The acquisition of the indefinite past in Modern Greek by Catalan/Spanish learners: A dual mechanism account

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ΠΕΡΙΛΗΨΗ

Έρευνες στο πεδίο της Κατάκτησης της Δεύτερης Γλώσσας για το πώς οι μαθητές υπεργενικεύουν ομαλά σχήματα σε ανώμαλα ρήματα ως τεχνική εκμάθησης προσεγγίζουν το θέμα στο πλαίσιο δύο βασικών ψυχογλωσσολογικών θεωριών, τη θεωρία του *μονού μηχανισμού* (Single Mechanism Account) (Westermann 1999, McClelland & Patterson 2002) και τη θεωρία του *διττού μηχανισμού* (Dual Mechanism Account) (Ullman 1999, Stavrakaki & Clahsen 2008). Η παρούσα μελέτη ερευνά την εκμάθηση του αορίστου ανώμαλων ρημάτων στη Νέα Ελληνική ως ξένη γλώσσα και ερμηνεύει τα αποτελέσματα με βάση τα προαναφερθέντα δύο μοντέλα. Η μελέτη διεξήχθη στην Κρατική Σχολή Γλωσσών της Βαρκελώνης στην Ισπανία. Οι συμμετέχοντες ήταν 30 μαθητές της Νέας Ελληνικής ως ξένης γλώσσας με πρώτη γλώσσα τα Καταλανικά ή τα Ισπανικά ή δίγλωσσοι σε αυτές τις γλώσσες. Τα εργαλεία που χρησιμοποιήθηκαν για τη συλλογή δεδομένων ήταν ένα κοινωνιογλωσσικό ερωτηματολόγιο και ένα τεστ γραμματικότητας. Τα αποτελέσματα δείχνουν ότι οι μαθητές στα πρώτα επίπεδα χρειάζονται περισσότερο χρόνο για πρόσβαση στους ανώμαλους τύπους και έχουν την τάση να υπεργενικεύουν τους καταληκτικούς ρηματικούς τύπους (π.χ. *πονάω-πόνεσα*) περισσότερο απ' ό,τι ρήματα με συγκεκριμένο (ανώμαλο) σχηματισμό στον αόριστο (π.χ. *βλέπω-είδα*). Υποστηρίζουμε ότι τα αποτελέσματα αυτά συνάδουν με τη θεωρία του διττού μηχανισμού λόγω της περίπλοκης κλίσης της Ελληνικής. Από τη σύγκριση των αποτελεσμάτων με αυτά μελετών σε άλλες γλώσσες προκύπτει ότι τα προαναφερθέντα μοντέλα φαίνεται να εξαρτώνται από την εκάστοτε γλώσσα-στόχο.

KEYWORDS: dual mechanism account, Greek as FL, indefinite past tense, overgeneralization, single mechanism account

1. Introduction*

The present study delves into the acquisition of the indefinite past in Modern Greek as a foreign language by Catalan/Spanish learners of the language. The purpose of this study is two-fold; first to explore whether the number of errors diminishes as proficiency level increases and whether learners overgeneralize irregular forms less often when they are at higher levels; and, second, if their performance is consistent with the Dual Mechanism Account (Stavrakaki & Clahsen 2008).

The present paper is divided into the following sections: first, a literature review which deals with the findings and theories from previous research, as well as the linguistic analysis of the Greek verbal system; second, the description of the context, participants and instruments in the study together with the procedure and research questions; third, both the quantitative and qualitative analyses of the results are presented along with the discussion; the conclusions and limitations of the study are provided in the final section.

2. Literature review

2.1. Regular vs. irregular verbs in past morphology to debate

Many studies have geared their investigations towards the acquisition of regular and irregular past tenses, analyzing how children acquire certain structures and forms in languages which are not fully part of the input they receive and how these forms are affected by several factors

* I would like to thank first Prof. María Luz Celaya (University of Barcelona), who shared with me her expertise and provided me with thoughtful advice during the process of this research. I would also like to thank the *Escola Oficial d'Idiomes "Drassanes"* in Barcelona, especially the Greek teachers, Teresa Magadán and Kleri Skandami for allowing me to collect data, as well as for the invaluable information they provided for this study. Thanks to the students of Greek who took part in the study. It is also a pleasure to thank Maria Andria, linguist and teacher of Greek, who was extremely patient during my research and whose view as an L1 speaker of Greek and learner of foreign languages was invaluable.

during their acquisition. One of these factors is the frequency effect, that is the fact that "memory storage depends on the preference for high over low-frequency forms, which becomes stronger with repeated exposure and use" (Clahsen et al. 2010: 521). "Regular inflections are not stored in an associative memory" but are rule-based and "there are no frequency effects on their production latencies", since the equally frequent stem forms can be quickly and equally accessed, taking the same amount of time to add an *-ed* ending in the case of English (Ellis & Schmidt 1998: 309). In view of the above, some cognitive theories underlying regular-irregular debate have emerged in the field.

It has been widely demonstrated that second language (L2) learners generally follow the same stages in the acquisition of morphology in a given language as children do in the acquisition of the same language as a first language (L1). Besides, even learners who receive instruction present the same developmental stages (see Lightbown & Spada 2013). However, in other areas such as pragmatics, adults present an advantage over children, since adults are already competent in the pragmatics of their L1, whereas "children have to go through both the process of analysis and control in their L1 and L2" (Barón & Celaya 2010: 59). Nevertheless, the idea of a similar route of acquisition is not supported by researchers like Clahsen and Muysken (1989), who revealed that considerable differences can be perceived in linguistic features like word order, negation and agreement in German between L1 and L2 learners.

Concerning the acquisition of regular and irregular past tenses, there exist interesting phenomena underlying this process. These phenomena are overregularization (or overgeneralization) and recovery and have been the focus of several studies (see e.g. Shirai 2003). In English, for instance, irregular forms are also subject to overregularization, that is when young "children sometimes regularize irregular verbs, producing '*goed*' or '*felled*'" (McClelland & Patterson 2002: 1). In this sense, it is noticeable that frequency plays an important role in the acquisition of irregular verbs in Second Language Acquisition (SLA), and "overapplications will occur until enough instances of the irregular form have been heard and used by the learner" (Paradis et al. 2007: 499); a better accuracy score will be shown by learners if the frequency of an irregular form is high (Clahsen et al. 2010).

The present study delves only into the phenomenon of overgeneralization. Nevertheless, even though this phenomenon is perceived in both L1 and L2 acquisition, several studies have demonstrated that overgeneralizations are more frequent when adults learn a L2 or FL than when children acquire their L1 (Clahsen & Muysken 1989); it seems that L2 learners rely more on patterns stored in memory than children since irregular forms are lexically listed, resulting in their overgeneralization (Clahsen et al. 2010). "Children's memories are not as good as adults' memories, hence overregularization errors" (Thordardottir et al. 2002: 6-7). This strategy can also be explained by the deductive learning of grammatical rules by L2 learners, which results in transferability to new situations (Ausubel 1964), and the use of this strategy by means of which the learner discovers the structure of the language by testing out his hypotheses (Pica 1994). Exposure is also a relevant factor because children are more exposed to the L1 than adults to the L2 in naturalistic settings, and especially in FL settings, so the difference in the amount of input implies that low-frequency irregular forms take longer to be internalized and accessed than high-frequency ones for L2 learners (Ellis & Schmidt 1998). In other words, lexical strength of a word increases due to the token frequency in the input and in the language user's output.

