



UiT The Arctic University of Norway

Faculty of Humanities, Social Sciences and Education

The Acquisition of Aspect in L2 English by Greek speakers

A Feature Reassembly Approach

Grigoria Lazarou

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Dedication

To my late uncle

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Abstract

Aims and objectives: The purpose of this thesis is to investigate factors influencing the acquisition of aspect, the internal temporal conceptualization of events in predicates, in second language acquisition. The main objective is to examine which and to what extent the following linguistic components influence the Feature Reassembly Hypothesis; the learners' age thus their linguistic maturity, their English proficiency level, their linguistic background, or the complexity of feature bundling and reassembly.

Methodology: Two groups of young Cypriot-Greek speakers, learners of English L2 are compared; Group A has mean age of 12.8 years old and group B has mean age of 15.8 years old, and Group C native adult speakers of English with mean age of 34.1 years old. The participants were tested through a 5-point Likert scale acceptability judgment task and a two alternative forced-choice task. The test examined the Anterior aspect which bundles four features; continual, experiential, resultative and reportative (found in the formal tense form *Present Perfect*), and the Performative aspect which bundles two features; completeness and habitual (found in the formal tense form *Past Simple*).

Data: A total of 73 participants were tested; Group A= 31 and Group B= 32 (young Cypriot-Greek learners of English L2) , and group C= 10 (native adult speakers of English).

Findings: The complexity of feature bundling and the proficiency level of learners appear to have a significant effect on feature reassembly. In particular, the continual feature which is bundled with Anterior aspect in combination with the Performative aspect in non-past tense appear to be puzzling for young Cypriot-Greek speakers, learners of English L2. Moreover, the completeness feature and habitual feature which are bundled with the Performative aspect in past tense is an unorthodox combination for MG speakers of perfective and imperfective aspect; the results of this study indicate that further research is required to obtain a significant results. In any case, as proficiency level increases, feature reassembly becomes more target-like.

Keywords: Aspect, Second Language Acquisition, Feature Reassembly Hypothesis, feature complexity, aspectual asymmetries

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List of abbreviations

1	First Person
2	Second Person
3	Third Person
ACC	Accusative case
Ant	Anterior Aspect
ASP	Aspect
CEFR	Common European Framework of Reference for Languages
cl	Clitic
COMPL	Completeness
CON	Continual
D	Determiner
DPL	Long distance agreement – plural form
DS	Long distance agreement – singular form
EXP	Experiential
f	Feminine gender
FEAT	Feature
Fut	Future marker
FRH	Feature Reassembly Hypothesis
GEN	Genitive case
GRAM	Grammaticality
GR	Grammatical
HAB	Habitual
IGCSE	International General Certificate of Secondary Education
Impe	Imperative forms
IPC	Imperfective Aspect
L1	First language
L2	Second Language
LPL	Local agreement – plural form
LS	Local agreement – singular
MD	Modern Greek
n	Neuter gender
NEG	Negation

NOM	Nominative case
Pass	Passive
Past	Past
PC	Perfective Aspect
PM	Performative Aspect
PL	Plural
poss	Possessive
pr	Pronoun
PROG	Progressive Aspect
RES	Resultative
SG	Singular
SUB	Subjunctive
SLA	Second Language Acquisition
UN	Ungrammatical
VOC	Vocative case

1 Introduction

In linguistics, aspect is the grammatical marking which depicts the internal temporal conceptualization of events in predicates. Much research has been conducted and is still in progress concerning the acquisition of aspect both in first language (L1) acquisition and in second language (L2) acquisition. So far, data indicate that both L1 and L2 learners are initially more productive with perfective aspectual forms, which tend to bundle the completeness feature, compared to imperfective aspectual forms, which tend to bundle [+continual] and [+habitual] features, (Dosi et al., 2017). For Modern Greek (MG) acquisition in particular, studies of Papadopoulou and Mattheoudakis on MG L2 acquisition indicate that within the imperfective aspect, the [+continuous] feature is acquired earlier than the [+habitual] feature (Dosi et al., 2017).

Dosi et al. (2017) replicated a similar experiment with non/heritage Greek-English bilingual children and monolingual peers of age 8-12 years old through comprehension and production tasks (Dosi et al., 2017). In particular, Dosi et al. (2017) examined the acquisition of MG perfective aspect which bundles the completeness feature, and the imperfective aspect which bundles the [+continual] and [+habitual] features. According to Dosi et al. (2017) findings, as far it concerns the comprehension task, the completeness feature located in the perfective aspect (and tense located in the past) was successfully acquired. However, the [+habitual] feature located in the imperfective aspect (and tense located in the past) appeared to be problematic. To add to that, the younger group of monolinguals (ages 8-10 years) also exhibited difficulties with the [+habitual] feature of the imperfective aspect. Lastly, as expected, the bilingual group which had more daily exposure to MG performed better to those whose MG exposure was limited.

There are more studies regarding the acquisition of aspect in Modern Greek L2 by Dosi (2017), Karpava and Grohmann (2010) and Karpava et al. (2012), however, none of them look into the acquisition of aspect in English L2 from speakers of Modern Greek L1, let alone Cypriot-Greek L1. Moreover, I have not come across other papers on second language acquisition which approach aspect from Hewson's (2012) viewpoint of the English aspect. Additionally, the study approaches the syntactic structure of aspect following Adger's (2010 & 2003) *Hierarchy of Projection* theory and I classify the Performative and Progressive aspect as the primary aspects, entailing that a meaningful utterance necessarily must have one or the other, and thus the Anterior aspect is classified as a secondary aspect which always has to include one or the other primary aspects to

produce meaningful utterances. The purpose of this thesis is to investigate factors influencing the acquisition of the grammatical aspect by L1 young Cypriot-Greek learners' of English L2 through comprehension tasks, as well as to examine which and to what extent the following components influence the Feature Reassembly Hypothesis (FRH); the complexity of feature bundling, the learners' age thus their linguistic maturity, the learners' English proficiency level, and the learners' linguistic background. The findings of this study can be equally beneficial to the field of applied linguistics and to second language teachers in general, as in my opinion L2 teachers with additional adequate linguistic knowledge of students' L1 would be able to understand and predict the students' possible errors and guide them towards successful language acquisition.

According to Lardiere's (2009) FRH, the acquisition of formal features of a second language takes considerable time during which the learners are required to reassemble these features from L1 onto the appropriate L2 counterparts. The English aspects in question are the Anterior and Performative aspects. The Anterior aspect in non-past tense bundles the continual (1), experiential (2), resultative (3) and reportative features (4), and it is widely known as the formal tense form *Present Perfect*.

- | | | | |
|--|--------------------|------------------------|-----------------|
| (1) I have | lived | here three years now. | [+continual] |
| Have-Ant-1SG | live-PM-Past | | |
| (I am still here) | | | |
| | | | |
| (2) He cannot come. He has | broken his leg. | | [+resultative] |
| | have-Ant-3SG | hear-PM-Past | |
| (His broken leg results to not being able to attend) | | | |
| | | | |
| (3) He has never | missed | Mark's birthday party. | [+experiential] |
| | have-Ant-3SG | miss-PM-Past | |
| (So far he has experienced all Mark's birthday) | | | |
| | | | |
| (4) I have | just got the news! | How are you dear? | [+reportative] |
| | have-Ant-3SG | get-PM-Past | |
| (the speaker found out about these news recently) | | | |

The Anterior aspect in MG can only be combined with the Perfective aspect, thus the features that can be bundled with the MG Anterior form of non-past tense are the reportative, resultative and experiential features and all events discussed are interpreted as completed. Therefore, utterances of the *Present Perfect* form bundled with the continual feature, such as the example (1) are expected to

be puzzling for MG speakers. At the same time, the use of the Anterior aspect is generally infrequent by speakers of MG (Hedin, 1995), because the Perfective aspect can carry the same meanings (more details in section 2.2.4).

The English Performative aspect in past tense bundles the completeness (5) and habitual (6) features, and it is widely known as the formal tense form *Past Simple*

(5) John *walked* home. [+completeness]
walk-PM-Past

(6) Mary, when in high school, she walked to school every day. [+ habitual]

MG bundles the completeness feature in the Perfective aspect, and the habitual, continual and progressive features in the Imperfective aspect. As mentioned above, L2 learners are initially more productive with perfective aspectual forms which tend to bundle the completeness feature. Therefore, MG speakers are expected to quickly bundle the Performative aspect with the completeness feature in the *Past Simple* form, but struggle to do the same with the habitual feature.

In the current study I examine children's knowledge of the features in the English formal tense forms *Present Perfect* and *Past Simple*, at the ages of thirteen and sixteen under the umbrella of FRH. The study addresses the following researcher questions:

RQ1: Is the *Past Simple* form an easier form to learn compared to the *Present Perfect* form, as it bundles less features than the latter?

RQ2: Would *Past Simple* forms bundled with the habitual feature be more challenging compared to those bundled with the completeness feature?

RQ3: Would *Present Perfect* forms bundling relevance with continual feature be more challenging to students than of those bundling relevance with resultative and experiential features?

RQ4: Would *Present Perfect* forms bundling relevance with reportative feature be more challenging for the young Greek speakers compared to native English speakers? Would native English speakers also prefer the *Past Simple* form for the reportative feature?

RQ5: Is the feature reassembly completed/achieved by the time students qualify to take their English language IGCSE exam? What role do age, proficiency, linguistic background and complexity of feature bundling play in second language acquisition?

In order to answer these questions, I have conducted an experiment on *Gorilla* (an online survey method) which included a background questionnaire, a placement test, a Likert scale acceptability judgement task and a two-alternative Forced-choice task (see section 3.2). A total of 74 participants; two groups of young Cypriot-Greek speakers, learners of English L2 taking classes of B1 and IGCSE level of proficiency, and a group of native adult English speakers participated in the study, see section 3.5.

The findings of this study argue that the complexity of feature bundling and the proficiency level of learners appear to have a significant effect on feature reassembly. In particular, the continual feature which is bundled with Anterior aspect in combination with the Performative aspect in non-past tense appear to be puzzling for young Cypriot-Greek speakers, learners of English L2. Moreover, the completeness feature and habitual feature which are bundled with the Performative aspect in past tense is an unorthodox combination for MG speakers of perfective and imperfective aspect, and the results of this study indicate that further research is required to obtain a significant result. Nonetheless, as proficiency level increases, feature reassembly becomes more target-like in English second language acquisition.

This thesis contains the following chapters: Chapter 2 is the literary background which begins with terminology setting, elaborates on the grammatical aspects identified in English and in Modern Greek and explores the aspectual asymmetries of the two. Lastly, it discusses the theoretical approach, Feature Reassembly Hypothesis, which this thesis follows and closes with similar approaches of aspect acquisition in English L2. Chapter 3 states the research questions addressed in this thesis, and outlines the methodology applied. Chapter 4 presents the results of the experiment, as well as the statistical analysis of the data collected. Chapter 5 discusses the findings of this thesis, and Chapter 6 concludes with the summary of the study and the utility of its results.

2 Background

2.1 Tense

According to the literature, tense is the marking languages use to locate events on the time axis. The Indo-European languages illustrate temporal relationships through particular morphemes attached on verbs. (Meisterernst, 2014). At the same time, languages behave similarly to programming; for example one -1- marking attached on a verb can signifying an x tense, and zero -0- marking on verbs can also signify a y tense, different than x tense. For languages, following the principle of economy (Martine, 2009), zero marking does not mean nothing. As shown in *Table 1*, for Latin, -a- marking signifies the past tense, zero marking signifies the present tense, and -i- signifies the future tense. The Indo-European language families are twelve, nine of which have binary tense systems - past and non-past -, while the other three - Italic, Celtic, Baltic - have three and more tenses; mainly past, present and future.

Table 1: Latin time axis

Aspect	Past	Present	Future
Imperfective: -b-	voca-b-a-t call-IPC-Past-3SG S/he/It was calling	voca- Ø -t call-3SG S/he/It calls	voca-b-i-t call-IPC-Fut-3SG S/he/It will call

English and Modern Greek are languages of binary tense systems, of past and non-past, which mark the past tense with particular morphemes attached on the verbs, and mark the non-past with zero marking (or in other words, leave non-past tense unmarked). Additionally, they both express future meanings through modals; Greek with the particle *tha*, and English with the modal verb *will*. Modern Greek typically marks the past tense with the suffix -e- for third person singular, but sometimes double marks the past tense with an additional prefix e- or i- (similarly to Classical Greek). English on the other hand, marks the past tense for all persons and numbers with the suffix -ed-, except for irregular verbs.

Table 2: Modern Greek and English time axis

Aspect	Language	Past	Non-Past
Imperfective: Ø	Modern Greek	Regular: ka'lus-e call-Past-3SG	ka'li / θa ka'li call-3SG/ Fut-particle call-3SG
		Irregular: 'e-treh-e Past-run-Past-3SG	'trehi/ θa 'trehi run-3SG/ Fut-particle run-3SG
Performative: Ø	English	Regular: S/he/It call-ed call-Past	S/he/It calls / will call call-3SG/ Fut-modal call
		Irregular: S/he/It ran run-Past	S/he/It runs/ will run run-3SG/ Fut-modal run

(Hewson, 2012).

2.2 Aspect

Smith in 1997 had defined the grammatical aspect as matter of “viewpoint” (Meisterernst, 2014, p.17). Comrie (Comrie, 1976, p.3) understood aspect as the “different ways of viewing the internal temporal constituency of a situation”. Gvozdanović refers to aspect as states of affairs. (Gvozdanović, 2022). Lastly, Meisterernst (2014) claims that aspect is a grammatical feature which cannot be located on the time axis as tense is. Taking everything into account, I perceive that the common ground in all approaches is that aspect seems to be the grammatical marking which depicts the internal temporal conceptualization of events in predicates, and because this marking views this event from the inside (rather than the outside), it has no inherent location of the time axis; another morpheme would be responsible to indicate the time of reference.

2.2.1 English Performative Aspect

Hewson (2012) identifies three grammaticalised aspects in English. Starting with the Performative aspect, it is grammaticalised with zero -0- marking. According to Hewson (2012, p.516), the Performative aspect expresses “complete performance of all phases in the event” for verbs which describe activities, accomplishments and achievements for past tense; see section 2.3, example (1), thus it bundles the completeness feature. This feature overlaps with the Perfective aspect found in languages like Modern Greek; see section 2.2.4, examples (1), (2). Moreover, the completeness feature is found in verbs describing narration functions such as story-telling, live

broadcasting and instructions for non-past tense; see examples in and (a) and (b). For these cases MG uses the imperfective aspect see section 2.2.4 examples (10), (11).

Depending on context, the performative aspect can express continuity of performance. Continuity of performance bundles the continual feature, and it can be found in stative verbs as in examples (c) and (d).

(a) He shoots and scores!
shoot-PM-3SG score-PM-3SG

(b) Add eggs and milk into a bowl, and whisk together.
add-PM whisk-PM

(c) I live in Norway.
live-PM

(d) I always knew you liked him.
Know-PM-Past

Continuity of performance is also found in events describing habits, personal traits, natural laws, community rules, thus it bundles the habitual feature; see section 2.3, example (2). These features overlap with the continual and habitual features found in the Imperfective aspect of Modern Greek; see 2.2.5, examples (1)-(2) habitual functions, (3b) personal traits, (4) – (5) natural laws, (6) community rules.

2.2.2 English Progressive Aspect

The Progressive aspect is grammaticalised with the auxiliary *be* and *-ing* marking on the main verb. It appears to be a simpler aspect, as its primary function is to describe “ongoing events at reference time” (Vafaeian, 2022, p.2), thus it carries only one feature, the progressive. These events are interpreted as dynamic with potential telic end points; e.g. *While John was playing football, I was cooking*. Both events were active in the past (as the verb *be* is in the past axis), and the *play-ing* event potentially ended when *cook-ing* event was completed. Moreover, the progressive aspect seems to be used in the present to express “dramatic and topical events”, while in the past it adds “background supportive material” (Vafaeian, 2022, p.19). Lastly, Vafaeian points out the four cases in which speakers are more likely in favour of using the progressive aspect; “(a) a punctual reference point” (e.g. now, at 6 p.m.), (b) an emotive component (e.g. *Mary is always losing her keys*, adding to

the speakers a point of view towards the event, expressing some kind of annoyance in Mary's tendency.), (c) the involvement or business of the subject in the event (e.g. *John is working long hours this month because of a big project*, meaning, he is very busy these days) and, (d) the desire to turn the attention of the speaker towards an ongoing event." (e.g. *Behold! A car is coming towards Jane* (Vafaeian, 2022, p.35).

2.2.3 English Anterior Aspect

The Anterior aspect is grammaticalised with the auxiliary *have* and the main verb in the *past participle form* marking. In the literature is found as *Perfect*, *Retrospective* and *Anterior*, and from now on I will be using the term Anterior. In Lindstedt's understanding which derives from Maslov – 1990; the Anterior aspect is "an aspecto-temporal form of the verb, expressing a present state as a result of a preceding action or change, and /or expressing a past action, event or state that is somehow important to the present and is considered from the present point of view, detached from the past facts" (Dahl, 2000, p.365-366). For example, when a man with a broken leg walks into a room and people ask; *What happened?* The injured man replies; *I have fallen off the stairs*. The present state of a broken leg is a result of the preceding action *falling off the stairs*. This information is important, and must be expressed in this form as it explains the present state, and gives out the appropriate order of the events that have taken place; firstly, the man fell, then the leg broke.

Moreover, following Klein's proposal (Ritz 2012, p. 888) and Maslov's understanding of the Anterior (Dahl, 2000, p.365-366), it appears to be a temporal aspect; where every time an event is in the Anterior aspect, the onset time of this event takes place before an x reference time; e.g. (1) *I have eaten*, eat-event has started before the time of articulation which is the reference time. (2) *After I left, I realised that I had forgotten my umbrella home*; forget-event has started before leave-event. (3) *Had John known Mary wanted to come, he would have invited her*; even in the conditional of unreal past the know-event is preceding the invite-event. First John needed to know that Mary wanted to come, before inviting her. In addition, Lindstedt claims that its primary function is "the Current Relevance (CR) of a past situation" along with "at least one of the following features: resultative; experiential; inferential; reportative" (Dahl, 2000, p.378). Ritz adds that according to a corpus study made on the English *Perfect* forms by Nisiyama and Koenig in 2006, the main features identified were resultative and continual (so long no other information denotes an ending point) (Ritz, 2012, p.896).

To summarize, the prototypical function of the Anterior aspect in English is temporal and relevance; indicating that the event in Anterior aspect is anterior to a second mentioned or implied event/ or to a reference time. In addition, the choice of presenting the events as such, is done consciously to emphasize the relevance or the effects of the anterior event to the mentioned or implied event/ or to the reference time. In the case of *Present Perfect* form, the reference time is the present, the time of utterance (ToU). This relevance, can carry at least one of the following features: continual (see section 2.4, example (1)), resultative (see section 2.4, example (2)); experiential (see section 2.4, example (3)); reportative (see 2.4, example (4)), depending always on the context/ the pragmatics of the conversation and the language. I do not support Lindstedt's claim upon the inferential feature, at least for the case of English. When speakers infer to something they denote the probability or possibility of an event, which is modality, rather than an internal temporal conceptualization of the event. Moreover, English prefers the use of modal verbs when expressing probability or possibility, not aspect. Lindstedt's example of inferential anterior is from Swedish; "Tjuven har kommit in genom det här fönstret" which even though it does not have a modal verb, it translated to "The thief (must) have entered the house by this window" (Dahl, 2000, p.376). In English when making assumptions after investigations, modality is mandatory to be grammaticalised and combined with the anterior aspect.

Lastly, the Anterior aspect is always found along with another aspect. In English the Anterior aspect for non-past tense is grammaticalised either in *Present Perfect Simple* form or in *Present Perfect Continuous* form. As explained in section 2.1, zero marking in languages still carries meaning. In English, the Performative aspect is grammaticalised with zero marking (see section 2.2.1), and it is present in the *Present Perfect Simple* form. Thus, the *Present Perfect Simple* form carries Anterior aspect, Performative aspect and non-past tense. Whereas the *Present Perfect Continuous* form carries Anterior aspect, Progressive aspect and non-past tense. Since all grammatical forms known as tenses in English either carry zero marking (performative aspect) or *be -ing* marking (progressive aspect), it is concluded that these two are the primary aspects found in the English language;

Table 3: All English formal tense forms

<u>Performative</u>	<u>Progressive</u>
Future Simple <i>You will teach English</i>	Future Continuous <i>Tomorrow at 8a.m. you will be teaching English.</i>
Present Simple form <i>You teach English every day</i>	Present Continuous form <i>You are teaching English now</i>
Past Simple form <i>Yesterday you taught English.</i>	Past Continuous form <i>Yesterday at 7a.m. you were teaching English</i>
Future Perfect Simple <i>By 3p.m. you will have taught English.</i>	Future Perfect Continuous <i>By 2p.m. you will have been teaching English for five hours.</i>
Present Perfect Simple <i>You have taught English before</i>	Present Perfect Continuous <i>You have been teaching English since morning.</i>
Past Perfect Simple <i>The student fainted after you had taught English.</i>	Past Perfect Continuous <i>You had been teaching English for five hours when a student fainted.</i>

Consequently, the Anterior aspect is a secondary aspect as it is optional. Events can be grammatically acceptable and deliver meaning without it; it is added for supplementary information about the aspect-temporal conceptualization of the event. This representation of the English formal tense forms is also reflected in Adger's (2010 & 2003, p. 275) *Hierarchy of Projection* theory;

“Clausal: C > Finite > Tense > (Negation) > (Modal) > (Perfect) > (Progressive) > (Passive) > v > V”

However, I cannot simply adopt this hierarchy of projection of events in this paper, as I have introduced a slightly different terminology. A few adjustments are required;

“Clausal: C > Finite > Tense > (Negation) > (Modal) > (Anterior) > Performative/Progressive > (Passive) > v > V”

“Perfect” is replaced with the term *Anterior* for the Anterior aspect. The Performative and Progressive aspect share the same position, they are no longer in a parenthesis, as they are no longer

optional, but rather mandatory. The forward slash indicates that the speaker has to necessarily pick one or the other in order to form a grammatically acceptable utterance. Interpreting the Anterior aspect as a secondary aspect next to another primary aspect can explain why in English the *Present Perfect Simple* form can carry continual and completeness features (4). A native English speaker could interpret this both ways depending on context.

(4) I have lived in Spain for two years.

Table 4 below presents the way tense and aspect are projected in English. Its purpose is to present the hierarchy of projection discussed above with formal grammatical forms identified in English.

Table 4: Tense and Aspect projection of English

Secondary Aspect	Primary Aspect	Grammatical Marks	Past	Non-past
	Progressive	Tense: Past in verb <i>be</i> Aspect: be + /-ing/	was study-ing was giv-ing	is study-ing is giving
	Performative	Tense: Past /-ed/ + irregular Aspect: (unmarked)	stud-ied gave	study give
Anterior	Progressive	Tense: in Anterior aspect: have Aspect: have + (be + /-ing/)	had been study-ing had been giv-ing	has been study-ing has been giv-ing
Anterior	Performative	Tense: in Anterior aspect: have Aspect: have + past participle	had stud-ied had giv-en	has stud-ied has giv-en

2.2.4 Modern Greek Perfective Aspect

The Perfective aspect is the viewpoint outside the event discussed, expressing totality. It depicts that an event has a beginning and an end, thus it carries the completeness feature. Modern Greek tends to grammaticalize the Perfective aspect with the –s– suffix (1), but as Newton (1979) pointed out there is no standard morpheme that applies to all verbs (2).

(1) I Ma'ria 'e-pka-s-e
 D-f-SG-NOM Maria-NOM Past-grab-PC-Past-3SG

ena mil-o
 one-n-ACC apple-n-SG-ACC
 Maria grabbed an apple.

(2) I Ma'ria 'pir-e
 D-f-SG-NOM Maria-NOM get-PC-Past-3SG

ena mil-o
 one-n-ACC apple-n-SG-ACC
 Maria took an apple.

The perfective sometimes indicates a change regarding a situation of reference which possibly persists after the time of utterance (Hedin, 1995). As exhibited in (3), before the time of utterance she hadn't been loved; the perfective indicates this change in her state which, depending on context, may still persist. Example (3) is the formal MG past tense form *Aoristos*. Similarly in (4) – the imperative form – before the time of utterance, the interlocutor was not crying; the perfective with the negation forbids the possible change from ever happening. Therefore, the perfective can carry the feature of new-status; a change/alternation of a situation.

(3) me ton ke'ro i Ma'ria
 with D-n-SG-ACC time-n-SG-ACC D-f-SG-NOM Maria-NOM

ton a'γapise
 cl-m-SG-ACC love-PC-Past-3-SG
 Eventually, Maria loved him.

(4) min klapsis
 Impe-NEG cry-Impe-PC-2-SG

Don't start crying

In other cases, this change can be a single completed event with a starting point and an ending point (5) – *Aoristos*. That is why MG allows Perfective to be identified in utterances expressing future as well (6); the event will start and finish within the future time of reference (Hedin, 1995).

(5) To 1987 o 'Marios pa'dreftike
 In 1987 D-m-SG-NOM Mario-NOM marry-PC-Past-3-SG
 In 1987 Marios got married.

(6) θa lu'sto 'avrio
 Fut-particle shower-PC-1-SG tomorrow
 I will shower tomorrow

Lastly, the use of the Perfective aspect appears to influence the referentiality of noun phrases. In (7) the use of perfective denotes that the noun phrase in reference is a particular noun phrase that the speaker refers to. Had the aspect been imperfective, then the meaning of the sentence would have been a general rule, that all towels must be washed.

(7) oi pe'tsetes 'prepi na pli'θun
 D-f-PL-NOM towel-f-PL-NOM must SUB wash-PC-SUB-Pass-3-PL
 The towels (these ones indicating to) must be washed

2.2.5 Modern Greek Imperfective Aspect

The Imperfective aspect locates its viewpoint within the event, and bundles the continual, habitual and progressive features. Modern Greek tends to leave the imperfective aspect unmarked – zero marking (Hedin, 233-235). In MG the use of the Imperfective is very frequent as it serves various functions.

To begin with, the habitual feature of the imperfective aspect of MG denotes an “indefinite repetition” (Newton, 1979, p.139). This repetition can express habituality (Dosi et al., 2017); see (1) - *Paratatikos* past tense form, and (2) - *Enestotas* present tense form.

(1) San pe'ði 'ðjavaza po'li
 like child-n-SG-VOC read-IPC-Past-1-SG a lot
 As a child I read a lot

(2) 'trexo sto 'parko 'kaθe pro'i
 Run-IPC-1-SG at-the-n-SG-ACC park-n-SG-ACC every morning-n-SG
 I run at the park every morning

Moreover, the habitual feature can describe repeated behavioural traits of certain agents (3) – *Enestotas/Paratatikos*, or of a group of agents (4) – *Enestotas* (Hedin, 2000, p. 231). To add to that, it is used to describe the laws of physics (5) – *Enestotas*, and communities (6) – *Paratatikos* – around us. In English these are expressed in the formal tense forms *Present Simple* and *Past Simple* (see translations of 3-6).

(3)-a I Ma'ria ka'pnizi/ 'kapnize
 D-f-SG-NOM Maria-NOM smoke-IPC-3-SG/ smoke-IPC-Past-3-SG
 Maria smokes. Maria smoked-used to smoke.

(3)-b I Ma'ria mi'lai/ mi'luse dina'ta
 D-f-SG-NOM Maria-NOM talk-IPC-3-SG/ talk-IPC-Past-3-SG loudly
 Maria talks/ talked-used to talk loudly.

(4) I 'γates fo'vude to ne'ro
 D-f-PL-NOM cat-f-PL-NOM talk-IPC-3-PL D-n-SG-ACC water-n-SG-ACC
 Cats are scared of water

(5) To ne'ro 'vrazi stus eka'to va'θmus
 D-n-SG-NOM water-n-SG-NOM boil-IPC-3-SG at-the-m-PL-ACC 100 degree-m-PL-ACC
 Water boils at 100°C

(6) Pa'λα to 'kapnisma epitre'potan
 Old D-n-SG-NOM smoking-n-SG-NOM allow-Pass-IPC-Past-3-SG

se kli'stus 'xorus
 in closed-m-PL-ACC space-m-PL-ACC
 In the past smoking indoors was allowed.

The imperfective with the continual feature in MG can be found in environments of modality, a use of “potentiality” as Mackridge suggested in 1985 (Hedin, 2000, p. 253). Modality expressing possibility, ability and obligation is expressed in imperfectiveness; see (7), (8), (9) – *Enestotas/Paratatikos*.

(7) ta si'maðja 'fenonde/ 'fenondan
 D-n-PL-NOM mark-n-PL-NOM see-PASS-IPC-3PL see-PASS-IPC-Past-3PL
 The marks are/ were visible.

