



UNIVERSIDAD DE JAÉN
Centro de Estudios de Postgrado

Master's Dissertation/
Trabajo Fin de Máster

NP
POSTMODIFICATION
IN B2 AND C1 ENGLISH
LEARNER WRITING

Student: García Baños, María

Tutor: Dr. María Belén Díez-Bedmar
Dpt.: English Philology

November, 2022

ABSTRACT

This Master's Dissertation provides a learner corpus study on Noun Phrase, henceforth (NP), postmodification by EFL students at CEFR B2 and C1 levels in English. The data investigated are two subsections of the FineDesc Corpus (Díez-Bedmar, 2022). The subcorpora have been manually annotated to firstly characterize NP postmodification in each CEFR level of proficiency and secondly, to reveal if there is any difference in the production of NP postmodification by B2 and C1 learners. This study points out that B2 and C1 learners follow a similar tendency in their use of postmodification, Prepositional Phrases (PPs) being the most recurrent type of postmodification employed by L1 Spanish EFL learners.

KEYWORDS: B2 and C1 learners, CEFR (Common European Framework of Reference for Languages), EFL (English as a Foreign Language), learner corpus research, Levels, Noun Phrase (NP), Postmodification.

RESUMEN

Este trabajo aporta un estudio de un corpus de estudiantes sobre la postmodificación en el sintagma nominal por parte de alumnos con nivel B2 y C1 en inglés como lengua extranjera. Los datos investigados son dos subsecciones pertenecientes al FineDesc Corpus (Díez-Bedmar, 2022). Los corpus han sido anotados manualmente en primer lugar poder caracterizar la postmodificación en el sintagma nominal en cada nivel y en segundo lugar para descubrir si hay alguna diferencia en la producción de postmodificación en el sintagma nominal por parte de los estudiantes con niveles de B2 y C1. Este estudio señala que los estudiantes B2 y C1 siguen una tendencia similar en su uso de la postmodificación siendo los sintagmas preposicionales el tipo de postmodificador más recurrente por estudiantes que tienen español como lengua materna y que aprenden inglés como lengua extranjera.

PALABRAS CLAVE: Estudiantes con nivel B2 y C1, MECR (Marco Común Europeo de Referencia para las lenguas), Inglés como lengua extranjera, investigación basada en corpus de estudiantes, niveles, Sintagma nominal y Postmodificación.

TABLE OF CONTENTS

1. INTRODUCTION.....	1
2. THE NOUN PHRASE IN ENGLISH	2
2.1. Postmodification in the noun-headed NP.....	7
2.1.1. Main realizations of the Postmodifiers.....	10
2.1.1.1. Noun Phrases in Apposition.....	11
2.1.1.2. Adjectival Phrases.....	12
2.1.1.3. Adverbial Phrases.....	12
2.1.1.4. Prepositional Phrases.....	13
2.1.1.5. Reflexive pronouns.....	15
2.1.1.6. Relative clauses.....	16
2.1.1.6.1. Types of Relative pronouns.....	17
2.1.1.6.2. Syntactic functions of Relative clauses.....	19
2.1.1.6.3. Special cases of Relative clauses.....	19
2.1.2.7. Non-finite clauses.....	21
2.1.2. Minor realizations of the Postmodifier.....	22
2.2. Postmodification in a pronoun-headed NP.....	24
3. NOUN PHRASE MODIFICATION IN LEARNER WRITING.....	26
4. RESEARCH QUESTIONS.....	31
5. METHODOLOGY.....	32
5.1. Learner corpus.....	32
5.2. Annotation.....	33
5.2.1 Discarded cases.....	36
5.3. Data retrieval	37
5.4. Statistics	37
6. RESULTS AND DISCUSSION.....	38
6.1. Research question 1: Which NP postmodification type characterize learner writing at CEFR B2 and C1 levels?	38
6.2. Research question 2: Which are the most significant differences found in NP postmodification between B2 and C1 levels?	41
6.3. Research question 3: Are there any differences in NP postmodification considering text type?	45
6.4. Research question 4: Are there any differences in NP postmodification regarding language accuracy across levels and text types?	48

7. CONCLUSION.....	53
8. REFERENCES.....	55
9. APPENDIX.....	58
Appendix 1: B2 corpus: Noun-headed and Pronoun-headed NP (normalized data)...	58
Appendix 2: C1 corpus: Noun-headed and Pronoun-headed NP (normalized data)....	60
Appendix 3: Text type: Noun-headed NP (normalized data)	62
Appendix 4: Text type: Pronoun-headed NP (normalized data)	64
Appendix 5: B2 corpus: Noun-headed and Pronoun-headed NP (normalized data)...	65
Appendix 6: C1 corpus: Noun-headed and Pronoun-headed NP (normalized data)....	67
Appendix 7: Text type: Noun-headed NP (normalized data).....	69
Appendix 8: Text type: Pronoun-headed NP (normalized data).....	71

1. INTRODUCTION

Learner corpora have been employed by corpus and applied linguists to examine the way foreign or second language students incorporate, master, and employ a foreign language.

Learner corpora may be helpful for foreign language teachers since it helps them to anticipate errors in their students' written and oral productions, which may facilitate and foster the learner's process of learning a foreign language if addressed the remedial teaching.

This MA Dissertation is a learner-corpus study which investigates NP postmodification by learners of English at two CEFR levels; B2 and C1 in their written texts. Previous research such as Biber et al. (2021), Carter & McCarthy (2006), or Downing (2015) has revealed that the English language incorporates both Premodification and Postmodification as a technique to provide further information about the referent in the head of the NP.

Therefore, the principal main of this study is to discover if there is any difference in the production of NP postmodification by B2 and C1 learners. To achieve this goal, we have explored which are the most and the less frequent types of NP postmodification considering on the one hand, students' language proficiency level; B2 or C1, and on the other hand, the text type they have penned. Additionally, given that learners tend to produce both correct and ungrammatical structures when they learn a foreign language, the ungrammatical errors produced by the students have also been considered when annotating the data.

This MA Dissertation has been organized into 9 sections the introduction being the first one. In the second section, the grammatical aspect under analysis, i.e., Postmodification in the NP, has been examined with regards to the syntactic functions, the types of postmodification both in noun-headed and in pronoun-headed NP. It is in the third section where a review of previous studies on NP modification in learner's language will be provided. Then, the research questions of this study will be presented in Section 4 and the methodology employed for this study, which includes an explanation on the learner corpora selected, the annotation procedure employed the data retrieval and statistics, will be described in Section 5. The results obtained will be offered in Section 6 and they will be tightly bound to the research questions in Section 4. It will be in Section 7 where the more relevant conclusions reached after having analyzed the data will be revealed. To finish off, in Section 8, the bibliography consulted will be offered, and Section 9 shows the appendices created.

2. THE NOUN PHRASE IN ENGLISH

A NP, also known as Nominal Group (Downing, 2015) consists of a word or a group of words which may point out people, places, institutions, objects, qualities, or activities amongst others (Downing, 2015).

The prototypical structure of a NP comprises the next five grammatical elements:

¹Determiner + Premodifier + *Head* + Complement as Postmodifier + Postmodifier

Depending on the grammar selected, there will be variations on the terminological words employed. Carter and McCarthy (2006), de Haan (1989) and Huddleston and Pullum (2005) distinguish between determiners and pre-head modification before the head of the NP. Whereas Quirk et al. (1985) differentiate between both elements and opt for determinatives and premodification, Greenbaum and Quirk (1990, p. 364) employ the term *premodification* which encompassed “all the items placed before the head-notably determiners, adjectives and nouns.”

Table 1 shows the major components found in the NP using examples:

	Pre-Head		Head	Post-Head		References
	Determiner	Premodifier		Complement	Postmodifier	
(1a)	The	summer	<i>celebration</i>			(My own example)
(1b)	The		<i>celebration</i>		[which takes place in summer]	(My own example)
(2)	A	nice	<i>day</i>		[at the beach].	(Carter & McCarthy, 2006, p. 318)
(3)			<i>shouts</i>	of expectation.		(Downing, 2015, p. 362).
(4)	The		<i>fact</i>	that I haven't succeeded.		(Biber et al., 2021, p. 568).
(5)	A	young	<i>woman.</i>			(Huddleston & Pullum, 2005, p. 84).

¹ In the examples provided, the *head* of the NP is italicized and the postmodifiers are placed in square brackets.

(6)	A	big	<i>one</i>		[in town].	(Biber et al., 2021, p. 568).
(7)			<i>nothing</i>		[new].	(Downing, 2015, p. 372).

Table 1. Structure of the Noun Phrase (my own design)

In pre-head positions, we may find determiners such as articles, demonstratives, or possessives and premodifiers. Complements and postmodifiers are located in post-head positions. Syntactically premodifiers, postmodifiers and complements are not usually essential whereas determiners and heads are core elements in the NP as in (5) in Table 1.

(5) A young *woman*

(Huddleston & Pullum, 2005, p. 84)

In (5), the head of the NP *woman* is essential to understand the phrase. Nonetheless, the Adjectival Phrase [young] which premodifies *woman* is not a core element in the NP.

The head of the NP can be premodified or postmodified by another element. Thus, there are two types of modification. Premodification occurs when the premodifier precedes the head of the NP as in (2):

(2) A nice *day* [at the beach]

(Carter & McCarthy, 2006, p. 318)

In (2), the adjective *nice* premodifies the head of the NP *day*. Whereas in postmodification, postmodifiers follow the head as in (7) in which *nothing* is postmodified by the Adjectival postmodifier *new*.

When examining pre-head positions and in line with Quirk et al. (1985, p. 1242, as cited in Pastor, 2009, p. 31) premodifiers are “semantically less explicit than postmodifiers” since premodification allows for the elicitation of prepositions, for instance. In (1a), nominal premodification is used with the noun *summer*, whereas in (1b) the sentence denotes the same meaning than in (1a) but the NP *the celebration* contains a relative clause [which takes place in summer] functioning as its postmodifier. Therefore, postmodifiers could be said that they are more explicit than premodifiers.

- | | |
|---|------------------|
| (1a) The summer <i>celebration</i> | (My own example) |
| (1b) The <i>celebration</i> [which takes place in summer] | (My own example) |

Biber et al. (2021, p. 527) conducted a corpus-based analysis of written and spoken texts in English to examine the use of NPs in diverse text registers like conversational texts, fictional texts, news, and academic writings. They discovered that in all these registers, the number of NPs containing premodification was higher than those containing postmodification. Moreover, NP modification was not a prominent feature of conversation, while speakers or writers in academic and news opted more for modification in these registers. Besides, postmodification was more representative and frequent in academic papers than in the rest of registers (Biber et al., 2021).

Biber et al. (2021, p. 580) also predicted that NP with postmodifiers were normally employed to denote a “first mention of a referent in a text”, for the second mention speakers and writers opted for NP premodification, and then for the usage of a simple noun reference. Finally, pronouns are used for final mentions as in (8) taken from an academic text:

- (8) Deterministic dynamical systems of three or more dimensions → such systems
 → living systems → some biological systems → they → others
 (Biber et al. 2021, p. 581)

Eisenberg et al. (2008) investigated the way 5-, 8- and 11-year-old L1 English learners created and incorporated NPs in their oral language while they were recounting fictional stories. The main aim of this research was to explore the age at which learners can produce both simple and complex NPs. To achieve this goal, NPs were grouped into as proposed by (Eisenberg et al., 2008, p. 149):

Simple NPs as in (9a), simple descriptive NPs as in (9b), complex descriptive NPs as in (9c) and complex NPs with postmodification as in (9d). This classification was similar to the one followed by Valkova & Kořínková (2015).

- | | |
|---|----------------------------------|
| (9a) The <i>boy</i> | (Eisenberg et al., 2008, p. 149) |
| (9b) A [little] <i>boy</i> | (Eisenberg et al., 2008, p. 149) |
| (9c) The [weird] [yellow] <i>object</i> | (Eisenberg et al., 2008, p. 149) |
| (9d) A <i>dog</i> [that had fur] | (Eisenberg et al., 2008, p. 149) |

Eisenberg et al. (2008, pp. 145-152) concluded that all students at the age of 5 could utter simple NPs, when learners were 8 they could elaborate simple descriptive NPs, whereas it was at the age of 11 when all students produce NPs with postmodification. Nonetheless, there was an increase in the number of complex descriptive NPs and complex NPs when learners were aged from 5 to 11 but most of the learners at the three ages employed more postmodification than complex premodification as Eisenberg et al. (2008) noticed.

Eisenberg et al. (2008, p. 155)'s study supports Durrant and Brenchley (2022, pp. 20-21)'s hypothesis that NP elaboration and complexity experiments a major development during school years. In line with Eisenberg et al. (2008), the contrastive study conducted by Sånglöf (2014, p. 22)'s showed that monolingual students make made more use of postmodification.

Then, the head of NP is located. Heads are the most relevant elements within phrases since the rest of elements depend on them. In NPs, the head may be a noun or a pronoun (Downing, 2015, p. 362), as in (6) and (7):

(6) A big *one* [in town] (Biber et al., 2021, p. 568)

(7) *Nothing* [new] (Downing, 2015, p. 372)

In (6), the pronoun *one* functions as the head of the NP creating a pronoun- headed NP and in (7), the pronoun *nothing* is the head of the NP.

Therefore, the type of head of the NP (noun-headed NP and pronoun-headed NP) and their corresponding postmodifiers will be examined in Sections 2.1. and 2.2, respectively.

As Downing (2015, p. 413) stated, NPs can perform any syntactic function in the clause except for the one of the Predicator. The most common syntactic functions of NPs are summarized in Table 2:

Syntactic function	Example
Subject	(10) <i>The best players</i> were here. (My own example)
Direct Object	(11) The committee engaged <i>the best player available</i> . (Downing, 2015, p. 413)
Indirect Object	(12) They offered <i>the best player available</i> a high salary. (Downing, 2015, p. 413)
Subject complement	(13) Bale seemed to be <i>the best player available</i> . (Downing, 2015, p. 413)
Object complement	(14) Everybody considered him <i>the best player available</i> . (Downing, 2015, p. 413)
Adverbial	(15) She will announce her wedding <i>the following week</i> . (My own example)
Apposition	(16) Cristiano Ronaldo, <i>the best player</i> , is in Madrid. (My own example)
Complement	(17) They paid a high price for <i>the best player available</i> (Downing, 2015, p. 413)

Table 2. Syntactic functions of the NP (Downing, 2015, p. 413)

Quirk and Greenbaum (1973) agree with Downing (2015) about the different syntactic functions played by the NP in clauses. Quirk and Greenbaum (1973, pp. 167-168) state that depending on these syntactic functions may be classified into two categories.

Firstly, complementation encompasses Direct objects, Complements and Adverbials since they are “obligatory elements” in a clause as they are compulsory for the complementation of the verb (Quirk & Greenbaum, 1973, p. 167).

- (18) We have proved him a fool (Quirk & Greenbaum, 1973, p. 167)
 (18a) We have proved * a fool
 (18b) We have proved him *

In (18), *him* is a pronoun-headed NP functioning as the Direct object and *a fool* is a Noun-headed NP which functions as an Object Complement. The sentence is incomplete if one of these syntactic functions is excluded as in (18a) which has not got the Direct object *him* or (18b) which lacks Object Complementation *a fool*. Nonetheless, Quirk and Greenbaum (1973, p. 167) also point out that in certain cases, the Direct object or the Object Complement may have a grammatical optional character as in (18):

- (19a) He made her career a success (Quirk & Greenbaum, 1973, p. 167)
 (19b) He made her career (Quirk & Greenbaum, 1973, p. 167)

In (19a), the NP *a success* functions as the Object Complement of the clause and it may be omitted since the clause in (19b) is grammatically correct.

Secondly, optional adverbials can be added to the clause to provide further details as in (20).