The irregularity of past tenses in language has raised an important debate between connectionists and generativists. Whereas generativists support that languages are entirely governed by rules, connectionists consider that associative networks are present in the process of acquisition (Jensvoll 2004). In this sense, two hypotheses about this issue have emerged in the field, namely the Single Mechanism Account Hypothesis (supported by connectionists)

(Rummelhart & McClelland 1986) vs. the Dual Mechanism Account Hypothesis (generativist theory) (Pinker & Prince 1994). This dichotomy will be examined in depth in the next section in order to understand how regular and irregular forms work in the language that is the object of the present study, Greek.

2.2. Single Mechanism vs. Dual Mechanism

The Single Mechanism Account claims that both regular and irregular past forms are acquired and processed in the same way, by employing a single mechanism and without using explicit representations of morphological rules (Shirai 2003). On the other hand, the Dual Mechanism Account involves the existence of two distinct cognitive mechanisms for the acquisition and processing of regular and irregular inflectional morphology, considering that irregular verbs are stored in the lexicon (Clahsen et al. 2010) and have to be retrieved from the memory (Ullman 1999, Romanova 2008). These two cognitive mechanisms are responsible for the "decomposition of regulars into stems and exponents, and full-form storage for irregulars" (Clahsen et al. 2003: 1). When such irregular forms have to be retrieved from the mental system, the learner needs more time to look for a specific item in the brain. As Stathopoulou and Clahsen claim (2010: 871), "since irregular forms are stored and retrieved from the lexicon, wordform frequency effects are expected to be found for irregular (but less so for regular) past tense forms". As the learning progresses, the frequency effect is relevant for irregular items but not so for regular items (Ellis & Schmidt 1998). These theories can also be applied to other linguistic areas such as phonology as seen in a cross-sectional study carried out by Nicolaidis et al. (2004), in which it was found that in phoneme acquisition place co-occurrence constraints can be differentiated by frequency patterns.

Previous research concerning these theories has shed light on the English indefinite past. Jensvoll (2004) considers that researchers such as Pinker support the Dual Mechanism Hypothesis because a great number of studies have mainly focused on English as the language of research. Besides, English past tense morphology is not as complex as the system of other languages. Recent research has investigated how the acquisition of the past tense morphology works in other languages, supporting the Dual Mechanism. In this sense, researchers might lean towards one theory or another, depending on the language of study. In a study carried out by Stavrakaki and Clahsen (2008), they proposed a Dual Mechanism Account for their findings in the acquisition of indefinite past tense by Greek children, arguing that the regular past tense concerns a morphological rule and that irregular forms are stored in lexical memory. Following this idea, other researchers revealed that irregular inflections are sensitive in terms of frequency and set up neighbourhoods based on phonological similarity (Marian et al. 2008, Romanova 2008). In this sense, Ullman (1999: 50) came up with the following idea: "If irregulars are retrieved from associative memory in a manner similar to that hypothesized by single-system models, whereas regulars are rule-products, then phonological neighbourhood effects should be found for irregular but not regular forms." Some examples of studies are consistent with the Dual Mechanism such as Norwegian (Jensvoll 2004) or Greek (Clahsen et al. 2003, 2010), which present a more complex past tense morphology. Thus, the more complex a language is in its past tense system, the harder it is to retrieve forms from the lexicon, and, consequently, more reliability in the Dual Mechanism Theory has to be considered.

Other studies, however, disregard this theory, considering that the past tense inflection is acquired gradually due to its sensitivity to semantic and phonological content, supporting a single, integrated mechanism for regular and irregular forms "dependent jointly on phonology and semantics" (McClelland & Patterson 2002: 465) and "all irregular verbs are thought to be generated by the lexical associative mechanism" (Patterson et al. 2001: 722). For instance, some irregular forms can be easily acquired due to similar phonology in English (*read-read,*

lead-led etc). Following this idea, overgeneralizations of regular verbs to irregular are something hard to explain and a clear explanation for such blends cannot be found if the two mechanisms of the inflection system are distinct (Westermann 1999). In a study carried out by Thordardottir et al. (2002) a strong relationship between the amount of vocabulary and morphological and syntactic progress in Icelandic and English-speaking 2-year-olds was also consistent with the Single Mechanism Account. In other words, these researchers embrace a Single Mechanism Account considering that both regular and irregular forms are jointly present in one unique mechanism, and stating that irregular forms cannot be acquired if they are not associated to regular rules.

In view of these ideas, the next objective of the present review is to analyze the complex irregularity of the Greek language.

2.3. Previous research in Greek as an L1, L2 and FL

Not many studies in SLA have been devoted to research in Greek and most of these deal with Greek as L1; very few so far have investigated Greek as an L2/FL. However, many studies deal with the linguistic description of Greek as a FL involving contrastive analyses of different tenses between Greek and other languages such as Spanish (Álvarez 1999). Nevertheless, further research is still needed on how Greek is acquired by both native and foreign speakers.

Concerning Greek as an L1, there has been a lot of interest in the language in terms of phonology, analyzing how children produce sounds when acquiring the language in the first stages and the presence of a high number of lingual obstruents (Nicolaidis et al. 2004), an area also explored by Mennen and Okalidou (2006). Other studies have investigated the relationship between the acquisition of nominal ellipsis and the acquisition of the agreement system in the nominal domain of Greek (Ntelitheos & Christodoulou 2005). Furthermore, the complexity of Greek morphology has allowed researchers to get an idea about how native children acquire verbal tenses. Studies on the perfective past and present perfect tenses were carried out by researchers such as Stavrakaki and Clahsen (2008), analyzing the strategies followed in the process of acquisition. Following this idea, the objective of the present study focuses on the strategy of overgeneralization, but in this case, as shown by non-native speakers of Greek.

Syntax and morphology have been the main focus of attention in studies regarding Greek as a L2/FL. Greek is characterized by free syntax, implying that word order can be altered and is not strict. This fact has made researchers investigate how non-native speakers perform in this area. It has been stated that Greek free word order is not a problem for non-native speakers whose language has a strict word order (Andreou et al. 2008). In Andreou et al. (2008) it is reported that even though English speakers made more errors in morphology than Greek native speakers, they performed much better in syntax tasks. The frequent errors that non-native speakers make in morphology can be explained by the fact that "L2 learners rely more on stored inflected word forms and on associative generalizations than native speakers" (Clahsen et al. 2010: 501). On the other hand, Andria (2010) and Andria et al. (2012) conducted research on the role of psychotypology in the acquisition of Greek vocabulary by bilingual Spanish-Catalan speakers from Barcelona (Spain) with both English and Greek as FL. Furthermore, Andria and Serrano (2013) investigated the influence of L1 patterns on the acquisition of Greek as an L2 by Spanish and Catalan L1 learners and explored whether proficiency level and stays in the target-language country (Greece) can have an impact on such influence. It is important to mention that the participants of the present study belong to the same context used in Andria (2010), Andria et al. (2012) and Andria and Serrano (2013).

Furthermore, other studies have focused on how specific features of the language are acquired by people with specific language impairment (SLI) comparing their performance to that of normally-developed subjects. Develegka (2010) carried out a case study based on nominal agreement, while Stavrakaki (2001, 2006) focused mainly on how grammatical competence was acquired by impaired subjects. Similarly, Stathopoulou and Clahsen (2010) conducted a study regarding the acquisition of the perfective past in Greek by adolescents with Down syndrome.