(8) aftos 'lini/ 'eline pro'vlimata
 pr-m-SG-NOM solve-IPC-3-SG solve-IPC-Past-3-SG problem-n-PL-ACC
 He can / could solve all equations.

(9) afto ðen to sideronis/ siderones
 pr-n-SG-ACC NEG cl-n-SG-ACC iron-IPC-2-SG iron-IPC-Past-2-SG
 This mustn't be ironed.

The progressive feature of the imperfective is used for narrations, story-telling (10) and written instructions such as recipes (11). The speakers make this choice to illustrate “a dynamic movement towards the important information” (Thomas, 2011, p. 2378);

(10) si'konete 'tote ce i 'eli ce 'lei
 stand-IPC-3SG then and D-f-SG-NOM Elli and say-IPC-3SG
 Elli stands up and says

(11) pro'sθetume a'lati ce anaka'tevume
 add-IPC-2PL salt-n-SG-ACC and mix-IPC-2PL
 Add salt and mix

Secondly, the progressive feature is used to indicate that something in progress is parallel to a time/event of reference, or parallel to the time of utterance (if it is located in the present), or else to “a situation on a transitional phase” with the situation not yet coming into existence (Hedin, 2000, p.230); see (12) in *Enestotas* and (13) in *Paratatikos*.

(12) I Ma'ria 'yrafi 'ena vi'vlio.
 D-f-SG-NOM Maria-NOM write-IPC-3-SG one-n-ACC book-n-SG-ACC
 Maria is writing a book (now-ToU, or these days)

(13) I Ma'ria 'eyrafe 'ena vi'vlio
 D-f-SG-NOM Maria-NOM write-IPC-Past-3-SG one-n-ACC book-n-SG-ACC
 Maria was writing a book (yesterday at 6p.m. / when I arrived home)
 - at a specific reference time/event

(During that period of her life) Maria was in the process of writing a book.

- within an x-time period.

In both readings, past and present, the realisation of the *book* is not there. This imperfective focuses on the event being in progress at x-reference time/period (Hedin, 1995). It is similar to two uses found in the English *Present Progressive/ Continuous* form; a) an event currently in progress b) something changing gradually as-we-speak, and usually found with keywords “these days” (Dooley & Evans, 2014, p. 12-19) (14). Additionally, it is similar to the use of Past Progressive form where an event in progress is parallel to a time (or time-period)/event reference located in the past (15).

- (14) These days/Now, I am renovating my house.
renovate-PROG

- (15) Yesterday at 6p.m./ All weekend/ When you called I was renovating my house
renovate-PROG-Past

Lastly, the progressive feature is used to give background information/ to describe the scenery or the atmosphere in which “main” events took place; (16) in *Enestotas*, and (17) in *Paratatikos* (Hedin, 2000, p.135).

- (16) 'Koita o 'iλos 'lambi ta
look-PC-Impe-2-SG D-m-SG-NOM sun-m-SG-NOM shine-IPC-3-SG D-n-PL-NOM

pe'ðja 'pezun o'rea 'mera
child-n-PL-NOM play-IPC-3-PL beautiful-f-SG day-f-SG

Look! The sun is shining, the kids are playing... What a beautiful day!

- (17) 'Molis 'ksipnisa o 'iλos 'elambe
when wake-PC-Past-1-SG D-m-SG-NOM sun-m-SG-NOM shine-IPC-Past-3-SG

ta pe'ðja 'epezan o'rea 'mera
D-n-PL-NOM child-n-PL-NOM play-IPC-Past-3-PL beautiful-f-SG day-f-SG

When I woke up, the sun was shining, the kids were playing... What a beautiful day it was!

2.2.6 Modern Greek Anterior Aspect

In MG the Anterior aspect is grammaticalised with the auxiliary “have” and the main verb in the Perfective aspect (Hedin, 1995 p.233-235). Because of this combination, the formal tense form *Aoristos*, which expresses perfectiveness, shares functions with the formal form *Parakimenos* which carries Anterior aspect in non-past tense. Consequently, it is an aspect which is not that frequent in MG (Hedin, 1995). Its primary use is to indicate that the event in the Anterior aspect is anterior to a second mentioned or implied event/ or to a reference time. It is used to show relevance with reportative, resultative and experiential features. It cannot carry the continual feature, as English does, because it is combined with the Perfective aspect, thus the event discussed is always completed.

The relevance with the reportative feature can be expressed either with Anterior aspect combined with Perfective aspect (1), or only with Perfective aspect (2). Hedin calls this the “stative function” of MG Anterior (1995, p.243).

- (1) 'ehi 'erθi 'γrama
 have-Ant-3-SG come-PC-3-SG letter-n-SG-ACC
 A letter has arrived (it is on the table)
- (2) 'irθe 'γrama
 come-PC-Past-3-SG letter-n-SG-ACC
 A letter arrived (it is on the table)

The Anterior aspect in the *Parakimenos* form is preferred to the solely Perfective aspect found in the *Aorist* form when the relevance has resultative features; (3), (4). Hedin refers to this as the Anterior of current relevance in situations that have developed over time (5), otherwise it would have been a simple change regarding a situation of reference, and thus the Anterior in past tense would be more appropriate (Hedin, 1995, p.243).

- (3) 'kseri ti 'kani 'ehi vri
 know-IPC-3-SG what do-IPC-3-SG have-Ant-3-SG find-PC-3-SG
 ti 'klisi tu
 D-f-SG-ACC calling-f-SG-ACC pr-poss-m-3-SG
 He knows what he is doing, he has found his calling
- (4) 'eho a'kusi po'la γja a'fton

have-Ant-1-SG hear-PC-1-SG a lot for pr-3-SG-GEN
 ðen ton embi'stevome
 NEG cl-m-SG-GEN trust-IPC-1-SG
 I have heard a lot about him, I do not trust him.

(5) i ce'ri 'exun a'laksi
 D-m-PL-NOM time-m-PL-NOM have-Ant-3-PL change-PC-3-PL
 Times have changed (It is evident that a situation is different than before)

As mentioned above, the Anterior aspect in MG cannot carry other features than the resultative, reportative, or experiential as English does. Therefore, for every case that English speakers would combine the Anterior aspect along with the Progressive aspect, MG uses solely the Imperfective; (6)-(7). Interestingly, Italian speakers would also choose the Imperfective when translating in Italian English sentences with Anterior-Progressive aspect combinations (Italian is a language of Perfective and Imperfective aspect); (8)

(6) 'etroγes 'ise γe'matos 'psixula
 eat-IPC-Past-2-SG be-IPC-2-SG full-m-SG breadcrumb-PL-ACC
 Have you been eating? You are full of breadcrumbs.

(7) 'etreçes 'ise kata'kokkini
 run-IPC-Past-2-SG be-IPC-2-SG (completely)-red-f-SG
 Have you been running? You look flustered

(8) Correvi?
 run-IPC-Past-2-SG
 Have you been running?

Lastly, the Anterior aspect with the experiential feature is expressed in MG as (9) and (10) (Hedin, 1995, p.242).

(9) -ksa'nakanes ski -'exo 'kani ðjo fo'res
 again_do-PC-Past-2-SG ski-n-SG have-Ant-1-SG do-PC-1-SG two time-f-PL
 -Have you ever skied before?
 - I have skied twice.

- (10) -ksana'efayes 'susi -'oçi ðen 'exo 'fai po'te
 again_eat-PC-Past-2-SG sushi-n-SG no NEG have-Ant-1-SG eat-PC-1-SG never
 -Have you ever eaten sushi before? -No, I have never eaten sushi

Lastly, as mentioned in 2.2.3, the Anterior aspect is a secondary aspect as it is optional. Events can be grammatically acceptable and deliver meaning without it; it is added for supplementary information about the aspect-temporal conceptualization of the event. Adopting once again Adger's (2010 & 2003, p. 275) *Hierarchy of Projection* theory, this Hierarchy for MG would appear as follows;

Clausal: C > Finite > Tense > (Negation) > (Modal) > (Anterior) > Perfective/Imperfective > (Passive) > v > V

However, this hierarchy has one exception, as MG does not allow the combination of Anterior aspect with the Imperfective aspect;

- (11) *'exo 'ðiavaza 'oli 'mera
 have-Ant-1-SG study-IPC-Past-1-SG all-f-SG-ACC day-f-SG-ACC
 I have been studying all day.

*Clausal: C > Finite > Tense > (Negation) > (Modal) > Anterior > Imperfective > (Passive) > v > V"

The *Table 5* below presents the way tense and aspect are projected in Modern Greek. Its purpose is to present the hierarchy of projection discussed above with formal grammatical forms identified in MG.

Table 5: Tense and Aspect projection of Modern Greek

Secondary Aspect	Primary Aspect	Grammatical Marks	Past	Non-Past
	Imperfective	Tense: Past /-e/ Aspect: (unmarked)	'ðjava-z-e Studied was studying	ðja'va-z-i Stud-ies is studying
	Perfective	Tense: Past /-e/ Perfective: /-s-/	'ðjava-s-e Studied	ðja'va-s-i study
Anterior	Perfective	Tense: /i-/ in Anterior aspect: have Aspect: have + /-s-/	'içe ðja'va-s-i had studied	'eçi ðja'va-s-i has studied

2.3 The Past Simple form

The *Past simple* form is used to express completed past events. It is marked with the morpheme *-ed*; (1). At the same time, depending on context, it can additionally carry the [+ habitual] feature (2), thus expressing past habitual meanings (Dosi et al., 2017).

1) John *walked* home.
walk-PM-Past

2) Mary, when in high school, she *walked* to school every day. [+ habitual]
walk-PM-Past

Typical books of teaching English as a second language argue that the *Past Simple* tense form is used for the following functions; “a) for completed actions in the past”; (1), “b) for past habits”; (2), “c) for actions that took place the one after the other - narrating the events of a story in the order that the events took place”; (3) (Dooley & Evans, 2014, p. 23-27), and “d) an action which happened at a

certain time in the past and there is direct/ indirect reference to the time”; (4) (Dooley & Evans, 2016, p. 42).

3) I woke up, got ready for school, missed the bus and walked to school.
wake-PM-Past get-PM-Past miss-PM-Past walk-PM-Past

4) Crete officially became part of Greece in December 1913.
become-PM-Past

2.4 The Present Perfect Simple form

The *Present Perfect Simple* form is grammaticalised with the auxiliary *have* and the main verb in the past participle form. Using again the same material, teaching English as a second language by Dooley and Evans; the *Present Perfect Simple* is a formal tense form used for: “(a) actions that happened in the past and the exact time is not important; (b) actions that happened in the past, we do not know when, but there are evident results in the present”, and with keywords: *just, already, yet, how long, for, since* (Dooley & Evans, 2014, p. 45-49); “(c) actions which started in the past and continues to the present”, and with keywords: *already, yet, just, ever, never, for, since* (Dooley & Evans, 2016, p.10). Teaching materials and theoretical linguists’ approaches discussed in section 2.2.3 seem to partially agree with this description of the *Present Perfect Simple* form, but the theoretical linguists’ approaches appear to be more concrete.

Following Ritz (2012, p. 884), it is once again reassured that the *Present Perfect* form carries meanings of “current relevance”. Every time speakers use the *Present Perfect* form, they refer to an event which started/ took place before the time of utterance (the reference time), and the speakers imply through this form a current relevance. This current relevance can be bundled with one of the following features; continual (1), resultative (2), experiential (3), and reportative (4) - for “recent past” or “hot news” (Ritz, 2012, p.883).

(1) I have worked as a teacher for 25 years.
Have-Ant-1SG work-PM-Past
(Up to the time of utterance the speaker can still work as a teacher)

(2) He cannot come. He has broken his leg.
have-Ant-3SG hear-PM-Past
(His broken leg results to not being able to attend)

(3) He has never missed Mark's birthday party.
have-Ant-3SG miss-PM-Past
(So far he has experienced all Mark's birthday)

(4) I have just got the news! How are you dear?
have-Ant-3SG get-PM-Past
(the speaker found out about these news recently)

2.5 Aspectual asymmetries and feature reassembly

In this section I discuss the features of *Past Simple* form and *Present Perfect Simple* form which could be problematic for Greek L1 speakers, learners of English L2 due to the aspectual asymmetries between English and MG.

2.5.1 The Past Simple form and the MG respective forms

The Performative aspect in the past tense is grammaticalised in English in the *Past Simple* form. As demonstrated in section 2.2.1, the Performative aspect denotes continuity of performance thus bundles the continual and habitual features. However, depending on context, it can also be bundled with the completeness feature. The primary function of the *Past Simple* form is to express completed past events, which carries the feature of completeness. Similar functions are; for events that took place the one after the other and for events with a direct or direct past reference time (section 2.3). These functions are exactly the same as the primary functions expressed by the Perfective aspect in the past tense (section 2.2.4) found in MG formal form *Aoristos*. It is therefore, expected that Greek L1 speakers, learners of English L2 would have no problems with these functions, since there is absolute match of feature bundling.

The habitual feature in *Past Simple* forms expressing past habitual events, personal traits of deceased people, or past personal traits of people, and past societal or community laws are expected to be problematic for L1 speakers of Perfective and Imperfective aspectual language systems like MG. For such cases MG speakers use a different formal form than *Aoristos* with imperfective aspect, *Paratatikos* which carries the habitual feature; see section 2.2.5, example (1) for habitual past events, section 2.2.5 examples (3a) and (3b) for personal traits of deceased people, or past personal traits of people, and section 2.2.5 example (6) past societal or community laws.

2.5.2 The Present Perfect Simple form and the MG respective forms

Present Perfect Simple form carries the Anterior and Performative aspect in the non-past tense. As demonstrated in section 2.2.3, the primary function of the Anterior aspect in English is to indicate that the event is anterior to a second mentioned or implied event/ or to a reference time. The choice of presenting the events as such, is done consciously to emphasize the relevance or effects of the anterior event to the mentioned or implied event/ or to the reference time. This relevance, can be bundled with one of the following features: continual, resultative, experiential, or reportative. In MG the anterior aspect, in *Parakimenos* form, has the same primary function as in English; indicating that the event is anterior but relevant to a second mentioned or implied event/ or to a reference time. However, this relevance can be bundled with only reportative, resultative and experiential features, because the Perfective aspect does not carry the continual feature as the Performative aspect does in English. The *Present Perfect* form in example (1) expresses relevance with the continual feature, but the respective MG translation requires switching to the Imperfective aspect of non-past tense - *Enestotas* (2);

(1) I have known him for years now

(2) Ton 'ksero 'xronia
him-cl-m-SG-Acc know-IPC-1SG year-m-PL

Moreover, the reportative feature of the Anterior aspect is infrequent because the Perfective aspect can carry the same meanings; see section 2.2.6 examples (1) and (2). Thus, for such cases the *Aoristos* form is preferred. The Anterior aspect in MG is combined only with the Perfective aspect and carries less features than in English; an event is anterior to a second mentioned or implied event/ or to a reference time and the relevance of this event to the second mentioned or implied event/ or to a reference time bundles with the experiential and resultative feature, and rarely with the reportative feature.

2.5.3 Summary of asymmetries

To summarize, Cypriot-Greek learners of English L2 initially associate the *Past simple* form with functions of the *Aoristos* form of their mother tongue for completed events. For events expressing continuity of performance learners are required to use again the *Past Simple* form, but in their mother tongue they would have to switch to another form – *Paratatikos* – which serves similar functions. The imperfective aspect in MG carries a) continual, b) progressive and c) habitual

features. The Perfective aspect in MG carries the features of completeness and new-status, which is also a completed event. Greek speakers, in order to acquire English, need to reassemble the habitual and completeness features with the Performative aspect of past tense, so that the *Past Simple* form can express habitual past events and completed past events. The progressive feature - and only that - needs to be reassembled to the Progressive aspect. However, it is expected that MG speakers – at least at an initial stage – would bundle the progressive, habitual and continual features with the English Progressive aspect resulting to overuse and misuse of the progressive aspect. In particular, for past habitual events, personal traits of deceased people, or past personal traits of people, and past societal or community laws learners are expected to reject the *Past Simple* forms and seek for other forms as they would do in MG.

The Anterior aspect in the MG and English have the same primary function; an anterior event being relevant to a second mentioned or implied event/ or to a reference time. However, the *Present Perfect* form, constructed with the Anterior and Performative aspect. Consequently, Greek speakers are once again required to reassemble the continual feature to the Performative aspect, so that the *Present Perfect* form denoting that the current relevance can be bundled with experiential, reportative, resultative and continual features. These learners would not interpret such utterance (1) as ambiguous; a completed event or an event that still persists (depending on context) - as natives would - but only as a completed event.

(1) I have lived in Spain for 2 years.

Additionally, English utterances of Anterior and Performative aspect carrying relevance with the reportative feature are also expected to be avoided (2), or their Performative equivalent which is the *Past Simple* form expressing completed events will be preferred (3);

(2) A letter has arrived (it is on the table)

(3) A letter arrived (it is on the table)

Table 6 and *Table 7* below present Greek speakers' expected responses to the features identified in the formal tense forms *Past Simple* and *Present Perfect* respectively. Learners are expected to reject utterances which present aspect-feature bundle asymmetries.

Table 6: Past Simple

<i>Past Simple</i> – Performative	Predictions
Feature 1: completeness	✓ Learners are expected to accept sentences expressing completeness
Feature 2: habitual; <ul style="list-style-type: none"> • past habits • past personal traits of people • past societal or community laws Expected rejections: Ex. When I was 10, I walked to school every day. Ex. Mary smoked as a teenager.	✱ Learners are expected to reject sentences expressing continuity. They are expected to bundle the habitual feature in the Progressive aspect, as in their mother tongue the progressive, habitual and continual feature are found in the same aspect; Imperfective Ex. *When I was 10, I was walking to school every day. Ex. *Mary was smoking as a teenager.

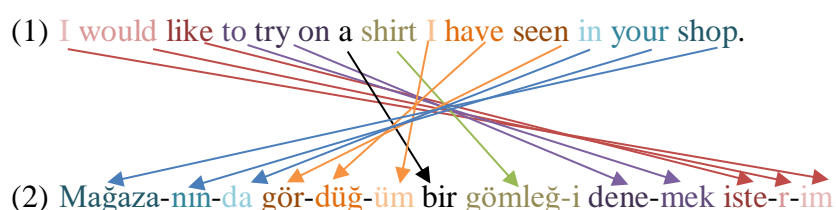
Table 7: Present Perfect

<p><i>Present Perfect –</i> Anterior & Performative</p>	<p>Expectations</p>
<p>Feature 1: this anterior event is relevant to a second mentioned or implied event. This event carries the EXPERIENTIAL feature.</p>	<p>✓ Learners are expected to accept sentences expressing past experiences.</p>
<p>Feature 2: this anterior event is relevant to a second mentioned or implied event. This event carries the RESULTATIVE feature.</p>	<p>✓ Learners are expected to accept sentences expressing resultative events.</p>
<p>Feature 3: this anterior event is relevant to a second mentioned or implied event. This event carries the REPORTATIVE feature.</p> <p>Expected preference:</p> <p>I just found the perfect dress. > I have just found the perfect dress.</p>	<p>✱ Learners are expected to show preference towards the sentences reporting relevance in the <i>Past Simple</i> form, rather than in the <i>Present Perfect</i> form.</p>
<p>Feature 4: this anterior event is relevant to a second mentioned or implied event. This event carries the CONTINUAL feature.</p> <p>Expected rejections:</p> <p>Ex. I have known him 10 years now.</p>	<p>✱ Learners are expected to reject sentences expressing continuity.</p> <p>Ex. *I know him 10 years now</p>

2.6 Feature Reassembly Hypothesis

This study follows Lardiere's (2009) theoretical approach towards Second Language Acquisition (SLA), the Feature Reassembly Hypothesis. Hegarty (2005) suggested that First Language Acquisition (FLA) begins with feature bundling, then these bundles are categorized in accordance to the functions they serve, which then leads to the creation of functional categories (Lardiere, 2009, p.185). This description is similar to Lardiere's approach, as she visualized the creation of a language like the creation of living beings from atoms to cells, from cells to tissues, from tissues to organs, to synchronized organs working together to complete a task. In particular, according to Lardiere, features "are the primitive descriptive atoms of language" (Lardiere, 2009, p.181). Lardiere claims that x-language does not lack any features found in y-language, and if second language learners want to successfully acquire a language, then they should look for the appropriate features in their L1 and reassemble them in the particular order which is grammatically acceptable in the target language.

An excellent feature reassembly example comes from English-Turkish; the morpho-syntactic form of Turkish (1) is nearly a mirror opposite of the English one (2).



English possessive pronouns are separate words preceding nouns. Turkish does not have such individual words, but expresses the possessiveness in suffixes attached to the nouns; see *your shop* in examples (1) and (2). In additions, English does not have cases, yet the reader knows that the direct object of *try on* is the *shirt* because of the syntactic order of the words, whereas Turkish attaches the accusative case suffix (-i) to the noun. A second language learner of Turkish could claim that there are more features in Turkish to acquire, yet both sentences express the same meaning. No language has more, or less features than the other. What is bothersome is not the quantity of features to acquire, but the process of feature reassembly.

Additionally, Lardiere (2009, p.215) claims that the task is even more difficult when there is feature combinations; "the greater difficulty for second language acquirer lies in assembling just the right combination of features into the right lexical items for each language" and using them in the

appropriate context to serve the appropriate function. Sometimes reassembly is not enough, sometimes languages need to combine features in their attempt to express the same meanings as another language would use one feature. For example, English requires the combination of Anterior and Progressive aspect in non-past tense to express relevance with the resultative feature for an event with a starting point in the past and an undetermined duration (3);

(3) Have you been running? You look flustered
Have-Ant-2SG pr-2SG be-PM run-PROG

Whereas MG, does not need to make such combinations to express the same meaning. It only requires the imperfective aspect in past tense (4);

(4) 'etreçes 'ise kata'kokkini
run-IPC-PAST-2-SG be-IPC-2-SG (completely)-red-f-SG
Have you been running? You look flustered

Lars Johanson (Dahl, 2000, p.32) supports something similar; “two features that behave independently in one language may be fused in another language”.

Lardiere’s conclusion to this hypothesis came from studies on English L1 and French L1 speakers acquiring Korean. English and Korean demand [wh] and [Q] features when forming wh-expressions, but their assembly representations are different. The study showed that English L1 speakers of intermediate proficiency in Korean scored better in sentences with [+Q] feature, than of those with [-Q] feature, as the [+wh] and [+Q] features are representations also found in English, their mother tongue (Lardiere, 2009, p.187). French and Korean both have the lexical [+plural] feature, but in Korean its use is delimited, as it carries a specific semantic value in the language, whereas in French – a language of inflectional agreement – it is a necessary feature which needs to always be represented (Lardiere, 2009, p.211). This means that feature reassembly is indeed difficult since each language chooses different feature-bundles and represents those on “lexical items in different ways under different conditioning environments” (Lardiere, 2009, p.219).

Though difficult, this reassembly is not impossible, as 17% of the advanced level learners of Korean got a perfect score in the study (Lardiere, 2009, p.187). Lardiere agrees with Slabakova and quotes her; “more precise research questions can be formulated if L1 transfer is taken into account and properties that differ between L1 and L2 are investigated” (Lardiere, 2009, p.219). Furthermore,

Lardiere supports that a Contrastive Analysis (CA) of features is the best method to follow when it comes to SLA, as it is a method which breaks L1 into pieces, gives the learner a better understanding of language in general, and once it reassembles them to L2, it makes the task less complex from learners' initial expectations. This practice is not new. Contrastive Analysis and Culturally Relevant Instructions (CRI) are teaching methods already applied in bilingual societies with positive outcomes. In particular, CRI has been applied in Hawaii since the 1980s, and indicated that students perform better in their Standard English tests when the classroom integrates features from students' cultural background (Knapp, 2015, p.14). If such methods have proven to benefit language acquisition in bilingual societies, then why not SLA?

2.7 Previous studies on the acquisition of aspect in L2 English

According to Johanson (Dahl, 2000), aspectotemporality is multi-dimensional; it discusses the interaction of lexical items, morphology, syntax, semantics and pragmatics. The elements of interactions are so many that plethora of variation is inevitable. The feature bundles vary so much from one language system to another that universal predictions cannot be possible (Dahl, 2000, p.30). Striving for SLA through matching of L1 tenses to L2 tenses is the wrong way to go around SLA. Features can be superficially similar among languages, but when once realised in contextualised environments, pragmatics fail the expectations, or rather, the expectations fail the reality of the languages. As presented above in sections 2.2.3 and 2.2.6, English and MG both have the Anterior aspect, but they assign different features on them.

Roberts and Liszka (2013) have studied German L1 and French L1 speakers' comprehension aspectual proficiency in formal tense forms *Past Simple* and *Present Perfect*. Both groups' explicit knowledge of these tense/aspects was of the same level as the native speakers of English (proved by the Grammatical Judgement Task scores). However, on the second part of the experiment, a self-paced reading task, the groups' scores varied. In other words, they are implicit knowledge on English tense/aspects did not reflect their explicit knowledge once the participants were put in an environment of real-time comprehension. Only the French L1 speakers performed as well as they did on the first task, whereas the German L1 speakers failed to identify the mismatch condition. Roberts and Liszka claim that this is because of L1 cross-linguistic influence which is stronger in real-time processing. English, French and German display [+/- past] features, however only English and French accept particular adverbial expressions for perfective and others for perfect (anterior) aspect, whereas German demands different adverbs; English and French associate the adverb "since" only

with perfect (anterior) aspect meanings, whereas German associate the adverb “already” with (its periphrastic grammaticalised) perfect aspect meanings. Moreover, French grammaticalises perfect aspect whereas German does not. To add to that, French grammaticalises more aspects than German; French has im/perfective, German does not. This “lack” of grammaticalised features influenced negatively Germans’ performance on aspect at the on-line task, contrary to Frenchs who are more sensitive to aspectual distinctions, even if English perfective and perfect mismatch in certain uses the French perfective and perfect.

A few years later, Roberts and Liszka (2021) examined the acquisition of the English (past) perfective and (past) progressive aspect in German, Dutch and French learners of L2 English. All participants took an English proficiency test, only those whose proficiency was characterised as “advanced” made the cut for the remaining of the study. Participants then, were tested on sentence in *Past Simple* early VS late closure, and *Past Progressive* early VS late closure on-line and off-line; “

(a) Simple past, late closure:

As John hunted the frightened rabbit it escaped through the dark trees.

(b) Simple past, early closure:

As John hunted the frightened rabbit escaped through the dark trees.

(a) Past progressive, late closure:

As John was hunting the frightened rabbit it escaped through the dark trees.

(b) Past progressive, early closure:

As John was hunting the frightened rabbit escaped through the dark trees.”

(Roberts & Liszka, 2021, p.630)

The test measure Acceptability and Response Time (RT) when processing disambiguate. English natives also participated as a control and their results indicated that *Past Simple*, late closure and *Past Progressive*, early closure required more time for the participants to process disambiguate.

All L2 learners reacted similarly to English natives – on both on-line and off-line tests - for the sentences in the *Past simple*, as all four languages have grammatical representations of [+/-past] feature. As for the *Past Progressive*, things escalated otherwise. German is a language with no distinction of “on-going”, or “continuous” or “habitual” events; no grammaticalization of progressive or imperfective aspect. Dutch is a language which is currently going through a

grammaticalization of the progressive aspect with a periphrastic expression “ann het + infinitive” (Roberts & Liszka, 2021, p.637). French lacks the Progressive aspect, but can express meanings of progressiveness through imperfective (with some limitations as we have discussed earlier in the case of MG). As predicted by Roberts and Liszka, the French most advanced learners reacted almost native-like on the online test regarding *Past Progressive*, since they were more sensitive to progressiveness due to the grammaticalised Imperfective aspect of their L1. The only distinction was that they reacted faster to *Past Progressive*, early closure than late closure (opposite to natives’ RT), even though they equally accepted both forms. On the on-line test Dutch and German learners appear to interpret “both aspectual types as [+telic] and a direct object expected equally” (Roberts & Liszka, 2021, p.637). On the off-line test, Dutch and French learners reacted similarly, with answers close to natives, confirming once again that Dutch is going through a language change. Lastly, on the off-line test, Germans reacted likewise to the on-line test they took.

3 Research Questions and Methodology

3.1 Research Questions and Predictions

According to the literature discussed in section 2.5.3, English and Modern Greek present aspectual asymmetries which results to different features assigned to different yet similar grammatical forms. The question that surfaces is how much of a problem these asymmetries are for young Greek speakers, learners of L2 English. Can Greek speakers reassemble the appropriate features to the correct grammatical English forms by the time they qualify to apply for an English language International General Certificate of Secondary Education (IGCSE)? The study examines children’s knowledge of the features of the English formal tense forms *Present Perfect* and *Past Simple*, at the ages of thirteen and sixteen. Thirteen is the typical age when students are introduced to more complex forms of the *Present Perfect* (*Present Perfect Simple*, *Present Perfect Progressive*, conditionals with *Present Perfect* etc), whereas sixteen is the typical age students take their English language IGCSE.