(20) She passed the exam last week (My own example)

In (20), the NP *last week* functions as an optional time adverbial as it gives more details about the action expressed by the verb, and it is not a compulsory element to understand the nuance expressed by the clause. At this point, it is relevant to mention that Quirk and Greenbaum (1973, p. 207) consider that it is less common to find a NP playing the syntactic function of Adverbial as in (19).

2.1. Postmodification in the noun-headed NP

Postmodifiers provide additional information about the head of the NP. They are post-head elements, nonetheless, they differ from complements since complements normally come from verbs and they are normally introduced by a preposition like in (3) of Table 1:

(3) *Shouts of expectation* (Downing, 2015, p. 362)

In (3), the head of the NP *shouts* is followed by a complement introduced by the preposition *of* and it is *of expectation*.

Moreover, there are abstract nouns such as *fact* in (4) of Table 1, which introduces a complement *that I haven't succeeded*, which is in turn developed as a content clause (Downing, 2015, p. 364).

(4) The *fact* that I haven't succeeded (Biber et al., 2021, p. 568)

Another example is (21) below, in which *belief* is the head of the NP, and it is an abstract noun which is followed by a complement functioning as a post-head element within the NP.

(21) His *belief* that he is always right (Downing, 2015, p. 364)

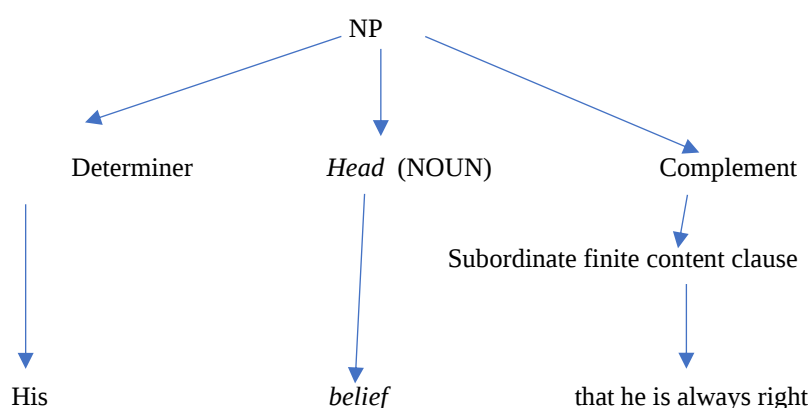


Figure 1. Syntactic analysis of a NP with complement (my analysis)

In (2) and (6), we find postmodifiers and there are not any complements postmodifying the head. Please, notice that example (2) is a noun-headed NP and example (6) is a pronoun-headed NP. In (2), the head of the NP *day* is premodified by the adjective *nice* and then it is also postmodified by the PP *at the beach*.

(2) A nice *day* at the beach

(Carter & McCarthy, 2006, p. 318)

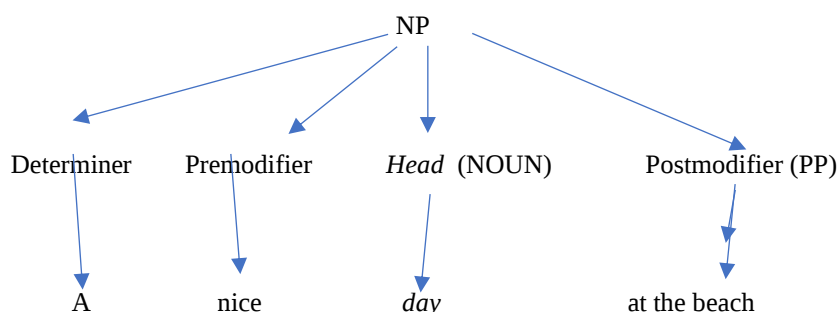


Figure 2. Syntactic analysis of a noun-headed NP (my analysis)

In (6), the head of the NP is the pronoun *one* which is premodified by the adjective *big* and it is also postmodified by the PP *in town*

(6) A big *one* in town

(Biber et al., 2021, p. 568)

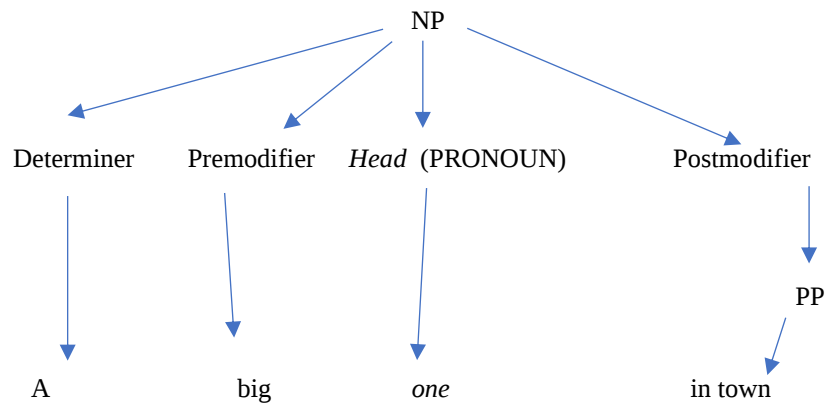


Figure 3. Syntactic analysis of a pronoun-headed NP (my analysis)

According to Downing (2015, pp. 401-402), postmodifiers can fulfill two functions in the sentence:

1. To provide essential information allowing the hearer/reader to specify and identify the referent of the NP. In (22) the postmodifier is in square brackets, and it helps the audience to identify the house the speaker is referring to. In this case, postmodifiers can be specified as defining or restrictive since they are embedded in the NP, and they give relevant details to recognize the house.

(22) This is the *house* [where the Prime Minister lives] (Downing, 2015, p. 402)

2. To give supplementary or additional information about the referent once it has already been specified or mentioned as in (23). Downing (2015, p. 402) refers to this type of postmodifier as “non-defining, non-restrictive or supplementive” in nature as it is not embedded in the NP structure. As Biber et al. (2021, p. 596) pinpoint non-restrictive postmodifiers tend to be included between commas to differentiate the head of the NP from the postmodifiers, whereas no punctuation is employed with restrictive postmodifiers as in (21).

(23) This is *Number 10 Downing Street*, [where the Prime Minister lives] .

(Downing, 2015, p. 402)

In (23), the postmodifier [where the Prime Minister lives] is non-defining since it provides extra information about the head of the NP *Number 10 Downing Street* and it is also placed in between commas.

2.1.1. Main realizations of the Postmodifiers

Postmodifiers can show different realized realizations. They can be divided into two types. On the one hand, we find the most frequent and main types of realizations of the postmodifiers as summarized in Table 3 (following Downing, 2015 and Biber et al., 2021), which will be examined in this section.

Realization	Example	References
NP in apposition	(24) They invited <i>my wife</i> [Lucy].	(Huddleston & Pullum, 2005, p. 96).
Adjectival Phrase	(25) A <i>drawer</i> [full pens and pencils].	(Carter & McCarthy, 2006, p. 324)
Adverbial Phrase	(26) [...] I am a <i>block</i> [behind].	(Biber et al., 2021, p. 599)
Prepositional Phrase	(27) An ancient market <i>town</i> [in the heart of the country].	(Carter & McCarthy, 2006, p. 325)
Reflexive Pronoun	(28) the <i>Americans</i> [themselves].	(Downing, 2015, p. 403)
Finite and non-finite Relative clause	Restrictive relative clause (29a) <i>Politicians</i> [who make extravagant promises] aren't trusted. Non-restrictive relative clause (29b) <i>Politicians</i> , [who make extravagant promises], aren't trusted.	(Huddleston & Pullum, 2005, p. 187). (Huddleston & Pullum, 2005, p. 187).
Non-finite clause (-to clause, -ing clause and -ed clause)	-to clause (30) The way [to go to our home]. -ed clause (31) A <i>letter</i> [written by his uncle]. -ing infinitive (32) That short fat <i>man</i> [walking through the shop].	(Biber et al., 2021, p. 598) (Huddleston & Pullum, 2005, p. 96). (Carter & McCarthy, 2006, p. 325)

Table 3. Main Realizations of the postmodifiers (my design based on Downing, 2015, p. 403)

On the other hand, we also encounter minor types of realizations of the postmodifiers (See Table 5), which will be revised in Section 2.1.2. named *Minor realizations of the Postmodifiers* of this MA Dissertation.

2.1.1.1. Noun Phrases in Apposition

An apposition, also known as an appositive unit or apposite NP, may be defined as “a nominal unit that has the same referent” (Downing, 2015, p. 408). It can be integrated within the NP as in (33) or supplementary as in (34).

- (33) My *friend* [Jim] (Carter & McCarthy, 2006, p. 576)

- (34) *Neil Armstrong*, [the first man on the moon] (Downing, 2015, p. 409)

Appositions are quite common in news since they allow the writer to provide further information about a noun to “clarify the referent of a proper noun” (Biber et al., 2021, p. 578).

- (35) *Princess Alice*, [Duchess of Gloucester] (Biber et al., 2021, p. 578)

Appositions may be acronyms like *IAS* in (36) or chemical or mathematical formulas like *[HCl]* in (37):

- (36) *IAS* [Institute of Advanced Studies] (Biber et al., 2021, p. 634)

- (37) *Hydrogen chloride, [HCl]* (Biber et al., 2021, p. 634)

Biber et al. (2021, p. 633) state that they are more frequent in news and in academic prose and they do normally modify a proper noun as in (38) taken from a news text of Biber et al. (2021)'s corpus or a technical name as in (39) taken from an academic text of Biber et al. (2021)'s corpus.

- (38) *Vladimir Ashkenazy*, [one of the world's greatest pianists].
(Biber et al. 2021, p. 633)

- (39) *Another technique* [(the ‘Wheeler linkage’)] (Biber et al. 2021, p. 634)

Durrant and Brenchley (2022) pointed out that appositions were more common in native English learners' writing than in the one of adults since students employed them to refer to texts.

2.1.1.2. Adjectival Phrases

Downing (2015, p. 407) indicates that single adjectives are not very commonly used as postmodifiers as in (40).

(40) *something* [nice] (Downing, 2015, p. 407)

Please, notice that in the previous example the head of the NP is an indefinite pronoun *something*, as it will be examined in Section 2.2.

Dyjáková (2014, p. 31) establishes that postmodifying adjectives in the NP can be classified into obligatory (in those cases the Adjectival Phrase is placed after the NP) as in (41) or optional as in (42a) and (42b) in which the Adjectival Phrase *absent* may precede or postpone the NP.

(41) *A girlfriend* [more beautiful than you] (Dyjáková, 2014, p. 32)

(42a) *The pupils* [absent] (Dyjáková, 2014, p. 34)

(42b) *The* [absent] *government* (Dyjáková, 2014, p. 34)

2.1.1.3. Adverbial Phrases

Adverbial Phrases can also function as postmodifiers of the NP. Downing (2015, p. 408) signals that they may denote the notions of “space, time and reason.” In (43), the adverb *after* postmodifies the head of the NP *week* expressing the notion of time.

(43) He came and left the *week* [after]. (Downing, 2015, p. 408)

(44) The *road* [back] is dense with traffic. (Quirk et al., 1985, p. 1293)

Moreover, subordinate relative adverbial clauses may also be used as postmodifiers of a NP as in (45), in which *where* introduces a relative adverbial clause that is in turn postmodifying the head of the NP *university* as explained by Downing (2015, p. 408).

- (45) She took her degree at the *university* [where she was studying].
(Downing, 2015, p. 408)

At this point, it is important to mention that Huddleston & Pullum (2005, p. 96) do not include adverbial Phrases as a post-head modifier in their grammar.

2.1.1.4. Prepositional Phrases

Downing (2015, p. 407) and Biber et al. (2021, p. 601) share the idea that PPs are the most usual type of postmodifiers as in (46) and (47). In (46) we find a defining postmodifier since it is integrated in the NP. In contrast, in (47), the postmodifier is non-defining.

- (46) The *beginning* [of the film] (My own example)
- (47) The departure *time*, [at 5 o'clock in the morning], was uncomfortably early for most passengers. (Downing, 2015, p. 407)

Biber et al. (2021, pp. 600-602) considered that PPs were the most typical type of postmodifiers in all the registers examined except for conversation, which did not contain as much postmodification as the rest of text registers.

According to Biber et al. (2021, pp. 629-631), the most prominent prepositions introducing PP postmodifiers in their corpus were *of* and *in*. *For*, *on*, *to*, *with* appeared in the corpus in a to a minor extend. These authors also indicated that the use of the preposition *for* could be explained since this preposition has a wide variety of functions (Biber et al., 2021, pp. 629) as in (48) where *for* expresses measure and in (49) denotes a partitive construction.

- (48) a *yard* [of cloth] (Biber et al., 2021, pp. 630)
- (49) *one* [of your sons] (Biber et al., 2021, pp. 630)

Biber et al. (2021) explain that some PPs as in (50a) can be re-phrased using a relative clause with the copulative verb *be* and then followed by a PP complement as in (50b) to maintain a similar meaning:

- (50a) The car *keys* [on the table] (Biber et al., 2021, pp. 629)
(50b) The car *keys* [that were on the table]. (Biber et al., 2021, pp. 629)

Downing (2015) also pinpoints that PP postmodifiers may be coordinated as in (51) or embedded as in (52):

- (51) The *path* [over the cliffs] and [down to the beach]. (Coordinated)
(Downing, 2015, p. 407)
(52) The *pen* [on the table [of my office [in London]]]. (Embedded)

Pastor Gómez (2009) conducted a corpus-based analysis about the role of nouns as modifiers in the NP (53a) and postmodification by PPs (53b) using six corpora of written and spoken Present Day English.

- (53a) [drug] *addiction* (Pastor Gómez, 2009, p. 210)
(53b) an *addiction* [to drugs] (Pastor Gómez, 2009, p. 210)

In (53a), the head of the NP is the noun *addiction* which in turn, is premodified by the noun *drug*. Whereas in (53b), the noun *addiction* is postmodified by the PP *to drugs*.

Pastor Gómez (2009, p. 206) discovered that non-narrative genres like news included more Noun+Noun structures than narrative genres. Moreover, American English speakers more often opted for this type of NP structure than British speakers. Pastor Gómez (2009, p. 211) indicated that a plausible reason for the selection of nominal modifiers over the PPs as postmodifiers may be that PPs “are more ephemeral and less context dependant”.

Furthermore, Durrant and Brenchley (2022, pp. 2-12) centered on the written language development of students in England aged from 6 to 16 to uncover the way NP complexity differs across diverse genres, which were literary and non-literary texts. This study also compares learners’ writing with the one of adults. They realized that NP complexity increases across the

diverse year groups, but these authors did not find an outstanding distinction in NP complexity between literary and non-literary texts. The use of PPs, relative and participial clauses increased through years in children's written language.

Durrant and Brenchley (2022, p. 16) discovered that adults tend to employ more multiple and embedded PPs as NP postmodifiers than learners in year 11 "27 per cent of the students' NPs were either embedded or embedded within another PP". Durrant and Brenchley (2022, pp. 20-21) concluded that NP complexity normally takes place during the educative levels of primary and secondary education and in the case of PPs and RC their frequency and complexity boosts as learners mature.

2.1.1.5. *Reflexive pronouns*

As Biber et al. (2021, p. 599) mention, reflexive pronouns can be used in apposition for emphatic purposes as in (54).

(54a) *She* [herself] painted her car (My own example)

(54b) They take [themselves] too seriously, they exaggerate
(Brinton & Brinton, 2010, p. 238, as taken from the COCA corpus)

In (54), the third person reflexive pronoun *herself* underscores that the agent of the action is the subject *she*. In line with Downing (2015, p. 403), we have decided to examine them in a single subsection of this MA Dissertation instead of integrating them under Section 2.1.1.1 as they are a NP in apposition. In (54b), the reflexive pronoun *themselves* refers to the subject of the sentence *They*.

2.1.1.6. Relative clauses

Relative clauses (RC) are a type of finite and non-finite subordinate clauses which normally function as postmodifier of a NP.