Although there is not much research concerning the acquisition of Greek, the above mentioned studies provide an overview of how different linguistic areas of the language are investigated with L1, L2, FL speakers, as well as subjects with certain types of impairments. In the following section, the perfective past in Greek will be analyzed in order to understand the main concerns of the present study.

2.4. The indefinite past in Greek

2.4.1. The complexity of the past tense

One important distinction amongst indefinite (or perfective) past tense forms is between sigmatic and non-sigmatic forms. The former contain an *-s-* perfective affix (sigma in the Greek alphabet) plus the personal ending, whereas the latter are without *-s-* (Stavrakaki & Clahsen 2008). The sigmatic forms would refer to what we know as regular such as *πληρώνω-πλήρωσα* (/pliróno-plírosa/ "to pay"), whereas the non-sigmatic would correspond to the irregular (those who do not present any *-s-* in the past). The Greek verb system has been described as a two-way system where the regularity of verb forms depends upon the presence or absence of the perfective past tense affix *-s-* (Stathopoulou & Clahsen 2010: 872). In both regular and irregular verbs, categories are defined by the contrast between the perfective or imperfective aspect. The former is reflected in the present root and the latter in the aoristos root (from the name of the tense: indefinite past) (Leontaridi 2002, Stathopoulou & Clahsen 2010). In other words, verbs in Greek conjugate all tenses (present perfect, past perfect, future continuous etc.), by using either the present root or the past root, depending on its continuous aspect (imperfective) or punctual aspect (perfective). Although Stavrakaki and Clahsen (2008) found out that there was a vast majority of regular verbs over irregular verbs in Greek from evidence in a large corpus from the website *Neurosoft Language Tools*, irregular forms present many different categories. Greek verbal tenses use the following formula in the indefinite past: (*ε*) + stem + *σα*. The *-ε-* between parentheses refers to an augmentive vowel and is only added when the verb has a monosyllabic stem. This augmentive vowel is expressed in both perfective and imperfective past tenses. The above formula can be found both in regular verbs and some irregular forms. Two examples (one regular and another irregular) are conjugated in the indefinite past below:

> (1) Regular: *δηλώνω* (/dilóno/ "to declare") – *δήλωσα*, *δήλωσες*, *δήλωσε*, *δηλώσαμε*, *δηλώσατε*, *δήλωσαν* (/dílosa, díloses, díloses, dilósame, dilósate, dílosan/)
> (2) Irregular: *τρώω* (/tróo/ "to eat") – *έφαγα*, *έφαγες*, *έφαγε*, *φάγαμε*, *φάγατε*, *έφαγαν* (/éfaga, éfages, éfage, fágame, fágate, éfagan/)

However, not all irregular forms follow the (*ε*) + *stem* + *σα* rule mentioned above. There is much dissimilarity when expressing this tense in many other irregular forms. In this respect, Triandafillidis (1993: 231-233) offers a thorough description of the different categories for the non-sigmatic verbs (see Table 1).

Table 1. Categories for irregular verbs (Triandafillidis 1993: 231-233)

1.	Verbs which present a totally different word in the indefinite past i.e. *βλέπω* (present) - *είδα* (indefinite past) "to see"
2.	Verbs which change the feature of the present tense in the indefinite i.e. *βγάζω* (present) - *έβγαλα* (indefinite past) " to take out"
3.	Verbs which change the thematic vowel in the present i.e. *μένω* (present) - *έμεινα* (indefinite past) "to stay"
4.	Verbs ending with *-αινω* and *-ανω*, which conjugate the indefinite past by eliminating the *ν* and changing the thematic vowel in the present i.e. *ανασταίνω* (present) - *ανάστησα* (indefinite past) "to revive" *αμαρτάνω* (present) - *αμάρτησα* (indefinite past) "to sin"
5.	Verbs ending with *-λλω* conjugate the indefinite by reducing just to one *λ* and changing the thematic vowel i.e. *σφάλλω* (present) - *έσφαλα* (indefinite past) "to err"
6.	Verbs ending with *-λνω* and *-ρνω* conjugate their indefinite by eliminating the *ν* and changing the thematic vowel i.e. *στέλνω* (present) - *έστειλα* (indefinite past) "to send" *σπέρνω* (present) - *έσπειρα* (indefinite past) "to sow"
7.	Some verbs ending with *-αινω* create their indefinite past root by eliminating the syllable from the present root *-αιν* i.e. *καταλαβαίνω* (present) - *κατάλαβα* (indefinite past) "to understand"
8.	Verbs belonging to the first conjugation that are conjugated as the second i.e. *θέλω* (present) - *θέλησα* (indefinite past) "to want"
9.	Different suffixes for verbs belonging to the contract verbs *-άω*: *-ασα*, *-εσα*, *-υσα*, *-αξα*, *-ηξα*, *-εψα* i.e. *γελάω* (present) - *γέλασα* (indefinite past) "to laugh" *φοράω* (present) - *φόρεσα* (indefinite past) "to wear" *μεθώ* (present) - *μέθυσα* (indefinite past) "to get drunk" *πετώ* (present) - *πέταξα* (indefinite past) "to fly" *τραβώ* (present) - *τράβηξα* (indefinite past) "to pull" *θαρρώ* (present) - *θάρρεψα* (indefinite past) "to reckon"

As seen in Table 1, the Greek verbal tense system is quite complex. However, the present study will specifically concentrate on two of these categories and how learners of Greek overapply the (*ε*) + *stem* + *σα* schema to the irregular categories specified below:

> Category number 1: Verbs which present a different form in the past (*βλέπω-είδα*, /vlépo, íδa/ "to see")
> Category number 9: Verbs expressing the indefinite past by adding the suffixes *-εσα*, *-ησα*, *-ασα* in those verbs called 'contract' and present the ending *-άω* in the infinitive form (*πονάω-πόνεσα*, /ponáo, pónesa/ "to hurt")

Verbs of the former category are explicitly taught during the first stages, but overgeneralizations can occur at later stages, including such forms as *βλέπω - έ + βλεπ + σα* = **έβλεψα* /évlepsa/ instead of *είδα* /íδa/, which is the correct form. Verbs of the latter category present a great variety of endings. Being called "contract" verbs ending in *-άω*, the regular affix *-σα* can be overapplied: *πονάω-*πόνα + σα* /pónasa/ instead of *πονάω-πόνεσα* /pónesa/.

2.4.2. The indefinite past tense in Greek, Spanish and Catalan: A contrastive analysis

Since the present study will examine the acquisition of the indefinite past tense in Greek (called *αόριστος* /aóristos/) by native speakers of Spanish and Catalan, a contrastive analysis between the three languages involved in the current study is attempted in order to understand the processes underlying the acquisition of this grammatical feature. In Greek, the indefinite past is the tense used to express actions that began and finished in the past. However, these

actions can be punctual or repeated several times (Álvarez 1999). "In Greek there is no use of Present Perfect in order to refer to the near past, as in Spanish" (Andria 2010: 12). In this respect, in both Spanish and Catalan the near past is expressed by the present perfect. Examples of this dichotomy can be seen as follows:

(3) Greek: Σήμερα το πρωί πλήρωσα το λογαριασμό. (Indefinite past tense)
(Today in the morning I paid the bill)
(4) Spanish: Esta mañana he pagado la cuenta. (Present perfect tense)
(This morning I have paid the bill)
(5) Catalan: Aquest matí he pagat el compte. (Present perfect tense)
(This morning I have paid the bill)

As can be perceived in the examples, the fact that some languages present a similar grammatical structure does not mean that an absolute correspondence exists between them. For instance, the indefinite preterite differs from one language to another.[1]

In the case of Greek, indefinite tense is used for a past action regardless of the moment when this happened. Spanish and Catalan, instead, avoid the use of the indefinite to refer to the near past (or a past considered as near) and substitute it with the present perfect (Álvarez 1999). The Catalan present perfect (as in Spanish) is used to express the "before now tense", but not a distant past, i.e. hodiernal past vs. pre-hodiernal past (Rigau 2001).