RQ1: Is the *Past Simple* form an easier form to learn compared to the *Present Perfect* form, as it bundles less features than the latter?

RQ2: Would *Past Simple* forms carrying the habitual feature be more challenging compare to those carrying the feature of completeness feature?

RQ3: Would *Present Perfect* forms carrying relevance with continual feature be more challenging to students than of those carrying relevance with resultative and experiential features?

RQ4: Would *Present Perfect* forms carrying relevance with reportative feature be more challenging for the young Greek speakers compared to native English speakers? Would native English speaker also prefer the *Past Simple* form for the reportative feature?

RQ5: Is the feature reassembly completed/ achieved by the time students qualify to take their English language IGCSE exam? What role do age, proficiency, linguistic background and complexity of feature bundling play in second language acquisition?

Following the assumptions of FRH, it is hypothesised that all features identified in the English *Present Perfect* and *Past Simple* forms are available in Modern Greek. A Greek speaker learner of English L2, after enough years of exposure to the language, should be able to successfully acquire these forms as long as the feature reassembly is completed. Moreover, taking into account Roberts and Liszka (2021) research, it is hypothesized that since MG has grammatical distinctions for perfective, imperfective, and anterior aspect, as well as past and non-past tense, learners would not face great difficulty acquiring the forms in question. However, at the same time, it is hypothesised that the feature reassembly task of feature combinations would be more challenging compared to single feature reassembly; “the greater difficulty for second language acquirer lies in assembling just the right combination of features into the right lexical items for each language” (Lardiere, 2009, p.215).

- 1) It is expected that the *Past Simple* form would be an easier form to learn compared to *Present Perfect* form, since it carries only one aspect; the Performative aspect which bundles only two features; completed past events feature and habitual feature – used to express past habits, past personal traits of people, past societal or community laws (for examples see section 2.3). On the other hand, the *Present Perfect* form carries a combination of aspect; the Anterior and Performative aspect which bundles four possible features; an event with a starting point in the past which has relevance to a second mentioned or implied event, and that relevance carries one of the following features; experiential, resultative, reportative, or continual (for examples see section 2.4).

- 2) For the *Past Simple* form in particular, it is expected from learners to accept sentences expressing completeness and reject sentences expressing habituality. Greek speakers learners of English L2 are expected to bundle the habitual feature with the English Progressive aspect, as in their mother tongue the habitual, progressive and continual features are found in the same aspect; Imperfective. Therefore, it is expected from learners to accept ungrammatical sentences in the Progressive aspect with the habitual feature.

Ex. *When I was 10, I was walking to school every day.

- 3) As it concerns the *Present Perfect* form in particular, each feature is expected to be treated differently. The sentences carrying relevance with experiential and resultative features are expected to be accepted by the learners, since those features are also bundled with the Anterior aspect in their mother tongue.

The sentences carrying relevance with the continual feature are expected to be rejected by the learners, since the Anterior aspect in their mother tongue is always combined with the Perfective aspect which always implies that the event discussed is completed. Consequently, learners are expected to accept ungrammatical sentences in the *Present Simple* form for events with a starting point in the past with relevance of the continual feature, because such meanings in their mother tongue are expressed with the Imperfective Aspect in the non-past tense.

Ex. *I know him 10 years now.

- 4) The sentences carrying relevance with the reportative feature are also a grey area for English native speakers. According to the literature discussed above, such meanings are expressed both with Anterior and Performative aspect (for the *Present Perfect* form), as well as solely with the Performative aspect (for the *Past Simple* form). Learners are required to grammatically assess such sentences through a forced-choice task, and they are expected to show great preference towards the sentences reporting relevance in the *Past Simple* form, rather than in the *Present Perfect* form.
- 5) Following the assumptions of FRH, acquiring a second language is possible. Feature combination may be a difficult task to manage, yet not unattainable. This theoretical approach does not give specifics on how long or when the feature reassembly process takes to complete/

is completed. However, considering Cambridge’s guidelines on successful English language acquisition, Greek speakers learners of English L2 by the time they reach the maturity to take their IGCSE exam, are indeed expected to complete/achieve feature reassembly; at least to high enough level (it is also a spectrum) to successfully acquire their English language IGCSE.

3.2 Method

3.2.1 Acceptability judgement task – Likert scale

The present study uses an acceptability judgement task (AJT) to collect data. AJTs have been used in the field of linguistics since the 1970s, and it is quite a popular method used in second language acquisition research (Maie & Godfroid, 2021). In literature, especially in the past, acceptability and grammaticality have been used interchangeably. However, these terms are certainly not synonyms. A sentence in an x language is grammatical when its components align with the syntactic rules of the language in question, whereas its acceptability depends on the native speakers’ intuition and perception (Leivada & Westergaard, 2020). At the same time, grammaticality derives from native speakers’ acceptability, since “grammaticality is often a formal, standardized snapshot of the way the official language looks like at a **given point in time**”; as language changes through time (Leivada & Westergaard, 2020, p.6).

Grammaticality depends heavily two elements. The first is formal rules of x language at x time in history (what Leivada and Westergaard (2020) call as “relative ungrammaticality”). For example in MG subjects and verbs need to agree in number (1) (2), but this rule is loose for Turkish. If the subject has the plural morpheme, then the verb does not necessarily need to have the plural morpheme too. Examples (3) and (4) are equally acceptable.

(1) ta peđja pezun
 D-NOM-3-PL child-NOM-3-PL play-IPC-3-PL
 Children are playing

(2) *ta peđja pezi
 D-NOM-3-PL child-NOM-3-PL play-IPC-3-SG
 *Children is playing

(3) çocuklar oynuyor
 child-NOM-3-PL play-PROG-3-SG
 Children are playing

(4) çocuklar oynuyorlar
child-NOM-3-PL play-PROG-3-PL
Children are playing

As Leivada and Westergaard (2020) have previously stated, such rules are language specific, can be altered in the course of time, or even be true in other languages. The second element is core principles of language which are not defined by any language in particular, are not expected to alter in the course of time, and violations of such rules would never occur consistently (Leivada and Westergaard (2020) call this as “absolute ungrammaticality”). Grammatical errors of this kind would be sentences with licensed arguments, but no verb assigned to them (5); the argument “birds cats chase” is missing a verb (that verb could be *love, hate, adore, like*)

(5) *Birds cats chase seeds.

Thus, un/grammaticality has a binary system of evaluation either as *relative* or *absolute*, whereas acceptability has a continuum system of evaluation which is usually set by the researcher to assist the participant, the Likert scale.

The current study includes sentences of relative grammaticality and ungrammaticality; sentences which are relatively grammatical for Standard British English, but some of their relative ungrammatical counterparts are relatively grammatical in Modern Greek. Before each item shown there was a fixation cross of about 0.43-0.54 seconds (numbers varied depending on device). The participants were shown a context line for about 1.7 seconds, then another line would appear, and the participants were asked to evaluate the entirety of the sentence on a scale of 1-5, with 5 as very good, 1 as very bad, and 3 as “I don’t know”, see *Figure 1* below. The trials and each item separately were timed, but there was no time limit for participants’ responses, as according to Maie’s and Godfroid’s findings “time pressure tended to deprive the participants of the necessary time and effort required to perform the task” (2021, p. 189).

Please rate the following sentences with

1 for very bad
2 for bad
3 for I don't know
4 for good
5 for very good

Next

Figure 1 - Instructions for AJT, Likert scale

3.2.2 Two Alternative Forced-choice task

Another data collection method applied in this study is the two alternative forced-choice task (2AFCT), which is another form of acceptability judgement data collection used widely in both L1 and L2 linguistic competence. Contrary to the Likert scale acceptability judgement task, forced-choice tasks do not allow variation. According to Stadthagen-Gonzalez et al. (2018), the advantages of forced-choice tasks weigh more than the disadvantages; comparing in pairs is more trustworthy than ratings, it requires less memory skills and it “yields more granular data” as binary un/acceptable answers give clearer answers compare to on scale answers. (2018, p. 90). Moreover, according to Bogacz et al. (2006, p.700), two alternative forced choice tasks are designed and applied bearing in mind three bottom line assumptions: “(a) evidence favouring each alternative is integrated over time”; expecting that as the experiment proceeds, participants’ preference is being shaped, “(b) the process is subject to random fluctuations”; provided that the items and options are displayed in random order for each trial and “(c) the decision is made when sufficient evidence has accumulated favouring one alternative over the other”; provided the context sentence given is assumed to be sufficient evidence for participants to make a choice.

For the forced-choice task participants had to choose between *Past Simple* and *Present Perfect* forms. Before each item shown there was a fixation screen of about 0.55-0.6 seconds (numbers varied depending on device). The items were examined in a random order, both options A and B were also depicted in random (meaning that options A and B were never in the same formal tense form) and there was always a context sentence. Trials and each item separately were timed, but there was no time limit for participants' responses. *Figure 2* depicts the introductory instructions of the task and *Figure 3* and *4* are examples of the Forced-Choice task trials.

Choose A or B to continue the sentences or conversations displayed



Figure 2 – Instructions for Forced-Choice task

Sarah is not here.

A

She didn't come from the shops yet.

B

She hasn't come from the shops yet.

Figure 3 – Example 1 of Forced-Choice task trial

The class has started,

A	B
but so far only 2 students have arrived.	but so far only 2 students arrived.

Figure 4 - Example 2 of Forced-Choice task trial

As mentioned in the theoretical background, section 2.2.6, the use of the Anterior aspect in MG for sentences carrying the reportative feature is limited, as the Perfective aspect can carry the same meanings for such cases (1), (2).

(1) 'ehi 'erθi 'ɣrama
have-Ant-3-SG come-PC-3-SG letter-n-SG-ACC
A letter has arrived (it is on the table)

(2) 'irθe 'ɣrama
come-PC-Past-3-SG letter-n-SG-ACC
A letter arrived (it is on the table)

To add to that, it is evident that the English translations of the examples above do not differentiate much either, especially when such examples are given in written form, which lacks the performative aspects of natural speech. The study assumes that the Anterior aspect, when carrying the reportative feature, can be a trivial form even for the English native speakers. Both forms, *Past Simple* and *Present Perfect* are relatively acceptable for such meanings. That is why the items of this feature were examined separately through a different method, looking into natives' and learners' preference, instead of grammaticality.

3.3 Procedure

The study targeted students who take classes of B1 and IGCSE level, and are working towards acquiring their respective language proficiency diplomas in summer of 2024. Therefore, the two expected groups were: Group A; B1 level and of ages 12-14 years old, and Group B; B2 and of ages 15-17 years old. Since all targeted participants were underage, an information sheet about the study (Appendix 1) was circulated in English (which included master's student's contact information in case anyone requested further details of the study). Alongside with the information sheet, consent forms were circulated both in English (Appendix 2) and in Modern Greek (Appendix 3) for participants' parents to sign. The items examined in the experiment are extracted from typical books of teaching English as a second language by Dooley and Evans (2014; 2016). However, standard language and spoken language are not necessarily the same. As discussed previously in section 3.2.1, (un)grammaticality and acceptability are two different notions. Thus, for this experiment another group was called to participate as the control group. Group C consists of 10 native adult speakers of English from the UK (since Dooley and Evans books are published by Express Publishing, UK). Appendix 4 depicts the information sheet and the short consent form they had to agree on before participating.

The entirety of the experiment was designed on Gorilla Experiment Builder platform (www.gorilla.sc). Initially, the test was designed on OpenSesame platform, however, this platform no longer supports touch screen responses, and thus it was transferred to Gorilla Experiment Builder platform. This is a web-based platform which is user-friendly, comes with multiple tutorial videos, and provides online support for any specific issues/questions a researcher may face. Moreover, it is a platform that allows both keyboard and touch screen responses which automatically makes the experiment accessible to a larger audience; computer users, cell phone users, tablet users. To add to that, it allows the researcher to visualise how the experiment will be displayed on computer screens, tablet screens, and cell phone screen devices. In this way, the researcher is always aware of the dimensions of the items displayed, and can adjust them according to their liking.

The experiment for the young Cypriot-Greek speakers was done on-line, yet in a classroom environment. The researcher was always present in all classrooms ensuring the experiment was running smoothly. The researcher distributed QR codes which allowed the students to access the experiment via their cell phone devices. The participants could not share their answers with their classmates as the items examined displayed randomly for each trial, and participants were informed

about it in advance. The entirety of the experiment took approximately 25-30 minutes. The researcher recruited participants from four different afternoon private institutes which teach English as a second language in the area of Nicosia, Cyprus. The private institutes in questions are; *Yiangou Educational HALL, D.P. English Private Institute, Achievers Private Institute* and *ELK "The Learning Place"*. The experiment for the adult native speakers of English was also done on-line, without any supervision. The researcher distributed the URL and QR code of the experiment to them via email, so that the participants could access the experiment via their personal cell phones or computer devices. The entirety of the experiment took approximately 15-20 minutes. Somewhere during the process of data collection something must have gone wrong either with the experiment running, or with the storing process, as a response for the Likert scale AJT, for the item "Before the pandemic, my friends and I partied every weekend" for a particular participant of rGoup A was never stored.

Group A and Group B went through the same tasks. The first task was a multiple choice background questionnaire. Each question had an option "other" for participants to type in their answers, in case the multiple choice options did not reflect their case. The background questionnaire focused on children's age and linguistic background (Appendix 5). The second task was a subset of a multiple choice standard Oxford Proficiency Test (Appendix 6) of 40 items. This test is popular among linguistic researches which also included acceptability judgement tasks (Jensen et al., 2019). Group A takes classes of B1 level, and Group B takes classes of IGCSE level, thus their level of English is expected to be at least of B2 level. However, expectations and reality of things do not always go hand in hand, thus both groups had to take a proficiency test prior to the items examined in the experiment. Following Espindola's approach (2022), the scores of the placement test are interpreted as the follow levels of proficiency in the English language; 1-8 out of 40 interpreted as A1 level, 9-16 out of 40 interpreted as A2 level, 17-24 out of 40 interpreted as B1 level, 25-32 out of 40 interpreted as B2 level, and 33-40 out of 40 interpreted as C1 level.

The 40 items appeared in a different randomized order for each trial and participants' screens depicted one item at a time. Before each item shown there was a fixation screen of about 0.55-0.6 seconds (numbers varied depending on device). There was no time limit for participants' responses, neither were their responses timed. *Figure 5* depicts the instructions given for the placement test, and *Figure 6* depicts how each item was shown to participants; participants were asked to choose one of the three options given to continue to the next item.

Choose A, B, or C to fill in the gaps

Next

Figure 5 - Instructions of Placement Test

In cold countries people wear thick clothes
_____ warm.

A	B	C
for keeping	to keep	for to keep

Figure 6 - Example of Placement test

Once Group A and B completed the placement test (second task), they proceeded to the acceptability judgement task of Likert scale (see section 3.2.1) and concluded the experiment with the two alternative forced-choice task (see section 3.2.2).

Group C, as native adult speakers of English, started the experiment with consenting to participate in the experiment. Their first task was to fill in a background questionnaire, similar to the

one provided to Group A and B, focused on their linguistic background (see Appendix 7). Unlike the young learners of Group A and B, they did not fill in the 40-item multiple choice standard Oxford Proficiency Test. Once they completed the background questionnaire, they proceeded to the acceptability judgement task of Likert scale (see section 3.2.1), and concluded the experiment with the two alternative forced-choice task (see section 3.2.2).

3.4 Test items

The AJT using a Likert-type scale of 1 to 5 consisted of 74 items. For all the items examined there were two conditions: 37 items were relative grammatical and 37 items were relative ungrammatical.

For the *Present Perfect* form, 5 items for each of the following features were displayed for evaluation; continual, experiential and resultative. *Table 8* depicts all the items examined in the *Present Perfect* form of the continual feature. The ungrammatical items carrying continual meanings are put in the *Present Simple* form because MG speakers express an event that has started in the past and continues to the present through the present tense. Moreover, in MG sentences carrying the Anterior aspect could never carry the continual feature. See *Table 5*, the Anterior aspect in MG is always in combination with the Perfective aspect, thus all events in Anterior aspect are considered as completed events.

Table 8: Present Perfect form, continual feature

GRAM	ASP	FEAT	Context	Task
GR	Ant	CON	-Does Mary work here?	-Of course! Mary has worked here for years.
UN	PM	CON	-Does Mary work here?	-Of course! Mary works here for years.
GR	Ant	CON	I am so tired,	I have been awake since 5 in the morning.
UN	PM	CON	I am so tired,	I am awake since 5 in the morning.
GR	Ant	CON	I am having a great time in London,	I have lived here for two months.
UN	PM	CON	I am having a great time on London,	I live here for two months.

GR	Ant	CON	- Are you and John friends?	-Great friends! We've been friends since we were 5.
UN	PM	CON	- Are you and John friends?	-Great friends! We are friends since we were 5.
GR	Ant	CON	-Has Jessie found a job?	-Yes. She has been in the army since last summer.
UN	PM	CON	-Has Jessie found a job?	-Yes. She is in the army since last summer.

Table 9 depicts all the items examined in the *Present Perfect* form of the resultative and experiential feature. The ungrammatical items carrying resultative and experiential meanings are put in the *Past Simple* form. This is because MG speakers prefer to express such meanings in their mother tongue using the simple past *Aoristos* (of Perfective aspect); “the use of the Perfect (Anterior) is rather delimited in MG due to the function of the perfective past... to convey that the situation has current relevance and consequently occurs in contexts that in some other languages are typical for the Perfect” (Hedin, 1995, p.242).

Table 9: *Present Perfect form, resultative and experiential feature*

GRAM	ASP	FEAT	Context	Task
GR	Ant	RES	The fridge is empty.	I haven't gone shopping for days.
UN	PM	RES	The fridge is empty.	I didn't go shopping for days.
GR	Ant	RES	She cannot draw today because	she has broken her arm.
UN	PM	RES	She cannot draw today because	she broke her arm.
GR	Ant	RES	-Why are you still awake?	-I haven't finished my homework yet.
UN	PM	RES	-Why are you still awake?	-I didn't finish my homework yet.
GR	Ant	RES	I am not hungry.	I have eaten a big breakfast.
UN	PM	RES	I am not hungry.	I ate a big breakfast.
GR	Ant	RES	I need more money.	That's why I've decided to look for another job.
UN	PM	RES	I need more money.	That's why I decided to look for another job.

GR	Ant	EXP	The countryside of Scotland is wonderful.	Have you ever been there?
UN	PM	EXP	The countryside of Scotland is wonderful.	Were you ever there?
GR	Ant	EXP	When you go to the farm, look after Mike.	So far, he has ridden the horse only twice.
UN	PM	EXP	When you go to the farm, look after Mike.	So far, he rode the horse only twice.
GR	Ant	EXP	-Don't eat this! It's very spicy.	-Don't worry, I have eaten sushi many times before.
UN	PM	EXP	-Don't eat this! It's very spicy.	-Don't worry, I ate sushi many times before.
GR	Ant	EXP	I don't know how to ski.	I have never done this before.
UN	PM	EXP	I don't know how to ski.	I never did this before.
GR	Ant	EXP	I know all the words of this song.	I have listened to it a million times!
UN	PM	EXP	I know all the words of this song.	I listened to it a million times!

For the *Past Simple* form, 5 items for each of the following features were displayed for evaluation; completeness and habitual. *Table 10* depicts all the items examined in the *Past Simple* form of the completeness feature. The ungrammatical items carrying completeness meanings are put in the *Past Progressive* form. MG speakers are expected to prefer the *Past Simple* form as in their mother tongue completed events are expressed with the simple past *Aoristos*. *Aoristos* of Perfective aspect and *Past simple* of Performative both express the feature of completed events as their primary feature (Dosi et al, 2017), (Hedin, 1995).

Table 10: Past Simple form, completeness feature.

GRAM	ASP	FEAT	Context	Task
GR	PM	COMPL	-Where are the English books?	-I put them on the bookcase a while ago.
UN	PROG	COMPL	-Where are the English books?	-I was putting them on the bookcase a while ago.
GR	PM	COMPL	-Kate? Is this you?	-Yes, it is. I cut my hair this morning.
UN	PROG	COMPL	-Kate? Is this you?	-Yes, it is. I was cutting my hair this morning.
GR	PM	COMPL	-What did you do yesterday?	-I cooked, did the dishes, and went to bed early.
UN	PROG	COMPL	-What did you do yesterday?	-I was cooking, doing the dishes, and going to bed early.
GR	PM	COMPL	The famous artist Leonardo Da Vinci	Painted Mona Lisa in 1503.
UN	PROG	COMPL	The famous artist Leonardo Da Vinci	was painting Mona Lisa in 1503.
GR	PM	COMPL	The tourists had so much fun today!	They went sightseeing, visited a museum, and then they spent a lot of time swimming.
UN	PROG	COMPL	The tourists had so much fun today!	They were going sightseeing, visiting a museum, and then they were spending a lot of time swimming.

Table 11 depicts all the items examined in the *Past Simple* form of the habitual feature. The ungrammatical items carrying habitual meanings are put in the *Past Progressive* form, because in their mother tongue events expressing continuity and habituality in the past require a different form than the simple past form *Aoristos*. MG speakers are expected to bundle the habitual feature in the

Progressive aspect, as in their mother tongue the progressive feature, habitual and continual feature are found in the same aspect; Imperfective.

Table 11: Past Simple form, habitual feature

GRAM	ASP	FEAT	Context	Task
GR	PM	HAB	Until 2008, Cypriots	used the Cypriot pound, not euros.
UN	PROG	HAB	Until 2008, Cypriots	were using the Cypriot pound, not euros.
GR	PM	HAB	When I was in high school,	I walked to school every day.
UN	PROG	HAB	When I was in high school,	I was walking to school every day.
GR	PM	HAB	John doesn't smoke anymore,	but he smoked a lot in his thirties.
UN	PROG	HAB	John doesn't smoke anymore,	but he was smoking a lot in his thirties.
GR	PM	HAB	When Elena lived in the UK,	she always moved around by bus.
UN	PROG	HAB	When Elena lived in the UK,	she was always moving around by bus.
GR	PM	HAB	Before the pandemic,	my friends and I partied every weekend.
UN	PROG	HAB	Before the pandemic,	my friends and I were parting every weekend.

The remaining 24 items of the AJT were filler items. They are about one third of all the items examined in the experiment. They are items of subject-verb agreement; three items for local singular agreement, three items for local plural agreement, three items for distant singular agreement, and three items for distant plural agreement. The exact items used in the experiment can be found in Appendix 8.

Lastly, the 2AFCT consisted of 12 items. For all the items examined there were two alternative options: Option A for the *Present Perfect* form, and option B for the *Past Simple* form. Table 12 depicts all the items examined in the *Present Perfect* form of the reportative feature. According to literature for English (see section 2.3), the *Present Perfect* form which carries the reportative feature

is interchangeable with the *Past Simple*, since the same meaning can be conveyed with both forms; reporting on a completed past event. Thus, for this feature a 2AFCT was held more appropriate.

Table 12: 2AFCT items

Num	Context	A – <i>Present Perfect</i> form	B – <i>Past Simple</i> form
1	You do not need to cook dinner.	I have already made some pasta.	I already made some pasta.
2	Oh my god!	I have just heard on the news that a storm is coming.	I just heard on the news that a storm is coming.
3	Sarah is not here.	She hasn't come from the shops yet.	She didn't come from the shops yet.
4	(on the phone) – Hey, where are you?	-I've just arrived home.	-I just arrived home.
5	The class has started,	but so far only 2 students have arrived.	but so far only 2 students arrived.
6	It's only 11 in the morning	and Mary has already finished her chores.	and Mary already finished her chores.
7	Wow! Marco has a lot of books here.	Yeah, but so far he hasn't read any of them.	Yeah, but so far he didn't read any of them.
8	Everyone is still in the meeting	They haven't agreed to anything yet.	They didn't agreed to anything yet.
9	I know this neighborhood,	I have walked these streets recently.	I walked these streets recently.
10	What is wrong with Ben today?	He has run to the pharmacy 3 times already.	He ran to the pharmacy 3 times already.
11	-Do you have any news from Lena?	-Yes, I have recently received an email from her.	-Yes, I recently received an email from her.
12	Wow! This is a big farm.	Up to now, I have counted 53 cows!	Up to now, I counted 53 cows!

3.5 Participants

For the purposes of this study three groups were targeted. Group A consists of young Cypriot-Greek speakers, learner of English L2, of B1 stated proficiency level. Group B consist of young Cypriot-Greek speakers learners of English L2, of B2 stated proficiency level (IGCSE). Lastly, Group C consists of native adult speakers of English, the control group.

Group A has 31 participants in total. The ages of Group A range from 10-14 years old, with the mean age to be 12.8 years old and the median age to be 13.0 years old. As it concerns home languages, 54% of Group A claimed to speak only Greek at home, while the remaining 46% claimed to speak additionally to Greek, English (primarily), Romanian and other languages. As it concerns languages spoken outside of home only 35% of Group A claimed to speak only Greek, while the remaining 65% claimed to speak additionally to Greek, English (primarily), Romanian, German and other languages.

Group B has 32 participants in total. The ages of Group B range from 14-18 years old, with the mean age to be 15.8 years old and the median age to be 15.5 years old. As it concerns home languages, 69% of Group B claimed to speak only Greek at home, while the remaining 31% claimed to speak additionally to Greek, English (primarily), and Romanian. As it concerns languages spoken outside of home only 28% of Group B claimed to speak only Greek, while the remaining 72% claimed to speak additionally to Greek, English (primarily), Romanian, Spanish, French and other languages.

Group C has 10 participants in total. The ages of Group C range from 20 years old to 51 years old, with the mean age to be 34.1 years old and the median age to be 35.5 years old. All of 10 participants were born and raised in England, UK, however, three of them currently live outside of the UK (one in Cyprus, one in Thailand and one in Norway). Only one of the 10 participants speaks another language - apart from English - at home (but only English outside home), while the remaining speak only English at home. Lastly, only one participant speaks English and another language outside of home (but only English at home), while the remaining speak only English outside of home.

4 Results

The data retrieved from Gorilla were analysed in R, using *lm4* package (Bates, et al., 2015). The main objective of this study is to examine whether there are statistically significant differences between the ways in which completeness, habitual, continual, resultative, experiential and reportative features are judged in a Likert scale acceptability judgement task and a two-alternative Forced-choice task, as well as whether the results support the Feature Reassembly Hypothesis discussed in Chapter 2. In the analysis the dependent variable is accuracy, and the independent variables are age, groups, proficiency level and features (the six linguistic properties), the interaction between features and groups and the interaction between features and proficiency level. Additionally, I have analysed accuracy by using a mixed effects logistic regression model.

In the upcoming sections, I discuss the participants' proficiency scores within each group examined, and in comparison to their age and linguistic background. Secondly, I discuss the results of the Likert scale AJT, and thirdly the results of the two alternative Forced-choice task. The fillers are excluded from the analyses.

4.1 Results of Proficiency test

As stated in the chapters 1 and 3, the study targeted students taking classes of B1 (Pre-intermediate) level and IGCSE (intermediate) level, who prepared themselves for their corresponding diplomas exams in the summer of 2024. According to the Common European Framework of Reference for Languages (CEFR) (Cambridge Assessment International Education, n.d.), an IGCSE with a grade among A-C ensures that candidates' reading, writing and listening skills in English are of B2 level, and a D grade ensures that candidates' reading and writing skills are of B2 level, whilst their listening skills are B1 level. Taking these factors into account, it is expected that the proficiency level of Group A (following classes of B1 level) would be A2 level and above, and the proficiency level of Group B (following classes of IGCSE level) would be B1 level and above.

According to participants' scores, Group A consists of 3 participants of A2 level of proficiency (Group A.L.) and 28 participants of B1 and above level of proficiency (Group A.U.). Group B consists of 2 participants of A2 level of proficiency, 5 participants of B1 level of proficiency (Group B.L.) and 25 participants of B2 level of proficiency (Group B.U.). Two participants of Group B

Table 13: Summary of placement test

scored lower than expected, but since this is a paper examining the acquisition of aspect, not about children's overall proficiency in English, they were not disqualified from the study. *Table 13* below depicts a summary of groups' number, mean and median of their age, and mean and median of their scores. As the table depicts, just from the placement test there is a clear trend between Group A and Group B; the higher the proficiency of participants, the better the scores.