(55) The *boy* [who opened the door]. (My own example)

Example (55) consists of a NP whose determiner is *the* and the head of the NP is the noun *boy*. There is a RC *who opened the door*, which functions as a postmodifier of the head. In (55) the postmodifier is a finite subordinate RC, which is introduced by the relative pronoun *who* functioning as the subject of the RC. The relationship between the relative pronoun *who* and its referent *boy*, which is known as anaphora. According to Huddleston and Pullum (2005, p. 183), the relative pronoun is “anaphorically related” to the antecedent in terms of meaning.

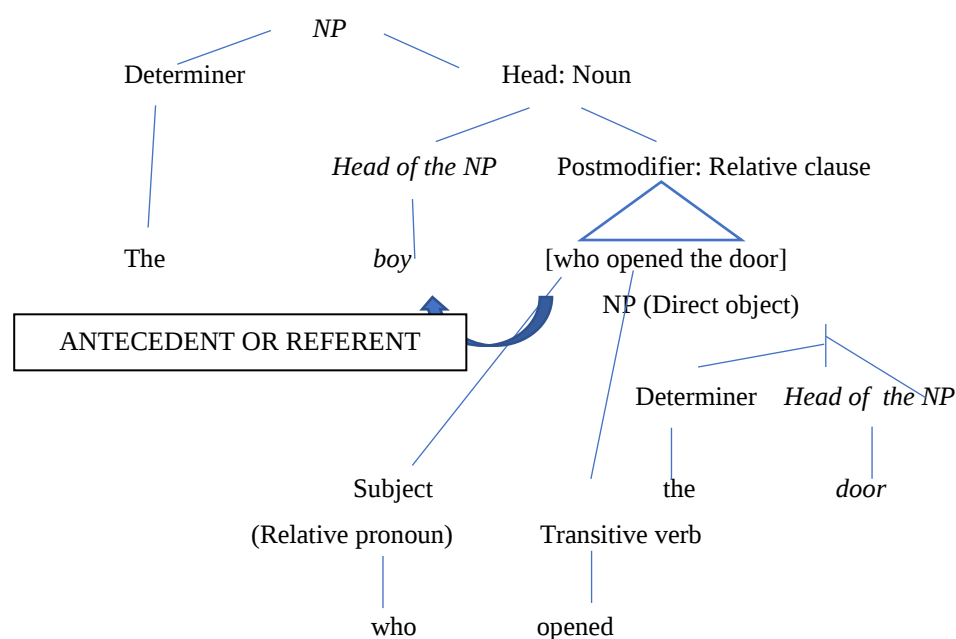


Figure 4. Syntactic analysis of a Relative clause functioning as a postmodifier (my analysis)

The head of the NP functions as the antecedent of the relative pronoun. It is the relative pronoun the one which introduces the finite subordinate RC, as shown in (56):

(56) She is the *girl* [who came to the party]. (My own example)

In (56) the relative pronoun *who* is related to the head of the NP which is *girl*.

2.1.1.6.1. Types of Relative clauses

According to Carter and McCarthy (2006, p. 566), defining or restrictive RCs define the antecedent and provide essential and relevant information.

(57) This is the *girl* [that went to the cinema]. (My own example)

In (57), the RC defines *the girl* and restricts and selects the girl from a set. Therefore, the meaning expressed by the RC is crucial to define the person we are referring to.

Biber et al. (2021, p. 610) encountered that there was an inclination for the use of *which* in restrictive RCs in academic texts since it has a more “conservative and academic character”. On the contrary, due to the “informal, and colloquial” character of *that*, it is more frequent in conversation and fictional texts.

Non-defining or non-restrictive RCs following Carter and McCarthy (2006, p. 566), provide extra and optional information about the antecedent. Non-defining RCs are normally placed in between commas, parentheses, or dashes. They always require a relative pronoun.

(58) My *aunt*, [who studies in Madrid], is a teacher. (My own example)

This RC provides further information which is not necessary to distinguish the person we are referring to. In these constructions, the relative pronoun cannot be omitted.

Biber et al. (2021, p. 610) observed that *which* and *who* are more frequently employed in non-restrictive or non-defining RCs, while *that* is hardly ever observed in this type of clauses. As Biber et al. (2021, p. 610) points out, when *that* is employed in a non-restrictive RC, “it often occurs in a series of postmodifiers and is used for special stylistic effect” as in (59) taken from a fictional text of Biber et al. (2021) ‘s corpus.

(59) Here one might say to those sliding lights, those fumbling *airs*, [that breathe and bend over the bed itself] [...].

(Woolf, 1927, as cited in Biber et al., 2021, pp. 610)

According to Huddleston and Pullum (2005, p. 185) and considering the content or meaning pointed out by the antecedent, relative pronouns are *who*, *which*, *when*, *where*, *why*, *that*, *whose*, and *whom*.

Biber et al. (2021, pp. 604-605) indicated that the three most outstanding relative pronouns in their corpus-based study were *that*, *which* and *who*, but their usage fluctuated across registers. For instance, *which* is quite common in academic prose. However, in conversation there is a preference for the use of *that* instead of *which*.

Parrott (2000, p. 413) mentioned that some native speakers employ *what* as a relative pronoun as a substitute of *that* as in (60), which is not a correct sentence.

(60) That is the *problem* [*what / that I have to understand] (Parrott, 2000, p. 413)

The relative pronoun *that* may be omitted, so in those circumstances it may have an optional character. Nonetheless, *that* is compulsory when it functions as the subject of the dependent RC as in (61).

(61) The *lady* [who/that runs this shop] has just moved.
(Carter & McCarthy, 2006, p. 922)

The relative pronoun *that* does not tend to introduce non-defining RC, except in informal spoken usage, as Carter and McCarthy (2006, p. 572) state. Example (62) is a non-defining RC. The most common relative pronoun to be used is *who* as in (62a), nevertheless *that* may be employed in informal or oral language as in (62b)

(62a) *Mr. Jones*, [who studies in Oxford,] is my cousin. (My own example)
(62b) *Mr. Jones*, [that studies in Oxford,] is my cousin. (My own example)

2.1.1.6.2. Syntactic functions of Relative clauses

Table 4 outlines the main syntactic functions of RCs following Carter and McCarthy (2006), Brinton and Brinton (2010) and Quirk and Greenbaum (1973).

Syntactic function of the RC	Example
Subject	(63) The <i>student</i> [who lives in Paris] is here. (My own example)
Direct Object	(64) Mary gave me the <i>ball</i> [which was placed on the table.] (My own example)
Object of a preposition	(65) The girl [who(m) he spoke to.] (Quirk & Greenbaum, 1973, p. 379)
Indirect Object	(66) The only <i>person</i> [to whom I will tell the entire story.] (Adapted from Brinton & Brinton, 2010, p. 262)
Reason Adjunct Adverbial	(67) I see no <i>reason</i> [(why) we can't all just get alone.] (Brinton & Brinton, 2010, p. 260, as taken from the COCA corpus)
Time Adjunct Adverbial	(68) Had it happened <i>last year</i> [when she hit thirty?.] (Brinton & Brinton, 2010, p. 260, as taken from the COCA corpus)
Place Adjunct Adverbial	(69) I look for a <i>place</i> [where she can not see me.] (Brinton & Brinton, 2010, p. 260, as taken from the COCA corpus)

Table 4. Syntactic functions of relative clauses following Carter and McCarthy (2006, p. 568), Brinton and Brinton (2010, pp. 260-263) and Quirk and Greenbaum (1973, p. 379)

2.1.1.6.3. Special cases of Relative clauses

In this section some particular cases of RCs will be examined. Initially, attention will be paid to zero relative pronoun clauses and then describe non-finite relative clauses, sentential relative clauses, and cleft relative sentences.

Firstly, Zero Relative pronoun clauses are a subtype of RCs in which the relative pronoun has been omitted. As Carter and McCarthy (2006, p. 574) highlight, zero relative clauses do not occur in non-defining RCs. In (70) the relative pronoun *which* has been elicited in a defining RC.

(70) The *table* [I saw]. (Quirk & Greenbaum, 1973, p. 381)

(Which) (that) Ø relative

(71) The *shop*, [which is next to her house], is expensive. (My own example)

While in contrast, in (71), the relative pronoun *which* cannot be omitted since it is used in a non-defining RC as formerly explained in Section 2.1.1.6.1, non-defining RCs always require a relative pronoun.

Biber et al. (2021, p. 615) noticed that the preference for a zero relative clause depends on whether the subject of the RC is a pronoun or a full NP. When the subject of the RC is a pronoun, there is a predominance for the omission of the relative pronoun, whereas “in a full NP functioning as subject, most RCs retain the relative pronoun.” (Biber et al., 2021, p. 615).

Secondly, Non-finite relative clauses are those RCs in which a non-finite clause functions as the postmodifier of a NP.

In (72), the verb of the subordinate RC is a non-finite to-infinitive form, *to keep*, and (73) contains a non-finite -ing clause, *standing in the corner now*. Example (73) also includes an omission of the relative pronoun *who* and of the auxiliary verb *is*.

(72) We found a big *box* [in which to keep the CDs].
(Huddleston & Pullum, 2005, p. 212)

(73) The *girl* [standing in the corner now] is my sister.
(Quirk & Greenbaum, 1973, p. 378)

(who is) Ø relative pronoun

Thirdly, Sentential relative clauses are a subtype of *which* relative clauses “referring to a whole sentence or stretch of discourse. They are employed in “informal spoken language to express an evaluation” (Carter & McCarthy, 2006, p. 566). Example (74) is a sentential relative clause since the antecedent of the RC is the former idea previously mentioned in the main clause, *he is always complaining*.

(74) He is always complaining, [which annoys Sarah]. (My own example)

Finally, Cleft relative clauses or Wh-clefts, following Downing (2015, p. 230) are a particular type of defining RCs which share the form of the it-cleft construction.

(75a) It was *Ann* [who arrived late]. (My own example)

(75b) *Ann* arrived late. (My own example)

Example (75a) may be rephrased as a simple clause as in (75b). The speaker or writer opts for a cleft relative clause as in (75a) to place the focus or emphasis on the doer of the action *Ann*.

2.1.1.7. Non-finite clauses

Biber et al., (2021) and Downing (2015) agree on the idea that there are three main types of non-finite clauses functioning as postmodifiers of the NP, namely To or infinitive non-finite clauses, -Ed non-finite clauses and -Ing non-finite clauses. They all have nonfinite verbs which do not inflect for verbal tense. Parrott (2000, p. 427) noticed that English native speakers make more use of non-finite clauses as NP postmodifiers than students of English.

The first type of non-finite clauses is known as To or infinitive non-finite clauses. According to Downing (2015, p. 407), non-finite clauses can postmodify a NP functioning as:

Subject: (76) The *man* [to help you] is Mr Johnson. (Quirk et al., 1985, p. 1266)

Direct Object: (77) She has *nothing* [to study]. (My own example)

Complement: (78) The commonest kind of *worker* [to become nowadays] is an unemployed one. (Downing, 2015, p. 407)

Secondly, -ed non-finite clauses are also known as -en non-finite clause following Downing (2015, p. 403). As Biber et al. (2021, p. 625) state, -ed non-finite clauses “correspond directly to the passive in finite clauses” as in (79), whereas -ing non-finite clauses are more related to “finite progressive aspects verbs” as in (80).

(79) [...] The *decision* [taken by the headteacher]. (My own example)

was

(80) A military *jeep* [travelling down Beach Road][...] (Biber et al., 2021, p. 625)

was

-Ing non-finite clauses (as in 81a) can be reformulated and the meaning expressed is similar to the one denoted by its corresponding finite RC (see example 81b). Downing (2015, p. 406) expresses that -ing non-finite clauses are the preferred option when the speaker /writer does not need to express verbal tense or aspect.

(81a) He wrote a *book* [containing his reminiscences of the five U.S. Presidents].

(Downing, 2015, p. 406)

(81b) He wrote a *book* [that contained his reminiscences of the five U.S. Presidents].

(Downing, 2015, p. 406)

These last two types of non-finite clauses functioning as postmodifiers are more common in academic prose in line with Biber et al. (2021) who detailed the most frequent verbs in the corpus used in *-ed* (see 83) and *-ing* non-finite clauses (see 82).

(82) being and containing: *-ing* non-finite clause (Biber et al. 2021, p. 625)

(83) based and given: *-ed* non-finite clause (Biber et al. 2021, p. 626)

2.1.2. *Minor realizations of the Postmodifiers*

Table 5 summarizes the main minor realizations of the postmodifiers based on Biber et al., (2021) and Greenbaum and Quirk (1990). They are Postmodifier Complex, Postponed mode qualifier, and Discontinuous modification.

Postmodifier Complex	(84) a <i>source</i> [of ideas and insights which are of particular relevance] [...]	(Biber et al. , 2021, p. 636)
Postponed mode qualifier	(85) <i>chicken</i> [à la king].	(Greenbaum & Quirk, 1990, p. 380)
Discontinuous modification	(86) You'll meet <i>a man</i> tomorrow [carrying a heavy parcel].	(Greenbaum & Quirk, 1990, p. 392)

Table 5. Minor realizations of the postmodifier by Biber et al., (2021, p. 636) and Greenbaum and Quirk (1990, pp. 379-380, 392)

Biber et al. (2021, p. 636) defined *postmodifier complex* as “a combination of postmodifiers, whether they represent one postmodifier embedded in another or a series of postmodifiers modifying a single head noun.” Example (87) presents a complex postmodifier since there are other postmodifiers integrated in the main NP as represented in Figure 5.

(87) a *source* [of ideas and insights which are of particular relevance] [...]

(Biber et al. , 2021, p. 636)

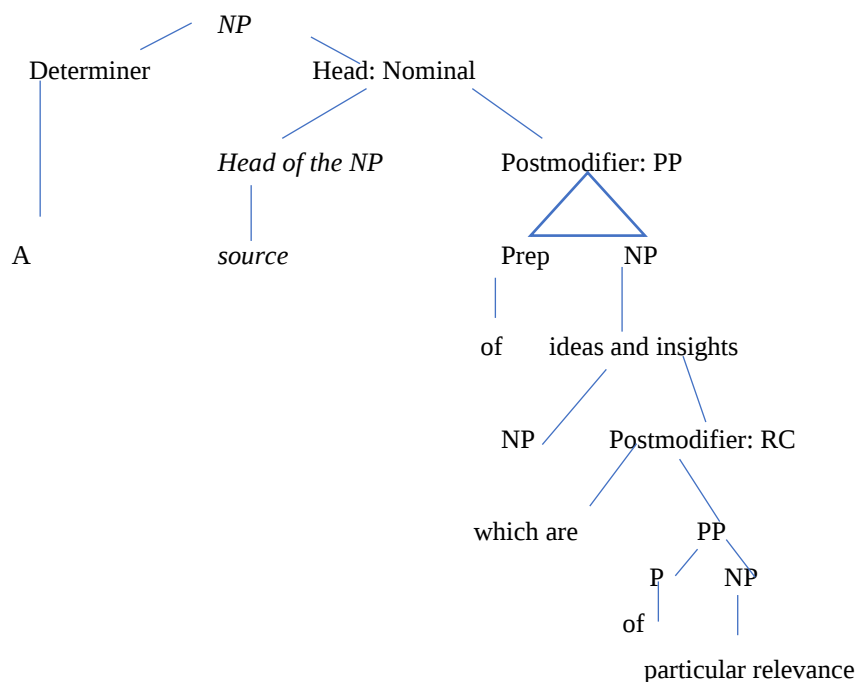


Figure 5. Syntactic analysis of a complex postmodifier (my analysis)

Greenbaum and Quirk (1990, pp. 379-380) indicate that “a *postponed mode qualifier*” is a special type of postmodifier. It is a French grammatical construction which is usually employed when referring to cuisine, and it is more frequently employed in American English than in British English. Syntactically, they could be analyzed as a PP functioning as the postmodifier of a noun as in (88) and (89).