2.5. Research questions

In light of the review above, the present study intends to answer the following research questions:

a) Does proficiency play a role in the acquisition of the indefinite past in Greek or more specifically, in the number of overgeneralizations? Is there a decrease in overgeneralizations as the level of proficiency increases? and

b) Is the learners' performance consistent with any of these accounts?

3. The study

3.1. Context

Barcelona presents a multicultural atmosphere that leads to an increase in the interest of learning foreign languages. Among these languages, Greek seems to be gaining relevance since the city receives a growing number of Greek tourists every year. This can be explained by the closeness of both cultures and languages and the fact that the city of Barcelona is a highly preferred destination by Greek people. In the metropolitan area of Barcelona, English is generally the first FL and Greek is learned as a second or third FL. Nowadays, universities such as Universitat de Barcelona and Universitat Autònoma de Barcelona provide optional courses in Modern Greek. Moreover, there are also institutions such as the Greek Community of Catalonia in Barcelona which offer formal classes, as well as participation in cultural activities, thus enhancing language learning.

The Official School of Languages of Barcelona "Drassanes", where this study has been conducted, presents the highest number of students enrolled in Greek classes, as an average of 90 learners enrol each year. Currently, there are nearly 30 students enrolled in the first year, 18 in the second, 15 in third A, 10 in third B, 8 in the fourth year, and 15 in the fifth and last course. The school involves 5 levels in 6 years. Each level takes one year, except for the 3rd

[1] It should also be mentioned that this use of the past tense differs in South-American Spanish and some regions in the North of Spain, where the near past is expressed by the indefinite past tense (Celaya 1992). In the present study, only the standard variety (mainly spoken in the central part of Spain and the East coast) will be considered.

level, which is divided in two years (called 3a and 3b). The first two years correspond to the elementary level; the two courses belonging to the 3rd year are analogous to the intermediate level; whereas the last two years are equivalent to the upper-intermediate level. However, it is important to consider that the highest level attained after finishing all courses correspond to the official B2 from the Common European Framework of Reference for Languages (Council of Europe, 2001) (see Table 2). Students at the school receive four hours of instruction a week plus an extra two hours of instruction every other Friday during the first term. The first course was not included in the study since students are taught the indefinite past from the second level onwards.

Table 2. Greek language level equivalences

Official School of Languages	**CEFR**
1st	A1 – Beginner
2nd	A2 – Elementary
3rdA	B1 – Intermediate
3rdB	
4th	B2 – Upper-intermediate
5th	
	C1 – Advanced
	C2 – Proficiency

3.2. Participants

Twenty eight learners (17 women and 11 men) of Modern Greek as a FL took part in the study. Eight participants were excluded from the initial sample of 36 students due to the fact that they did not have Spanish or Catalan as their L1. Eleven participants had Catalan and twelve Spanish as their L1, while five learners were Catalan/Spanish bilingual.

It is also important to mention that apart from formal instruction at this school, nine participants have attended summer courses in Greece several years. Seven learners have lived in the country for several months or years. All participants had academic degrees and their ages varied between 28 and 75 (Mean Age: 47.6) (see 3.3).

3.3. Methodological tools

A questionnaire in both Catalan and Spanish was provided to the students in order to elicit their linguistic background and get information on the following relevant aspects for the present study (see Table 3): Age, L1 (Spanish, Catalan, Spa/Cat bilingual, other languages), years learning Greek, classes outside school and exposure to the language (natural and instructional settings) (See Appendix I).

In addition, a Grammaticality Judgment Test (GJT) was designed on the basis of the material used by the teachers at the school (both textbooks and extra material) and of information on pedagogical issues coming from meetings between the author of this paper and the two teachers. This procedure aimed at ensuring that the students (from the lowest grade taking part in the study) could recognize all the forms in the task. The test consisted of twenty sentences on the correct and incorrect forms of irregular verbs (based on overgeneralization) in the Greek indefinite past; among these sentences there were five distractors. The GJT was also analyzed by the two teachers prior to data collection to get feedback on its suitability.

Instructions on the task were provided in Spanish and Catalan both written and orally in all the groups. The participants were asked to reply whether each of the sentences was correct or incorrect. There was also the possibility to leave unanswered those sentences which were doubtful to the students, with the objective of eliciting their responses in the oral protocol (see Appendix II).

Table 3. Descriptive analysis of the questionnaire variables

Level	Participants	Mean ages	L1	Years learning Greek	Classes outside school	Exposure*
1	6	45	Cat: 2 Spa: 0 Cat/Spa:3 Other: 1	All: 2	Yes: 1 No: 5	4 / 1 2 / 2
2	7	39,1	Cat: 2 Spa: 4 Cat/Spa:1	3 years: 6 4 years: 1	Yes: 4 No: 3	4 / 2 3/ 5
3	5	57,2	Cat: 1 Spa: 3 Cat/Spa:1	4 years: 5	Yes: 1 No: 2	5 / 2
4	4	56,5	Cat: 3 Cat/Spa:1	5 years: 3 8 years: 1	Yes: 1 No: 3	2 / 2 2 / 5
5	6	46,1	Cat: 3 Spa: 1 Cat/Spa:2	5 years: 2 6 years: 3 9 years: 1	Yes: 3 No: 3	3 / 2 3/ 5

*Exposure: 1 = No, 2 = Holidays, 3 = Interchange programs, 4 = Summer courses, 5 = Other reasons.

Finally, ten learners (two from each level) were randomly selected to participate in oral protocols. The reason why two participants were chosen for the oral protocols was because most were language teachers at secondary schools or translators. Therefore, it was considered relevant to examine both a "linguistic" and a "non-linguistic" protocol in each level to check for possible differences on the feedback given by learners with a different profile. These oral protocols were useful in order to find how learners went about overgeneralizing the irregular tenses encountered in the test, as well as the real time they needed in order to retrieve the correct form.

3.4. Pilot study

Five non-native speakers from different levels, in addition to four native speakers of Greek, took part in the pilot study in order to test the validity of the GJT. One of these native speakers, a doctoral student at the University of Barcelona, provided valuable information on the validity and suitability of the instrument during its process of design. A pilot oral protocol after the test was also conducted to consider which questions would be important in order to get valuable learners' feedback. The pilot study was conducted between March and April 2011.

Concerning the non-native group, one learner of Greek from each of the 2nd, 3rd and 4th level gave useful feedback through which the instrument was modified several times until a final version was reached. Another Spanish speaker with an intermediate level of the language who was not enrolled in the school also participated in the pilot study. The non-native teacher also tested the instrument. Four native speakers of Greek also participated as a control group. One of the native speakers of the group was the Greek native teacher at the school. Furthermore, one pilot oral protocol was carried out with a learner belonging to the 2nd level in order to examine the effectiveness of the questions given in the test.[2]

[2] It goes without saying that none of the participants who took part in the pilot study participated in the main study.