Proficiency	Mean(score)	Median(score)	n	Mean(age)	Median(age)
Group.A.L.	14	14	3	13.3	13
Group.A.U.	24.7	25	28	12.8	13
Group.B.L.	20.6	22	7	16.6	17
Group.B.U.	30.7	31	25	15.7	15

According to the linear regression model with scores predicted by age and adjusted by group, Group B scored on average 9.74 (95% CI : 4.88, 14.6; p-value <0.001) higher scores compared to Group A (Appendix 9). The results provide no significant evidence for a correlation between linguistic maturity (age) of the participants and higher scores; the p-values for the test of correlation between age and score were 0.17 and 0.069 within groups A and B, respectively (Appendix 10).

Following the items of the questionnaire, the analysis moves on to examine the possible effect of home-language(s) and outside-home-language(s) on proficiency scores.

Table 14: Language(s) use inside and outside home per group

Proficiency	Mean(score)	n	Mean(age)	Home Languages	n		Outside Home Languages	n	
Group A.L.	14	3	13.3	Monolingual Greek	1	33.33%	Monolingual Greek	0	0.00%
				English and other	1	33.33%	English and other	1	33.33%
				Greek and other	1	33.33%	Greek and other	2	66.67%
Group A.U.	24.7	28	12.8	Monolingual Greek	16	57.14%	Monolingual Greek	11	39.29%
				English and other	12	42.86%	English and other	17	60.71%
				Greek and other	0	0.00%	Greek and other	0	0.00%
Group B.L.	20.6	7	16.6	Monolingual Greek	5	71.43%	Monolingual Greek	2	28.57%
				English and other	2	28.57%	English and other	4	57.14%
				Greek and other	0	0.00%	Greek and other	1	14.29%
Group B.U.	30.7	25	15.7	Monolingual Greek	17	68.00%	Monolingual Greek	7	28.00%
				English and other	7	28.00%	English and other	16	64.00%
				Greek and other	1	4.00%	Greek and other	2	8.00%
Group A	14	31	13.3	Monolingual Greek	17	54.84%	Monolingual Greek	11	35.48%
				English and other	13	41.94%	English and other	18	58.06%
				Greek and other	1	3.23%	Greek and other	2	6.45%
Group B	24.7	32	12.8	Monolingual Greek	22	68.75%	Monolingual Greek	9	28.13%
				English and other	9	28.13%	English and other	20	62.50%
				Greek and other	1	3.13%	Greek and other	3	9.38%
Total		63		Monolingual Greek	39	61.90%	Monolingual Greek	20	31.75%
				English and other	22	34.92%	English and other	38	60.32%
				Greek and other	2	3.17%	Greek and other	5	7.94%

According to Table 14, 38.09% of the all the participants claimed to use more than one language at home, with 34.92% of them claiming to use English and other languages at home. 68.26% of all the participants claimed to use more than one language outside of home, with 60.32% of them claiming to use English and other languages outside of home. Given the above data, it is reasonable to hypothesize that participants' linguistic background may have an effect on participants' scores. Therefore, linear regression models with scores predicted by age were applied, with groups A and B, participants who use only Greek at home, and only Greek outside-home adjusted as predictors (Appendix 11), and groups A and B, participants who use English at home, and English outside-

home adjusted as predictors (Appendix 12). According to the models applied, neither of the two languages used at home or outside of home were found to be significantly associated with higher scores.

The analysis looks within each group, thus replacing group with Proficiency level and looking into the data separately for group A and group B. For Group A, a linear regression model with scores predicted by age, with Proficiency, participants who use only Greek at home, and only Greek outside-home adjusted as predictors was applied. Results indicated that only the participants who use only Greek at home were significantly associated with higher scores. The participants who use only Greek at home scored on average 4.09 (95% CI : 1.39, 6.79; p-value: 0.00442) higher scores compared to other participants (Appendix 13). Another linear regression model with scores predicted by age, with Proficiency, participants who use English at home, and English outside-home adjusted as predictors was applied. The results of this model indicated that participants who use English at home scored on average 4.41 (95% CI : -7.22, -1.60; p-value: 0.00335) lower scores compared to other participants (Appendix 14). Data suggest that participants who follow B1 level of English classes and use English at home are associated with lower scores, while those who use Greek-only at home are associated with higher scores. The same models were also applied for Group B (Appendix 15-16) without any of the effects identified in Group A having a statistically significant effect on participants' scores.

4.2 Results of Likert scale Acceptability Judgment Task

As mentioned in section 3.4, participants had to evaluate 74 items/sentences on a Likert scale from very bad to very good, where “very bad” is interpreted as unacceptable and “very good” is interpreted as acceptable. For this analysis, the Likert scale responses are treated as a binary variable of *unacceptable* and *acceptable*; levels 1 and 2 are interpreted as unacceptable and levels 4 and 5 as acceptable. Level 3 was the option for “I don’t know” which is interpreted as *not acquired yet*. Thus, a variable accuracy has been added, where grammatical sentences evaluated with 5-4 earned 1 point and 3-1 earned zero points. Similarly, ungrammatical sentences evaluated with 5-3 earned zero points, 1-2 earned 1 point.

During the data collection, some participants appeared to be uninterested, complained about the length of the experiment and tapped quickly through it. To take this into account, before calculating the scores for each participant per formal tense form and per feature examined, the study looks into participants who completed the study extremely quickly with a large number of “I don’t know” responses in a row. The plot found in Appendix 17 identifies four participants fitting the description. After cross examining their scores on the Likert scale AJT, with their placement test and their demographic description, four of them were excluded from the study. The three of the participants are from Group B, all are of B2 level of proficiency, but on the Likert scale AJT they were extremely fast; the median respond time of the participants were 0.673 seconds, 1.540 seconds and 1.233 seconds while for their peers in Group B the median respond time was 5.289 seconds. Additionally, their scores on the Likert scale AJT were 8 points, 6 points and 15 points out of 50 points. *Figure 7* suggests that the majority of the participants of Group B needed at least 3.5 seconds to read the items, think about it, submit their answers.

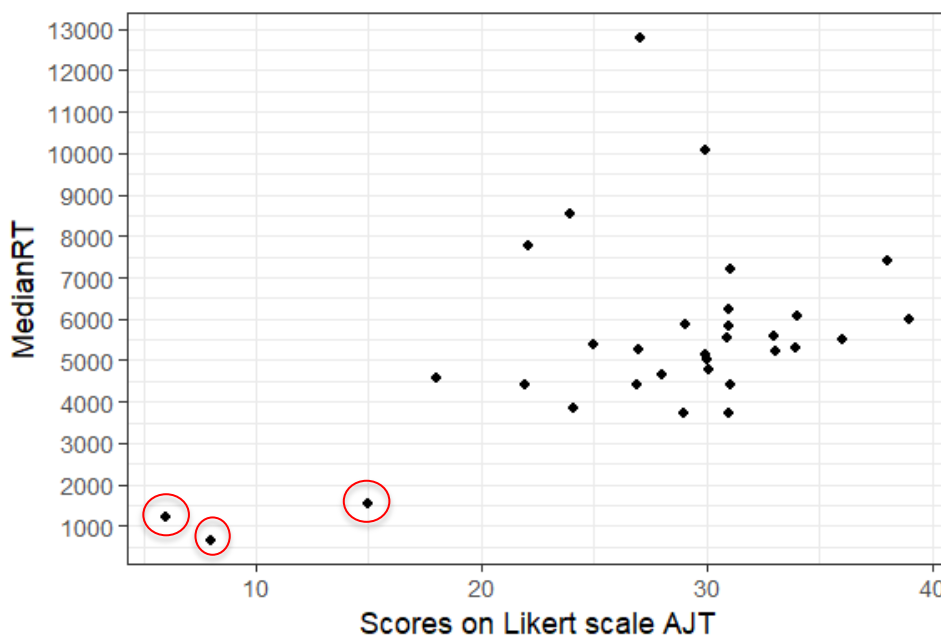


Figure 7 - Scores on Likert Scale AJT of Group B in relation to their median response time

The fourth participant fitting the description was from Group A. On the placement test they had scored 28 points out of 40, thus their proficiency level, according to Espindola’s approach, can be described as B2. On the contrary, their score on the Likert scale AJT was only 17 points out of the

50. Furthermore, their median response time on the Likert scale AJT was 1.590 seconds, while their peers in Group A needed at least 2.7 seconds to read the items, think about it, submit their answers (Figure 8).

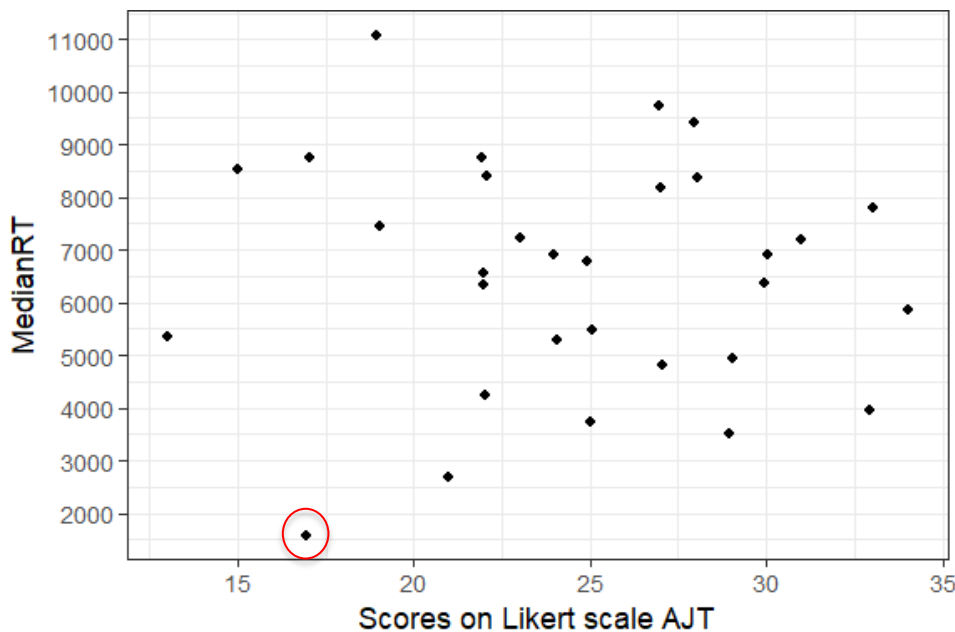


Figure 8- Scores on Likert Scale AJT of Group A in relation to their median response time

Taking everything into account, all four participants discussed above were excluded from the study, and the remaining of the analysis continues with Group A consisting of 30 participants and Group B consisting of 29 participants.

4.2.1 Statistical Analysis of grammatical accuracy of groups A and B

The initial analysis of the Likert scale AJT begins from the research question: Is the *Past Simple* form an easier form to learn compared to the *Present Perfect* form, as it bundles less features than the latter? To answer this question a generalised linear mixed effect model was applied, predicting accuracy by the interaction between formal tense forms (*Past simple*, *Present Perfect*) and groups, with age as fixed effects and participants' ID and items as random effects. Then, I performed a pairwise comparison between the groups by formal tense form, and a pairwise comparison between the formal tense forms by group. Contrary to the initial hypothesis, as seen in Appendix 18, no significant difference was identified in accuracy between the two forms. At the same time, however, the data suggest that Group B significantly outperformed Group A on the *Present Perfect* form (p-value 0.0001). The mean and median scores for Group A were calculated as 15.1 and 15

respectively, while the mean and median scores for Group B scored were calculated at 17.5 and 17 respectively with possible maximum score at 30 (Figure 9).

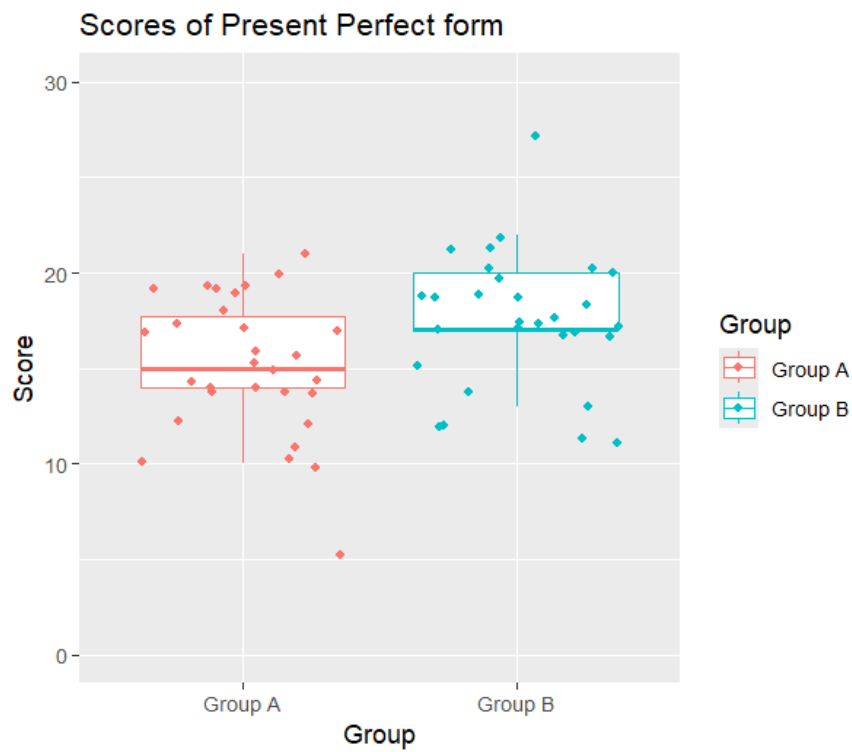


Figure 9 – Present Perfect form scores between Group A and Group B

For the Past Simple form, data indicate that Group B significantly outperformed Group A (p-value <0.0001). The mean and median scores for Group A were calculated as 9.8 and 10 respectively, while the mean and median scores for Group B scored were calculated at 12 and 12 respectively with possible maximum score at 20 (Figure 10).

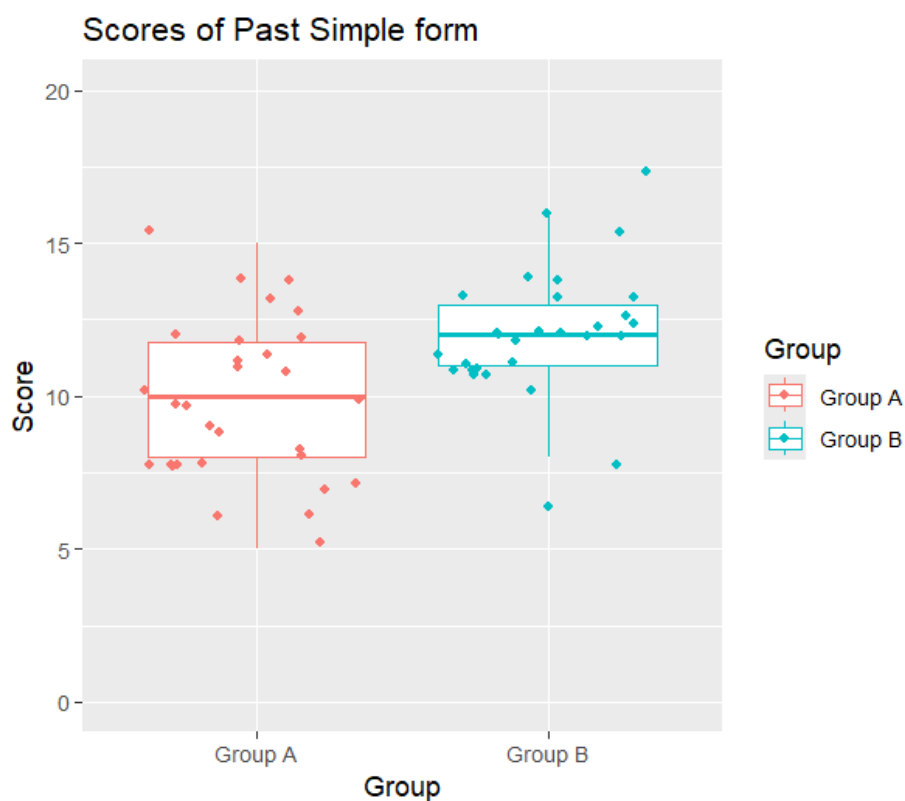


Figure 10 – Past Simple form scores between Group A and Group B

For the remaining research questions, the analysis continues with examining each feature individually. A generalized linear logistic mixed effect model was applied, predicting accuracy by features (continual, resultative, experiential, completeness, habitual), with groups and age as fixed effects and participants' ID and items as random effects.

According to the results found in Appendix 19, participants scored significantly higher for cases with the completeness feature (located in the *Past Simple* form) compared to the habitual feature (also located in the *Past Simple* form) with a p-value of 0.016. Moreover, results also indicated that participants' group and age were associated with better scores, with Group B having 2.7 odds of being more accurate than Group A with p-value <0.0001, and that younger participants scored higher compared to older ones with p-value 0.007. It appears that the younger participants of Group B have scored the best. However, after performing a pairwise comparison of features by Group (Appendix 20), no significance effect was found (p-value 0.11).

To examine the role of participants' linguistic background, multiple generalized linear logistic mixed effect models for only-Greek at home, only-Greek outside of home, English at home,

and English outside of home, with accuracy predicted by an interaction between features and groups with age as fixed effect and participants' ID and item as random effects were applied. According to the tables found in Appendix 21, participants from only-Greek outside of home, English at home, and English outside of home appear to score significantly higher on the completeness feature compare to the habitual feature with p-values 0.035, 0.023, and 0.035 respectively. However, after performing a pairwise comparison within features by group, no feature had a significant p-value.

The last model applied for groups A and B is a generalized linear logistic mixed effect model with accuracy predicted by an interaction between features and proficiency with age and as fixed effects and participants' ID and items as random effects. At first glance, results on Appendix 22 appear as expected; the higher the proficiency level (as measured by the placement test), the better scores for all features in question. After performing a pairwise comparison among proficiency by feature, the completeness feature (found in *Past Simple* form) appears to be particularly noteworthy. The participants of Group A low proficiency were significantly less accurate compared to participants of Group A upper proficiency with p-value 0.0079, to participants of Group B low proficiency with p-value 0.0004, and to participants of Group B upper proficiency with p-value <0.0001. Moreover, the participants of Group A upper proficiency were significantly less accurate compared to participants of Group B upper proficiency with p-value 0.0061. As depicted in *Figure 11*, the maximum possible score for the completeness feature is 10. The mean and median scores for Group A low proficiency were calculated at 2.67 and 3 respectively. The mean and median scores for Group A upper proficiency were calculated at 6.22 and 7 respectively. The mean and median scores for Group B low proficiency were calculated at 6.86 and 7 respectively. Lastly, the mean and median scores for Group B upper proficiency were calculated at 7.41 and 7 respectively.

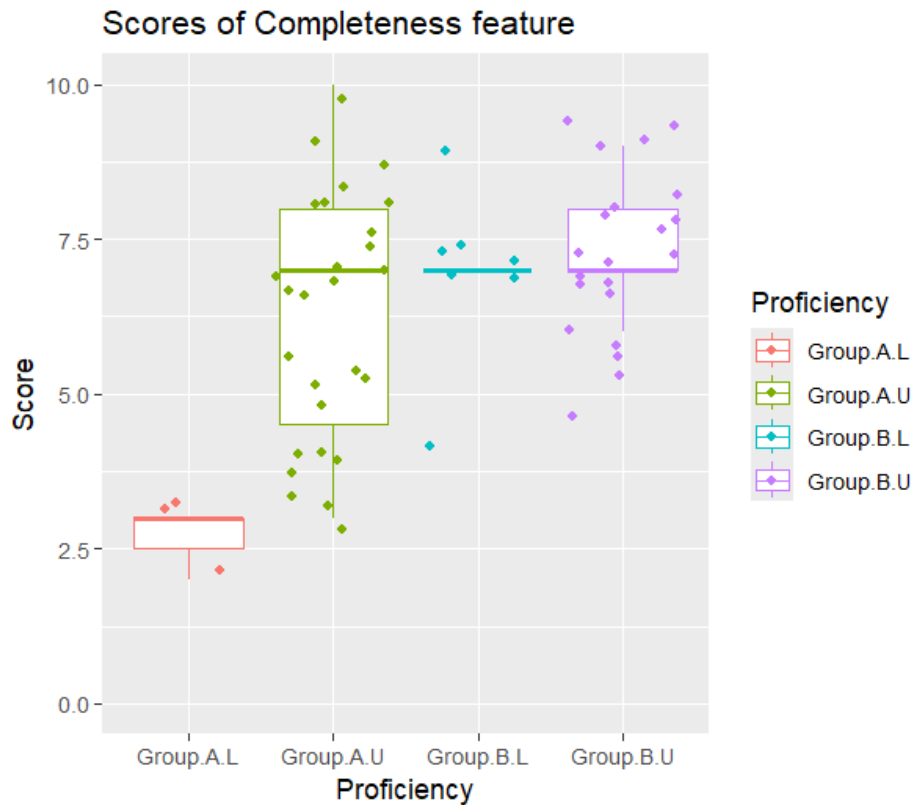


Figure 11 – Scores of Completeness feature by Proficiency group

The other feature worth mentioning is the continual feature (found in the *Present Perfect* form). The participants of Group A upper proficiency were significantly less accurate compared to participants of Group B upper proficiency with p-value 0.0001. As depicted in *Figure 12*, the maximum possible score for the continual feature is 10. The mean and median scores for Group A low proficiency were calculated at 5 and 5 respectively. The mean and median scores for Group A upper proficiency were calculated at 5 and 5 respectively. The mean and median scores for Group B low proficiency were calculated at 4.71 and 5 respectively. Lastly, the mean and median scores for Group B upper proficiency were calculated at 6.91 and 7 respectively.

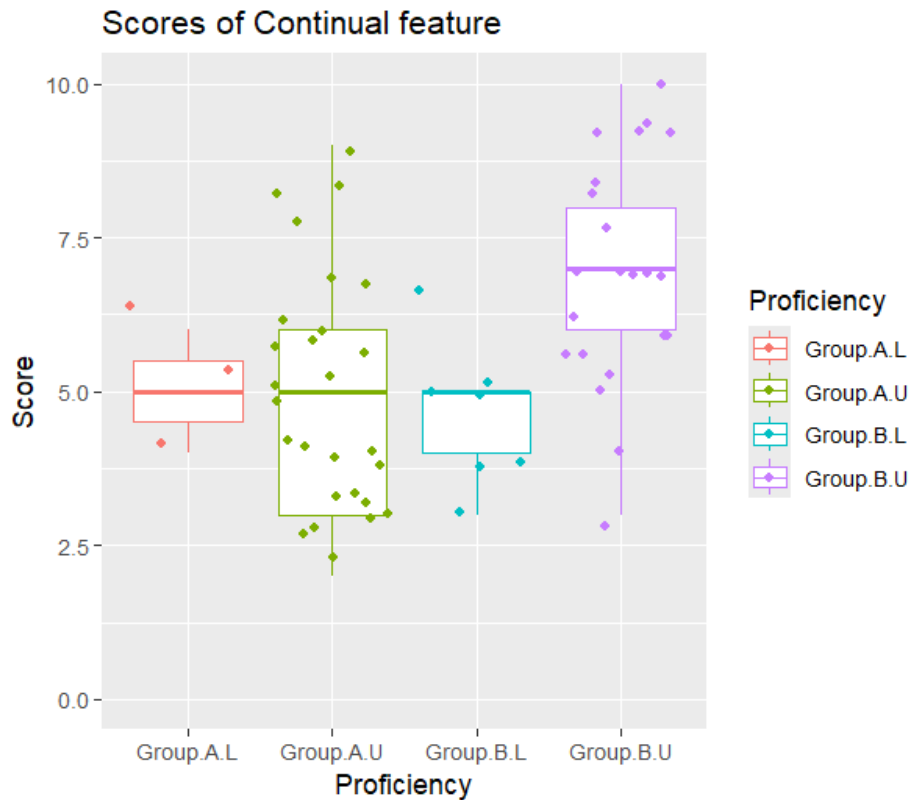


Figure 12 - Scores of Continual feature by Proficiency group

Two more features showed moderate significance, with Group A of upper proficiency scoring lower than Group B of upper proficiency for the experiential feature with p-value 0.026 and for the habitual feature with p-value 0.036. *Figure 13* depicts participants' scores for the experiential feature with the maximum possible score at 10. The mean and median scores for Group A low proficiency were calculated at 5.33 and 6 respectively. The mean and median scores for Group A upper proficiency were calculated at 5.11 and 6 respectively. The mean and median scores for Group B low proficiency were calculated at 5.14 and 5 respectively. Lastly, the mean and median scores for Group B upper proficiency were calculated at 6.05 and 6 respectively.

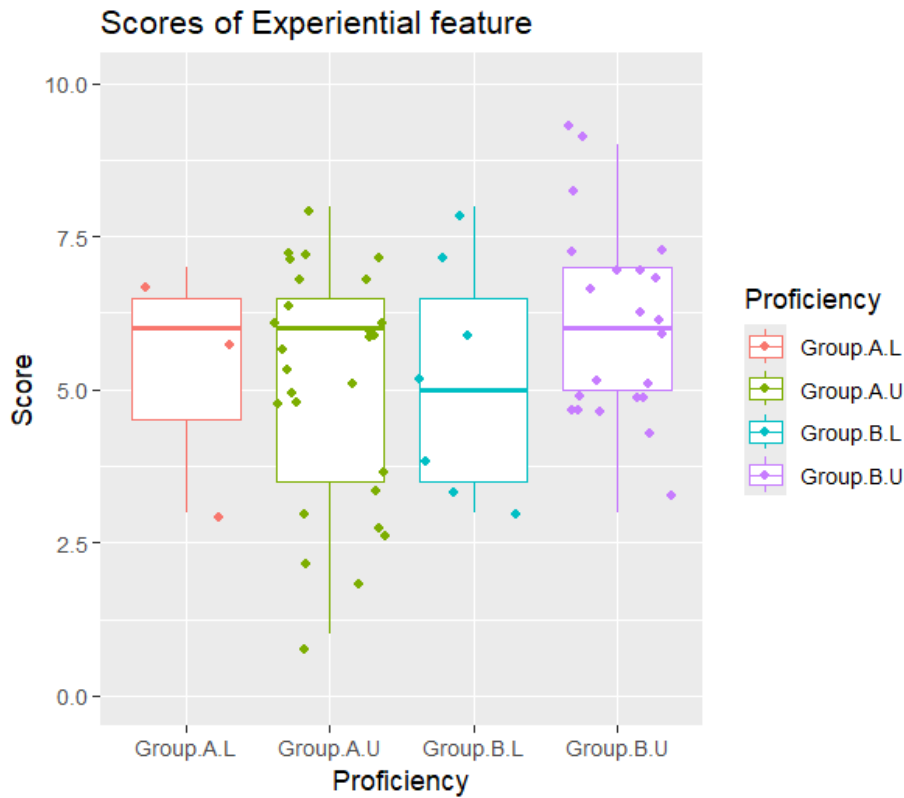


Figure 13 - Scores of Experiential feature by Proficiency group

To conclude, *Figure 14* depicts participants' scores for the habitual feature with the maximum possible score at 10. The mean and median scores for Group A low proficiency were calculated at 4.33 and 4 respectively. The mean and median scores for Group A upper proficiency were calculated at 3.89 and 4 respectively. The mean and median scores for Group B low proficiency were calculated at 4.71 and 5 respectively. Lastly, the mean and median scores for Group B upper proficiency were calculated at 4.73 and 5 respectively.

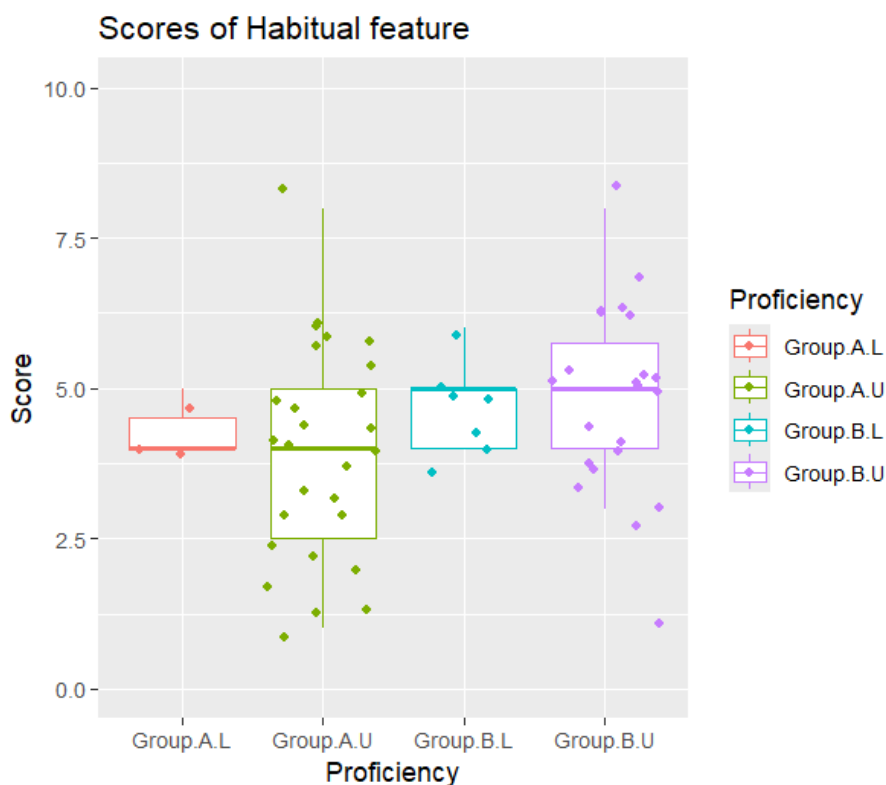


Figure 14 - Scores of Habitual feature by Proficiency group

For the same model I have also performed a pairwise comparison among features by proficiency. According to the result shown in Appendix 22, Group B of upper proficiency indicated to score three times higher on the completeness feature compared to the habitual feature was not significant, but with a p-value of only 0.052.