(88) *chicken* [à la king]. (Greenbaum & Quirk, 1990, p. 380)

(89) Another *play* [à la Beckett]. (Greenbaum & Quirk, 1990, p. 380)

Nonetheless, modification does not always occur next to the head of the NP. There are certain cases labelled “discontinuous modification” (Greenbaum & Quirk, 1990, p. 392). In those grammatical constructions the head of the NP is separated from its modifiers and other syntactical elements are placed in between. In (90) the time adjunct *tomorrow* is placed between the head of the NP *a man* and the postmodifier *carrying a heavy parcel*.

(90) You’ll meet *a man* tomorrow [carrying a heavy parcel].
(Greenbaum & Quirk, 1990, p. 392)

2.2. Postmodification in the pronoun-headed NP

As stated above, the head of the NP can be either a noun or a pronoun. When the head is a pronoun, it may be premodified (see 6) and postmodified (see 7).

(6) A big *one* [in town] (Biber et al., 2021, p. 568)

(7) *Nothing* [new] (Downing, 2015, p. 372)

In (6), the pronoun *one*, which is the head of the NP is premodified by the Adjectival Phrase *big* and it is postmodified by the PP *in town*. In (7), the pronoun *nothing* is postmodified by the Adjectival Phrase *new*.

Biber et al. (2021, pp. 575-579) and Downing (2015, pp. 369-374) agree on the idea that personal pronouns, the pronoun *one*, indefinite pronouns and demonstrative pronouns allow for postmodification. Moreover, Downing (2015, p. 383) emphasizes that possessive pronouns also function as pronominal heads as *yours* in (97). Table 6 provides an example of each of these pronoun-headed NPs.

Form of the pronoun	Example
Personal pronoun	(92) <i>She</i> [who sat here before me] had not wasted her time, as I was doing. (Du Maurier, 1975, as cited in Biber et al., 2021, p. 575)
The pronouns <i>one/ones</i>	(93) You know the <i>one</i> [she ran off with]. (Biber et al., 2021, p. 576) (94) I know Mavis likes scarves, so I bought her some lovely <i>ones</i> . (Downing, 2015, p. 374)
Indefinite pronoun	(95) I was just saying <i>something</i> [like that], <i>something</i> [cheap]. (Biber et al., 2021, p. 577)
Demonstrative pronoun	(96) The simplest covalent structure is <i>that</i> [of diamond]. (Biber et al., 2021, p. 578)
Possessive pronouns	(97) This suitcase is <i>yours</i> . (Downing, 2015, p. 383)

Table 6. Postmodification in pronoun-headed NP following Biber et al. (2021, pp. 575- 578) and Downing (2015, pp. 369-374,383)

(91) Some fresh ones from the country (Downing, 2015, p .374)

In (91) the pronoun *ones* functions as a pronominal head, which is premodified by the Adjectival Phrase *fresh* and it also postmodified by the PP *from the country*.

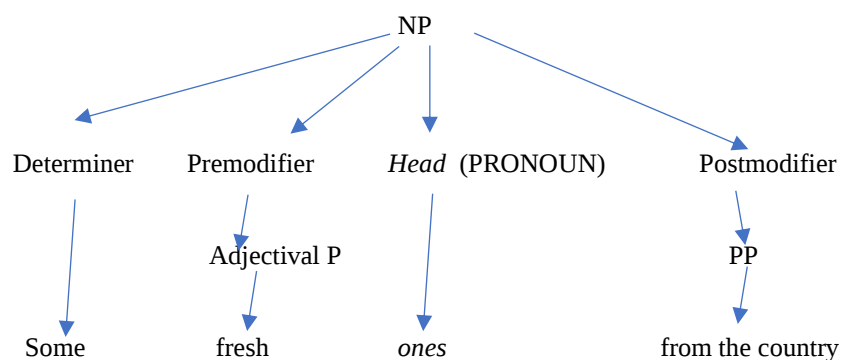


Figure 6. Syntactic analysis of a pronoun-headed NP (my analysis)

Biber et al (2021, p. 574) realized that in conversation, speakers employ pronouns more often than in “written non-fictional registers” where nouns are more frequently used.

3. NOUN PHRASE MODIFICATION IN LEARNER WRITING

In this section, a review of studies analyzing NP modification in EFL learner writing will be offered. This section will firstly cover the notion of NP modification in advanced and secondary school EFL student writing. Here, the research of Liu and Li (2016), Valkova and Kořínková (2015), and Díez-Bedmar and Pérez-Paredes (2020) will be presented.

Then, we will focus on a contrastive study conducted by Sånglöp (2014), which is based on NP premodification and postmodification by monolingual, bilingual and multilingual students of English in Sweden.

Liu and Li (2016) carried out a corpus-based contrastive analysis examining NP postmodification in the academic writing penned by English foreign language students. Liu and Li (2016, p. 48) analyzed and compared NP complexity and postmodification of two different corpora. One contains postgraduate MA Dissertations written by English Foreign language learners of applied linguistics in China and the other consists of research articles published in applied linguistics journals penned by professional writers.

To examine NP complexity, an automatic syntactic complexity analyzer developed by Lu (2010) was employed. Liu and Li (2016) only examined those NPs whose first postmodifier was a PP introduced by the preposition *of* as it was regarded as the most common PP in English (Liu & Li, 2016, p. 54, as cited in Biber et al., 1999, pp. 635- 642) and whose head noun was either *understanding*, *analysis* or *lack* as indicated by Liu & Li (2016, p. 56).

(98) an *understanding* ₁[of language ₂[as an ideational signifying system ₃[that plays a central role in how we understand ourselves and the world]₁]₂]₃

(Liu & Li, 2016, p. 54)

In (98) the head of the NP is *understanding* and it is postmodified by two PPs, the first is led by the preposition *of*, and the second one is introduced by the preposition *as*. Additionally, there is an embedded RC introduced by the relative pronoun *that*, which is postmodifying the head of an embedded NP that it is the noun *system*.

Moreover, the types of postmodifiers analyzed were centered on the ones proposed by Biber et al. (1999), like PPs or finite RCs. The results obtained revealed that learners academic writing was not as complex as the one of research articles as far as NP postmodification is concerned. Multiple postmodification was a feature more prominent in research articles and the most common pattern of multiple postmodification contained 2 or 3 successive postmodifiers as Liu and Li (2016, p. 62) observed (see 99).

(99) detailed text *analysis* [₁of the authentic student *pieces* [₂in the massive *database* [₃built by the “Experiencing English Writing” research group₃]₂]₁].
(Liu & Li ,2016, p. 59)

In (99) the head of the NP is the noun *analysis*, which is postmodified thrice using embedded and multiple postmodification. The first postmodifier is the PP [of the authentic student pieces]. In turn, the noun *pieces* is postmodified by the PP [in the massive database] which is also postmodified by the non-finite clause [built by the “Experiencing English Writing” research group].

At this point, the second research to be analyzed is the one of Valkova and Kořínková (2015) who also carried out a comparative analysis to investigate complex NPs. To do so, they examined written texts produced by Czech students of English with an advanced level and English native speakers. The texts were reports and reviews as they were supposed to include more complex NPs (Valkova & Kořínková, 2015, p. 81).

The results obtained revealed that Czech learners opted for the use of short NPs with one or two words. In contrast, English native speakers employed longer NPs. When examining the structure of NPs, Valkova and Kořínková (2015, p. 83) discovered that bare NPs as in (100) were both participants’ preferred option. Then, the use of NPs with only premodification as in (101) was more employed by Czech students of English than their counterpart.

English native speakers penned more NPs with only postmodification (102) and NPs with both premodification and postmodification (103) than Czech learners of English.

(100) The *teacher* - Bare NP

(Valkova & Kořínková, 2015, p. 83)

(101) The [new] *teacher*- Only premodification (Valkova & Kořínková, 2015, p. 83)

(102) The *teacher* [we hate]- Only postmodification

(Valkova & Kořínková, 2015, p. 83)

(103) The [new] *teacher* [we hate]- Both premodification and postmodification

(Valkova & Kořínková, 2015, p. 83)

Valkova and Kořínková (2015, pp. 84-85)'s analysis revealed that PPs and finite RCs were the most common type of postmodifiers among participants. Czech learners of English employed more -ed and -ing participle clauses than English native speakers and these Czech students of English minimize the use of appositive and infinitive clauses and appositions.

Thirdly, Díez-Bedmar and Pérez-Paredes (2020) conducted a cross-sectional study of NP complexity in the written compositions penned by Spanish students of English as a foreign language in secondary schools. Díez-Bedmar and Pérez-Paredes (2020, p. 10) aimed to investigate if NP complexity varies across different secondary school years. Therefore, students' aged were 12,13,16 and 17 respectively. They were asked to write about their favorite film (Díez-Bedmar & Pérez-Paredes, 2020, p. 11). They employed two methods to analyze the students' compositions. Firstly, a "Tool for the Automatic Analysis of Syntactic Sophistication and Complexity" (Díez-Bedmar & Pérez-Paredes, 2020, p. 4) was employed to identify the different syntactic constituents within each NP. Secondly, manual parsing was also conducted to classify NPs into four groups (Díez-Bedmar & Pérez-Paredes, 2020, p. 13). The first group contained simple NPs with a determiner, the second one included NPs with premodification, the third one consisted of postmodified NPs, and the final group included NPs containing both premodification and postmodification.

Díez-Bedmar and Pérez-Paredes (2020, p. 15) uncovered that the most frequent NP structure by all the participants was (det + N). Then, the second most common structure corresponded with the one of premodification (premodification+ N), and the least employed structures were the ones of postmodification (N+ postmodification) and both (premodification+ N+ postmodification). These results coincide with the ones reached by Valkova and Kořínková (2015) as bare NPs and premodification are more common than postmodification.

Díez-Bedmar and Pérez-Paredes (2020, p. 15) also discovered that students aged at 17 in Grade 12 incorporated in their writing more NPs with postmodification and with both types of modification than younger students in the research. This analysis also revealed that the most frequent types of postmodifier employed by all Spanish students were PPs, RCs and appositions. Díez-Bedmar and Pérez-Paredes (2020, p. 18) pointed out that the “the number of uses of NP type 19 corresponding with RCs increases with grade, whereas the number of uses of NP type 14 corresponding with PPs decreases with grade”. On the other hand, Adverb phrases and multiple NPs were the least frequent types of postmodifiers used. Furthermore, NPs including both premodification and postmodification were mostly employed by students aged at 16 and 17 and they tend to contain PPs and RCs or apposition functioning as postmodifiers. Díez-Bedmar and Pérez-Paredes (2020, p. 22) concluded that “the higher the grade, the more NP pattern types used.”

Finally, Sånglöp (2014, p. 2) compared the way NP are premodified and postmodified by three groups of students of English in Sweden considering their language background. Participants were monolingual, bilingual and multilingual upper secondary learners of English aged from 16 to 19 years old. For monolingual students both parents spoke Swedish, for bilingual students one parent spoke Swedish and the one parent a language different from Swedish, and for multilingual students both parents did not speak Swedish, but a foreign language (Sånglöp, 2014, p. 16).

The research questions proposed had to deal with the possible connection established between the NP structure employed and the language background of the learners. The written essays by the participants were manually analyzed considering the NP modification at phrasal and clausal level.

The results of the contrastive analysis conducted by Sånglöp (2014, p. 22) demonstrated that it was most common amongst all learners to employ postmodification (50%) than premodification (29%) and both pre and postmodification (22%), being monolingual students the ones who made more use of postmodification, and bilingual students the ones who employed more structures containing both pre and postmodification as in (104) taken from a bilingual student aged at 18:

(104) One [great] *memory* [that I have from the vacation in Spain]

(Sånglöv, 2014, p. 23)

In line with De Haan (1989, as cited in Sånglöv, 2014, p. 8) this study confirms that the most common type of postmodifiers are PPs, finite clause including relative and appositive that-clauses, and non-finite verb clauses. PPs is by far the most common type of postmodifier as multilingual learners used them “a 10% more frequently than bilingual students” (Sånglöv, 2014, p. 23), which reinforces Parkinson and Musgrave (2014, p. 49)’s statement that “PPs are the most common postmodifiers in twentieth century academic prose.”

4. RESEARCH QUESTIONS

The main goal of this MA Dissertation is to firstly characterize NP postmodification by CEFR B2 and C1 EFL learners and secondly, to reveal if there is any difference in their production of NP postmodification, considering the main and minor realizations of postmodifiers as examined in section 2.

Due to the nature and the classification of the data analyzed, four research questions have been designed and proposed:

Research question 1: Which NP postmodification type characterize learner writing at CEFR B2 and C1 levels?

Research question 2: Which are the most significant differences found in NP postmodification between B2 and C1 levels?

Research question 3: Are there any differences in NP postmodification considering text type?

Research question 4: Are there any differences in NP postmodification regarding language accuracy across levels and text types?

5. METHODOLOGY

In this section, the methodology followed will be described. Section 5.1 describes the learner corpus employed, Section 5.2 explains the annotation done, Section 5.3 centers on the data retrieval and Section 5.4 on statistics.

5.1. Learner corpus

The learner corpus under analysis is a subsection of the FineDesc Corpus (Díez-Bedmar, 2022)². This learner corpus consists of written CertAcles exams by L1 Spanish students at three CEFR levels, B1, B2 and C1. These texts have been rated by two independent expert raters.

The subsections of the FineDesc Corpus (Díez-Bedmar, 2022) used for this study are composed of learner writing at B2 and C1 levels in two text types, email writing and formal writing (see Tables 7.1 and 7.2).

Furthermore, there is a wide variety of text types in this selected corpus. When analyzing B2 texts, we may find informal emails and articles, whereas the types of C1 texts examined are formal emails and letters of endorsement. Overall, 132 texts and 31988 words have been analyzed.

Tables 7.1 and 7.2 show the numbers of texts and words regarding each text type.

B2 CORPUS		
Text type	Number of texts	Number of words
Informal email	33	7077
Argumentative text (Article)	33	7763
Total	66	14840

Table 7.1 Text types B2 corpus

C1 CORPUS		
Text type	Number of texts	Number of words
Formal email	33	8291
Letter of endorsement	33	8857
Total	66	17148

Table 7.2 Text types C1 corpus

² Project PID2020-117041GA-I00 funded by MCIN/AEI/10.13039/501100011033

5.2. Annotation

In this learner corpus analysis, all the types of postmodification in the NP have been firstly manually located and then annotated in each .txt file of the corpus. To achieve this goal, the taxonomy in Tables 8 and 9 has been created in order:

1. To determine whether the sentence is grammatically correct (c) or incorrect (i). The corpus has been manually error tagged since errors have been firstly detected and then annotated.
2. To identify the type of postmodification found in NPs.
3. To point out and specify the different subtypes and minor types of postmodification as previously examined in Sections 2.1.1 and 2.1.2.
4. To pinpoint Noun-headed and Pronoun-headed NPs.

The first letter in the taxonomy indicates if the postmodification employed is correct or incorrect. Then, the type of postmodification is identified. In the case of RCs functioning as postmodifiers, a further annotation has been used to provide a more detailed analysis. It includes the identification of the type of relative pronoun employed, followed by the type of RC: finite (f) or non-finite (nf), defining (d) or non-defining (nd) considering Downing (2015)'s terminology.