3.5. Procedure

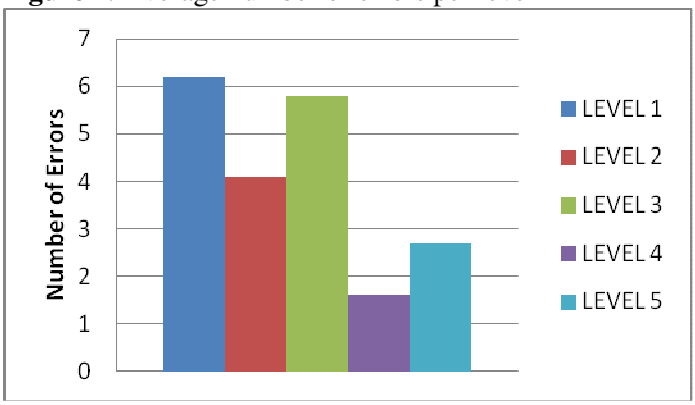
Data were collected during May 2011 at the school. The participants were tested in their own classroom by the researcher (in three groups) and by other researchers (in the other two groups)[3] due to their academic schedule. First, the questionnaires were distributed and after the participants had finished filling in all information, the GJTs were provided face down so that participants did not start at different times. Participants were given the permission to begin and the duration of the task was timed with a chronometer. The time limit was set at 10 minutes maximum for the completion of the GJT. As participants concluding the task, each participant's time was noted down in the test.

The oral protocols were also conducted during the same month, after the tests were collected. During the task, the ten participants were recorded and they were asked three main questions: why an incorrect sentence was said to be correct (if any), why a correct sentence was said to be incorrect, and finally, about the sentences left as unanswered. In some cases, they were also asked to find the correct form. The participants had their oral protocol in Catalan or Spanish depending on their language dominance. Greek was also an option, but none of the learners felt comfortable enough to share their ideas in this language.

4. Results and discussion

The first research question was on whether proficiency plays a role in the acquisition of the indefinite past in Greek and if there is a decrease in the number of overgeneralizations as the level increases. Results from the tests show that there is a decrease in overgeneralizations, although slight increases can be perceived in levels 3 and 5 (see Figure 1).

Figure 1. Average number of errors per level



As Figure 1 shows, learners in level 1 overgeneralized more (M = 6.2) because it is the first year when irregular past tenses are taught. However, a large decrease can be seen in level 2 (M = 4.1). At least half of the learners in this level have taken Greek courses outside school and most have been to Greece several times for holidays. Besides, two students have lived in the country for a longer period of time, something that may explain the large decrease in the number of errors with respect to the previous level. It could also be considered that instruction in this level plays an important role because learners present a higher command of the verbs in the test. In level 3, there is a rise again in the number of errors (M = 5.8). This increase can be explained by the fact that age can be an important factor because learners in this level are between 45 and 60 and all have frequently travelled to Greece for holidays. Nevertheless, age does not seem to affect the results in level 4 (M = 1.6), where three out of four learners are over 60. However, despite the low number of participants in this level, all have been exposed

[3] Brandon Tullock and Laura Vergés, research assistants in Applied Linguistics, were given guidelines and thorough instructions on data collection in these two groups by the researcher of the study.

to the language for different reasons: holidays in Greece, family or friends and/or their work as teachers or translators. Finally, results in level 5 show that there is an increase in the number of errors (M = 2.7) with respect to level 4. All have been exposed to the language either in summer courses or for holidays. It is also important to mention that four of the six learners in the last level have lived in Greece and, even though the number of errors in this level is surprisingly higher, compared to level 4, these specific learners did not make many mistakes in the GJT. In this sense, stay abroad is a key factor in the acquisition of the indefinite past in Greek. "The context of learning is a determining factor in L2 acquisition given that depending on what context the L2 learning takes place in, the learning will vary in terms of speed and accuracy" (Llanes 2011). This idea was also confirmed by Freed (1995), concluding that "students who have lived and studied abroad were found to speak more and at a significantly faster rate". Andria and Serrano (2013) have investigated how the factor of stay abroad plays a crucial role in the acquisition of Greek by Spanish and Catalan L1 learners, belonging to the same context as the present study.

A Kruskal-Wallis test revealed that the relationship between proficiency and number of errors is statistically significant (χ2 11.383; df 4; Asymp. P .023). However, no significant correlations were found in the verbs from the GJT, except in one of the forms (χ210.168; df 4; Asymp. P .038) (See Appendix 3 for the non-significant results of the Kruskal-Wallis test).

These results show that even in the last level overgeneralization of verbs may still occur. This finding suggests that L2 learners are influenced by patterns already stored in memory, since irregular forms are lexically listed (Clahsen et al. 2010). This is the reason why the participants in this study overapply regular rules. However, results showed that overapplications seem to be more frequent for verbs which form the indefinite past with the endings *-ησα* and *-εσα* than for those verbs presenting a specific form in the past. This finding seems to disregard the Single Mechanism Theory which states that phonological similarity can be beneficial in the acquisition of irregular forms (McClelland & Patterson 2002). In this study, however, phonological similarity can be misleading for learners and a disadvantage in the acquisition of irregular forms in Greek. For instance, verbs such as *χτυπάω* /χtipáo/ ("to knock" or "to hit") and *φοράω* /foráo/ ("to wear") form the correct indefinite past with *χτύπησα* /χtípisa/ and *φόρεσα* /fóresa/ respectively. Most learners overapplied the regular schema and reported that the correct indefinite form of these verbs were **χτύπασα* /htípasa/ and **φόρασα* /fórasa/, as perceived in the GJT.

Interesting responses on the phenomenon of overgeneralization were also elicited through the oral protocols. The participants were asked about the acceptance of some irregular forms as correct when these were conjugated as regular. Some of the answers given by the five participants with non-linguistic profession were the following: "it sounds good to me", "it seems like an aoristos to me" or "I confused it". Other common responses were "It seems correct to me" and "I thought the past was expressed in this way". On the other hand, participants from a linguistic background generally reported that the regular schema was applied to irregular verbs. The following example clearly illustrates the above idea: a learner from level 5 said that verbs in the test "had been regularized". These responses given by participants with a linguistic background can be explained in terms of metalinguistic awareness.[4]

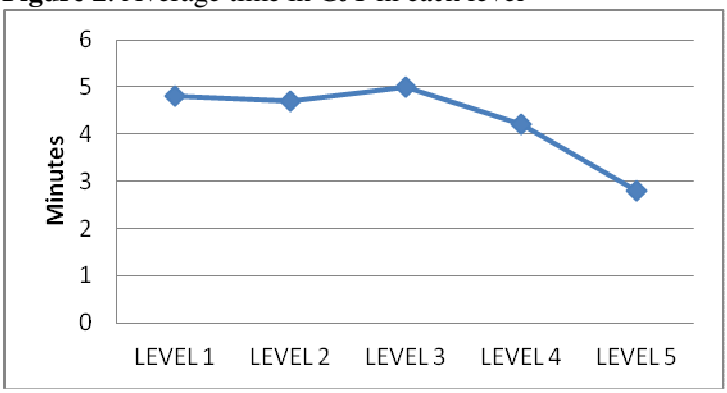
Our second research question asked if the results of the study were consistent with any of these accounts (single or dual mechanism). The oral protocols from the ten participants revealed that they need more time to access the irregular forms, something which was perceived in their hesitations. One participant from level 4 and another from level 5 could find all the correct irregular forms. Four other participants (from different levels) could get almost

[4] Metalinguistic awareness has been defined as "the ability to objectify language and dissect it as an arbitrary linguistic code independent of meaning" (Roth et al. 1996: 258).

all forms. Three (one from level 2 and two from level 3) could only get some correct irregular forms and one participant from level 1 was not able to find the correct past tenses. Even though the correct forms were not elicited by all of them until a few seconds later, a gradual acquisition of the indefinite past can be perceived as the level increases. Additionally, some learners in levels 1, 2 and 3 relied on previous knowledge to see if they were able to come up with the correct form by applying different irregular endings to the verbal root. Therefore, these learners tested out their hypotheses (Pica 1994) on what they already know. This strategy is very common especially in lower levels and, consequently, correct irregular forms take longer to be accessed. Learners in higher levels did not show this strategy considering that in level 4 and 5 irregular forms are highly frequent.