4.2.2 Statistical Analysis of grammatical accuracy of groups A, B and C

The fourth research question of this study examines whether the feature reassembly is completed/achieved by the time students qualify to take their English language IGCSE exam, and to what extent age, proficiency, linguistic background and complexity of feature bundling play in acquiring English as a second language. To address this question, we compared the scores of the L2 speakers with a small control group of 10 native adult speakers of English, referred to as Group C. The ages of Group C range from 20 years old to 51 years old, with the mean age to be 34.1 years old and the median age to be 35.5 years old. All of 10 participants were born and raised in England, UK. Eight of them use only English at home and outside home, one uses English and another language at

home and only English outside home, and one uses only English at home and English and another language outside home.

A generalized linear logistic mixed effect model with accuracy predicted by the interaction between formal tense forms and groups, with age as fixed effects and participants' ID and items as random effects was applied to compare the scores of all three groups. A pairwise comparison among groups by formal tense form and another between formal tense forms by group followed. According to the results found in Appendix 23, the odds of Group C scoring the *Present Perfect* form correct compared to Group A are three times higher with the p-value 0.019. As expected, the scores of Group A differ significantly from those of the native speakers. Moreover, Group A scored significantly lower on *Present Perfect* form compare to Group B with p-value 0.012. However, no significant difference was found between Group C getting the *Present Perfect* form correct compared to Group B. As depicted in *Figure 15*, the maximum possible score for the *Present Perfect* form is 30. The mean and median scores for Group A were calculated at 15.1 and 15 respectively. The mean and median scores for Group B were calculated at 17.5 and 17 respectively, and the mean and median scores for Group C were calculated at 19.6 and 19 respectively.

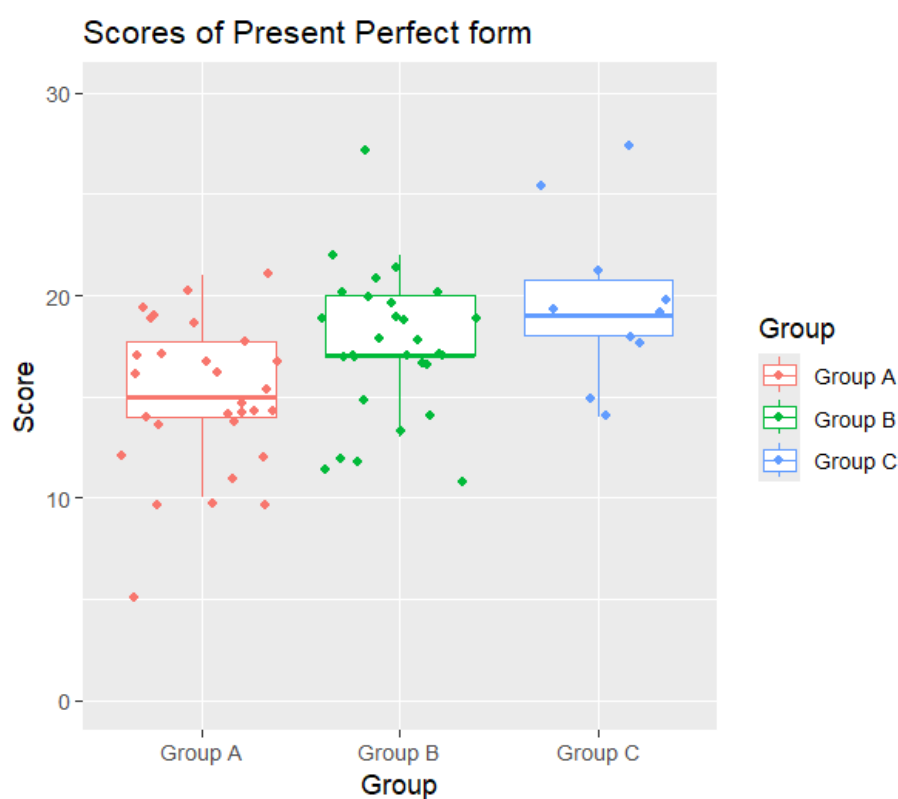


Figure 15 - Present Perfect form scores among all groups

For the *Past Simple* form, no significant difference was observed between Group C and either of the other two groups. Group A, however, underperformed Group B significantly with an odds ratio of 0.549 with p-value 0.0019 (see *Figure 10*.) Lastly, according to the pairwise comparison between formal tense forms by group, no significance difference was detected among the groups.

The analysis once again looks into each feature individually. A generalised linear logistic mixed effect model was applied, predicting accuracy by the interaction between features and groups with age as fixed effects and participants' ID and items as random effects. The first pairwise comparison is made among features by group. According to the results shown in Appendix 24, the scores of group A and B had no significance among features. Group C has scored slightly better on the completeness feature compared to the continual feature with p-value 0.036, nearly ten times higher on the continual feature compared to the habitual feature with p-value 0.0009, and eight times higher on the continual feature compared to the resultative feature with p-value 0.0022.

Figure 16 depicts the acceptability rates of grammatical items per feature for Group C. The data suggest that the native group recruited in this study strongly associates the continual feature with the *Present Perfect* form with acceptability rates at 87%. Remarkably, the completeness feature which was predicted to be the easiest feature to bundle with the Performative aspect, found in *Past Simple* form (at least for your Greek speakers, learners of English L2) is only at 60%, with 22% "I do not know" responses. The experiential feature bundled with the Anterior aspect found in the *Present Perfect* form, is at similar rates of acceptability as those of the completeness feature. The resultative feature appears to be more or less acceptable in both forms examined; the relative grammatical *Present Perfect* form, and the relative ungrammatical *Past Simple* form. Lastly, any typical book of teaching English as a second language would have regarded habits expressed in the *Past Progressive* form as ungrammatical, however our native English speakers struggle to associate the habitual feature for past events in the *Past Simple* form as they scored less than 50%, with 17% of "I do not know" responses and 36% acceptance of relative ungrammatical forms which bundle the habitual feature with the progressive aspect found in the *Past Progressive* form. This brings to mind Comrie's words; "habituality is not necessarily incompatible with progressiveness" (Comrie, 197, p.42) ex. "He used to be writing poems." (Comrie, 1976, p.33). At the same time, the population of our group

is extremely small to make such big assumptions, but it is an interesting finding which raises more questions for further research in the future.

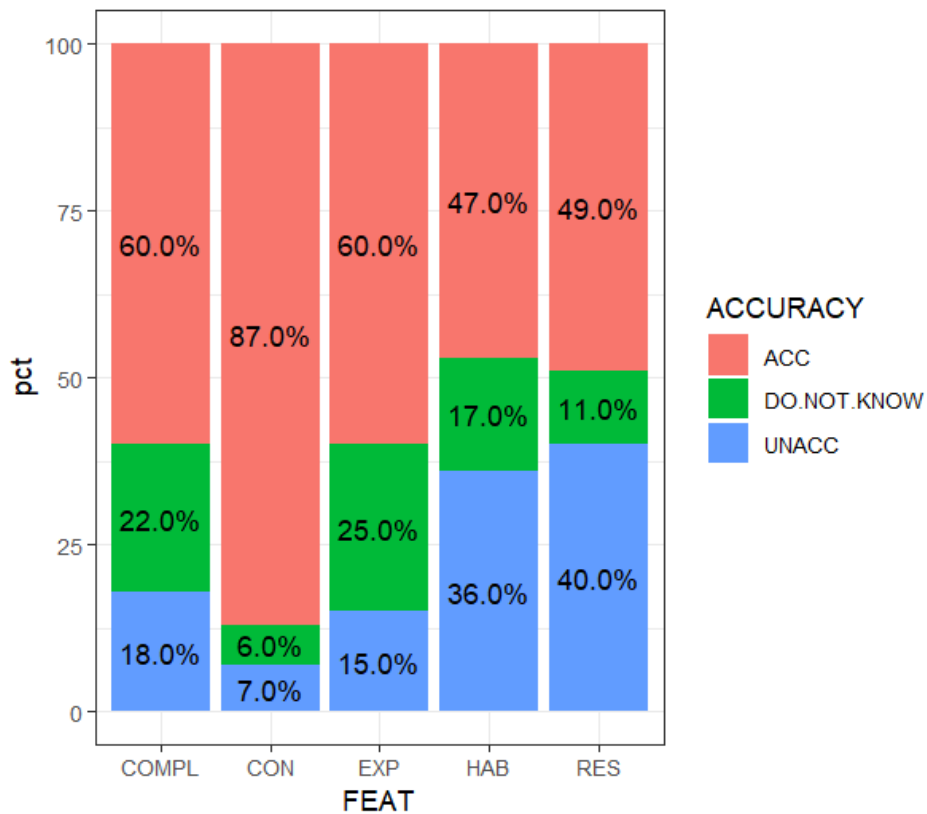


Figure 16 - Group C: Acceptability rates of grammatical items

The second pairwise comparison is made among groups by feature. According to the results shown in Appendix 24 for the completeness feature, Group B outperformed Group A significantly with p-value 0.0021. The mean and median scores for Group A were calculated as 5.87 and 6.5 respectively, while the mean and median scores for Group B scored were calculated at 7.28 and 7 respectively with possible maximum score at 10 (Figure 17).



Figure 17 - Scores of Completeness feature of Group A and Group B

Regarding the continual feature, Group C outperformed groups A and B significantly. More specifically, Group C scored eleven times higher than Group A with p-value $<.0001$ and five times higher than Group B with p-value 0.0008. Lastly, Group B scored slightly higher than Group A on the continual feature with p-value 0.0041. For the remaining features examined, no significance was identified. As depicted in *Figure 18*, the maximum possible score for the continual feature is 10. The mean and median scores for Group A were calculated at 5 and 5 respectively. The mean and median scores for Group B were calculated at 6.38 and 6 respectively, and the mean and median scores for Group C were calculated at 8.7 and 9 respectively.

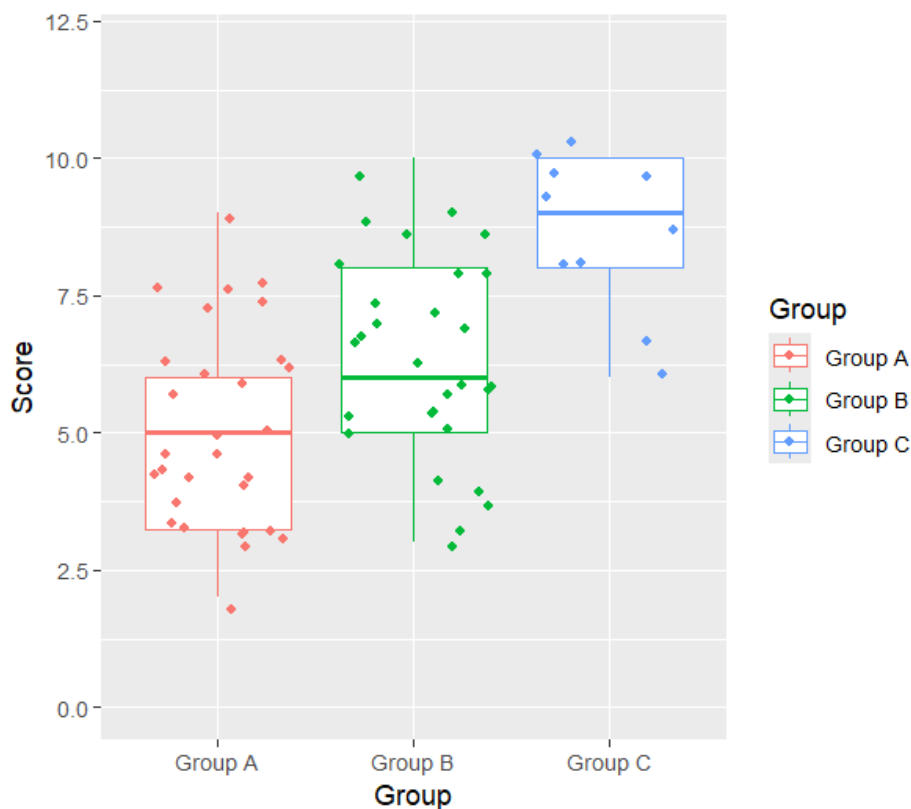


Figure 18 - Scores of Continual feature by group

The analysis of this chapter concludes with graphs of Group A’s and Group B’s acceptability rates of grammatical correct items per feature. *Figure 19* depicts Group A acceptability rates of grammatical items. Data suggest that the order of successful acquisition of features examined (at least for these speakers) is the follow: first the completeness feature which is located in the *Past Simple* form and has the highest acceptability rates, and the lowest unacceptability rates. Then, the experiential features which is located in the *Present Perfect* form and has the next highest acceptability rates, and the next lowest unacceptability rates. However, it has the greatest “I do not know” rates, indicating to be the most problematic for the learners to acquire as they seem to have not yet reassemble it to the most appropriate form. Quickly follows the continual feature which is also located in the *Present Perfect* form, and lastly the resultative feature once again located in the *Present Perfect* form. As predicted, the data suggest a greater rejection rather than acceptance of sentences carrying habitual meanings in the *Past Simple* form and a greater acceptance of sentences carrying the completeness feature in the *Past Simple* form. Contrary to the predictions, participants did not exhibit strong rejection of sentence carrying the continual feature in the *Present Perfect* form.

Overall, along with the results produced by the linear models above, the feature reassembly is definitely not yet significantly completed.

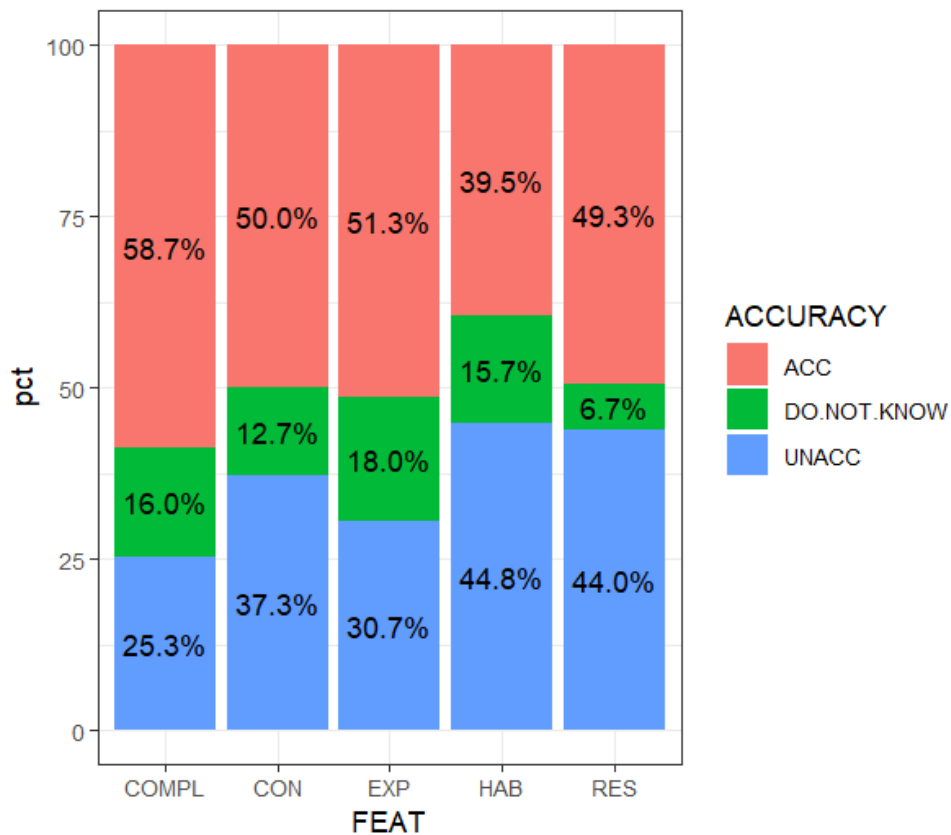


Figure 19 - Group A: Acceptability rates of grammatical items

Last but not least, *Figure 20* depicts Group B acceptability rates of grammatical items. Data suggest that the order of successful acquisition of features examined for these speakers is the follow: first the completeness feature which is located in the *Past Simple* form and has the highest acceptability rates, and the lowest unacceptability rates. Then, the continual features which is located in the *Present Perfect* form and has the next highest acceptability rates, and the next lowest unacceptability rates. Quickly follows the experiential feature which is also located in the *Present Perfect* form, and lastly the resultative feature once again located in the *Present Perfect* form, though with rates than are borderline considered acceptable for their level. As predicted, the habitual feature located in the *Past Simple* form persist to be a challenge even for IGCSE level learners of English L2. The rates are slightly better than Group A, and significantly higher for Group B upper proficiency participants (as seen in *Figure 14*). However, they are still only halfway towards full resemblance. Lastly, contrary to the predictions, participants did not exhibit strong rejection of

sentence carrying the continual feature in the *Present Perfect* form. Overall, along with the results produced by the linear models above, the feature reassembly process can be described as advance, with the habitual feature appearing to be the most problematic feature to re-assign to the target Performative aspect, and thus formal tense form, the *Past Simple* form.

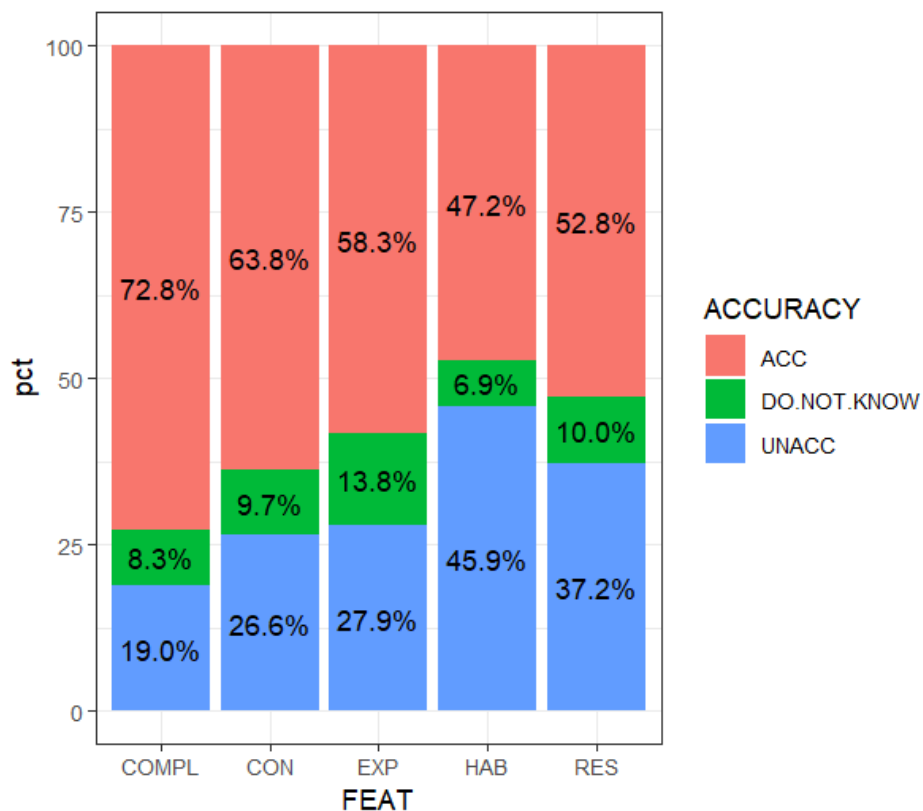


Figure 20 - Group B: Acceptability rates of grammatical items

4.3 Results of Forced-choice Acceptability Judgment Task

According to literature for English (see section 2.3), the *Present Perfect* form which bundles the reportative feature is interchangeable with the *Past Simple*, since the same meaning can be conveyed with both forms; reporting on a completed past event. Thus, for this feature a 2AFCT was held more appropriate, and for this feature acceptability is interpreted as preference. The analysis for this feature begins with a comparison between the responses of Group A and Group B, followed by a comparison among all three groups.

The first model applied can be found in Appendix 25 and it is a generalized linear logistic mixed effect model with accuracy predicted by group (groups A and B), with age as fixed effects and participants' ID and items as random effects. Data indicated that Group B shows a slight preference towards the *Present Perfect* form when it comes to the reportative feature with p-value 0.017. When modeling accuracy predicted by Proficiency level, data indicate no significance, most likely because the population within each group is too small to indicate any significance (see Appendix 26). The third model applied can be found in Appendix 27 and it is a generalized logistic mixed effect model with accuracy predicted by group (groups A, B, and C), with age as fixed effects and participants' ID and items as random effects. Data indicated no significant preference for any of the groups. Therefore, the study presents a summary of participants' preference for this feature.

Table 15: Reportative feature, summary of responses

Stated Level	Mean	Max	Min	Median
Group A	6.13	12	1	6.5
Group B	7.59	12	3	7
Group C	8.9	12	5	9.5

Table 15 depicts that in Group A there were participants who chose only once the *Present Perfect* form for this feature examined from all 12 items examined (thus indicating a strong preference towards the *Past Simple* form), as well as participants who chose only the *Present Perfect* form for all 12 items examined. The mean times Group A preferred the *Present Perfect* form were 6.13 and the median 6.5. In Group B there were participants who chose only three times the *Present Perfect* form from all 12 items examined, as well as participants who chose only the *Present Perfect* form for all 12 items examined. The mean times Group B preferred the *Present Perfect* form were 7.59 and the median 7. In Group C there were participants who chose only five times the *Present*

Perfect form from all 12 items examined, as well as participants who chose only the *Present Perfect* form for all 12 items examined. The mean times Group C preferred the *Present Perfect* form were 8.9 and the median 9.5. *Figure 21* is a plot of groups' preference towards using Present Perfect for reportative meanings, which suggests that Group C, our control group, leans towards the *Present Perfect* form for reportative meanings, whereas group A and B (Cypriot-Greek speaker learners of English L2) seem indecisive.

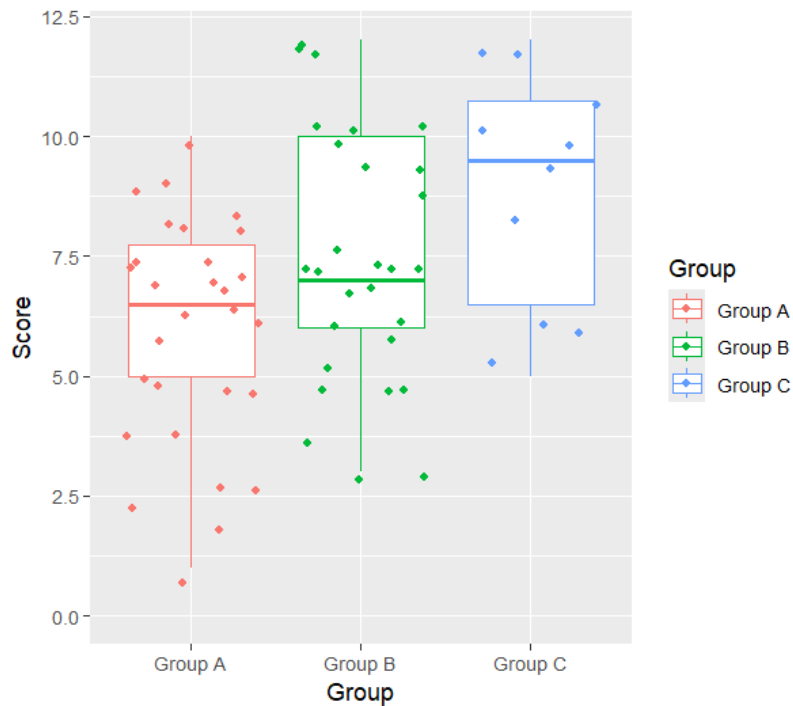


Figure 21 - Present Perfect use for reportative per Group

5 Discussion

The objective of this chapter is to answer the four research questions which resulted from the aspectual and feature bundling asymmetries identified in the literature part of this paper, according to the data analysed in chapter four.

- 1) Is the *Past Simple* form an easier form to learn compared to the *Present Perfect* form, as it bundles less features than the latter?

Contrary to the predictions, the data analysis located no significant difference in the accuracy of the two forms examined in neither of the groups examined. Even though the *Past Simple* form bundles only the completeness feature and the habitual feature, whereas the *Present Perfect* form carries relevance with four features (however the current data measurements account only for the following; features continual, experiential, resultative), data indicated that participants that Group A appears to have performed higher in the *Present Perfect* form compared to the *Past Simple* form. On the other hand, Group B appears to have performed better in the *Past Simple* form, compared to the *Present Perfect* form. However, the odds of scoring higher bares no significance for neither cases, thus none of the forms can be described as more challenging or facile. The only thing that can be said with confidence is that Group B outperformed Group A for the *Past Simple* form items significantly with p-value <.0001, and also significantly outperformed Group A for the *Present Perfect* form items with p-value 0.0001. The possible reasons behind these results can be associated with the following research question. It appears that the two features bundled in the *Past Simple* form, although fewer, are contradictive enough to puzzle the Greek learners of English L2 resulting to generally low scores in the *Past Simple* form. As presented in *Figure 9*, the mean score for Group A was below 50% (9.8 out of 20) and the mean score for Group B was only 12 out of 20.

- 2) Would *Past Simple* forms carrying the habitual feature be more challenging compare to those carrying the feature of completeness feature?

To answer this question, multiple models of analysis were applied. The first analysis predicting accuracy among all features indicated that even though participants scored three times higher on the completeness feature compared to the habitual feature, the result was not significant (p-value 0.11). However, once accuracy was predicted by an interaction between features and proficiency (proficiency measured by the placement test), with age as a fixed effect, and participants'

ID and items as random effects, only Group B of upper proficiency indicated to score three times higher on the completeness feature compared to the habitual feature, the difference was not significant, but with a p-value of only 0.052. Therefore, the findings suggest that young Cypriot-Greek speakers, learners of English L2 do find the habitual feature bundled in the *Past Simple* form more challenging than the completeness feature bundled in the same form, though the confidence for such a bold statement is low. Future studies running similar experiments with more participants may be better able to obtain a significant result.

Fascinatingly, even the control group of native adult speakers of English scored below 50% (47% to be exact – *Figure 16*) on this feature, suggesting that even natives are indecisive on what form to use when expressing habituality in past tense. According to traditional teaching English as a second language grammar books, expressing past habits in the *Past Progressive* form is considered ungrammatical. Nonetheless, native English speakers of the control group appear to think otherwise. Yet again, the population of the control group examined is fairly small to suggest that native's intuition begs to differ that much from typical grammar books. All in all, it is a notable outcome which raises more questions than answers and calls for further research in the future.

- 3) Would *Present Perfect* forms carrying relevance with continual be more challenging to students than of those carrying relevance with resultative and experiential features?

As explained in section 2.2.2 and 2.4.3, Modern Greek speakers always combine the Anterior aspect with the Perfective aspect. It is impossible to be combined with the imperfective aspect. Consequently, the Anterior aspect cannot carry the continual feature, as English does, and all events discussed in that form are always regarded as completed. It was predicted that sentences carrying relevance with the continual feature would be rejected by the learners, instead the ungrammatical items carrying continual meanings in the *Present Simple* form would have higher rates of acceptability. As predicted, groups struggled to associate meanings of continuity in the *Present Perfect* form (see *Figure 18*). The mean score for Group A was 5 out of 10, and for Group B was 6.38 out of 10. The probability of Group B scoring higher than Group A is considered significant, p-value 0.0041. Additionally, the mean score of Group C was 8.7 out of 10 and the probability of Group C scoring higher than Group A is highly significant (p-value <.0001), and compare to Group B is also highly significant, p-value 0.0008. It is evident that Group B consisted of participants of higher level of proficiency and were associated with higher scores. The study performed another

model predicting accuracy by an interaction between features and proficiency with age and as fixed effects and participants' ID and items as random effects. The results indicated that Group B of upper proficiency scored significantly higher than Group A of upper proficiency with p-value 0.0001, with mean scores at 6.91 for Group B and 5 for Group A.