Table 8 shows the taxonomy designed to annotate Noun-headed phrases, whereas Table 9 the one employed to annotate Pronoun-headed phrases with their corresponding example:

Taxonomy for Noun-headed NP	Annotated example from the corpus (file)
(c_apposition)	(105) He has a B2, (c_apposition) a intermediate level (c_prep_phrase) of English (C1_100230b.txt)
(c_adjectival_phrase)	(106) It is a <i>time</i> (c_adjectival_phrase) full of joy. (B2_30091b.txt)
(c_adverbial_phrase)	(107) Two <i>years</i> (c_adverbial_phrase) ago, my best friend made me a craft book.(B2_30128b.txt)
(c_prep_phrase)	(108) He wants to get the best <i>result</i> (c_prep_phrase) for the bussines balance (C1_100222b.txt)
(c_reflexive_pronoun)	(109) <i>I</i> (c_pronoun_headed_reflexive_pronoun) myself am a strong supporter (c_prep_phrase) of this. (C1_100216a.txt)

(c_rel_clause_relativepronoun_f/nf_d/nd)	(110) hopefully create a <i>community</i> (c_prep_phrase) of people (c_rel_clause_who_f_d) who unite and make a change. (B2_30130a.txt) (111) o reduce the consume (c_prep_phrase) of <i>meat</i> , (c_rel_clause_which_f_nd) which has a negative impact (c_prep_phrase) on environment. (B2_30118a.txt)
(c_rel_clause_which_sentential)	(112) Furthermore, he is <i>self-confident</i> , (c_rel_clause_which_sentential) which I believe that it is a good point (c_prep_phrase) in any job. (C1_100215b.txt)
(c_zero_rel_clause_f/nf_d/nd)	(113) I will always remember the <i>present</i> (c_zero_rel_clause_f_d) I've got for one Christmas. (B2_30155b.txt) (114) For example he helped my with an English project, (c_zero_rel_clause_f_nd) I didn't understand anything [...] (C1_100230b.txt)
(c_rel_clause_cleft)	(115) It was the best <i>christmas</i> (c_rel_clause_cleft) I have ever had (B2_30091b.txt)
(c_rel_clause_nf)	(116) He is very friendly, sociable and handsome, what can help with any <i>job</i> (c_rel_clause_nf) treating with people. (C1_100207b.txt)
(c_nonfinite_clause_to_inf)	(117) Also, another <i>point</i> (c_nonfinite_clause_to_inf) to bear in mind is that meat production [...]. (B2_30127a.txt)
(c_nonfinite_clause_ed_clause)	(118) It was a <i>video</i> (c_nonfinite_clause_ed_clause) done per the whole family and friends. (B2_30140b.txt)
(c_nonfinite_clause_ing_clause)	(119) The <i>snow</i> (c_nonfinite_clause_ing_clause) falling from the sky, the <i>lights</i> (c_nonfinite_clause_ing_clause) brightning in the street. (B2_30109b.txt)
(c_minor_complexpostmod)	(120) Mine was a <i>doll</i> (c_prep_phrase) of my size (c_prep_phrase) with a beautiful pink <i>dress</i> (c_prep_phrase) with a shining tiara (c_prep_phrase) on her big head. (B2_30097b.txt)
(c_minor_postponed)	No examples have been found
(c_minor_discontinuous)	No examples have been found

Table 8. Taxonomy designed and employed to annotate Noun-headed Phrases in the corpus

Taxonomy for Pronoun-headed NP	Example from the corpus (file)
(c_pronoun_headed_adjectival_phrase)	(121) you would tell me that is <i>something</i> (c_pronoun_headed_adjectival_phrase) material (B2_30096b.txt)
(c_pronoun_headed_adverbial_phrase)	(122) I don't think I can do it <i>myself</i> (c_pronoun_headed_adverbial_phrase) alone (B2_30131a.txt)
(c_pronoun_headed_prep_phrase)	(123) I have known him since 2016 because <i>both</i> (c_pronoun_headed_prep_phrase) of us study English in the UNED.(C1_100230b.txt)
(c_pronoun_headed_rel_clause_f_d)	(124) I'll recommended him if you are looking forward <i>someone</i> (c_pronoun_headed_rel_clause_who_f_d) who has to take responsibilities. (C1_100256b.txt) (125) Every present per se is special, but the <i>one</i> , (c_pronoun_headed_rel_clause_that_f_d) that came directly from the heart are the <i>ones</i> (c_pronoun_headed_rel_clause_that_f_d) that stay with us the largest. (B2_30163b.txt)
(c_pronoun_headed_zero_rel_clause_f_d)	(126) I don't want to forget <i>anything</i> (c_pronoun_headed_zero_rel_clause_f_d) I have to tell you. (C1_100209a.txt)
(c_pronoun_headed_nonfinite_clause_to_inf)	(127)Waiting for <i>something</i> (c_pronoun_headed_nonfinite_clause_to_inf) to come up. (B2_30163b.txt)
(c_pronoun_headed_nonfinite_clause_ed_clause)	(128) Each <i>one</i> (c_pronoun_headed_prep_phrase) of you bring <i>something</i> (c_pronoun_headed_nonfinite_clause_ed_clause) cooked from home. (B2_30131b.txt)
(c_pronoun_headed_nonfinite_clause_ing_clause)	(129) Most of them have found <i>themselves</i> (c_pronoun_headed_nonfinite_clause_ing_clause) rethinking the change. (C1_100231a.txt)

Table 9. Taxonomy designed and employed to annotate Pronoun-headed Phrases in the corpus

It is relevant to consider the fact that instances of complex postmodification have been annotated independently and separately regarding the varied postmodifiers embedded in the core NP to get a more thorough analysis of postmodification as in (130).

(130) different types (c_prep_phrase) of advantages, (c_rel_clause_which_f_nd) which main one was "reducing the company footprint". (C1_100232a.txt)

In (130) the NP is headed by the noun *type* which is postmodified by a PP introduced by the preposition *of* and which is [of advantages]. In turn, there is also a non-defining RC which postmodifies the noun *advantages*.

5.2.1 Discarded cases

Certain decisions have been taken when categorizing the data. Initially, the Saxon Genitive ('s) construction has not been analyzed in this learner corpus research since as Downing (2015) proposes NPs are not a type of postmodification.

Secondly, prepositional verbs have not been analyzed as they consist of a combination of a verb followed by its corresponding preposition. Some instances are *apply for* in (131) or *deal with* as in (132):

(131) being able to *apply for* better jobs [...] (C1_100214b.txt)

(132) I send you this email in order to *deal with* of the decisions (C1_100253a.txt)

Furthermore, the two distinct functions of quantifiers when functioning as determiners or pronouns have also been considered. Therefore, instances in which the quantifiers are used as determiners followed by a noun have not been analyzed in this study as in (133) and (134):

(133) Not only I will spend **lots of** *time* searching recepies (B2_30149a.txt)

(134) I imagine you are having **a lot of** *meetings* (c_prep_phrase) with them.
(C1_100243a.txt)

Finally, fixed expressions like *step by step* as in (135) have also been discarded:

(135) I'll do it *step by step*. (B2_30093a.txt)

5.3. Data retrieval

In order to extract and analyze NP postmodification, AntConc Version 3.5.9 software (Anthony, 2020) has been employed to retrieve the examples by means of concordances. For instance, in the case of RCs, the different relative pronouns revised in section 2.1.1.6.1 have been located in the corpus and then analyzed considering the type of RC in which they are employed.

The KWIC sort has been personalized which has facilitated the location of linguistic context in which NP heads and their corresponding postmodifiers have been employed by the participants. The main goal was to obtain each instance in which participants produce postmodification in the NP. Then, a counting of each type of postmodification has been conducted to determine the number of instances found of each type.

5.4. Statistics

Normalization of data has been used to compare the findings obtained. To do so, we have followed the next procedure:

Firstly, a count of each type of postmodification has been carried out to discover the number of occurrences of a given postmodifier type in the learner corpus. Secondly, the number of occurrences of a given postmodifier has been divided by the number of words in the whole corpus (B2 or C1), and the result obtained is known as the ratio of normalization. Finally, the ratio of normalization has been multiplied by the constant 1000 which has enabled data comparison.

6. RESULTS AND DISCUSSION

In this chapter, the results obtained will be discussed. To provide a thorough answer to the research questions proposed in chapter 4, the same division into research questions will be employed here.

6.1. Research question 1: Which NP postmodification type characterize learner writing at CEFR B2 and C1 levels?

This first question revolves around the learners' use of NP postmodification taking into account their CEFR B2 and C1. Here, we will discuss the most and least frequent NP postmodification types employed by B2 and C1 learners as examined in section 2.

First of all, it is important to mention that noun-headed NPs with postmodification are more frequently employed by B2 and C1 learners in this corpus analysis than pronoun-headed NP with postmodification. As it is shown in Table 10, B2 and C1 students make more use of Noun-headed NP postmodification than in Pronoun-headed NPs to a similar extend. The percentage of Noun-headed NPs with postmodification employed by C1 learners is 49,9% compared to the 42,2% of B2 learners, and 3,91% for B2 learners and 3,97% for C1 students in the case of Pronoun-headed NPs. A total of 1765 NPs with postmodification have been analyzed in this MA Dissertation.

	No. of Noun-headed NP with postmodification		No. of Pronoun-headed NP with postmodification	
	No.	%	No.	%
B2 learners	745	42,2 %	69	3,91%
C1 learners	881	49,9%	70	3,97%
	1626 (92,1%)		139 (7,9%)	
Total no. NPs with postmodification	1765			

Table 10. No. of Noun-headed and Pronoun-headed NPs with postmodification considering text type

Regarding the B2 corpus, Appendix 1 summarizes the results and the ratio of normalization of Noun-headed and Pronoun-headed NPs obtained from the B2 corpus.

In the case of noun-headed postmodification employed by B2 students, the three most frequent types of postmodification are PPs ³(26,68- 396 occurrences found in the corpus), relative clauses (7,27- 108 occurrences found in the corpus) and to-infinitive non-finite clauses (6,33 – 94 occurrences found in the corpus). These results support the ones discovered by Valkova and Kořínková (2015, pp. 84-85) and Díez-Bedmar and Pérez-Paredes (2020) that the most frequent types of postmodifier employed by foreign language students of English were PPs and relative clauses.

Meanwhile, the least employed types of postmodifiers are reflexive pronouns, which sentential relative clauses and minor cases of postmodification including complex, postponed, and discontinuous postmodification. In all these cases, the ratio of normalization is 0 since any results have been found.

Considering pronoun-headed postmodification, PPs (2,9 – 43 occurrences found in the corpus), adjectival Phrases (0,67 -10 occurrences found in the corpus) and RCs (0,4 – 6 occurrences found in the corpus) are the type of postmodifiers more employed by B2 students. The least employed ones are appositions (0) and reflexive pronouns (0) as it can be observed in Appendix 1.

Thus, the most frequent types of pronoun and noun-headed postmodification coincide. It can be observed that there is a predominance in the use of PPs, whereas the uses of minor cases of postmodification and the use of reflexive pronouns in both types of NPs are limited. Examples (136) and (137), taken from the B2 corpus show how these students employ PPs as postmodifiers in noun-headed (136) and pronoun-headed NPs (137).

(136) I found an interesting *project* (c_prep_phrase) about it (B2_30149a.txt)

(137) You can also present *someone* (c_pronoun_headed_prep_phrase) with an object.
(B2_30149b.txt)

³Figures inside the brackets indicate the ratio of normalization per 1000 words followed (-) by the no. of occurrences found in the corpus

Considering the C1 corpus, Appendix 2 displays the results and the ratio of normalization of Noun-headed and Pronoun-headed NPs obtained from the C1 corpus.

Concerning noun-headed postmodification, the three most frequent types of postmodification employed by C1 learners are PPs (30,03- 515 occurrences found in the corpus), RCs (6,06 – 104 occurrences found in the corpus) and to-infinitive non-finite clauses (5,60- 96 occurrences found in the corpus). On the other hand, the least employed types of postmodifiers are reflexive pronouns and minor cases of postmodification whose ratio of normalization is 0 since any results have been found. These results suggest that both B2 and C1 learners employ the similar types of postmodifiers when examining the most and the least frequent ones. One difference between these CEFR groups is that C1 learners employ more which sentential relative clauses (0,23- 4 occurrences found in the corpus) as noun-headed postmodifier than B2 learners (0) as in (138):

(138) I might say that he has got steady *nerves*, (c_rel_clause_which_sentential) which is the best *quality* (c_prep_phrase) for every job. (C1_100215b.txt)

Vis-à-vis pronoun-headed postmodification, PPs (2,68- 46 occurrences found in the corpus), adjectival Phrases (0,41-7 occurrences found in the corpus) and RCs (0,29 –5 occurrences found in the corpus) are the type of postmodifiers more employed by C1 students. Appositions (0,06- 1 occurrence found in the corpus), reflexive pronouns (0,06-1 occurrence found in the corpus), adverbial phrases (0,06- 1 occurrence found in the corpus) and to and -ing non-finite clauses (0,06- 1 occurrence found in the corpus) are the least employed by C1 learners as demonstrated in Appendix 2.

Therefore, as in the case of Noun-headed NPs employed by B2 learners, the most frequent types of pronouns and noun-headed postmodification coincide.

6.2. Research question 2: Which are the most significant differences found in NP postmodification between B2 and C1 levels?

Chart 1 shows a comparison of the type of postmodifier in Noun-headed NPs penned by B2 and C1 learners. Chart 2 presents the postmodifiers used by the participants in Pronoun-headed NPs.

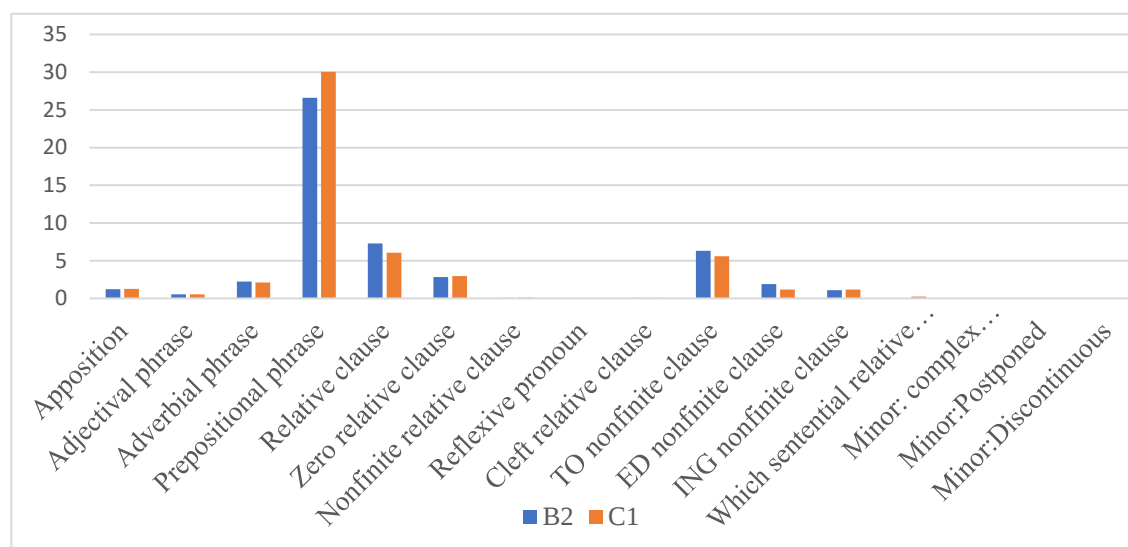


Chart 1. Comparison B2-C1 Noun-headed NP Postmodification

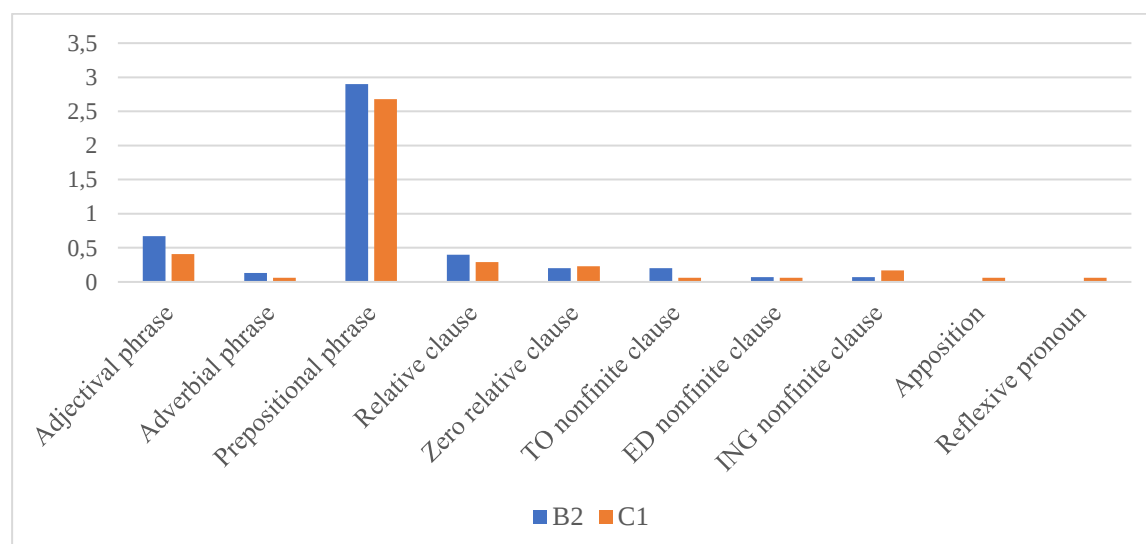


Chart 2. Comparison B2-C1 Pronoun-headed NP Postmodification

There is a similar use of postmodification when comparing B2 and C1 students. C1 students more frequently opt for the use of PPs (26,62⁴- 30,03) as postmodifiers in noun-headed NPs. Nonetheless, B2 students are the ones who employ more PPs (2,9-2,68), as postmodifiers in pronoun-headed NPs.