The Dual Mechanism Account is also suggested by the time each learner spent on the GJT. Results show that the time learners need to complete the task decreases as the level increases, except in level 3, where learners need more time, probably because of their age (see Figure 2).

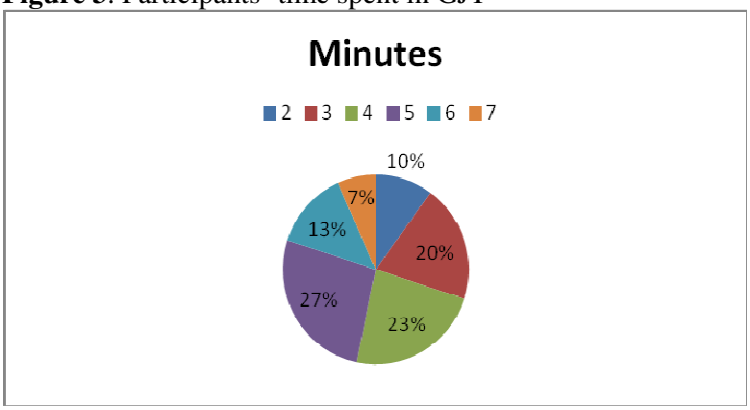
Figure 2. Average time in GJT in each level



As can be seen in Figure 2, results show that learners at levels 1 and 2 need more time to complete the test (M = 4.8 and 4.7). Lack of use and low frequency of irregular forms can account for these results in such basic levels. Similarly, a slight increase can be seen in level 3. However, the learners at higher levels (4 and 5) do not need so much time in order to elicit the correct irregular forms from the lexicon and do not show as many errors, as seen above. Therefore, most learners at these levels present a better command of the irregular verbs due to their high frequency. In this respect, these findings show that repeated exposure and use make irregular forms become more settled in the memory (Clahsen et al. 2010).

Furthermore, our results show that half of the participants in this study needed an average time of between 4 and 5 minutes to complete the task (see Figure 3). This can be explained by the fact that learners made more errors with verbs which present irregularity by adding a suffix. This category of verbs is very complex and present different endings depending on the verb. This fact leads learners to hesitate and spend longer time before choosing an option. This is the reason why this category was chosen in the study due to the facility that learners show to overgeneralize the forms. On the other hand, verbs presenting a totally different word in the indefinite past do not demand such a long time, considering that these forms are explicitly taught from level 1 onwards and, consequently, they are acquired sooner. The oral protocols also confirmed this idea; learners make generally more errors in verbs presenting irregular ending than in those verbs with exclusive forms in the indefinite past.

Figure 3. Participants' time spent in GJT



5. Conclusion and limitations

The aim of the present study was to explore whether there was a decrease in the number of overgeneralization errors as the level of proficiency increases. Findings show that there was a significant correlation between proficiency and the total number of errors. However, the decreases perceived in some of the levels can be explained by the fact that some students lived or studied in Greece for several months or year. In this sense, the stay or study abroad aspect seems to be a key factor. Findings also suggest that the irregular forms that have a suffix present more errors than verbs having specific forms in the past.

The second objective was to investigate if irregular forms took longer to be retrieved from memory, according to the Dual Mechanism. The oral protocols revealed that a gradual acquisition of the indefinite past can be perceived as the level increases and learners in the first levels need more time to access the correct form than learners in higher levels, where overgeneralization errors can still occur. Additionally, even though participants in the highest level generally showed a better command of the forms in the test, the overgeneralization errors existing in this level can be explained by the fact that level 5 is equivalent to a B2 of the CEFR, which is an upper-intermediate level. Furthermore, the native Greek teacher at the school reported that some students in level 5 did not show the command demanded in this grade.

We are aware of the fact that the results in the present study cannot be generalized because of the low number of participants from each level. Further research should be conducted with participants from other institutions which offer Greek language courses, so as to get a different socioeconomic and cultural background. In addition, the analysis of individual variables such as stay abroad should be taken into consideration in follow-up studies in order to examine whether there is an effect in the results. Moreover, the use of different instruments could be useful to test participants' performance in the Greek indefinite past in a different way. We also think that other categories in the Greek verbal system should also be studied to investigate whether learners show a tendency to overgeneralize as their learning progresses. For instance, a test on tenses of regular and irregular verbs could be designed to analyze the time learners from different levels need to spend on each category of verbs. In spite of the above-mentioned limitations, we hope that the present study can contribute to the analysis of the acquisition of Greek as a FL, especially as concerns the possible application of cognitive models that have been used to explain the acquisition of other foreign languages.

Bibliography

Álvarez, C. 1999. Αντιστοιχία των ρηματικών χρόνων στην Ισπανική και στη Νέα Ελληνική γλώσσα. *Μελέτες για την Ελληνική Γλώσσα* 19, 14-24.

Andreou, G., Karapetsas, A. & Galantomos, I. 2008. Modern Greek language acquisition of morphology and syntax by non-native speakers. *The Reading Matrix* 8 (1), 35-42.

Andria, M. 2010. Crosslinguistic influence in multilingual acquisition: A study on the acquisition of Greek as a foreign language by Spanish speakers. Unpublished MA dissertation. Universitat de Barcelona.

Andria, M., Miralpeix, I. & Celaya, M. L. 2012. Διαγλωσσική επίδραση κατά την εκμάθηση της Ελληνικής ως Ξένης Γλώσσας από ισπανόφωνους μαθητές. In Z. Gavriilidou, A. Efthymiou, E. Thomadaki & P. Kambakis-Vougiouklis (eds), *Selected papers of the 10th ICGL*. Komotini: Democritus University of Thrace, 654-662.

Andria, M. & Serrano, R. 2013. Developing new 'thinking-for-speaking' patterns in Greek as a foreign language: The role of proficiency and stays abroad. *The Language Learning Journal* Available at: DOI:10.1080/09571736.2013.804584

Ausubel, D. P. 1964. Adults versus children in second-language learning: Psychological considerations. *Modern Language Journal* 48, 420-424.

Barón, J. & Celaya, M. L. 2010. Developing pragmatic fluency in an EFL context. *EUROSLA Yearbook* 10 (1), 38-61.

Celaya, M. L. 1992. *Transfer in English as a Foreign Language: A Study on Tenses*. Barcelona: Promociones y Publicaciones Universitarias.

Clahsen, H., Martzoukou, M. & Stavrakaki, S. 2010. The perfective past tense in Greek as a second language. *Second Language Research* 26, 501-525.