Nonetheless, what the literature failed to predict was that groups would also score low on the experiential and resultative feature. The acceptability rates of grammatical items per feature for Group A were at 51.3% for the experiential feature, 50% for the continual feature and 49.3% for the resultative feature, though without any statically significant p-value identified when compared to each other. The acceptability rates of grammatical items per feature for Group B were at 63.8% for the continual feature, 58.3% for the experiential feature, and 52.8% for the resultative feature, though without any statically significant p-value identified when compared to each other.

- 4) Would *Present Perfect* forms carrying relevance with reportative feature be more challenging for the young Greek speakers compared to native English speakers? Would native English speaker also prefer the *Past Simple* form for the reportative feature?

The literature predicted that the reportative feature found in the *Present Perfect* form would also be puzzling for the groups since the Anterior aspect in MG for sentences carrying the reportative feature is infrequent, because the Perfective aspect can carry the same meanings for such cases (see section 2.2.2.3 and 2.4.2). Additionally, the form was assumed to be trivial for the English native speakers as both forms, *Past Simple* and *Present Perfect*, are relatively acceptable for such meanings. Contrary to the predictions, all groups indicated a preference towards the *Present Perfect* form, rather than the *Past Simple form*, with the mean of responses to be slightly above 50% for Group A at 6.13 out of 12, for Group B at 7.59 out of 12 and for Group C at 8.9 out of 12. To add to that, the odds of Group B choosing the *Present Perfect* form to *Past Simple* form were slightly higher with p-value 0.0173. Even if mathematically Group C showed a stronger preference towards the *Present Perfect* form to *Past Simple* form, no statistical significance was identified as the group examined for this singular test was very small to produce significant result.

- 5) Is the feature reassembly completed/achieved by the time students qualify to take their English language IGCSE exam? What role do age, proficiency, linguistic background and complexity of feature bundling play in second language acquisition?

The final research question for this study cannot be answer with a yes or a no. All the people who have acquired a second language after the critical period are a living proof that feature reassembly is indeed possible, but how can it be measured? For this study, for the features examined, data suggest that the participants of Group B have reached an advance level feature reassembly as their acceptability rates of grammatical items, seen in *Figure 19*, are relatively close to those of the native adult English speakers, seen in *Figure 16*. According to the data analysis, their scores regarding the habitual, the completeness, resultative and reportative feature do not deviate significantly. As expected, Group C outperformed Group B on the continual feature with the odds of accuracy being five times higher and with significant p-value 0.0008. Therefore, I would rate the feature reassembly for Group B to be at an advance level, with room of improvement on the continual feature.

The study attempted to measure possible the effects in second language acquisition with some success. To begin with, the data provide no evidence for linguistic maturity to be associated with higher scores, since within the groups p-value was identified for Group A as p-value 0.17 and for Group B as p-value 0.0692 (Appendix 10), indicating that scores and age are not significantly correlated. Quite the reverse, data suggested that younger participants within groups scored higher compared to their peers as seen in Appendix 19; younger participants scored significantly higher on the formal tense forms examined with p-value 0.007. In regards to participants' linguistic background, the results indicated no association between participants' linguistic background and their scores (Appendix 21).

As it concerns proficiency, the results of the placement test, which determined the participants' proficiency level, indicated that participants of Group A who use only Greek at home language were significantly associated with higher scores; scoring on average 4.09 (95% CI : 1.39, 6.79; p-value: 0.00442) higher scores compared to other participants (Appendix 13). Additionally, for participants of Group A who use English at home and English outside of the home, results indicated that participants scored on average 4.41 (95% CI : -7.22, -1.60; p-value: 0.00335) lower scores compared to their peers (Appendix 14). Furthermore, results shown in Appendix 22 indicated that Group B of upper proficiency indicated to score three times higher on the completeness feature compared to the habitual feature, the difference was not significant, but with a p-value of only 0.052. For the completeness feature, the participants of Group A low proficiency were significantly less accurate compared to participants of Group A upper proficiency with p-value 0.0079, to participants

of Group B low proficiency with p-value 0.0004, and to participants of Group B upper proficiency with p-value <.0001. Moreover, the participants of Group A upper proficiency were significantly less accurate compared to participants of Group B upper proficiency with p-value 0.0061. For the continual feature, Group B of upper proficiency scored higher than Group A upper proficiency on the continual feature with p-value 0.0001.

Lastly, in terms of complexity of feature bundling, only the continual feature found in the Anterior aspect in combination with the Performative aspect in non-past tense (*Present Perfect* form) is suggested to be the most problematic for all MG speaker participants, since Group C outperformed Group B on the continual feature with odds of accuracy being five times higher and with highly significant p-value 0.0008. To add to that, Group C scored eleven times higher than Group A with p-value <.0001. The least trivial feature for participants is suggested to be the completeness feature with participants of Group B upper proficiency scoring higher than Group A upper proficiency with p-value 0.0061, Group B upper proficiency scoring higher than Group A low proficiency with p-value <.0001, Group B low proficiency scoring higher than Group A low proficiency with p-value 0.0004, Group A upper proficiency scoring higher than Group A low proficiency with p-value 0.0079. Lastly, the completeness feature and habitual feature which are both bundled with the Performative aspect in past tense is an unorthodox combination for our young Cypriot-Greek speakers of perfective and imperfective aspect. As predicted, the data indicated that Group B of upper proficiency scored three times higher on the completeness feature compared to the habitual feature, the difference was not significant, but with a p-value of only 0.052. Future studies running similar experiments with more participants may be better able to obtain a significant result.

The results of this study are aligned with previous studies which supported that both L1 and L2 learners are initially more productive with perfective aspectual forms which tend to bundle the completeness feature, compare to imperfective aspectual forms which tend to bundle [+continual] and [+habitual] features (Dosi et al., 2017) (Dosi, 2017). Similarly, my young Cypriot-Greek speakers, learners of English L2 scored significantly higher on the comprehension tasks examining the completeness feature, and significantly lower on the comprehension tasks examining the continual and habitual feature. At the same time, this study associates the results on the completeness, continual and habitual features in the *Past Simple* forms and *Present Perfect* forms with the aspectual asymmetries identified between MG and English. The findings of this study are valuable both to the field of applied linguistics and to second language teachers in general. From my

perspective, an L2 teacher with supplementary satisfactory linguistic knowledge of students' L1 would be capable to comprehend and foresee their students' probable mistakes and guide them with much more ease towards the right answers, and thus to successful second language acquisition.

6 Conclusion

This paper investigates the grammatical aspect, the internal temporal conceptualization of events in predicates, and the respective features bundled involved in English second language acquisition in light of Modern Greek as an L1. Lardiere's Feature Reassembly Hypothesis (2009), argues that L2 acquisition involves mapping existing features of L1 onto new L2 lexical items with distinct composition. The purpose of this study is to explore the composition of feature bundling in aspects of both L1 and L2, and investigate which features would be more challenging in second language acquisition. This study provides innovating insight in second language acquisition, and explores possible factors influencing L1 transfer and feature reassembly by comparing two groups of young Cypriot-Greek learners' of English L2 through comprehension tasks centring aspect.

In order to put the FRH into the test, six features were examined: the completeness and the habitual features bundled in the Performative aspect of past tense, also known as the formal tense form *Past Simple*:

- | | |
|--|-----------------|
| (1) John <i>walked</i> home. | [+completeness] |
| walk-PM-Past | |
| (2) Mary, when in high school, she walked to school every day. | [+ habitual] |
| walk-PM-Past | |

The other features examines are the reportative, resultative, experiential and continual features bundled in the Anterior-Performative aspects of non-past tense, also known as the formal tense form *Present Perfect*:

- | | |
|--|-----------------|
| (3) I have lived here three years now. | [+continual] |
| Have-Ant-1SG live-PM-Past | |
| (4) He cannot come. He has broken his leg. | [+resultative] |
| have-Ant-3SG hear-PM-Past | |
| (His broken leg results to not being able to attend) | |
| (5) He has never missed Mark's birthday party. | [+experiential] |
| have-Ant-3SG miss-PM-Past | |
| (So far he has experienced all Mark's birthday) | |

- (6) I have just got the news! How are you dear? [+reportative]
 have-Ant-3SG get-PM-Past
 (the speaker found out about these news recently)

The study follows Hewson’s (2012) understanding of the English aspect, and identifies three aspects in the English language; the Anterior which is grammaticalised with the auxiliary “have” and a main verb either in the performative form or progressive form (also known as the *Present Perfect Simple* form and *Present Perfect Progressive* form for non-past tense). It indicates that the event in Anterior aspect is anterior and relevant to a second mentioned or implied event/ or to a reference time. The Anterior aspect bundles this anterior relevance with continual, resultative, experiential and reportative features. The Progressive is grammaticalised with the particle “be” and –ing morpheme attached to the main verb, indicating an event in progress at a reference time, thus it bundles with the progressive feature. Lastly, the Performative aspect is grammaticalised with zero marking. It is an unmarked aspect. Depending on context, it can indicate continuity of performance as in non-past tense bundles with the continual and habitual feature, but it can also indicate completeness of performance both in non-past and past tense bundling with the completeness feature. Lastly, the study approaches the syntactic structure of aspect following Adger’s (2010 & 2003) *Hierarchy of Projection* theory and classifies the Performative and Progressive aspect as the primary aspects, entailing that a meaningful utterance necessarily must have one or the other. Consequently, the Anterior aspect is classified as a secondary aspect which always has to include Performative or Progressive aspect to produce meaning utterances.

As is concerns the aspect in MG, the study follows Newton (1979) and Hedin (1995&200) understandings and identifies three aspects; the Perfective aspect which tends to be grammaticalised with the –s– suffix, but as Newton (1979) pointed out there is no standard morpheme that applies to all verbs. The Perfective aspect is the viewpoint outside the event discussed, thus it expresses totality, and bundles with the completeness feature. The Imperfective aspect locates its viewpoint within the event, and in MG it tends to be grammaticalised with zero marking - an unmarked aspect. The imperfective aspect bundles with the continual, habitual and progressive features. Lastly, the Anterior is grammaticalised with the auxiliary “have” and the main verb always in the perfective aspect. It indicates that the event in Anterior aspect is anterior and relevant to a second mentioned or implied event/ or to a reference time and bundles this anterior relevance with resultative, experiential and reportative features.

In sum, MG bundles the completeness feature in the Perfective aspect, and the habitual, continual and progressive feature in the Imperfective aspect. When tense is located in the past, the Perfective aspect bundles the completeness feature, and the Imperfective aspect bundles the habitual and progressive feature. Past tense disallows the continual feature to persist in the Imperfective aspect past forms. Moreover, the Anterior aspect in MG can only be combined with the Perfective aspect, thus the features that can be bundled with Anterior MG forms non-past tense are the reportative, resultative and experiential features and all events discussed are interpreted as completed. On the other hand, English bundles the completeness, continual, and habitual features in the Performative aspect, and the progressive feature in the Progressive aspect. When tense is located in the past, the Performative aspect bundles the completeness and habitual feature, and the Progressive aspect bundles the progressive feature. Past tense disallows the continual feature to persist in the Performative aspect past forms. Furthermore, the Anterior aspect in English can be combined with both the Performative and Progressive aspect, thus the features that can be bundled with the Anterior English forms are the reportative, resultative, experiential, continual and progressive features. Consequently, the Anterior form that combines the Anterior aspect with the Performative aspect in non-past tense bundles the reportative, resultative, experiential and continual features.

The six features were tested on 74 participants; two groups of young Cypriot-Greek speakers, learners of English L2 taking classes of B1 and IGCSE level of proficiency, and a group of native adult English speakers, see section 3.5. The experiment was run on *Gorilla* (an online survey method), and included a background questionnaire, a placement test, a Likert scale acceptability judgement task and a two-alternative Forced-choice task, see section 3.2.

The study associates the results of the comprehension AJT with the aspectual asymmetries identified between MG and English. In particular, data indicated that young Cypriot-Greek speakers, learners of English L2 scored significantly higher on the comprehension tasks examining the completeness feature found in the *Past Simple* forms, and significantly lower on the comprehension tasks examining the continual feature found in the *Present Perfect* forms, and the habitual feature found in the *Past Simple* forms. The results of this study are aligned with previous studies which supported that both L1 and L2 learners are initially more productive with forms bundling the completeness feature, compared to forms bundling the [+continual] and [+habitual] features (Dosi et al., 2017) (Dosi, 2017). Last but not least, the results of this study provide empirical data for the

Feature Reassembly Hypothesis; participants' scores increased as the proficiency level on the English language of participants increased, and the complexity of feature bundling truly affected participants' scores in second language acquisition, yet without making the acquisition impossible.

The findings of this study can be beneficial to English second language teachers too. Second language teachers master all the linguistic and pedagogical knowledge required to teach foreign languages to young minds. However, I believe that L2 teachers with additional adequate linguistic knowledge of students' L1 would be able to understand where the students' possible mistakes come from and assist them to overcome them. As the famous educator John Dewey once said; "A problem well stated is a problem half solved". Similarly, I believe that simply pointing out wrong from right, grammatical from ungrammatical is not enough. In my opinion, identifying the root of features mis-mapping in the acquisition of aspect is the first great step that must be acknowledge for a successful second acquisition.

Limitations of the Present Study

The current study suffers some limitations. The participants' number is relatively small, especially the native adult speakers of English. Even though the study has produced some significant results, a greater number of participants may obtain even more significant results. The data collected regarding participants' linguistic background were very limited. The current questionnaire was interested only in participants' language(s) use inside and outside home. Future research should also look into the years of exposure to languages examined, as well as participants' daily use of language(s); how many hours in a day are they exposed to an x-language and y-language approximately; how many hours in a day do they use an x-language and y-language. Moreover, the data analysis has identified four participants who even though they had completed the experiment, their response time and answers indicated that they had quickly tapped through the experiment, rather than actually go through it. To add to that, I have in hand more consent forms than participants who have indeed completed the experiment. The participants were free to exit the experiment any time they wanted and some did. These facts indicate that the length of the experiment was too long to keep the participants engaged in the process. Future research should include less features examined per trial, in an attempt to keep participants' attention, as well as to reach a broader audience.

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Appendices

Appendix 1 – Information Sheet



Information Sheet

for Parents/Guardians of Children in **The Acquisition of Aspect in L2 English by L1 Greek speakers**

Purpose of the Study: The Acquisition of Aspect in L2 English by Greek speakers is looking into the aspectual asymmetries observed between English and Modern Greek, which results to different features assigned to different yet similar grammatical forms. The question that surfaces is how much of a problem these asymmetries are for young Greek speakers, learners of L2 English.

What will the study involve? The study involves collecting data from children aged 12 -17 years, on a number of sentences focusing on the English aspect. We invite your child's participation in a survey on February 2024 in Cyprus. A master's student of UiT will conduct an online survey with children/young people which will take approximately 30 minutes.

Once you have completed the consent form, please place it in the envelope provided, seal it, and return it to the reception desk. You can keep the information sheet for your records.

Why has your child been asked to take part? Your child has been asked to take part in the research because they attend, which was invited and has agreed to participate in *The Acquisition of Aspect in L2 English by L1 Greek speakers* project.

Do I or my child have to take part? No, participation is voluntary. You will be asked to sign a consent form for yourself and on behalf of your child. If you do not give permission, your child cannot

participate. Both you and your child have to agree to proceed with participating in the study. You and your child have the option of withdrawing from the study, even if you have agreed to participate. Once your child has completed their involvement, they can still withdraw up until 2 weeks after the completion of the project (anticipated project completion date is November 2024).

Will you and your child's participation in the study be kept confidential? Yes, absolutely! We are collecting data for research purposes only, so we gather only a minimum of personal data (age, place of upbringing, and linguistic environment) to record consent, and it will be stored securely and separately from the survey data collected. Your personal data will be processed and handled in accordance with European legislation, including the General Data Protection Regulation (EU) 2016/679. Access to personal data will be highly restricted (project researchers only), and no attempt will be made to link personal data to survey responses. Ten years after the completion of the project, your personal data and the research data will be erased. Your and your child's answers to the questions on the survey will be tagged with an anonymous identifier made up of letters and numbers.

What will happen to the information you and your child give? The responses from your child will become part of a securely stored database, along with data from other children. Because the answers that your child gives will be anonymised, there will be no way to tell who provided the information. The research team will use this data for a linguistic research study.

What will happen to the results? It is expected that results of this study will be published in an academic journal.

What are the possible disadvantages of taking part? We don't envisage any negative consequences for you or your child in taking part.

What if there is a problem? At the end of their participation, we will discuss with the children how they found the experience and how they are feeling. If they feel distressed, we will talk to their teacher.

Who has reviewed this study? Supervision and approval of the study has been given by Marit Kristine Westergaard, professor of English Linguistics at UiT- The Arctic University of Norway.

Any further queries? If you need any further information, you can contact:

Grigoria Lazarou (master's student conducting the research): grigoria.laz@gmail.com

If you agree to allow your child(ren) to take part in the study, please fill out the attached consent form. If you have more than one child participating, you will be able to add their names at the bottom of the consent form

Appendix 2 – Consent form in English

Parent / Guardian Consent Form

I..... give permission for my child(ren) to participate in The Acquisition of Aspect in L2 English by Greek speakers.

The purpose and nature of the study has been explained to me in writing.

I understand that my child will be participating voluntarily.

I understand that anonymity will be ensured, because personal data is collected only to record consent and is stored separately to data collected from children, with no attempt made to link them. My child's data will have an anonymous identifier made up of letters and numbers.

I understand that my child can withdraw from the study, without repercussions, whether before it starts or while they are participating, and we do not have to give any reasons for this.

I understand that the data and any personal details collected are for research and teaching purposes only within the scope of the The Acquisition of Aspect in L2 English by Greek speakers.

My personal details will be processed and handled in accordance with European legislation including the General Data Protection Regulation (EU) 2016/679. I have the right to access these data, rectify them, limit or oppose their processing and to request deletion of my personal data.

I understand that my child can withdraw permission to use the data at any time up until **2 weeks** after the completion of the **survey**, in which case the material will be deleted. If my child changes their mind and wishes to withdraw after a report has been published, their material cannot be removed from the reports, but the research team will refrain from using it in any future work or analysis. I understand that after an anonymous survey that it will not be possible for my child to withdraw and that it may be practically impossible to remove their data from a focus group with others. I understand that after ten years all data associated with the study will be destroyed.

I understand that disguised extracts (e.g., name / location won't be used) and data from my child's **survey** may be quoted in presentations and subsequent publications (journal article, book chapter, student thesis, newspaper article, social media publicity about the study's findings, etc.), if I give permission below (please tick):

I confirm that I am a legal decision-maker¹ for the child(ren) listed below)

¹ Parent / legal guardian. For children in state care, please consult the HSE *National Consent Policy* (2019, p. 75): "In order to conduct research involving a child in care, researchers should first get consent from the responsible legal guardians e.g., parent and/or the child's health / social

I consent to my child(ren) participating in this study²

I do not consent to my child(ren) participating in this study

Signature: _____

Date: _____

Name (CAPS): _____

Child 1's name (CAPS): _____

Child 2's name (CAPS): _____

care providers or someone with a duty of care to the child. This consent must be supplemented with the child's assent". [Click here](#) for full policy.

² "For the purposes of participation in clinical trials, anyone over the age of 16 years can consent on his/her own behalf. For all other research, the person must be over the age of 18 years in order to provide consent" (Health Service Executive, 2019, p. 72). [Click here](#) for full policy

Appendix 3 - Consent form in Modern Greek

Συγκατάθεση γονέα-κηδεμόνα

Εγώ ο/η επιτρέπω στο/α παιδί/ά μου να συμμετάσχει/ουν στην έρευνα:

The Acquisition of Aspect in L2 English by Greek speakers.

Έχω ενημερωθεί σχετικά με το σκοπό και το τρόπο διεξαγωγής της έρευνας γραπτώς.

Κατανοώ πως το παιδί μου θα συμμετάσχει στην έρευνα εθελοντικά.

Κατανοώ πως θα διατηρηθεί ανωνυμία, αφού τα προσωπικά στοιχεία που συλλέγονται διατηρούνται μόνο στο αρχείο συγκατάθεσης και φυλάσσονται ξεχωριστά από τα δεδομένα που θα συλλεχτούν από τα παιδιά, χωρίς καμία πιθανότητα ή δυνατότητα να τους συνδέσει κανείς με αυτά. Τα δεδομένα του παιδιού μου θα έχουν ένα μοναδικό και ανώνυμο κωδικό αναφοράς που θα αποτελείται από τυχαία γράμματα και αριθμούς.

Κατανοώ πως το παιδί μου μπορεί να αποχωρίσει από την έρευνα, χωρίς επιπτώσεις, είτε πριν την έναρξη ή κατά την διάρκεια της έρευνας, και δεν χρειάζεται να δώσουμε εξηγήσεις για την τυχόν απόφασή του.

Κατανοώ πως τα δεδομένα και τα οποιαδήποτε προσωπικά στοιχεία που θα συλλεχτούν υπηρετούν ερευνητικούς και εκπαιδευτικούς σκοπούς μόνο για όσον αφορά την έρευνα *The Acquisition of Aspect in L2 English by Greek speakers*.

Η διαχείριση και επεξεργασία των προσωπικών μου στοιχείων γίνεται σύμφωνα με την Ευρωπαϊκή νομοθεσία που περιλαμβάνει ειδικά τον Γενικό Κανονισμό για την Προστασία Δεδομένων (Κανονισμός (ΕΕ) 2016/679).

Έχω το δικαίωμα στη πρόσβαση, διόρθωση, στο περιορισμό ή και στην άρση της συγκατάθεσης μου στην επεξεργασία των δεδομένων μου, ακόμη και να ζητήσω την διαγραφή τους.

Κατανοώ πως το παιδί μου μπορεί να ανακαλέσει την συγκατάθεση του στη χρήση των δεδομένων του μέχρι και 2 εβδομάδες μετά την ολοκλήρωση της έρευνας, όπου σε αυτή την περίπτωση το υλικό θα διαγραφεί. Αν το παιδί μου αλλάξει γνώμη και επιθυμεί να ανακαλέσει την συγκατάθεση του μετά την δημοσίευση οποιασδήποτε έκθεσης, το υλικό τους δεν μπορεί να διαγραφεί από την έκθεση, αλλά η ερευνητική ομάδα δεν θα αφαιρέσει το υλικό για να μην χρησιμοποιηθεί σε μελλοντικές μελέτες και αναλύσεις. Κατανοώ πως μετά από μια ανώνυμη έρευνα η άρση συγκατάθεσης του παιδιού μου θα είναι αδύνατη και η διαγραφή των δεδομένων του από την ομάδα εστίασης με άλλα άτομα θα είναι πρακτικά αδύνατη. Κατανοώ πως μετά από 10 χρόνια όλα τα δεδομένα σχετικά με την έρευνα θα καταστραφούν.

Κατανοώ πως στοιχεία όπως όνομα/ περιοχή δεν θα χρησιμοποιηθούν και τα δεδομένα του παιδιού μου από την έρευνα μπορεί να αναφέρονται σε παρουσιάσεις και σε μεταγενέστερες δημοσιεύσεις (άρθρα σε περιοδικό, κεφάλαιο βιβλίου, διπλωματική φοιτητή, άρθρο εφημερίδας, προβολή σε μέσω κοινωνικής δικτύωσης σχετικά με τα ευρήματα της έρευνας, κλπ.), αν δώσω την συγκατάθεσή μου πιο κάτω (παρακαλώ σημειώστε):

- Επιβεβαιώνω** ότι είμαι ο/η ηθική ιθύνων³ για το/α παιδί/ά (που αναφέρονται πιο κάτω)
- Δίνω την συγκατάθεση** μου για την συμμετοχή του/των παιδιού/ών μου στην έρευνα⁴
- ΔΕΝ δίνω την συγκατάθεση** μου για την συμμετοχή του/των παιδιού/ών μου στην έρευνα

Υπογραφή: _____ Ημερομηνία: _____

Όνομα (ΚΕΦΑΛΑΙΑ): _____

Όνομα παιδιού 1 (ΚΕΦΑΛΑΙΑ): _____

Όνομα παιδιού 2 (ΚΕΦΑΛΑΙΑ): _____

³ Parent / legal guardian. For children in state care, please consult the HSE *National Consent Policy* (2019, p. 75): “In order to conduct research involving a child in care, researchers should first get consent from the responsible legal guardians e.g., parent and/or the child’s health / social care providers or someone with a duty of care to the child. This consent must be supplemented with the child’s assent”. [Click here](#) for full policy.

⁴ “For the purposes of participation in clinical trials, anyone over the age of 16 years can consent on his/her own behalf. For all other research, the person must be over the age of 18 years in order to provide consent” (Health Service Executive, 2019, p. 72). [Click here](#) for full policy

Appendix 4 – Consent form for native adult speakers of English

I am a master's student at the Department of Language and Culture, at UiT the Arctic University of Norway, and I am seeking participants for a research project. In the next paragraph I will inform you about the experiment in question. Bare in mind that you are free to withdraw at any point of the experiment.

In this study I will ask you to evaluate some English sentences. The experiment takes approximately eighteen minutes. All information given will remain confidential, and your name will neither be collected nor connected with any research findings. If for any reason during this study you feel uncomfortable, you are free to terminate your participation and your information will be removed. All data are collected anonymously, for that reason you cannot request for your responses. If you have any further questions or concerns regarding this study, do not hesitate to contact me through email: Grigoria Lazarou at gla039@uit.no

I Agree

I am at least 18 years old of age, I have read and understood the above and hereby give my consent to take part in this experiment in full knowledge that data is being recorded.

Appendix 5 – Young learners of English L2 background questionnaire

Which city do you live in?

- Nicosia
- Larnaca
- Limassol
- Paphos
- Famagusta
- Other – please specify:

Which country do you live in?

- Cyprus
- Greece
- UK
- USA
- Other – please specify:

How old are you?

- 13
- 14
- 15
- 16
- 17
- Other – please specify:

What languages do you speak at home?

- Only Greek
- Only English
- Greek and English
- Greek and other
- English and other
- Other – please specify:

What languages do you speak outside of home?

- Only Greek
- Only English
- Greek and English
- Greek and other
- English and other
- Other – please specify:

My level of English is...

- Ket/A2
- Pet/B1
- B Senior/ A2
- C Senior/ B1
- IGCSE
- Other – please specify:

Appendix 6 – Oxford Proficiency test

Context

1. Water _____ at a temperature of 100°C
2. In some countries _____ very hot all the time.
3. In cold countries people wear thick clothes _____ warm.
4. In England people are always talking about _____.
5. In some places _____ almost every day.
6. In deserts there isn't _____ grass.
7. Places near Equator have _____ weather in the cold season.
8. In England _____ time of year is usually from December to February.
9. _____ people don't know what it's like in other countries.
10. Very _____ people can travel abroad.
11. John's coming to see you, _____
12. It's been a long time since you've seen him, _____
13. He's due to arrive tomorrow, _____
14. He won't be getting in till about 10:30, _____
15. You met him while you were on holiday, _____
16. Mohammed Ali _____ his first world title fight in 1960.
17. After he _____ an Olympic gold medal, he became a professional boxer.
18. His religious beliefs _____ change his name when he became a champion.
19. If he _____ lost his first fight with Sonny Liston, no one would have been surprised.
20. He has traveled a lot _____ as a boxer and as a world-famous personality.
21. He is very well known _____ the world.
22. Many people _____ he was the greatest boxer of all time.
23. To be the best _____ the world is not easy.
24. Like any top sportsman, Ali _____ train very hard.
25. Even though he has now lost his title, people _____ always remember him as a champion.
26. The history of _____
27. is _____ short one.
28. For many centuries men _____ to fly,
29. but with _____ success.
30. In the 19th century a few people succeeded _____ in balloons.
31. But, it wasn't until the beginning of _____ century
32. that anybody _____ able to fly
33. in a machine _____ was heavier than air,
34. in other words, in _____ we now call a 'plane'.
35. The first people to achieve "powered flight" were the Wright Brother. _____ was the machine
36. which was the forerunner of the Jumbo jets and supersonic airlines that are _____ common sight today.
37. They _____ hardly have imagined that in 1969,
38. _____ more than half a century later,
39. a man _____ landed on the moon.
40. Already _____ is taking the first steps towards the stars.