Considering PPs and RCs as postmodifiers of noun-headed NPs, B2 participants produce a total of 396 occurrences of PPs and C1 students use 515. In the case of RCs, in B2 corpus there are more occurrences of RCs (108) than in the C1 corpus (104) as seen in Appendices 1 and 2. Therefore, my corpus analysis differs from the one of Díez-Bedmar and Pérez-Paredes (2020, p. 18) as in this MA Dissertation the number of PPs increases with the learners' level of proficiency, instead of decreasing with grade as Díez-Bedmar and Pérez-Paredes (2020, p. 18) pointed out. Furthermore, as B2 learners produce more RCs than C1 students, the present research also contrasts with Díez-Bedmar and Pérez-Paredes (2020, p. 18) 's claim that "the number of uses of NP type 19 corresponding with relative clauses increases with grade".

This MA Dissertation also supports (Liu & Li, 2016, p. 54, as cited in Biber et al., 1999, pp. 635- 642) as the most common PP found in this study is the PP introduced by the preposition *of* . There are 126 occurrences in the B2 corpus and 207 in the C1 corpus of the preposition *of* introducing a PP postmodifier of a noun-headed NP.

It is also relevant to notice that B2 students employ more RCs (7,27-6,06) and to non-finite clauses (6,33-5,6) than C1 learners, as noun-headed NPs postmodifiers as in (139) and (140):

(139) Veganuary is an *initiative* (c_rel_clause_that_f_d) that started in 2014
(B2_30130a.txt)

(140) A good way (c_nonfinite_clause_to_inf) to demonstrate your friendship
(B2_30099b.txt)

⁴ The first number indicates the ratio of normalization per 1000 words by B2 and the second one points out the one of C1 learners.

C1 participants are the ones who use more Zero relative clauses (0,2- 0,23), ing non-finite clauses (0,07- 0,17), appositions (0- 0,06) and reflexive pronouns (0- 0,06) as postmodifiers in pronoun-headed NPs as in (141), (142), (143), (144):

(141) I don't want to forget *anything* (c_pronoun_headed_zero_rel_clause_f_d) I have to tell you (C1_100209a.txt)

(142) In spite of *everyone* (c_pronoun_headed_nonfinite_clause_ing_clause) agreeing at the meeting (C1_100223a.txt)

(143) He is always trying to learn about *everything* (c_pronoun_headed_apposition): languages, other cultures, science and so on (C1_100243b.txt)

(144) *I* (c_pronoun_headed_reflexive_pronoun) myself am a strong *supporter* (c_prep_phrase) of this (C1_100216a.txt)

Furthermore, C1 and B2 students employ a wide variety of relative pronouns (*that*, *who*, *which*, *when*, *where*) in RCs as postmodifiers in noun-headed NPs, whereas C1 learners are the ones who only employ the relative pronoun (*why*) as in (145):

(145) The *reason* (c_rel_clause_why_f_d) why I am writing to you this email. (C1_F_100230a.txt)

Charts 3 and 4 reveal the percentage of RCs functioning as NP postmodifiers found in each corpus bearing in mind the type of relative pronoun employed. In both corpora, the relative pronoun *that* (65 occurrences in B2 corpus-50 occurrences in C1 corpus) is the students' preferred option as in (146):

(146) They can't be compared to the *memories* (c_rel_clause_that_f_d) that can be given. (B2_30109b.txt)

In second place, C1 learners employ *which* (14 occurrences in B2 corpus -21 occurrences in C1 corpus) as in (147) and sentential relative clause (0 occurrences in B2 corpus -4 occurrences in C1 corpus) more frequently than B2 learners.

(147) He can develop *jobs* (c_rel_clause_which_f_d) which involve strength
(C1_100215b.txt)

Instead, B2 make more use of *where* (8 occurrences in B2 corpus -5 occurrences in C1 corpus)
as in (148):

(148) It is the *moment* (c_rel_clause_where_f_d) where you join with the whole family
(B2_30140b.txt)

Besides, in both corpora, the number of occurrences of finite clauses is higher than the one of nonfinite ones and the number of occurrences of defining clauses surpasses the one of non-defining clauses.

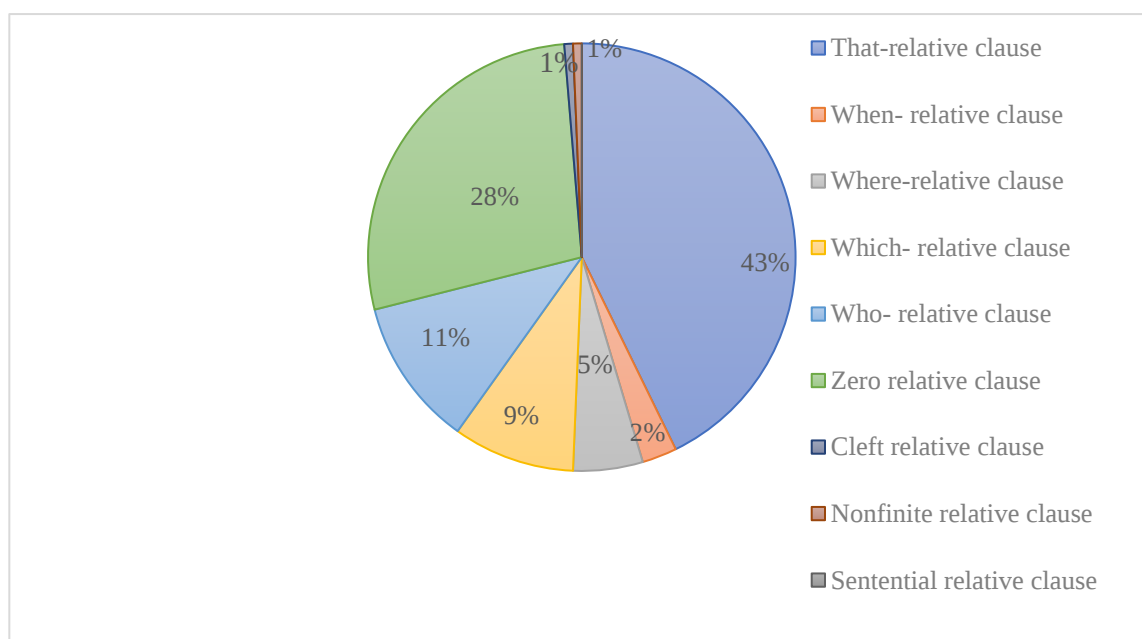


Chart 3. B2 corpus: Correct and incorrect relative clauses found in Noun-headed NPs.

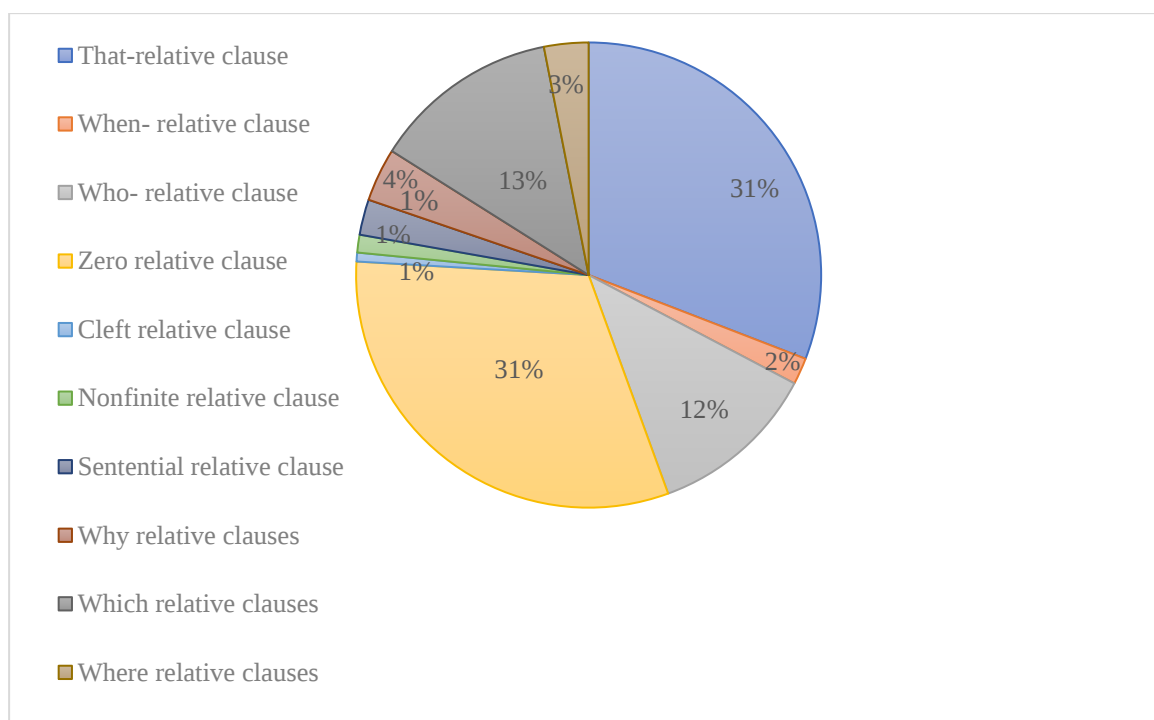


Chart 4. C1 corpus: Correct and incorrect relative clauses found in Noun-headed NPs.

6.3. Research question 3: Are there any differences in NP postmodification considering text type?

The second research question centers on the text type written by B2 and C1 learners. A discussion on the most and least frequent NP postmodification types employed by learners in each text type will be carried out.

Firstly, it is important to mention that B2 (745 occurrences) and C1 (881 occurrences) learners employ more NP postmodification in noun-headed NPs than in the pronoun-headed ones (69 occurrences produced by B2 students and 70 by C1 learners) as it can be observed in Table 11.

Vis-à-vis noun-headed NPs with postmodification, they are mostly employed in letters of endorsement (486 occurrences) and articles (433 occurrences) and least used in informal emails (312 occurrences).

Most postmodifiers in pronoun-headed NPs are found in letters of endorsement (43 occurrences) and in articles (42 occurrences), and least employed in formal and informal emails (27 occurrences in each text type).

No. of Noun-headed NP with postmodification				No. of Pronoun-headed NP with postmodification			
B2 CORPUS		C1 CORPUS		B2 CORPUS		C1 CORPUS	
Informal email	Article	Formal email	Letter of endorsement	Informal email	Article	Formal email	Letter of endorsement
No.	No.	No.	No.	No.	No.	No.	No.
312	433	395	486	27	42	27	43
745		881		69		70	
1626				139			

Table 11. No. of Noun-headed and Pronoun-headed NPs with postmodification considering text type

All the results are shown in Appendices 3 and 4 once the data have been normalized. Regarding noun-headed NPs, the most frequent type of NP postmodifiers in the four text types analyzed is PPs, mostly produced in letters of endorsement (294-33,19) and in articles (236-30,4). It is important to notice that the number of occurrences of PPs found in informal emails (160) is more than half of the one in letters of endorsement (294) as observed in Appendix 3. Thus, this corpus analysis supports Biber et al. (2021, pp. 600-602) assumption that PPs were the most typical type of postmodifiers in all the text types examined.

The second and third more recurrent type of postmodifiers are RCs and non-finite to infinite clauses. RCs are mostly employed in articles (59-7,6) and in letters of endorsement (58-6,55), whereas non-finite to infinitive clauses are mostly used in articles (56-7,21) and in formal emails (55-6,63).

Any instance of reflexive pronouns and minor realizations of the postmodifier has been found being the least employed NP postmodifiers in noun-headed NPs together with cleft relative clauses, with only one occurrence in articles and formal emails as in (115) from Table 8:

(115) It was the best *christmas* (c_rel_clause_cleft) I have ever had.

(B2_30091b.txt)- Article

Other least employed postmodifiers are sentential relative clauses, which are more frequent in letters of endorsement (3-0,34) and non-finite relative clauses which we have only found 1 occurrence in an article, in one formal email and in one letter of endorsement as in (149):

(149) It was a *video* (c_nonfinite_clause_ed_clause) done per the whole family and *friends* (c_rel_clause_nf) telling me why they love me. (B2_30140b.txt)- Article

Considering pronoun-headed NPs, as it is observed in Appendix 4, the most recurrent postmodifiers are PPs, Adjectival Phrases and RCs.

PPs are mostly employed in letters of endorsement (29-3,27) and in articles (24-3,09). C1 students less use them in formal emails (17-2,05). In articles is where we find more Adjectival Phrases (8-1,03) as in (150), and RCs (6-0,77) as in (151):

(150) Easy ways (c_nonfinite_clause_to_inf) to make *someone* (c_pronoun_headed_adjectival_phrase) happy (B2_30116b.txt)- Article

(151) Gift giving is *something* (c_pronoun_headed_zero_rel_clause_f_d) I enjoy a lot (B2_30130b.txt)- Article

It has been difficult to find examples of apposition (only one occurrence has been analyzed in a Letter of endorsement), reflexive pronouns (see 152), adverbial phrases (2 occurrences in informal emails) and nonfinite clauses (3 occurrences in Letters of endorsement) functioning as postmodifiers in pronoun-headed NP.

(152) *I* (c_pronoun_headed_reflexive_pronoun) myself am a strong *supporter* (c_prep_phrase) of this. (C1_100216a.txt)- Formal email

In conclusion, it can be claimed that most Noun and pronoun-headed NPs with postmodification are found in letters of endorsement and in articles. One relevant difference noticed is that formal emails tend to include more PPs (221-26,66), Adverbial phrases (22-2,65) and to infinitive clauses (55-6,63) as postmodifiers in noun-headed NPs than informal emails. Thus, depending on the text type analyzed, there is a variation in the number of postmodifiers found.

6.4. Research question 4: Are there any differences in NP postmodification regarding language accuracy across levels and text types?

This research question examines language accuracy and the analysis of the errors made by participants. Data have been manually analyzed considering grammatical and orthographical rules.

Appendix 5 summarizes the number and the ratio of normalized errors found in Noun-headed NP and pronoun-headed NP in the B2 corpus, whereas Appendix 6 conforms the results obtained from the C1 corpus.

In this study B2 participants make more errors regarding NP postmodification. The percentage of error frequency of B2 participants corresponds to 6,27% in comparison with 2,83% associated with C1 students. All the errors found are in noun-headed NPs in both corpora. Most of these errors are associated with the type of preposition employed by B2 participants (27 errors, whose ratio of normalized error is 36,24) and by C1 learners (19 errors, whose ratio of normalized error is 21,54) as in (153), in which the correct preposition is *to*, creating a to-infinitive non-finite clause, and not a PP. In (154), the correct preposition is *in*.