Clahsen, H. & Muysken, P. 1989. The UG paradox in L2 acquisition. *Second Language Research* 5, 1-29.

Clahsen, H., Sonnenstuhl, I. & Blevins, J. P. 2003. Derivational morphology in the German mental lexicon: A dual mechanism account. In R. H. Baayen & R. Schreuder (eds), *Morphological Structure in Language Processing*. Berlin/New York: de Gruyter, 125-155.

Develegka, D. 2010. Specific language impairment in Greek: A case study on nominal agreement. Unpublished PhD dissertation, University of Essex.

Ellis, N. C. & Schmidt, R. 1998. Rules or associations in the acquisition of Morphology? The frequency by regularity interaction in human and PDP learning of morphosyntax. *Language and Cognitive Processes* 2 (3), 307-336.

Freed, B. 1995. What makes us think that students who study abroad become fluent? In B. Freed (ed.), *Second Language Acquisition in a Study Abroad Context.* Amsterdam/Philadelphia: John Benjamins, 123-148.

Jensvoll, M. H. 2003. The acquisition of past tense in English/Norwegian bilingual children. Single versus dual mechanisms. *Proceedings of the 19th Scandinavian Conference of Linguistics*, 31 (3), 545-557.

Leontaridi, E. 2002. Análisis contrastivo del aspecto gramatical en español y en Griego Moderno. *Actas del I Congreso de estudiantes de Filología Hispánica / La palabra es futuro: filólogos del nuevo milenio*. Valladolid: Universidad de Valladolid, 129-144.

Lightbown, P. & Spada, N. 2013. *How Languages are Learned*. (4th edition). Oxford: Oxford University Press.

Llanes, A. 2011. The many faces of study abroad: An update on the research on L2 gains emerged during a study abroad experience. *International Journal of Multilingualism* 8 (3), 189-215.

Marian, V., Blumenfeld, H. K. & Boukrina, O. 2008. Sensitivity to phonological similarity within and across languages. *Journal of Psycholinguistic Research* 37, 141-170.

McClelland, J. L. & Patterson, K. 2002. Rules or connections in past-tense inflections: What does the evidence rule out? *Trends in Cognitive Science* 6, 465-472.

Mennen, I. & Okalidou, A. 2006. Acquisition of Greek phonology: An overview. *QMUC Speech Science Research Centre Working Papers*, *WP-11*.

Nicolaidis, K., Edwards J., Beckman, M. & Tserdanelis, G. 2004. Acquisition of lingual obstruents in Greek. *Proceedings of the 6th International Conference of Greek Linguistics, University of Crete, Rethymno*. Available at: http://www.philology.uoc.gr/conferences/6thICGL/

Ntelitheos, D. & Christodoulou, E. 2005. The acquisition of nominal ellipsis in Greek. *UCLA Working Papers in Linguistics* 13, 14-34.

Paradis, J., Nicoladis, E. & Crago, M. 2007. French-English bilingual children's acquisition of the past tense. *Proceedings of the 31st Annual Boston University Conference on Language Development*, 497-507.

Patterson, K., Lambon Ralph, M. A., Hodges, J. R., & McClelland, J. L. 2001. Deficits in irregular past-tense verb morphology associated with degraded semantic knowledge. *Neuropsychologia* 39, 709-724.

Pica, T. 1994. Research on negotiation: What does it reveal about second-language learning conditions, processes and outcomes? *Language Learning* 44, 493-527.

Pinker, S. & Prince, A. 1994. Regular and irregular morphology and the psychological status of rules of grammar. In S. D. Lima, R. L. Corrigan, & G. K. Iverson (eds), *The Reality of Linguistic Rules*. Amsterdam/Philadelphia: John Benjamins, 353-388.

Rigau, G. 2001. The role of the quantifier tot in some Catalan temporal phrases. *Catalan Working Papers in Linguistics* 9, 85-100.

Romanova, N. 2008. Mechanisms of verbal morphology processing in heritage speakers of Russian. *Heritage Language Journal* 6 (1), 105-126.

Roth, F. P., Speece, D. L., Cooper, D. H., & De La Paz, S. 1996. Unresolved mysteries: How do metalinguistic and narrative skills connect with early reading? *The Journal of Special Education* 30, 257-277.

Rummelhart, D. E. & McClelland, J. L. 1986. On learning the past tenses of English verbs. In J. L. McClelland, D. E. Rummelhart & PDP Research Group (eds), *Parallel Distributed Processing: Explorations in the Microstructure of Cognition*. Vol. 1. Foundations. Cambridge, MA: The MIT Press, 216-271.

Shirai, Y. 2003. The acquisition of tense-aspect morphology and the regular-irregular to debate. *ZAS Papers in Linguistics* 29, 195-209.

Stathopoulou, N. & Clahsen, H. 2010. The perfective past tense in Greek adolescents with Down Syndrome. *Clinical Linguistics and Phonetics* 24, 870-882.

Stavrakaki, S. 2001. Comprehension of reversible relative clauses in specifically language impaired and normally developing Greek children. *Brain and Language* 77, 419-431.

Stavrakaki, S. 2006. Developmental perspectives on specific language impairment: Evidence from the production of wh-questions by Greek SLI children over time. *Advances in Speech-Language Pathology* 8 (4), 384-396.

Stavrakaki, S. & Clahsen, H. 2008. The perfective past tense in Greek child language. *Journal of Child Language* 36, 113-142.

Thordardottir, E., Ellis Weismer, S. & Evans, J. 2002. Continuity in lexical and morphological development in Icelandic and English-speaking 2 years-old. *First Language* 22, 3-28.

Triandafillidis, M. 1993. *Νεοελληνική Γραμματική (της δημοτικής).* Θεσσαλονίκη: Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης, Ινστιτούτο Νεοελληνικών Σπουδών, Ίδρυμα Μανόλη Τριανταφυλλίδη. Ανατύπωση της έκδοσης του ΟΕΣΒ (1941), Θεσσαλονίκη.

Ullman, M. T. 1999. Acceptability ratings of regular and irregular past tense forms: Evidence for a dual-system model of language from word frequency and phonological neighbourhood effects. *Language and Cognitive Processes* 14, 47-67.

Westermann, G. 1999. Single mechanism but not single route: Learning verb inflections in constructivist neural networks. Commentary on "Lexical entries and rules of language: A multidisciplinary study of German inflection" by H. Clahsen. *Behavioral and Brain Sciences* 22, 1042-1043.

Appendix I: Questionnaire

QUESTIONARI/CUESTIONARIO

Gràcies per la seva col-laboració/Gracias por su colaboración.
Es garanteix l'anonimat/Se garantiza el anonimato.

DADES PERSONALS/DATOS PERSONALES

NOM I COGNOMS/NOMBRE Y APELLIDOS:……....
SEXE/SEXO: Home/Hombre Dona/Mujer
EDAT/EDAD:……...……
LLOC DE NAIXEMENT/LUGAR DE NACIMIENTO: ……
LLENGUA MATERNA/LENGUA MATERNA

- Català/Catalán
- Castellà/Castellano
- Bilingüe Cat/Cast
- Altres/Otras……

LLENGUA D'US FREQÜENT/LENGUA DE USO FRECUENTE

- Català/Catalán
- Castellà/Castellano
- Bilingüe Cat/Cast
- Altres/Otras……

NIVELL D'EDUCACIÓ/NIVEL DE EDUCACIÓN:
Primària/Primaria Secundària/Secundaria Estudis Universitaris/Estudios Universitarios
PROFESSIÓ/PROFESIÓN:……...……
E-MAIL I TELÈFON/E-MAIL Y TELÉFONO:……..…….....