Options:

A	B	C	Correct
is to boil	is boiling	boils	1. boils
there is	is	it is	2. it is
for keeping	to keep	for to keep	3. to keep
a weather	the weather	weather	4. the weather
it rains	there rains	it raining	5. it rains
the	some	any	6. any
a warm	the warm	warm	7. warm
coldest	the coldest	colder	8. the coldest
The most	Most of	Most	9. Most
less	little	few	10. few
hasn't he?	wasn't he?	isn't he?	11. isn't he?
hasn't it?	isn't it?	haven't you?	12. hasn't it?
won't he?	isn't he?	will he?	13. isn't he?
isn't he?	is he?	will he?	14. will he?
didn't you?	weren't you?	haven't you?	15. didn't you?
has won	won	is winning	16. won
had won	won	was winning	17. had won
have made him	made him to	made him	18. made him
has	would have	had	19. had
both	and	or	20. both
all in	all over	in all	21. all over
is believing	are believing	believe	22. believe
from	in	of	23. in
had to	must	should	24. had to
would	will	did	25. will
airplane	the airplane	an airplane	26. the airplane
quite a	a quite	quite	27. quite a
are trying	try	had tried	28. had tried
little	few	a little	29. little
to fly	in flying	into flying	30. in flying
this	next	that	31. this
were	is	was	32. was
who	which	what	33. which
who	which	what	34. what
his	their	theirs	35. theirs
such	such a	some	36. such a
could	should	couldn't	37. could
not much	not many	no much	38. not much
will be	had been	would be	39. would be
a man	man	the man	40. man

Appendix 7 – Native adult speakers of English background questionnaire

Where were you born (city and country)?

- Please specify:

Where do you currently live (city and country)?

- Please specify:

How old are you?

- Please specify:

What languages do you speak at home?

- Only Greek
- Only English
- Greek and English
- Greek and other
- English and other
- Other – please specify:

What languages do you speak outside of home?

- Only Greek
- Only English
- Greek and English
- Greek and other
- English and other
- Other – please specify:

My level of English is...

- Ket/A2
- Pet/B1
- B Senior/ A2
- C Senior/ B1
- IGCSE
- Native
- Other – please specify:

Appendix 8 – Items on Agreement, distraction

Gram	Agreement	Context	Task
GR	LS	Every summer, John	reads many comic books.
UN	LS	Every summer, John	read many comic books.
GR	LS	The high-school student	does not play video games every day.
UN	LS	The high-school student	do not play video games every day.
GR	LS	The small kitty always	cries for his mom.
UN	LS	The small kitty always	cry for his mom.
GR	LPL	Zoo animals	do not hunt.
UN	LPL	Zoo animals	does not hunt.
GR	LPL	Most parents rarely	work during the night.
UN	LPL	Most parents rarely	works during the night.
GR	LPL	In the winter, people	do not go camping that often.
UN	LPL	In the winter, people	does not go camping that often.
GR	DS	The lady with the long earrings	eats here every evening.
UN	DS	The lady with the long earrings	eat here every evening.
GR	DS	The dog with the long tail	barks at everyone.
UN	DS	The dog with the long tail	bark at everyone.
GR	DS	The boy with the blond hair	does not like ice-cream.
UN	DS	The boy with the blond hair	do not like ice-cream.
GR	DPL	The flowers on the table	do not smell good.
UN	DPL	The flowers on the table	does not smell good.
GR	DPL	The men dressed in black	work for a big company.
UN	DPL	The men dressed in black	works for a big company.
GR	DPL	The children in the yellow uniform	do not sell cookies.
UN	DPL	The children in the yellow uniform	does not sell cookies.

Appendix 9 – Linear regression model with scores predicted by age and adjusted by group

	estimate	std.error	statistic	p.value	conf.low	conf.high
(Intercept)	44.3	8.73	5.07	0.00000402	26.8	61.7
Age	-1.61	0.676	-2.38	0.0206	-2.96	-0.256
IGCSE	9.74	2.43	4.01	0.000169	4.88	14.6

Appendix 10 – Correlation test with scores predicted by age, group by group

	estimate	statistic	p.value	parameter	conf.low	conf.high
B1	-0.253	-1.41	0.17	29	-0.557	0.112
IGCSE	-0.325	-1.88	0.0692	30	-0.605	0.0263

Appendix 11 – Linear regression model with scores predicted by age, with groups, and participants who use only Greek at home, and only Greek outside-home adjusted as separate mixed effects

	estimate	std.error	statistic	p.value	conf.low	conf.high
(Intercept)	42.2	8.76	4.82	0.0000108	24.7	59.8
age	-1.51	0.671	-2.25	0.0282	-2.85	-0.167
Group IGCSE	9.03	2.43	3.72	0.000458	4.16	13.9
Only Greek outside home	-1.24	1.39	-0.893	0.375	-4.02	1.54
Only Greek at home	2.3	1.35	1.71	0.0932	-0.397	4.99

Appendix 12 – Linear regression model with scores predicted by age, with groups, and participants who use English at home, and English outside-home adjusted as separate mixed effects

	estimate	std.error	statistic	p.value	conf.low	conf.high
(Intercept)	43	8.86	4.86	0.00000944	25.3	60.7
age	-1.54	0.678	-2.27	0.0271	-2.89	-0.18
Group IGCSE	9.3	2.44	3.81	0.000337	4.42	14.2
English outside home	1.55	1.33	1.16	0.249	-1.12	4.22
English at home	-1.4	1.39	-1.01	0.317	-4.17	1.38

Appendix 13 – Linear regression model with scores predicted by age, with Proficiency, and participants who use only Greek at home, and only Greek outside-home adjusted as separate mixed effects, and data set only for Group A

	estimate	std.error	statistic	p.value	conf.low	conf.high
(Intercept)	26.2	10.6	2.49	0.0196	4.55	47.9
Age	-1.02	0.779	-1.31	0.201	-2.62	0.579
Proficiency Group.A.U.	9.79	2.32	4.22	0.000261	5.02	14.6
Only Greek outside home	-1.64	1.39	-1.18	0.249	-4.49	1.22
Only Greek at home	4.09	1.31	3.12	0.00442	1.39	6.79

Appendix 14 - Linear regression model with scores predicted by age, with Proficiency, and participants who use English at home, and English outside-home adjusted as separate mixed effects, data set only for Group A

	estimate	std.error	statistic	p.value	conf.low	conf.high
(Intercept)	27.9	10.6	2.64	0.0137	6.22	49.6
Age	-1.08	0.774	-1.4	0.174	-2.67	0.508
ProficiencyGroup.A.U	11.5	2.29	5.05	0.0000297	6.84	16.3
English outside home	1.56	1.31	1.19	0.245	-1.14	4.26
English at home	-4.41	1.37	-3.23	0.00335	-7.22	-1.6

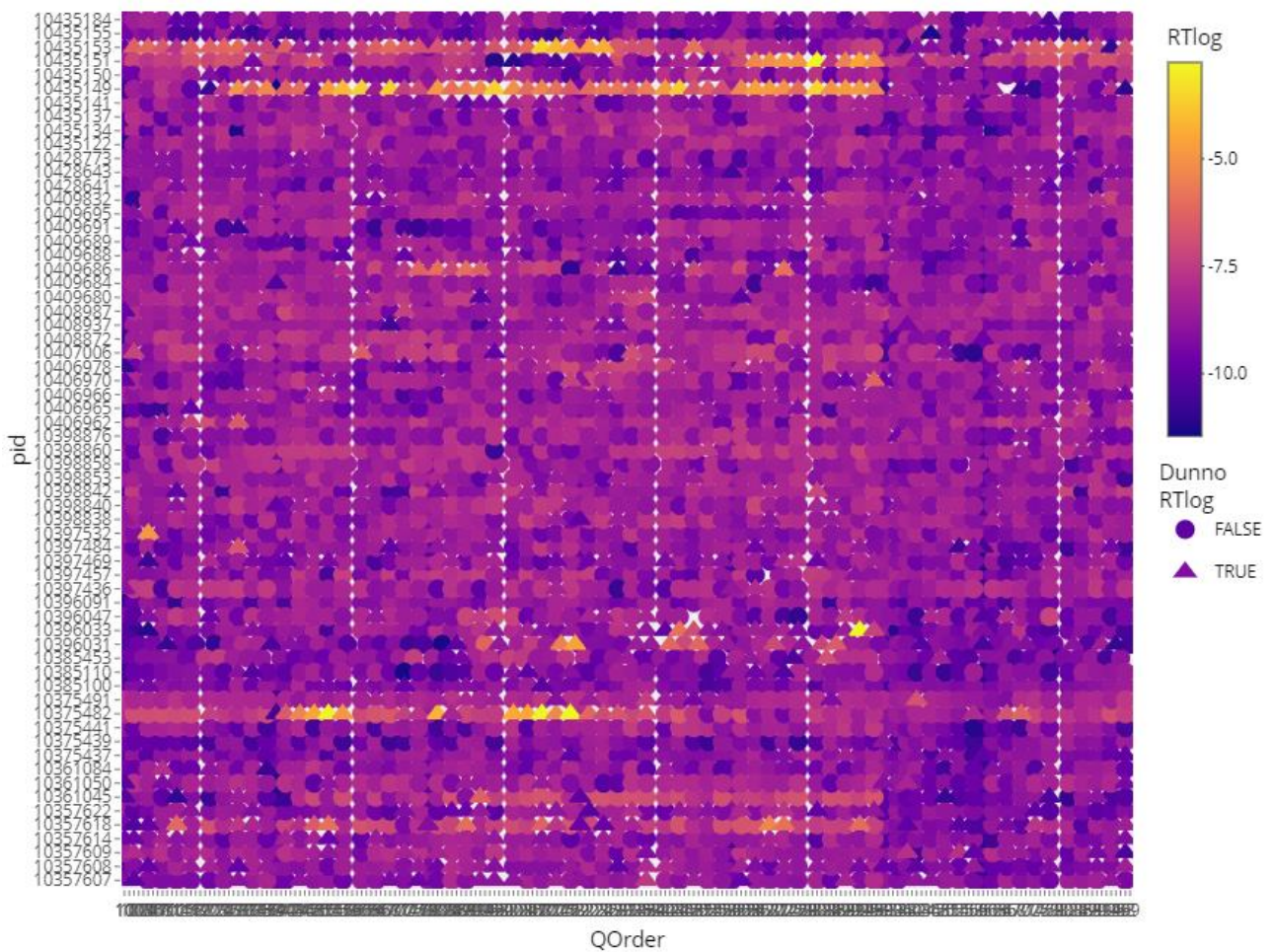
Appendix 15 - Linear regression model with scores predicted by age, with Proficiency, and participants who use only Greek at home, and only Greek outside-home adjusted as separate mixed effects, and data set only for Group B

	estimate	std.error	statistic	p.value	conf.low	conf.high
(Intercept)	25.2	11.2	2.25	0.0329	2.21	48.2
age	-0.263	0.656	-0.402	0.691	-1.61	1.08
ProficiencyGroup.B.U.	9.91	1.63	6.08	0.00000172	6.57	13.3
Only Greek outside home	-1.82	1.45	-1.25	0.222	-4.8	1.16
Only Greek at home	0.334	1.45	0.23	0.819	-2.64	3.31

Appendix 16 - Linear regression model with scores predicted by age, with Proficiency, and participants who use English at home, and English outside-home adjusted as separate mixed effects, data set only for Group B

	estimate	std.error	statistic	p.value	conf.low	conf.high
(Intercept)	25.8	11.2	2.31	0.0289	2.87	48.6
age	-0.313	0.665	-0.47	0.642	-1.68	1.05
ProficiencyGroup.B.U.	9.87	1.67	5.92	0.00000263	6.45	13.3
English outside home	-0.0377	1.37	-0.0275	0.978	-2.85	2.77
English at home	0.0811	1.49	0.0546	0.957	-2.97	3.13

Appendix 17 – Plot of multiple “I don’t know”'s in a row in relation to Respond Time



Appendix 18 – Generalized linear logistic mixed effect model with accuracy predicted by the interaction between formal tense forms and groups, with age as fixed effects and participants' ID and items as random effects.

Random Effects:

Groups Name	Variance	St. Dev.
pid (Intercept)	0.123	0.3507
context (Intercept)	1.057	1.028
Number of obs: 2949, groups: pid, 59; context, 50		

Fixed effects:					
	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	2.29146	0.88692	2.584	0.00978	**
FORM.T.PS	-0.01935	0.30908	-0.063	0.95009	
`Stated Level`IGCSE	0.98561	0.23069	4.273	1.93E-05	***
age	-0.18012	0.06715	-2.682	0.00731	**

A pairwise comparison between the groups by formal tense form.

\$emmeans

FORM.T. = PP:					
Stated Level	prob	SE	df	asympt.LCL	asympt.UCL
B1	0.438	0.0573	Inf	0.331	0.552
IGCSE	0.664	0.0526	Inf	0.554	0.758

FORM.T. = PS					
Stated Level	prob	SE	df	asympt.LCL	asympt.UCL
B1	0.416	0.0664	Inf	0.294	0.549
IGCSE	0.676	0.0604	Inf	0.549	0.782

Confidence level used: 0.95

\$contrasts

FORM.T. = PP:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
B1/IGCSE	0.396	0.0951	Inf	1	-3.858	0.0001	***

FORM.T. = PS:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
B1/IGCSE	0.341	0.0862	Inf	1	-4.255	<.0001	***

A pairwise comparison between formal tense forms by group.

\$emmeans

Stated Level = B1					
FORM.T.	prob	SE	df	asympt.LCL	asympt.UCL
PP	0.438	0.0573	Inf	0.331	0.552
PS	0.416	0.0664	Inf	0.294	0.549
Stated Level = IGCSE					
FORM.T.	prob	SE	df	asympt.LCL	asympt.UCL
PP	0.664	0.0526	Inf	0.554	0.758

PS	0.676	0.0604	Inf	0.549	0.782
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Confidence level used: 0.95

§contrasts

Stated Level = B1:						
Contrast	odds.ratio	SE	df	null	z.ratio	p.value
PP/PS	1.095	0.35	Inf	1	0.284	0.7767
Stated Level = IGCSE:						
Contrast	odds.ratio	SE	df	null	z.ratio	p.value
PP/PS	0.944	0.304	Inf	1	-0.178	0.8588

Appendix 19 – Generalized linear logistic mixed effect model with accuracy predicted by the interaction between formal tense forms and groups, with group and age as fixed effects and participants' ID and items as random effects.

Random Effects:

Groups Name	Variance	St. Dev.			
pid (Intercept)	0.1229	0.3506			
context (Intercept)	0.9299	0.9643			
Number of obs: 2949, groups: pid, 59; context, 50					
Fixed effects:					
	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	2.81554	0.92325	3.05	0.00229	**
FEATCON	-0.41605	0.45012	-0.924	0.35532	
FEATEXP	-0.49291	0.45064	-1.094	0.27404	
FEATHAB	-1.09037	0.45189	-2.413	0.01583	*
FEATRES	-0.66917	0.45314	-1.477	0.13974	
`Stated Level`IGCSE	0.98565	0.23073	4.272	1.94E-05	***
age	-0.18012	0.06717	-2.682	0.00733	**

Appendix 20 – Pairwise comparison of features by group

Şemmeans

Stated Level = B1					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.562	0.0839	Inf	0.397	0.714
CON	0.458	0.0844	Inf	0.303	0.622
EXP	0.439	0.0839	Inf	0.286	0.604
HAB	0.301	0.0721	Inf	0.18	0.458
RES	0.396	0.0824	Inf	0.25	0.563

Stated Level = IGCSE					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.774	0.06	Inf	0.636	0.871
CON	0.694	0.0727	Inf	0.537	0.816
EXP	0.677	0.0749	Inf	0.517	0.804
HAB	0.536	0.0854	Inf	0.37	0.693
RES	0.637	0.0799	Inf	0.472	0.776

Confidence level used: 0.95

Şcontrasts

Stated Level = B1						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.516	0.682	Inf	1	0.924	0.8876
COMPL/EXP	1.637	0.738	Inf	1	1.094	0.8099
COMPL/HAB	2.975	1.345	Inf	1	2.413	0.1118
COMPL/RES	1.953	0.885	Inf	1	1.477	0.5777
CON/EXP	1.08	0.486	Inf	1	0.171	0.9998
CON/HAB	1.963	0.885	Inf	1	1.495	0.5655
CON/RES	1.288	0.583	Inf	1	0.56	0.9808
EXP/HAB	1.818	0.82	Inf	1	1.324	0.6765
EXP/RES	1.193	0.54	Inf	1	0.389	0.9951
HAB/RES	0.656	0.298	Inf	1	-0.928	0.8861

Stated Level = IGCSE						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.516	0.682	Inf	1	0.924	0.8876
COMPL/EXP	1.637	0.738	Inf	1	1.094	0.8099
COMPL/HAB	2.975	1.345	Inf	1	2.413	0.1118
COMPL/RES	1.953	0.885	Inf	1	1.477	0.5777
CON/EXP	1.08	0.486	Inf	1	0.171	0.9998
CON/HAB	1.963	0.885	Inf	1	1.495	0.5655
CON/RES	1.288	0.583	Inf	1	0.56	0.9808
EXP/HAB	1.818	0.82	Inf	1	1.324	0.6765

EXP/RES	1.193	0.54	Inf	1	0.389	0.9951
HAB/RES	0.656	0.298	Inf	1	-0.928	0.8861

Appendix 21 - Generalized linear logistic mixed effect models with accuracy predicted by features, with group and age as fixed effects and participants' ID and item as random effects with datasets according to linguistic background

A- Only Greek at home

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.99576	0.9979
context (Intercept)	0.08441	0.2905

Number of obs: 1799, groups: context, 50; pid, 36

Fixed effects:

	Estimate	Std.Error	zvalue	Pr(> z)	
(Intercept)	3.63955	1.22397	2.974	0.00294	**
FEATCON	-0.37748	0.50728	-0.74	0.45680	
FEATEXP	-0.40367	0.5078	-0.8	0.42665	
FEATHAB	-0.95691	0.51241	-1.87	0.06184	.
FEATRES	-0.41747	0.51501	-0.81	0.41759	
`Stated Level`IGCSE	1.41582	0.35515	3.987	6.70E-05	***
age	-0.25278	0.09064	-2.79	0.00529	**
FEATCON:`Stated Level`IGCSE	-0.11993	0.33186	-0.36	0.71781	
FEATEXP:`Stated Level`IGCSE	-0.27719	0.33204	-0.84	0.40382	
FEATHAB:`Stated Level`IGCSE	-0.2244	0.33973	-0.66	0.50891	
FEATRES:`Stated Level`IGCSE	-0.29882	0.34876	-0.86	0.39154	

A pairwise comparison among features by group.

\$emmeans

Stated Level = B1:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.502	0.0974	Inf	0.32	0.684
CON	0.409	0.0943	Inf	0.244	0.598
EXP	0.403	0.094	Inf	0.239	0.592
HAB	0.279	0.0799	Inf	0.151	0.458
RES	0.399	0.096	Inf	0.233	0.593

Stated Level = IGCSE:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.806	0.0595	Inf	0.663	0.898
CON	0.717	0.0763	Inf	0.548	0.841
EXP	0.678	0.0818	Inf	0.502	0.814
HAB	0.561	0.0926	Inf	0.379	0.727
RES	0.67	0.0846	Inf	0.49	0.811

Confidence level used: 0.95

§contrasts

Stated Level = B1:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.459	0.74	Inf	1	0.744	0.9461
COMPL/EXP	1.497	0.76	Inf	1	0.795	0.9322
COMPL/HAB	2.604	1.334	Inf	1	1.867	0.3350
COMPL/RES	1.518	0.782	Inf	1	0.811	0.9275
CON/EXP	1.027	0.521	Inf	1	0.052	1.0000
CON/HAB	1.785	0.915	Inf	1	1.131	0.7904
CON/RES	1.041	0.536	Inf	1	0.078	1.0000
EXP/HAB	1.739	0.892	Inf	1	1.078	0.8178
EXP/RES	1.014	0.523	Inf	1	0.027	1.0000
HAB/RES	0.583	0.303	Inf	1	-1.037	0.8381

Stated Level = IGCSE:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.644	0.827	Inf	1	0.989	0.8604
COMPL/EXP	1.976	0.993	Inf	1	1.355	0.6565
COMPL/HAB	3.259	1.642	Inf	1	2.344	0.1310
COMPL/RES	2.047	1.041	Inf	1	1.409	0.6220
CON/EXP	1.201	0.6	Inf	1	0.368	0.9961
CON/HAB	1.982	0.992	Inf	1	1.367	0.6492
CON/RES	1.245	0.629	Inf	1	0.433	0.9927
EXP/HAB	1.649	0.825	Inf	1	1.001	0.8550
EXP/RES	1.036	0.523	Inf	1	0.07	1.0000
HAB/RES	0.628	0.318	Inf	1	-0.919	0.8897

B- Only Greek outside of the home

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	1.5016	1.2254
context (Intercept)	0.1497	0.3869

Number of obs: 900, groups: context, 50; pid, 18

Fixed effects:

	Estimate	Std.Error	zvalue	Pr(> z)	
(Intercept)	4.7192	2.4464	1.929	0.0537	.
FEATCON	-0.539	0.6257	-0.86	0.389	
FEATEXP	-0.292	0.6306	-0.46	0.6434	
FEATHAB	-1.3378	0.6355	-2.11	0.0353	*
FEATRES	-0.3405	0.6372	-0.53	0.5931	
`Stated Level`IGCSE	1.525	0.641	2.379	0.0174	*
age	-0.3216	0.1873	-1.72	0.0861	.
FEATCON:`Stated Level`IGCSE	-0.2342	0.4956	-0.47	0.6366	
FEATEXP:`Stated Level`IGCSE	-0.6994	0.5049	-1.39	0.166	
FEATHAB:`Stated Level`IGCSE	-0.1172	0.513	-0.23	0.8192	
FEATRES:`Stated Level`IGCSE	-0.6438	0.5229	-1.23	0.2183	

A pairwise comparison among features by group.

\$emmeans

Stated Level = B1:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.567	0.1218	Inf	0.331	0.776
CON	0.433	0.1214	Inf	0.225	0.668
EXP	0.495	0.1251	Inf	0.269	0.723
HAB	0.256	0.0965	Inf	0.113	0.482
RES	0.483	0.127	Inf	0.256	0.717

Stated Level = IGCSE:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.858	0.0727	Inf	0.652	0.951
CON	0.735	0.1126	Inf	0.472	0.896
EXP	0.691	0.1245	Inf	0.416	0.875
HAB	0.584	0.1418	Inf	0.309	0.815
RES	0.692	0.1265	Inf	0.413	0.878

Confidence level used: 0.95

§contrasts

Stated Level = B1:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.714	1.073	Inf	1	0.861	0.9109
COMPL/EXP	1.339	0.844	Inf	1	0.463	0.9906
COMPL/HAB	3.811	2.422	Inf	1	2.105	0.2178
COMPL/RES	1.406	0.896	Inf	1	0.534	0.9838
CON/EXP	0.781	0.491	Inf	1	-0.393	0.9950
CON/HAB	2.223	1.408	Inf	1	1.261	0.7149
CON/RES	0.82	0.521	Inf	1	-0.312	0.9979
EXP/HAB	2.846	1.818	Inf	1	1.637	0.4735
EXP/RES	1.05	0.672	Inf	1	0.076	1.0000
HAB/RES	0.369	0.238	Inf	1	-1.545	0.5328

Stated Level = IGCSE:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	2.167	1.471	Inf	1	1.139	0.7859
COMPL/EXP	2.695	1.842	Inf	1	1.45	0.5949
COMPL/HAB	4.285	2.938	Inf	1	2.122	0.2106
COMPL/RES	2.676	1.853	Inf	1	1.421	0.6140
CON/EXP	1.244	0.836	Inf	1	0.325	0.9976
CON/HAB	1.978	1.332	Inf	1	1.012	0.8500
CON/RES	1.235	0.841	Inf	1	0.31	0.9980
EXP/HAB	1.59	1.079	Inf	1	0.684	0.9601
EXP/RES	0.993	0.681	Inf	1	-0.01	1.0000
HAB/RES	0.624	0.429	Inf	1	-0.685	0.9598

C- English at home

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	1.2127	1.1012
context (Intercept)	0.2429	0.4928

Number of obs: 1000, groups: context, 50; pid, 20

Fixed effects:

	Estimate	Std.Error	zvalue	Pr(> z)
(Intercept)	1.65702	1.63938	1.011	0.3121
FEATCON	-0.77407	0.56999	-1.36	0.1744
FEATEXP	-0.47944	0.57571	-0.83	0.4050
FEATHAB	-1.32241	0.57984	-2.28	0.0226*
FEATRES	-0.8845	0.58027	-1.52	0.1274
`Stated Level`IGCSE	0.78975	0.58053	1.36	0.1737
age	-0.07258	0.12468	-0.58	0.5605
FEATCON:`Stated Level`IGCSE	0.31973	0.4693	0.681	0.4957
FEATEXP:`Stated Level`IGCSE	-0.50518	0.4758	-1.06	0.2884
FEATHAB:`Stated Level`IGCSE	-0.26067	0.48374	-0.54	0.5900
FEATRES:`Stated Level`IGCSE	-0.87159	0.49203	-1.77	0.0765

A pairwise comparison among features by group.

\$emmeans

Stated Level = B1:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.655	0.1041	Inf	0.435	0.824
CON	0.467	0.1134	Inf	0.264	0.681
EXP	0.54	0.115	Inf	0.322	0.744
HAB	0.336	0.1044	Inf	0.168	0.559
RES	0.439	0.1155	Inf	0.238	0.663
Stated Level = IGCSE:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.807	0.0838	Inf	0.593	0.923
CON	0.726	0.1046	Inf	0.486	0.882
EXP	0.61	0.126	Inf	0.356	0.815
HAB	0.462	0.1325	Inf	0.232	0.709
RES	0.419	0.1314	Inf	0.201	0.675

Confidence level used: 0.95

§contrasts

Stated Level = B1:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	2.169	1.236	Inf	1	1.358	0.6546
COMPL/EXP	1.615	0.93	Inf	1	0.833	0.9205
COMPL/HAB	3.752	2.176	Inf	1	2.281	0.1511
COMPL/RES	2.422	1.405	Inf	1	1.524	0.5466
CON/EXP	0.745	0.425	Inf	1	-0.516	0.9858
CON/HAB	1.73	0.994	Inf	1	0.954	0.8755
CON/RES	1.117	0.643	Inf	1	0.192	0.9997
EXP/HAB	2.323	1.35	Inf	1	1.451	0.5946
EXP/RES	1.499	0.872	Inf	1	0.697	0.9573
HAB/RES	0.645	0.378	Inf	1	-0.749	0.9449
Stated Level = IGCSE:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.575	0.975	Inf	1	0.734	0.9487
COMPL/EXP	2.677	1.663	Inf	1	1.585	0.5073
COMPL/HAB	4.87	3.043	Inf	1	2.534	0.0833
COMPL/RES	5.79	3.649	Inf	1	2.787	0.0424
CON/EXP	1.699	1.038	Inf	1	0.868	0.9087
CON/HAB	3.092	1.899	Inf	1	1.838	0.3515
CON/RES	3.676	2.277	Inf	1	2.101	0.2195
EXP/HAB	1.819	1.121	Inf	1	0.971	0.8681
EXP/RES	2.163	1.344	Inf	1	1.241	0.7270
HAB/RES	1.189	0.742	Inf	1	0.277	0.9987

D- English outside of the home

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.704	0.8391
context (Intercept)	0.1324	0.3638

Number of obs: 1799, groups: context, 50; pid, 36

Fixed effects:

	Estimate	Std.Error	zvalue	Pr(> z)	
(Intercept)	2.66971	1.06603	2.504	0.01227	*
FEATCON	-0.53487	0.44103	-1.21	0.22521	
FEATEXP	-0.50843	0.44208	-1.15	0.25011	
FEATHAB	-0.93562	0.44539	-2.1	0.03567	*
FEATRES	-0.74721	0.44838	-1.67	0.09562	.
`Stated Level`IGCSE	1.047	0.35434	2.955	0.00313	**
age	-0.17124	0.07939	-2.16	0.03101	*
FEATCON:`Stated Level`IGCSE	0.13647	0.32642	0.418	0.67590	
FEATEXP:`Stated Level`IGCSE	-0.04493	0.32775	-0.14	0.89095	
FEATHAB:`Stated Level`IGCSE	-0.21953	0.33244	-0.66	0.50902	
FEATRES:`Stated Level`IGCSE	-0.13892	0.33984	-0.41	0.68271	

A pairwise comparison among features by group.