(153) I realize beganism could be a good *initiative* (i_prep_phrase) *⁵*for change*
our minds. (B2_30138a.txt)

(154) He loves help *people* (c_zero_rel_clause_f_d) around him regardless their
position (i_prep_phrase) **on* the company (C1_100206b.txt)

The second most common error is found in RCs both in B2 (10 – 13,42) ⁶and C1 (6-6,8) learner writing as in (155), in which there is a spelling error of the relative pronoun *where*. Furthermore, some B2 learners employ that relative pronoun *that* in non-defining RCs as in (156), in which the relative *which* should be employed.

(155) It was going to be a close *web* (i_rel_clause_where_f_d) **were* only my friends
and I could join. (B2_30113b.txt)

⁵ * indicates that there is an error in the sentence.

⁶ The first number points out the number of errors and the second one the ratio of normalized error.

(156) You can enjoy with your friends *experiences*, (i_rel_clause_that_f_nd) **that* can go from having a spa day to go hicking a mountain, or having a picnic. (B2_30163b.txt)

Errors in nonfinite to-infinite clauses are the third more common errors found in the B2 corpus as in (157), in which the *to* infinitive marker should have been employed to introduce a to infinitive nonfinite clause.

(157) I saw *Veganuary*, (c_rel_clause_which_f_nd) which is an initiative (i_nonfinite_clause_to_inf) **for trying* to be vegetarian (B2_30150a.txt)

In the C1 corpus, only errors in PPs and in RCs have been detected, whereas in the B2 there are also errors in adjectival phrases as in (158), or in nonfinite -ed clauses as in (159). In (158) the comparative adjective *greener* should have been used and in (159) there is a spelling error with the noun *blanket*.

(158) We will make our *planet* (i_adjectival_phrase) more green (B2_30113b.txt)

(159) My best Christmas present was an upcycled **blanked* (i_nonfinite_clause_ed_clause) made of my childhood t-shirts (B2_30137b.txt)

Vis-à-vis C1 corpus as seen in Appendix 6, all the errors detected are located within PPs as in (160) and (161) or in RCs functioning as postmodifiers of a noun-headed NP as in (162) and (163). In (160), the student should employ the *to* infinitive marker and the base form of the verb *think* and not the preposition *of* followed by the -ing verbal form *thinking*.

In (161), the C1 student does not employ the appropriate preposition *about*. (162) and (163) are examples of errors found in RCs, in (162), there is a spelling error with the relative pronoun *which*, and in (163) the relative pronoun *who* should have been used since the head of the NP is *person*.

(160) You have any *opportunity* (c_nonfinite_clause_to_inf) to have a *minutes* (i_prep_phrase) **of thinking* on the possibility (c_prep_phrase) of increasing the temperature (C1_100277a.txt)

(161) He can easily maintain different *kind* (c_prep_phrase) of *conversations* (c_prep_phrase) with fluency and appropriate *vocabulary* (i_prep_phrase) *to the topic (C1_100224b.txt)

(162) Nevertheless he is trying to improve his English *level*, (i_rel_clause_which_f_nd) *wich I think is very important nowadays. (C1_100206b.txt)

(163) The *attitude* (c_prep_phrase) of an open-minded *person*, (i_rel_clause_which_f_nd) *which has the willing to make his best. (C1_100258b.txt)

Thus, there are different types of errors: orthographical errors as in (162), errors in the relative pronoun selected as in (163), errors in which the preposition *for* introduces a non-finite clause as in (153), in which the *to infinitive* marker should be employed, or errors in the selection of the correct preposition as in (161).

(153) I realize beganism could be a good *initiative* (i_prep_phrase) *⁷for change our minds. (B2_30138a.txt)

Given that most errors detected both at B2 and C1 level are located when PPs are employed as postmodifiers of NP, Chart 5 displays the introductory prepositions wrongly employed by learners. B2 participants made a total of 27 errors related to prepositions, whereas C1 students have made 19 errors. Prepositions *for* (10 errors in B2 corpus and 5 in C1 corpus) as in (164a, 164b) and *of* (8 errors in B2 corpus and 9 in C1 corpus) are the more troublesome.

In (164a), the correct preposition is *in*, and in (164b) the correct sentence should be a *to infinitive* non-finite clause introduced by the *to infinitive* marker. Thus, it is an error in the complement of the sentence and not in the PP.

There are also errors associated with the preposition *to* (4 errors in B2 corpus and 4 in C1 corpus) as in (165) in which the appropriate preposition is *for*.

⁷ * indicates that there is an error in the sentence.

(164a) I use that *bag* (i_prep_phrase) for every trip (B2_30105b.txt)

(164b) a good *chance* (i_prep_phrase) for speaking to his partners (C1_100237b.txt)

(165) Being comfortable at work should be a *priority* (i_prep_phrase) to our company (C1_100236a.txt)

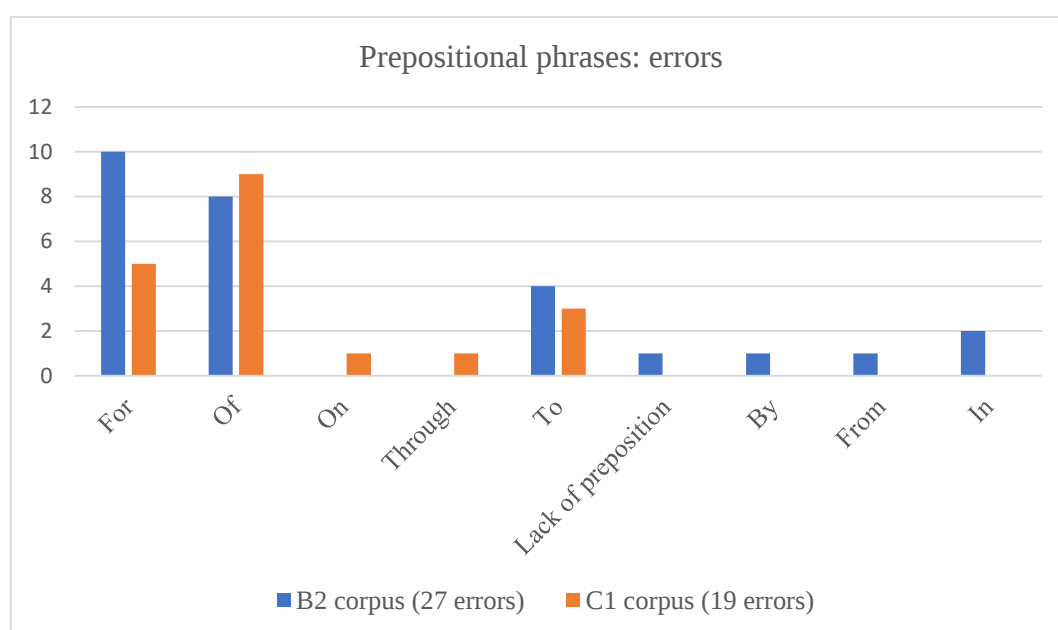


Chart 5. Errors in noun-headed PP postmodified by a prepositional phrase

To analyze language accuracy in the diverse text types, Appendices 7 and 8 have been designed. Appendix 7 shows the number of correct and incorrect noun-headed NPs with postmodification across text types and Appendix 8 is the one for pronoun-headed NPs.

As can be observed, errors are distributed among the different text types. Most of them have been found in articles (6,46%) and in informal emails (5,15%) written by B2 students. Letters of endorsement (3,1%) and formal emails (2,53%) are the ones which contain fewer errors. Any error has been found in pronoun-headed NPs as shown in Appendix 8.

The results obtained support and coincide with the ones discovered when analyzing language accuracy across CEFR B2 and C1 levels. Most errors are found in PPs and RCs functioning as postmodifiers within the Noun-headed NP. In PPs, most errors have been found in articles

(36,9) and in informal emails (35,2), and fewer errors in letters of endorsement (20,6). Nonetheless, the ratio error of normalization found in PPs is slightly lower in formal emails and letters of endorsement which coincide with the two types of text analyzed in the C1 corpus.

The second and third most recurrent errors found have been located in RCs, particularly in articles (16,2) and in letters of endorsement (10,3) and in to infinitive clauses in articles (6,9) and in informal emails (3,20). A surprising feature encountered is that any error has been found in adjectival phrase or in nonfinite clauses in formal emails and letters of endorsement.

7. CONCLUSION

This MA Dissertation is based on a learner corpus analysis on NP postmodification by L1 Spanish learners of English at B2 and C1 levels. To conduct this research, data has been selected from the FineDesc Corpus, which includes the written production of learners taking the CertAcles exams and with a B2 and a C1 level in English as a foreign language. The corpus has been manually annotated and analyzed by means of AntConc Version 3.5.9 software (Anthony, 2020). The subsequent conclusions have been reached keeping in mind the four research questions proposed in Section 4.

To begin with the first research question, this learner corpus analysis shows that there is a predominance in the use of PPs as postmodifiers of Noun-headed and pronoun-headed NPs at B2 and C1 levels, whereas there is a limited number of occurrences of minor cases of postmodification and in the use of reflexive pronouns and which sentential relative clauses. This study therefore supports Downing (2015, p. 407)'s and Biber et al. (2021, p. 625)'s claim that PPs are the most usual type of postmodifiers within NPs.

Regarding the second research question, the most significant differences found in NP postmodification between B2 and C1 levels are that C1 students more frequently opt for the use of PPs as postmodifiers in noun-headed NPs, whereas B2 students are the ones who employ more PPs as postmodifiers in pronoun-headed NPs. Furthermore, B2 students employ more RCs and to non-finite clauses than C1 learners, as noun-headed NPs postmodifiers.

Considering the third research question, PPs are the most recurrent type of NP postmodifiers in the four text types analyzed. These are informal emails and articles for the B2 corpus and formal emails and letters of endorsement for the C1 corpus. Nonetheless, we have not found occurrences of reflexive pronouns and minor constructions functioning as postmodifiers of a Noun-headed NP as explained in Section 2 of this MA Dissertation.

Vis-à-vis the fourth research question, B2 participants in this research make more errors regarding NP postmodification. Most of these errors are linked with the type of preposition they employ, being the prepositions *for* and *of* are the ones which more lead to error amongst participants. Furthermore, a surprising aspect encountered is that we have not found errors when analysis pronoun-headed NP postmodification in both corpora. It can also be concluded that

errors are distributed among the different text types analyzed. Most of them have been found in articles, and in the informal emails written by B2 whereas those texts written by C1 learners such as formal emails contain fewer errors. Most errors have been found in PPs and RCs functioning as postmodifiers of noun-headed NPs.

After having reached the previous conclusions, it is also important to highlight that the present learner corpus study has been conducted with a small number of texts and participants. Therefore, future research could investigate NP production by more learners including, for example, an analysis of premodification within the NP, include learners with other levels of proficiency in English and a wider variety of text types or a deeper error analysis of the data. A possible limitation of this study may be the lack of use of inferential statistics when studying the data. Further research will provide valuable information regarding to whether this predominance of PPs in NP postmodification is present in all non-native English-speaking learners.

On a final note, this study has given me the chance to interrelate two principal professional fields in our Master's degree: teaching and research. This learner corpus may contribute to the teaching and educative area since it is relevant not only to get a broader picture of learners' production, but it can also have consequences for language teaching as it evidences that there are grammatical areas which may need to be reinforced in the language class.

8. REFERENCES

- Anthony, L. (2020). AntConc (Version 3.5.9) [Computer Software]. Tokyo, Japan: Waseda University. Available from <https://www.laurenceanthony.net/software>
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *The Longman Grammar of Spoken and Written English*. London: Longman.
- Biber, D., Johansson, S., Leech, G.N., Conrad, S. & Finegan, E. (2021). *Grammar of Spoken and Written English*. John Benjamins Publishing Company.
- Brinton, L.J. & Brinton, D.M. (2010). *The Linguistic Structure of Modern English*. John Benjamins Publishing Company.
- Carter, R., & McCarthy, M. (2006). *Cambridge Grammar of English: A Comprehensive Guide : Spoken and Written English Grammar and Usage*. Cambridge: Cambridge University Press.
- Davies, M. (2008-) *The Corpus of Contemporary American English (COCA)*. Available online at <https://www.english-corpora.org/coca/>.
- De Haan, P. (1989). *Postmodifying Clauses in the English Noun Phrase: A corpus-based study*. Amsterdam: Rodopi.
- Díez-Bedmar, M. B. (2022). *Analysing learner language to inform the CEFR/CV descriptors: the FineDesc Project*. Research into practice: towards a data-driven curriculum. One-day virtual (Zoom) conference – 23 March 2022.
- Díez-Bedmar, M. B., Carrió-Pastor, M. L., Laso Martín, N.J., Luque-Agulló, G., Maíz-Arévalo, C. Méndez García, M.C and Montejo-Ráez, A. (2022). *FineDesc*. University of Jaén. <http://web.ujaen.es/investiga/finedesc/index.php>
- Díez-Bedmar, M. B., & Pérez-Paredes, P. (2020). Noun phrase complexity in young Spanish EFL learners' writing: Complementing syntactic complexity indices with corpus-driven analyses. *International Journal of Corpus Linguistics*, 25(1), pp. 4-35. <https://www.jbe-platform.com/content/journals/10.1075/ijcl.17058.die?crawler=true>
- Downing, A. (2015). *English Grammar: A University Course* (3rd Edition). London: Routledge.
- Du Maurier, D. (1975). *Rebecca*. London: Pan Books Ltd.
- Durrant, P., & Brenchley, M. (2022). Development of Noun Phrase complexity across genres in children's writing. *Applied Linguistics*, 10(10), pp. 1-27. <https://academic.oup.com/applij/advance-article/doi/10.1093/applin/amac032/6678893>

- Dyjáková, A. (2014). *Pre- and Post-modifying As in an English Noun Phrase in comparison with French* [Bachelor Thesis, Univerzita Tomáše Bati ve Zlíně]. Univerzita Tomáše Bati ve Zlíně. <https://digilib.k.utb.cz/handle/10563/28282>
- Eisenberg, S. L., Ukrainetz, T. A., Hsu, J. R., Kaderavek, J. N., Justice, L. M., & Gillam, R. B. (2008). Noun phrase elaboration in children's spoken stories. *Language, Speech, and Hearing Services in Schools*, 39(2), pp. 145–157. https://www.researchgate.net/publication/5431232_Noun_Phrase_Elaboration_in_Children's_Spoken_Stories
- Greenbaum, S., & Quirk, R. (1990). *A Student's Grammar of the English language*. Burnt Mill, Harlow, Essex, England: Longman.
- Huddleston, R., & Pullum, G. K. (2005). *A Student's Introduction to English Grammar*. Cambridge: Cambridge University Press.
- Liu, L. & Li, L. (2016). Noun phrase complexity in EFL academic writing: A corpus-based study of postgraduate academic writing. *The Journal of Asia TEFL* 13 (1), pp. 48-65. http://journal.asiatefl.org/main/main.php?inx_journals=47&inx_contents=428&main=1&sub=2&submode=3&PageMode=JournalView&s_title=Noun_Phrase_Complexity_in_EFL_Academic_Writing_A_Corpus_based_Study_of_Postgraduate_Academic_Writing
- Lu, X. (2010). Automatic analysis of syntactic complexity in second language writing. *International Journal of Corpus Linguistics*, 15(b), 474-496.
- Parkinson, J., & Musgrave, J. (2014). Development of noun phrase complexity in the writing of English for Academic Purposes students. *Journal of English for Academic Purposes*, 14, pp. 48-59. <https://www.sciencedirect.com/science/article/abs/pii/S147515851300088X?via%3Dihub>
- Parrott, M. (2000). *Grammar for English Language Teachers* (2nd ed.). Cambridge: Cambridge University Press.
- Pastor Gómez, I. (2009). *Nominal modifiers in Noun Phrase structure: Evidence from contemporary English* [PhD Dissertation, Universidade de Santiago de Compostela]. Servizo de Publicacións e Intercambio Científico. ISBN 978-84- 9887-318-4. <http://hdl.handle.net/10347/2618>
- Quirk, R. & Greenbaum, S. (1973). *A University Grammar of English*. London: Longman.
- Quirk, R., Greenbaum, S., Leech, G. and Svartvik, J. (1985). *A Comprehensive Grammar of the English Language*. London: Longman.

