung/antragstellen/de/antragstellung/nachnutzung_forschungsdaten/index.html).  
 [18] W. Oesterreicher, “Plurizentrische Sprachkultur – der Varietätenraum des Spanischen”, *Romanistisches Jahrbuch* 51, pp. 281–311, 2000.  
 [19] Ch. Draxler and K. Jänsch, “SpeechRecorder – A Universal Platform Independent Multi-Channel Audio Recording Software”, Proc. LREC 2004, Lisbon.  
 [20] D. L. Canfield, *La pronunciación del español en América*, Bogotá, Instituto Caro y Cuervo, 1962.  
 [21] J. I. Hualde, *The Sounds of Spanish*, Cambridge, Cambridge University Press, 2005.  
 [22] Real Academia Española / Asociación de Academias de la Lengua Española, *Nueva gramática de la lengua española. Fonética y fonología*, Madrid, Espasa Libros, 2011.  
 [23] C. Gabriel, T. Meisenburg and M. Selig, *Spanisch: Phonetik und Phonologie. Eine Einführung*, Tübingen, Narr, 2013.  
 [24] J. C. Félix-Brasdefer, “Data collection methods in speech act performance. DCTs, roleplays, and verbal reports”, A. Martínez-Flor and E. Usó-Juan (eds.), *Speech act performance. Theoretical, empirical, and methodological issues*, Amsterdam, Benjamins, pp. 41–56, 2010.  
 [25] A. G. Osborne, “Pronunciation strategies of advanced ESOL learners”, *International Review of Applied Linguistics in Language Teaching* 41, pp. 131–141, 2003.