LLENGUA GREGA/LENGUA GRIEGA

DURACIÓ DELS ESTUDIS/DURACIÓN DE ESTUDIOS

QUANT DE TEMPS PORTA APRENENT GREC?/¿CUÁNTO TIEMPO LLEVA ESTUDIANDO GRIEGO? .....
QUIN ANY VA COMENÇAR?/¿QUE AÑO EMPEZÓ?.....
HA ASSISTIT A CLASSES DE GREC FORA DE L'EOI?/¿HA ASISTIDO A CLASES DE GRIEGO FUERA DE LA EOI? SI NO
ON?/¿DÓNDE?.....
DURANT QUANT DE TEMPS?/¿DURANTE CUÁNTO TIEMPO?.....

EXPOSICIÓ A LA LLENGUA/EXPOSICIÓN A LA LENGUA

HA ANAT ALGUNA VEGADA A GRÈCIA?/¿HA IDO ALGUNA VEZ A GRECIA? SI NO
MOTIU/MOTIVO:

- VACANCES/VACACIONES
- PROGRAMMES D'INTERCANVI/PROGRAMAS DE INTERCAMBIO
- CLASSES D'ESTIU/CLASES DE VERANO
- ALTRES/OTROS.....

DURANT QUANT TEMPS?/¿DURANTE CUANTO TIEMPO? (Indiqui per separat/Indique por separado) .....

MOTIUS PELS QUALS APRÈN GREC/MOTIVOS POR LOS CUALES APRENDE GRIEGO:

- VULL VIATJAR A GRÈCIA/QUIERO VIAJAR A GRECIA.
- VULL VIURE A GRÈCIA/QUIERO VIVIR EN GRECIA.
- M'INTERESSA LA CULTURA GREGA/ME INTERESA LA CULTURA GRIEGA.
- TINC FAMILIA O AMICS/TENGO FAMILIA O AMIGOS.
- OCI/OCIO.

- ☐ ALTRES MOTIUS/OTROS MOTIVOS:
  (indiqui/indique).....

English translation:

QUESTIONNAIRE

Thanks for your participation.
Anonymity is ensured.

PERSONAL DETAILS

NAME AND SURNAME: …….....
GENDER: Male Female
AGE: ……
BIRTHPLACE: ……
NATIVE LANGUAGE

- ☐ Catalan
- ☐ Spanish
- ☐ Bilingual Cat/Spa
- ☐ Other……

LANGUAGE OF FREQUENT USE

- ☐ Catalan
- ☐ Spanish
- ☐ Bilingual Cat/Spa
- ☐ Others……

LEVEL OF EDUCATION:
Primary Secondary University studies
PROFESSION:……
E-MAIL & PHONE NUMBER: …….....

GREEK LANGUAGE EXPERIENCE

LENGTH OF STUDIES
HOW LONG HAVE YOU BEEN STUDYING GREEK LANGUAGE?
…..... .....
WHEN DID YOU START? .....
APART FROM THE LANGUAGE SCHOOL, HAVE YOU ATTENDED ANY OTHER GREEK CLASSES? YES NO
WHERE? .....
FOR HOW LONG? .....

EXPOSURE TO THE LANGUAGE
HAVE YOU EVER TRAVELED TO GREECE? YES NO
REASON:

- ☐ HOLIDAYS
- ☐ EXCHANGE SCHEME
- ☐ SUMMER COURSES
- ☐ OTHER.....

FOR HOW LONG? (Specify times separately)
.....

REASONS WHY YOU LEARN GREEK

- ☐ I WANT TO TRAVEL TO GREECE
- ☐ I WANT TO LIVE IN GREECE
- ☐ I AM INTERESTED IN THE GREEK CULTURE

- I HAVE FRIENDS OR FAMILY
- FOR LEISURE
- OTHER REASONS
  (Specify).....

Appendix II: Grammaticality Judgment Test

Put a √ in the correct sentences and a X in the incorrect ones. Please, leave the box empty in case you do not know the answer.

☐ 1. Χθες χτύπασα το χέρι μου.

☐ 2. Ο άνδρας δεν άνοιξε την πόρτα.

☐ 3. Το σπίτι καθαρίζεται εύκολα.

☐ 4. Βλέψαμε ένα χελιδόνι στο μπαλκόνι.

☐ 5. Η Ελένη με κάλασε στο πάρτι.

☐ 6. Εκείνες το ζώο είναι ωραίες

☐ 7. Χθες φοράσαμε καινούργια παπούτσια.

☐ 8. Την Δευτέρα πηγαίσατε στο θέατρο.

☐ 9. Εδώ και δύο μέρες δεν μπορώ να κοιμηθώ!

☐ 10. Χθες ξύπνησα στις επτά το πρωί.

☐ 11. Πόνασε το πόδι της.

☐ 12. Ο Γιάννης ήπιε ούζο.

☐ 13. Η μουσική του συναυλίας ήταν καλό!

☐ 14. Το λεωφορείο δεν πέρνασε στην ώρα του σήμερα.

☐ 15. Τραγουδάσαμε όλοι μαζί στη γιορτή.

☐ 16. Η γυναίκα μαγείρεψε όλο το φαγητό γρήγορα.

☐ 17. Πότε θα έρθει ο Νίκος;

☐ 18. Έβγαισα από το μάθημα πολύ γρήγορα.

☐ 19. Τα παιδιά ξέχνασαν τα βιβλία στην καφετέρια.

☐ 20. Γύρνασα στο σπίτι αμέσως.

English translation

1. Yesterday I hurt my hand.
2. The man didn't open the door.
3. The house is cleaned easily.
4. We saw a pigeon in the balcony.
5. Eleni invited me to the party.
6. Those animal is beautiful.
7. Yesterday we wore new shoes.
8. On Monday you went to the theatre.
9. Since two days I can't sleep!
10. Yesterday I woke up at seven in the morning.
11. Her leg hurt.
12. Giannis drank ouzo.
13. The music of the concert was good.
14. The bus didn't pass on time today.

15. We sang all together in the party.
16. The woman cooked all the food quickly.
17. When will Nikos come?
18. I left the class very quickly.
19. The children forgot the books in the café.
20. I returned to the house immediately.

Appendix III: Kruskal-Wallis test statistics. GJT Errors and sentences

	GJT ERRORS
Chi-Square	11.383
df	4
Asymp. Sig.	.023

	GJT1	GJT12
Chi-Square	4.466	3.667
df	4	4
Asymp. Sig.	.347	.453
	GJT2	GJT14
Chi-Square	.000	1.722
df	4	4
Asymp. Sig.	1.000	.787
	GJT4	GJT15
Chi-Square	3.421	3.456
df	4	4
Asymp. Sig.	.490	.485
	GJT5	GJT16
Chi-Square	2.404	2.302
df	4	4
Asymp. Sig.	.662	.680
	GJT7	GJT18
Chi-Square	1.160	3.985
df	4	4
Asymp. Sig.	.885	.408
	GJT8	GJT19
Chi-Square	2.143	10.168
df	4	4
Asymp. Sig.	.709	.038
	GJT10	GJT20
Chi-Square	1.592	3.953
df	4	4
Asymp. Sig.	.810	.412
	GJT11	
Chi-Square	1.643	
df	4	
Asymp. Sig.	.801	