Šemmeans

Stated Level = B1:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.554	0.0859	Inf	0.386	0.71
CON	0.421	0.0844	Inf	0.269	0.589
EXP	0.427	0.0851	Inf	0.274	0.596
HAB	0.327	0.0775	Inf	0.196	0.492
RES	0.37	0.0829	Inf	0.226	0.541
Stated Level = IGCSE:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.779	0.0592	Inf	0.643	0.874
CON	0.703	0.0708	Inf	0.549	0.822
EXP	0.67	0.075	Inf	0.511	0.798
HAB	0.527	0.0847	Inf	0.364	0.684
RES	0.593	0.0832	Inf	0.426	0.741

Confidence level used: 0.95

§contrasts

Stated Level = B1:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.707	0.753	Inf	1	1.213	0.7440
COMPL/EXP	1.663	0.735	Inf	1	1.15	0.7797
COMPL/HAB	2.549	1.135	Inf	1	2.101	0.2197
COMPL/RES	2.111	0.947	Inf	1	1.666	0.4549
CON/EXP	0.974	0.429	Inf	1	-0.06	1.0000
CON/HAB	1.493	0.663	Inf	1	0.903	0.8960
CON/RES	1.237	0.553	Inf	1	0.475	0.9896
EXP/HAB	1.533	0.682	Inf	1	0.96	0.8730
EXP/RES	1.27	0.569	Inf	1	0.533	0.9840
HAB/RES	0.828	0.374	Inf	1	-0.418	0.9936
Stated Level = IGCSE:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.489	0.657	Inf	1	0.904	0.8956
COMPL/EXP	1.739	0.767	Inf	1	1.255	0.7188
COMPL/HAB	3.174	1.402	Inf	1	2.615	0.0677
COMPL/RES	2.426	1.08	Inf	1	1.99	0.2709
CON/EXP	1.168	0.51	Inf	1	0.354	0.9966
CON/HAB	2.131	0.933	Inf	1	1.728	0.4167
CON/RES	1.629	0.719	Inf	1	1.104	0.8043
EXP/HAB	1.825	0.8	Inf	1	1.374	0.6445
EXP/RES	1.395	0.616	Inf	1	0.753	0.9437
HAB/RES	0.764	0.338	Inf	1	-0.608	0.9739

Appendix 22 - Generalized linear logistic mixed effect model with accuracy predicted by an interaction between features and proficiency, with age and as fixed effects and participants' ID and items as random effects.

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.1181	0.3436
context (Intercept)	0.9297	0.9642

Number of obs: 2949, groups: pid, 59; context, 50

Fixed Effects:

	Estimate	Std.Error	zvalue	Pr(> z)	
(Intercept)	0.76942	1.11416	0.691	0.489827	
FEATCON	1.11457	0.72267	1.542	0.123002	
FEATEXP	1.27634	0.72867	1.752	0.079841	.
FEATHAB	0.75586	0.73984	1.022	0.306944	
FEATRES	1.30455	0.75148	1.736	0.082569	.
ProficiencyGroup.A.U	1.59793	0.50189	3.184	0.001453	**
ProficiencyGroup.B.L	2.42992	0.6102	3.982	6.83E-05	***
ProficiencyGroup.B.U	2.5759	0.53332	4.83	1.37E-06	***
age	-0.14076	0.07207	-1.953	0.0508	.
FEATCON:ProficiencyGroup.A.U	-1.67708	0.60971	-2.751	0.005949	**
FEATEXP:ProficiencyGroup.A.U	-1.78158	0.61736	-2.886	0.003904	**
FEATHAB:ProficiencyGroup.A.U	-1.90608	0.63244	-3.014	0.002579	**
FEATRES:ProficiencyGroup.A.U	-1.93427	0.64656	-2.992	0.002775	**
FEATCON:ProficiencyGroup.B.L	-2.10225	0.68797	-3.056	0.002245	**
FEATEXP:ProficiencyGroup.B.L	-2.06435	0.69638	-2.964	0.003033	**
FEATHAB:ProficiencyGroup.B.L	-1.77476	0.71261	-2.491	0.012756	*
FEATRES:ProficiencyGroup.B.L	-2.3325	0.73005	-3.195	0.001398	**
FEATCON:ProficiencyGroup.B.U	-1.37725	0.62242	-2.213	0.026916	*
FEATEXP:ProficiencyGroup.B.U	-1.9324	0.62814	-3.076	0.002095	**
FEATHAB:ProficiencyGroup.B.U	-2.07217	0.64211	-3.227	0.00125	**
FEATRES:ProficiencyGroup.B.U	-2.2063	0.65689	-3.359	0.000783	***

A pairwise comparison among proficiency by feature.

§emmeans

FEAT = COMPL:					
Proficiency	prob	SE	df	asympt.LCL	asympt.UCL
Group.A.L	0.225	0.0994	Inf	0.0867	0.470
Group.A.U	0.589	0.0860	Inf	0.417	0.742
Group.B.L	0.767	0.0817	Inf	0.5734	0.890

Group.B.U	0.792	0.0598	Inf	0.6517	0.886
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FEAT = CON:					
Proficiency	prob	SE	df	asympt.LCL	asympt.UCL
Group.A.L	0.469	0.133	Inf	0.237	0.716
Group.A.U	0.450	0.0877	Inf	0.2899	0.621
Group.B.L	0.551	0.1111	Inf	0.3374	0.747
Group.B.U	0.746	0.0683	Inf	0.5914	0.856

FEAT = EXP:					
Proficiency	prob	SE	df	asympt.LCL	asympt.UCL
Group.A.L	0.510	0.1354	Inf	0.2645	0.75
Group.A.U	0.464	0.0884	Inf	0.3013	0.635
Group.B.L	0.600	0.1087	Inf	0.3817	0.784
Group.B.U	0.664	0.0799	Inf	0.4950	0.800

FEAT = HAB:					
Proficiency	prob	SE	df	asympt.LCL	asympt.UCL
Group.A.L	0.382	0.1315	Inf	0.1717	0.648
Group.A.U	0.312	0.0773	Inf	0.1832	0.479
Group.B.L	0.543	0.1141	Inf	0.3257	0.746
Group.B.U	0.506	0.090	Inf	0.3355	0.674

FEAT = RES:					
Proficiency	prob	SE	df	asympt.LCL	asympt.UCL
Group.A.L	0.517	0.1429	Inf	0.2584	0.767
Group.A.U	0.433	0.0888	Inf	0.2734	0.608
Group.B.L	0.541	0.1165	Inf	0.3198	0.747
Group.B.U	0.608	0.0869	Inf	0.4311	0.760

Confidence level used: 0.95

\$contrasts

FEAT = COMPL:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
Group.A.L/Group.A.U	0.2023	0.1015	Inf	1	-3.184	0.0079	**
Group.A.L/Group.B.L	0.088	0.0537	Inf	1	-3.982	0.0004	***
Group.A.L/Group.B.U	0.0761	0.0406	Inf	1	-4.83	<.0001	****
Group.A.U/Group.B.L	0.4352	0.1867	Inf	1	-1.939	0.2116	
Group.A.U/Group.B.U	0.3761	0.1127	Inf	1	-3.263	0.0061	**
Group.B.L/Group.B.U	0.8642	0.3059	Inf	1	-0.412	0.9764	

FEAT = CON:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	

Group.A.L/Group.A.U	1.0824	0.4965	Inf	1	0.173	0.9982	
Group.A.L/Group.B.L	0.7206	0.4095	Inf	1	-0.577	0.9391	
Group.A.L/Group.B.U	0.3016	0.1479	Inf	1	-2.444	0.0691	
Group.A.U/Group.B.L	0.6658	0.2798	Inf	1	-0.968	0.7676	
Group.A.U/Group.B.U	0.2787	0.0826	Inf	1	-4.311	0.0001	***
Group.B.L/Group.B.U	0.4185	0.1428	Inf	1	-2.554	0.0521	

FEAT = EXP:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
Group.A.L/Group.A.U	1.2016	0.5632	Inf	1	0.392	0.9796
Group.A.L/Group.B.L	0.6938	0.4012	Inf	1	-0.632	0.9217
Group.A.L/Group.B.U	0.5255	0.2613	Inf	1	-1.294	0.5667
Group.A.U/Group.B.L	0.5774	0.2454	Inf	1	-1.292	0.5678
Group.A.U/Group.B.U	0.4373	0.1291	Inf	1	-2.802	0.0261*
Group.B.L/Group.B.U	0.7573	0.2602	Inf	1	-0.809	0.8503

FEAT = HAB:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
Group.A.L/Group.A.U	1.3609	0.6649	Inf	1	0.631	0.9222
Group.A.L/Group.B.L	0.5194	0.3106	Inf	1	-1.095	0.6924
Group.A.L/Group.B.U	0.6043	0.3111	Inf	1	-0.978	0.7618
Group.A.U/Group.B.L	0.3816	0.1665	Inf	1	-2.208	0.1209
Group.A.U/Group.B.U	0.444	0.134	Inf	1	-2.69	0.0359*
Group.B.L/Group.B.U	1.1635	0.4129	Inf	1	0.427	0.9739

FEAT = RES:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
Group.A.L/Group.A.U	1.3998	0.7093	Inf	1	0.664	0.9107
Group.A.L/Group.B.L	0.9072	0.561	Inf	1	-0.158	0.9986
Group.A.L/Group.B.U	0.691	0.3684	Inf	1	-0.693	0.8997
Group.A.U/Group.B.L	0.6481	0.289	Inf	1	-0.973	0.7651
Group.A.U/Group.B.U	0.4936	0.1519	Inf	1	-2.294	0.0993
Group.B.L/Group.B.U	0.7617	0.2817	Inf	1	-0.736	0.8826

A pairwise comparison among features by proficiency.

Şemmeans

Proficiency = Group.A.L:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.225	0.0994	Inf	0.0867	0.470
CON	0.469	0.133	Inf	0.2370	0.716
EXP	0.510	0.1354	Inf	0.2645	0.750
HAB	0.382	0.1315	Inf	0.1717	0.648

RES	0.517	0.1429	Inf	0.2584	0.767
Proficiency = Group.A.U:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.589	0.086	Inf	0.4170	0.742
CON	0.450	0.0877	Inf	0.2899	0.621
EXP	0.464	0.0884	Inf	0.3013	0.635
HAB	0.312	0.0773	Inf	0.1832	0.479
RES	0.433	0.0888	Inf	0.2734	0.608
Proficiency = Group.B.L:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.767	0.0817	Inf	0.5734	0.890
CON	0.551	0.1111	Inf	0.3374	0.747
EXP	0.600	0.1087	Inf	0.3817	0.784
HAB	0.543	0.1141	Inf	0.3257	0.746
RES	0.541	0.1165	Inf	0.3198	0.747
Proficiency = Group.B.U:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.792	0.0598	Inf	0.6517	0.886
CON	0.746	0.0683	Inf	0.5914	0.856
EXP	0.664	0.0799	Inf	0.495	0.800
HAB	0.506	0.0900	Inf	0.3355	0.674
RES	0.608	0.0869	Inf	0.4311	0.760

§contrasts

Proficiency = Group.A.L:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	0.328	0.237	Inf	1	-1.542	0.5348
COMPL/EXP	0.279	0.203	Inf	1	-1.752	0.4023
COMPL/HAB	0.47	0.347	Inf	1	-1.022	0.8455
COMPL/RES	0.271	0.204	Inf	1	-1.736	0.4117
CON/EXP	0.851	0.596	Inf	1	-0.231	0.9994
CON/HAB	1.431	1.02	Inf	1	0.503	0.9871
CON/RES	0.827	0.599	Inf	1	-0.262	0.9990
EXP/HAB	1.683	1.209	Inf	1	0.724	0.9510
EXP/RES	0.972	0.71	Inf	1	-0.039	1.0000
HAB/RES	0.578	0.429	Inf	1	-0.739	0.9472
Proficiency = Group.A.U:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.755	0.824	Inf	1	1.198	0.7525

COMPL/EXP	1.657	0.78	Inf	1	1.074	0.8201
COMPL/HAB	3.159	1.496	Inf	1	2.428	0.1077
COMPL/RES	1.877	0.892	Inf	1	1.326	0.6753
CON/EXP	0.944	0.443	Inf	1	-0.122	1.0000
CON/HAB	1.8	0.851	Inf	1	1.243	0.7258
CON/RES	1.07	0.507	Inf	1	0.142	0.9999
EXP/HAB	1.906	0.903	Inf	1	1.362	0.6522
EXP/RES	1.133	0.538	Inf	1	0.262	0.9990
HAB/RES	0.594	0.284	Inf	1	-1.089	0.8125
Proficiency = Group.B.L:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	2.685	1.523	Inf	1	1.741	0.4084
COMPL/EXP	2.199	1.254	Inf	1	1.382	0.6390
COMPL/HAB	2.77	1.595	Inf	1	1.769	0.3917
COMPL/RES	2.795	1.631	Inf	1	1.762	0.3959
CON/EXP	0.819	0.461	Inf	1	-0.355	0.9966
CON/HAB	1.032	0.587	Inf	1	0.055	1.0000
CON/RES	1.041	0.6	Inf	1	0.07	1.0000
EXP/HAB	1.26	0.72	Inf	1	0.404	0.9944
EXP/RES	1.271	0.736	Inf	1	0.414	0.9938
HAB/RES	1.009	0.59	Inf	1	0.015	1.0000
Proficiency = Group.B.U:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.3	0.631	Inf	1	0.541	0.9831
COMPL/EXP	1.927	0.933	Inf	1	1.355	0.6568
COMPL/HAB	3.73	1.812	Inf	1	2.71	0.0525*
COMPL/RES	2.464	1.205	Inf	1	1.844	0.3480
CON/EXP	1.482	0.714	Inf	1	0.816	0.9258
CON/HAB	2.868	1.387	Inf	1	2.179	0.1874
CON/RES	1.895	0.922	Inf	1	1.313	0.6830
EXP/HAB	1.935	0.933	Inf	1	1.37	0.6472
EXP/RES	1.278	0.62	Inf	1	0.506	0.9868
HAB/RES	0.661	0.322	Inf	1	-0.852	0.9142

Appendix 23 - Generalized linear logistic mixed effect model with accuracy predicted by an interaction between formal tense forms and groups, with age and as fixed effects and participants' ID and items as random effects.

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.1641	0.4051
context (Intercept)	1.106	1.0517

Number of obs: 3449, groups: pid, 69; context, 50

Fixed Effects:

	Estimate	Std.Error	zvalue	Pr(> z)	
(Intercept)	1.28328	0.61764	2.078	0.03774	*
FORM.T.PS	-0.65276	0.36913	-1.768	0.077	.
`Stated Level`B1	-1.09961	0.40844	-2.692	0.0071	**
`Stated Level`IGCSE	-0.6476	0.36962	-1.752	0.07976	.
age	-0.01437	0.01627	-0.883	0.37718	
FORM.T.PS:`Stated Level`B1	0.56855	0.24024	2.367	0.01795	*
FORM.T.PS:`Stated Level`IGCSE	0.71568	0.24227	2.954	0.00314	**

A pairwise comparison among groups by formal tense form.

\$emmeans

FORM.T. = PP:					
Stated Level	prob	SE	df	asympt.LCL	asympt.UCL
native	0.738	0.0746	Inf	0.57	0.857
B1	0.484	0.0575	Inf	0.374	0.596
IGCSE	0.596	0.0534	Inf	0.489	0.695
FORM.T. = PS:					
Stated Level	prob	SE	df	asympt.LCL	asympt.UCL
native	0.595	0.1004	Inf	0.394	0.769
B1	0.463	0.0677	Inf	0.336	0.596
IGCSE	0.611	0.0632	Inf	0.483	0.726

Confidence level used: 0.95

\$contrasts

FORM.T. = PP:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
native/B1	3.003	1.2266	Inf	1	2.692	0.0194 *
native/IGCSE	1.911	0.7063	Inf	1	1.752	0.186

B1/IGCSE	0.636	0.1004	Inf	1	-2.865	0.0116	*
FORM.T. = PS:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
native/B1	1.701	0.7127	Inf	1	1.267	0.4138	
native/IGCSE	0.934	0.357	Inf	1	-0.178	0.9827	
B1/IGCSE	0.549	0.0965	Inf	1	-3.41	0.0019	**

A pairwise comparison between formal tense forms by group.

\$emmeans

Stated Level = native:					
FORM.T.	prob	SE	df	asympt.LCL	asympt.UCL
PP	0.738	0.0746	Inf	0.57	0.857
PS	0.595	0.1004	Inf	0.394	0.769
Stated Level = B1:					
FORM.T.	prob	SE	df	asympt.LCL	asympt.UCL
PP	0.484	0.0575	Inf	0.374	0.596
PS	0.463	0.0677	Inf	0.336	0.596
Stated Level = IGCSE:					
FORM.T.	prob	SE	df	asympt.LCL	asympt.UCL
PP	0.596	0.0534	Inf	0.489	0.695
PS	0.611	0.0632	Inf	0.483	0.726

Confidence level used: 0.95

\$contrast

Stated Level = native:						
Contrast	odds.ratio	SE	df	null	z.ratio	p.value
PP/PS	1.921	0.709	Inf	1	1.768	0.0770
Stated Level = B1:						
Contrast	odds.ratio	SE	df	null	z.ratio	p.value
PP/PS	1.088	0.355	Inf	1	0.258	0.7963
Stated Level = IGCSE:						
Contrast	odds.ratio	SE	df	null	z.ratio	p.value
PP/PS	0.939	0.308	Inf	1	-0.192	0.8478

Appendix 24 - Generalized linear logistic mixed effect model with accuracy predicted by an interaction between features and groups, with age and as fixed effects and participants' ID and items as random effects.

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.1694	0.4115
context (Intercept)	0.9704	0.9851

Number of obs: 3449, groups: pid, 69; context, 50

Fixed Effects:

	Estimate	Std.Error	zvalue	Pr(> z)	
(Intercept)	0.98043	0.69534	1.41	0.15854	
FEATCON	1.64568	0.57915	2.842	0.00449	**
FEATEXP	0.02669	0.53831	0.05	0.96046	
FEATHAB	-0.63619	0.54256	-1.173	0.24097	
FEATRES	-0.52504	0.54866	-0.957	0.33859	
`Stated Level`B1	-0.38614	0.45836	-0.842	0.39955	
`Stated Level`IGCSE	0.35347	0.42671	0.828	0.40746	
age	-0.01493	0.01664	-0.897	0.36957	
FEATCON:`Stated Level`B1	-2.0426	0.41423	-4.931	8.18E-07	***
FEATEXP:`Stated Level`B1	-0.35264	0.35552	-0.992	0.32124	
FEATHAB:`Stated Level`B1	-0.33727	0.36547	-0.923	0.35609	
FEATRES:`Stated Level`B1	0.08792	0.37559	0.234	0.81491	
FEATCON:`Stated Level`IGCSE	-2.10075	0.41964	-5.006	5.55E-07	***
FEATEXP:`Stated Level`IGCSE	-0.71818	0.36161	-1.986	0.04702	*
FEATHAB:`Stated Level`IGCSE	-0.6157	0.37022	-1.663	0.0963	.
FEATRES:`Stated Level`IGCSE	-0.40215	0.3814	-1.054	0.29169	

A pairwise comparison among features by group

\$emmeans

Stated Level = native:					
FEAT	prob	SE	df	asymp.LCL	asymp.UCL
COMPL	0.674	0.1079	Inf	0.441	0.844
CON	0.915	0.0422	Inf	0.788	0.969
EXP	0.679	0.1074	Inf	0.446	0.848
HAB	0.522	0.124	Inf	0.292	0.743
RES	0.55	0.1247	Inf	0.313	0.766
Stated Level = B1:					

FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.584	0.0853	Inf	0.414	0.736
CON	0.485	0.0876	Inf	0.322	0.652
EXP	0.503	0.0879	Inf	0.337	0.669
HAB	0.346	0.0806	Inf	0.209	0.516
RES	0.475	0.0893	Inf	0.31	0.646
Stated Level = IGCSE:					
FEAT	prob	SE	df	asympt.LCL	asympt.UCL
COMPL	0.746	0.0664	Inf	0.597	0.854
CON	0.651	0.0788	Inf	0.486	0.786
EXP	0.595	0.0835	Inf	0.427	0.744
HAB	0.457	0.0866	Inf	0.298	0.625
RES	0.538	0.0878	Inf	0.368	0.699

Confidence level used: 0.95

\$contrasts

Stated Level = native:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	0.193	0.112	Inf	1	-2.842	0.0363
COMPL/EXP	0.974	0.524	Inf	1	-0.05	1.0000
COMPL/HAB	1.889	1.025	Inf	1	1.173	0.7671
COMPL/RES	1.691	0.928	Inf	1	0.957	0.8743
CON/EXP	5.048	2.935	Inf	1	2.785	0.0427
CON/HAB	9.795	5.735	Inf	1	3.897	0.0009***
CON/RES	8.765	5.182	Inf	1	3.672	0.0022**
EXP/HAB	1.94	1.057	Inf	1	1.217	0.7416
EXP/RES	1.736	0.956	Inf	1	1.002	0.8548
HAB/RES	0.895	0.496	Inf	1	-0.2	0.9996
Stated Level = B1:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.487	0.705	Inf	1	0.837	0.9190
COMPL/EXP	1.385	0.658	Inf	1	0.687	0.9594
COMPL/HAB	2.647	1.265	Inf	1	2.037	0.2483
COMPL/RES	1.548	0.743	Inf	1	0.911	0.8927
CON/EXP	0.931	0.442	Inf	1	-0.15	0.9999
CON/HAB	1.78	0.85	Inf	1	1.207	0.7472
CON/RES	1.041	0.499	Inf	1	0.084	1.0000
EXP/HAB	1.911	0.914	Inf	1	1.354	0.6573
EXP/RES	1.118	0.536	Inf	1	0.232	0.9994
HAB/RES	0.585	0.283	Inf	1	-1.11	0.8014

Stated Level - IGCSE:						
contrast	odds.ratio	SE	df	null	z.ratio	p.value
COMPL/CON	1.576	0.756	Inf	1	0.948	0.8778
COMPL/EXP	1.997	0.958	Inf	1	1.441	0.6007
COMPL/HAB	3.497	1.684	Inf	1	2.599	0.0705
COMPL/RES	2.527	1.224	Inf	1	1.914	0.3098
CON/EXP	1.267	0.604	Inf	1	0.496	0.9878
CON/HAB	2.218	1.063	Inf	1	1.663	0.4568
CON/RES	1.603	0.773	Inf	1	0.98	0.8645
EXP/HAB	1.751	0.839	Inf	1	1.17	0.7685
EXP/RES	1.266	0.61	Inf	1	0.489	0.9884
HAB/RES	0.723	0.35	Inf	1	-0.671	0.9626

A pairwise comparison among groups by feature

Şemmeans

FEAT = COMPL:					
Stated Level	prob	SE	df	asypm.LCL	asypm.UCL
native	0.674	0.1079	Inf	0.44	0.844
B1	0.584	0.0853	Inf	0.412	0.736
IGCSE	0.746	0.0664	Inf	0.596	0.854
FEAT = CON:					
Stated Level	prob	SE	df	asypm.LCL	asypm.UCL
native	0.915	0.0422	Inf	0.788	0.969
B1	0.485	0.0876	Inf	0.322	0.652
IGCSE	0.651	0.0788	Inf	0.486	0.786
FEAT = EXP:					
Stated Level	prob	SE	df	asypm.LCL	asypm.UCL
native	0.679	0.1074	Inf	0.446	0.848
B1	0.503	0.0879	Inf	0.337	0.669
IGCSE	0.595	0.0835	Inf	0.427	0.744
FEAT = HAB:					
Stated Level	prob	SE	df	asypm.LCL	asypm.UCL
native	0.522	0.1240	Inf	0.292	0.743
B1	0.346	0.0806	Inf	0.209	0.516
IGCSE	0.457	0.0866	Inf	0.298	0.625
FEAT = RES:					
Stated Level	prob	SE	df	asypm.LCL	asypm.UCL
native	0.550	0.1247	Inf	0.313	0.766
B1	0.475	0.0893	Inf	0.310	0.646

IGCSE	0.538	0.0878	Inf	0.368	0.699
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Confidence level used: 0.95

§contrasts

FEAT = COMPL:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
native/ B1	1.471	0.674	Inf	1	0.842	0.6766	
native/ IGCSE	0.702	0.300	Inf	1	-0.828	0.6854	
B1/ IGCSE	0.477	0.105	Inf	1	-3.374	0.0021	**
FEAT = CON:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
native/ B1	11.345	5.795	Inf	1	4.755	<.0001	****
native/ IGCSE	5.739	2.750	Inf	1	3.646	0.0008	***
B1/ IGCSE	0.506	0.108	Inf	1	-3.189	0.0041	**
FEAT = EXP:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
native/ B1	2.093	0.966	Inf	1	1.601	0.2454	
native/ IGCSE	1.440	0.615	Inf	1	0.855	0.6689	
B1/ IGCSE	0.688	0.148	Inf	1	-1.742	0.1896	
FEAT = HAB:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
native/ B1	2.061	0.966	Inf	1	1.544	0.2704	
native/ IGCSE	1.300	0.563	Inf	1	0.605	0.8172	
B1/ IGCSE	0.631	0.142	Inf	1	-2.051	0.1002	
FEAT = RES:							
contrast	odds.ratio	SE	df	null	z.ratio	p.value	
native/ B1	1.347	0.642	Inf	1	0.626	0.8058	
native/ IGCSE	1.050	0.465	Inf	1	0.110	0.9934	
B1/ IGCSE	0.779	0.181	Inf	1	-1.073	0.5307	

Appendix 25 - Generalized linear logistic mixed effect model with accuracy predicted by group (A and B), with age and as fixed effects and participants' ID and items as random effects.

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.7352	0.8575
context (Intercept)	0.4312	0.6566

Number of obs: 708, groups: pid, 59; Question, 12

Fixed effects:

	Estimate	Std.Error	z value	Pr(> z)	
(Intercept)	2.7996	1.9825	1.412	0.1579	
`Stated Level`IGCSE	1.2563	0.5279	2.38	0.0173	*
age	-0.214	0.153	-1.399	0.1618	

A pairwise comparison by group.

\$emmeans

Stated Level	prob	SE	df	asypm.LCL	asypm.UCL
B1	0.438	0.0857	Inf	0.282	0.606
IGCSE	0.732	0.0707	Inf	0.574	0.847

Confidence level used: 0.95

\$contrasts

contrast	odds.ratio	SE	df	null	z.ratio	p.value	
B1/IGCSE	0.285	0.15	Inf	1	-2.38	0.0173	*

Appendix 26 - Generalized linear logistic mixed effect model with accuracy predicted by Proficiency, with age and as fixed effects and participants' ID and items as random effects.

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.724	0.8509
context (Intercept)	0.4309	0.6565

Number of obs: 708, groups: pid, 59; Question, 12

Fixed effects:

	Estimate	Std.Error	z value	Pr(> z)
(Intercept)	2.9457	2.285	1.289	0.197
ProficiencyGroup.A.U	-0.3425	0.6503	-0.527	0.598
ProficiencyGroup.B.L	0.7624	0.904	0.843	0.399
ProficiencyGroup.B.U	0.9606	0.7423	1.294	0.196
age	-0.2015	0.1645	-1.225	0.221

A pairwise comparison by proficiency level.

§emmeans

Proficiency	prob	SE	df	asympt.LCL	asympt.UCL
Group.A.L	0.519	0.1639	Inf	0.229	0.796
Group.A.U	0.433	0.0909	Inf	0.27	0.612
Group.B.L	0.698	0.1236	Inf	0.423	0.879
Group.B.U	0.738	0.0701	Inf	0.58	0.851

Confidence level used: 0.95

§contrasts

contrast	odds.ratio	SE	df	null	z.ratio	p.value
Group.A.L/Group.A.U	1.408	0.916	Inf	1	0.527	0.9526
Group.A.L/Group.B.L	0.467	0.422	Inf	1	-0.843	0.8337
Group.A.L/Group.B.U	0.383	0.284	Inf	1	-1.294	0.5667
Group.A.U/Group.B.L	0.331	0.255	Inf	1	-1.434	0.4778
Group.A.U/Group.B.U	0.272	0.147	Inf	1	-2.402	0.0767
Group.B.L/Group.B.U	0.82	0.409	Inf	1	-0.397	0.9788

Appendix 27 - Generalized linear mixed model with accuracy predicted by group (A, B and C), with age and as fixed effects and participants' ID and items as random effects.

Random effects:

Groups Name	Variance	Std.Dev.
pid (Intercept)	0.9018	0.9496
context (Intercept)	0.5891	0.7675

Number of obs: 828, groups: pid, 69; Question, 12

Fixed effects:

	Estimate	Std.Error	z value	Pr(> z)
(Intercept)	-0.060794	0.575764	-0.106	0.9159
Stated.LevelIGCSE	0.639691	0.323328	1.978	0.0479
Stated.Levelnative	1.142756	0.917598	1.245	0.213
age	0.008872	0.038021	0.233	0.8155

A pairwise comparison by group.

§emmeans

Stated Level	prob	SE	df	asympt.LCL	asympt.UCL
B1	0.523	0.0864	Inf	0.357	0.684
IGCSE	0.675	0.0694	Inf	0.528	0.794
native	0.775	0.1365	Inf	0.426	0.941

Confidence level used: 0.95

§contrasts

contrast	odds.ratio	SE	df	null	z.ratio	p.value
native/ B1	0.527	0.171	Inf	1	-1.978	0.1175
native/ IGCSE	0.319	0.293	Inf	1	-1.245	0.4264
B1/ IGCSE	0.605	0.498	Inf	1	-0.611	0.8140