- Sångl f, S. (2014). *Pre-and Postmodification in Noun Phrases: A comparison of monolingual, bilingual and multilingual male learners of English in Sweden* [Student thesis, Uppsala universitet, Institutionen f r pedagogik, didaktik och utbildningsstudier].
<https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A762330&dswid=104>
- Valkova, S. & Koř nkov , J. (2015). The complex Noun phrase in advanced students' writing. In Jason Bell, G. & Nem okov , K. (Eds.), *From Theory to Practice 2014: Proceedings of the Sixth International Conference on Anglophone Studies* (pp. 77-86). Univerzita Tom še Bati ve Zl n .
https://www.researchgate.net/publication/316274773_The_Complex_Noun_Phrase_in_Advanced_Students'_Writing
- Woolf, V. (1927). *To the Lighthouse*. New York: Harcourt, Brace & Company.

9. APPENDIX

Appendix 1: B2 corpus: Noun-headed and Pronoun-headed NP (normalized data).

B2 CORPUS					
Type of <u>Noun-headed</u> NP postmodification O: No. of occurrences R: Ratio of normalization ⁸	O	R	Type of <u>Pronoun-headed</u> NP postmodification	O	R
(c_apposition) (i_apposition)	18	1,21	(c_pronoun_headed_apposition) (i_pronoun_headed_apposition)	0	0
(c_adjectival_phrase) (i_adjectival_phrase)	8	0,54	(c_pronoun_headed_adjectival_phrase) (i_pronoun_headed_adjectival_phrase)	10	0,67
(c_adverbial_phrase) (i_adverbial_phrase)	33	2,22	(c_pronoun_headed_adverbial_phrase) (i_pronoun_headed_adverbial_phrase)	2	0,13
(c_prep_phrase) (i_prep_phrase)	396	26,68	(c_pronoun_headed_prep_phrase) (i_pronoun_headed_prep_phrase)	43	2,90
(c_reflexive_pronoun) (i_reflexive_pronoun)	0	0	(c_pronoun_headed_reflexive_pronoun) (i_pronoun_headed_reflexive_pronoun)	0	0
(c_rel_clause_relativepronoun_f/nf_d/nd) (i_rel_clause_relativepronoun_f/nf_d/nd)	108	7,27	(c_pronoun_headed_rel_clause_f_d) (i_pronoun_headed_rel_clause_f_d)	6	0,40
(c_rel_clause_which_sentential) (i_rel_clause_which_sentential)	0	0			
(c_zero_rel_clause_f/nf_d/nd) (i_zero_rel_clause_f/nf_d/nd)	42	2,83	(c_pronoun_headed_zero_rel_clause_f_d) (i_pronoun_headed_zero_rel_clause_f_d)	3	0,20
(c_rel_clause_cleft) (i_rel_clause_cleft)	1	0,07			

⁸ The most frequent postmodifiers have been highlighted in green and the least employed ones in red color.

(c_rel_clause_nf) (i_rel_clause_nf)	1	0,07			
(c_nonfinite_clause_to_inf) (i_nonfinite_clause_to_inf)	94	6,33	(c_pronoun_headed_nonfinite_clause_to_inf) (i_pronoun_headed_nonfinite_clause_to_inf)	3	0,20
(c_nonfinite_clause_ed_clause) (i_nonfinite_clause_ed_clause)	28	1,88	(c_pronoun_headed_nonfinite_clause_ed_clause) (i_pronoun_headed_nonfinite_clause_ed_inf)	1	0,07
(c_nonfinite_clause_ing_clause) (i_nonfinite_clause_ing_clause)	16	1,07	(c_pronoun_headed_nonfinite_clause_ing_clause) (i_pronoun_headed_nonfinite_clause_ing_clause)	1	0,07
(c_minor_complexpostmod) (i_minor_complexpostmod)	0	0			
(c_minor_postponed) (i_minor_postponed)	0	0			
(c_minor_discontinuous) (i_minor_discontinuous)	0	0			
No. of words in the B2 corpus	14840				

Appendix 2: C1 corpus: Noun-headed and Pronoun-headed NP (normalized data)

C1 CORPUS					
Type of <u>Noun-headed</u> NP postmodification O: No. of occurrences R: Ratio of normalization ⁹	O	R	Type of <u>Pronoun-headed</u> NP postmodification	O	R
(c_apposition) (i_apposition)	22	1,28	(c_pronoun_headed_apposition) (i_pronoun_headed_apposition)	1	0,06
(c_adjectival_phrase) (i_adjectival_phrase)	9	0,52	(c_pronoun_headed_adjectival_phrase) (i_pronoun_headed_adjectival_phrase)	7	0,41
(c_adverbial_phrase) (i_adverbial_phrase)	36	2,10	(c_pronoun_headed_adverbial_phrase) (i_pronoun_headed_adverbial_phrase)	1	0,06
(c_prep_phrase) (i_prep_phrase)	515	30,03	(c_pronoun_headed_prep_phrase) (i_pronoun_headed_prep_phrase)	46	2,68
(c_reflexive_pronoun) (i_reflexive_pronoun)	0	0	(c_pronoun_headed_reflexive_pronoun) (i_pronoun_headed_reflexive_pronoun)	1	0,06
(c_rel_clause_relativepronoun_f/nf_d/nd) (i_rel_clause_relativepronoun_f/nf_d/nd)	104	6,06	(c_pronoun_headed_rel_clause_f_d) (i_pronoun_headed_rel_clause_f_d)	5	0,29
(c_rel_clause_which_sentential) (i_rel_clause_which_sentential)	4	0,23			
(c_zero_rel_clause_f/nf_d/nd) (i_zero_rel_clause_f/nf_d/nd)	51	2,97	(c_pronoun_headed_zero_rel_clause_f_d) (i_pronoun_headed_zero_rel_clause_f_d)	4	0,23
(c_rel_clause_cleft) (i_rel_clause_cleft)	1	0,06			
(c_rel_clause_nf)	2	0,12			

⁹ The most frequent postmodifiers have been highlighted in green and the least employed ones in red color.

(i_rel_clause_nf)					
(c_nonfinite_clause_to_inf) (i_nonfinite_clause_to_inf)	96	5,60	(c_pronoun_headed_nonfinite_clause_to_inf) (i_pronoun_headed_nonfinite_clause_to_inf)	1	0,06
(c_nonfinite_clause_ed_clause) (i_nonfinite_clause_ed_clause)	21	1,17	(c_pronoun_headed_nonfinite_clause_ed_clause) (i_pronoun_headed_nonfinite_clause_ed_inf)	1	0,06
(c_nonfinite_clause_ing_clause) (c_nonfinite_clause_ing_clause)	20	1,16	(c_pronoun_headed_nonfinite_clause_ing_clause) (i_pronoun_headed_nonfinite_clause_ing_clause)	3	0,17
(c_minor_complexpostmod) (i_minor_complexpostmod)	0	0			
(c_minor_postponed) (i_minor_postponed)	0	0			
(c_minor_discontinuous) (i_minor_discontinuous)	0	0			
No. of words in the C1 corpus	17148				

Appendix 3: Text type: Noun-headed NP (normalized data)

	B2 CORPUS				C1 CORPUS				
	Informal email		Article		Formal email		Letter of endorsement		Total
T: No. of occurrences R: Ratio of Normalization	T	R	T	R	T	R	T	R	
Type of Noun-headed NP postmodification									
(c_apposition) (i_apposition)	11	1,55	7	0,9	7	0,84	15	1,69	40
(c_adjectival_phrase) (i_adjectival_phrase)	1	0,14	7	0,9	4	0,48	5	0,56	17
(c_adverbial_phrase) (i_adverbial_phrase)	14	1,98	19	2,45	22	2,65	14	1,58	69
(c_prep_phrase) (i_prep_phrase)	160	22,6	236	30,4	221	26,66	294	33,19	911
(c_reflexive_pronoun) (i_reflexive_pronoun)	0	0	0	0	0	0	0	0	0
(c_rel_clause_relativepronoun_f/nf_d/nd) (i_rel_clause_relativepronoun_f/nf_d/nd)	49	6,92	59	7,6	46	5,55	58	6,55	212
(c_rel_clause_which_sentential) (i_rel_clause_which_sentential)	0	0	0	0	1	0,12	3	0,34	4
(c_zero_rel_clause_f/nf_d/nd) (i_zero_rel_clause_f/nf_d/nd)	9	1,27	33	4,25	19	2,29	32	3,61	93
(c_rel_clause_cleft) (i_rel_clause_cleft)	0	0	1	0,13	1	0,12	0	0	2
(c_rel_clause_nf) (i_rel_clause_nf)	0	0	1	0,13	1	0,12	1	0,11	3
(c_nonfinite_clause_to_inf) (i_nonfinite_clause_to_inf)	38	5,37	56	7,21	55	6,63	41	4,63	190
(c_nonfinite_clause_ed_clause) (i_nonfinite_clause_ed_clause)	21	2,97	7	0,9	12	1,45	9	1,02	49
(c_nonfinite_clause_ing_clause)	9	1,27	7	0,9	6	0,72	14	1,58	36
(c_minor_complexpostmod) (i_minor_complexpostmod)	0	0	0	0	0	0	0	0	0
(c_minor_postponed) (i_minor_postponed)	0	0	0	0	0	0	0	0	0

(c_minor_discontinuous)	0	0	0	0	0	0	0	0	0
(i_minor_discontinuous)									
No. of Noun-headed NP with postmodification									1626

Appendix 4: Text type: Pronoun-headed NP (normalized data)

	B2 CORPUS				C1 CORPUS				
	Informal email		Article		Formal email		Letter of endorsement		Total
T: No. of occurrences R: Ratio of Normalization	T	R	T	R	T	R	T	R	
Type of Pronoun-headed NP postmodification									
(c_pronoun_headed_apposition) (i_pronoun_headed_apposition)	0	0	0	0	0	0	1	0,11	1
(c_pronoun_headed_reflexive_pronoun) (i_pronoun_headed_reflexive_pronoun)	0	0	0	0	1	0,12	0	0	1
(c_pronoun_headed_adjectival_phrase) (i_pronoun_headed_adjectival_phrase)	2	0,28	8	1,03	2	0,24	5	0,56	17
(c_pronoun_headed_adverbial_phrase) (i_pronoun_headed_adverbial_phrase)	2	0,28	0	0	1	0,12	0	0	3
(c_pronoun_headed_prep_phrase) (i_pronoun_headed_prep_phrase)	19	2,68	24	3,09	17	2,05	29	3,27	89
(c_pronoun_headed_rel_clause_f_d) (i_pronoun_headed_rel_clause_f_d)	0	0	6	0,77	3	0,36	2	0,23	11
(c_pronoun_headed_zero_rel_clause_f_d) (i_pronoun_headed_zero_rel_clause_f_d)	1	0,14	2	0,26	1	0,12	3	0,34	7
(c_pronoun_headed_nonfinite_clause_to_inf) (i_pronoun_headed_nonfinite_clause_to_inf)	2	0,28	1	0,13	0	0	1	0,11	4
(c_pronoun_headed_nonfinite_clause_ed_clause) (i_pronoun_headed_nonfinite_clause_ed_inf)	0	0	1	0,13	0	0	1	0,11	2
(c_pronoun_headed_nonfinite_clause_ing_clause) (i_pronoun_headed_nonfinite_clause_ing_clause)	1	0,14	0	0	2	0,24	1	0,11	4
No. of Pronoun-headed NP with postmodification									139

Appendix 5: B2 corpus: Noun-headed and Pronoun-headed NP (normalized data)

B2 CORPUS									
Type of <u>Noun-headed NP postmodification</u> R: Ratio of normalized errors	No. of occurrences			R	Type of <u>Pronoun-headed NP postmodification</u>	No. of occurrences			R
C: Correct sentences I: Incorrect sentences	C	I				C	I		
(c_apposition) (i_apposition)	18	0	18	0	(c_pronoun_headed_apposition) (i_pronoun_headed_apposition)	0	0	0	0
(c_adjectival_phrase) (i_adjectival_phrase)	6	2	8	2,68	(c_pronoun_headed_adjectival_phrase) (i_pronoun_headed_adjectival_phrase)	10	0	10	0
(c_adverbial_phrase) (i_adverbial_phrase)	33	0	33	0	(c_pronoun_headed_adverbial_phrase) (i_pronoun_headed_adverbial_phrase)	2	0	2	0
(c_prep_phrase) (i_prep_phrase)	369	27	396	36,24	(c_pronoun_headed_prep_phrase) (i_pronoun_headed_prep_phrase)	43	0	43	0
(c_reflexive_pronoun) (i_reflexive_pronoun)	0	0	0	0	(c_pronoun_headed_reflexive_pronoun) (i_pronoun_headed_reflexive_pronoun)	0	0	0	0
(c_rel_clause_relativepronoun_f/nf_d/nd) (i_rel_clause_relativepronoun_f/nf_d/nd)	98	10	108	13,42	(c_pronoun_headed_rel_clause_f_d) (i_pronoun_headed_rel_clause_f_d)	6	0	6	0
(c_rel_clause_which_sentential) (i_rel_clause_which_sentential)	0	0	0	0					
(c_zero_rel_clause_f/nf_d/nd) (i_zero_rel_clause_f/nf_d/nd)	42	0	42	0	(c_pronoun_headed_zero_rel_clause_f_d) (i_pronoun_headed_zero_rel_clause_f_d)	3	0	3	0
(c_rel_clause_cleft) (i_rel_clause_cleft)	1	0	1	0					

(c_rel_clause_nf) (i_rel_clause_nf)	1	0	1	0					
(c_nonfinite_clause_to_inf) (i_nonfinite_clause_to_inf)	90	4	94	5,37	(c_pronoun_headed_nonfinite_clause_to_inf) (i_pronoun_headed_nonfinite_clause_to_inf)	3	0	3	0
(c_nonfinite_clause_ed_clause) (i_nonfinite_clause_ed_clause)	27	1	28	1,34	(c_pronoun_headed_nonfinite_clause_ed_clause) (i_pronoun_headed_nonfinite_clause_ed_inf)	1	0	1	0
(c_nonfinite_clause_ing_clause) (c_nonfinite_clause_ing_clause)	16	0	16	0	(c_pronoun_headed_nonfinite_clause_ing_clause) (i_pronoun_headed_nonfinite_clause_ing_clause)	1	0	1	0
(c_minor_complexpostmod) (i_minor_complexpostmod)	0	0	0	0					
(c_minor_postponed) (i_minor_postponed)	0	0	0	0					
(c_minor_discontinuous) (i_minor_discontinuous)	0	0	0	0					
	701	44	745	6,27%		69	0	69	0%

Appendix 6: C1 corpus: Noun-headed and Pronoun-headed NP (normalized data)

C1 CORPUS									
Type of <u>Noun-headed NP postmodification</u> R: Ratio of normalized errors	No. of occurrences			R	Type of <u>Pronoun-headed NP postmodification</u>	No. of occurrences			R
C: Correct sentences I: Incorrect sentences	C	I				C	I		
(c_apposition) (i_apposition)	22	0	22	0	(c_pronoun_headed_apposition) (i_pronoun_headed_apposition)	1	0	1	0
(c_adjectival_phrase) (i_adjectival_phrase)	9	0	9	0	(c_pronoun_headed_adjectival_phrase) (i_pronoun_headed_adjectival_phrase)	7	0	7	0
(c_adverbial_phrase) (i_adverbial_phrase)	36	0	36	0	(c_pronoun_headed_adverbial_phrase) (i_pronoun_headed_adverbial_phrase)	1	0	1	0
(c_prep_phrase) (i_prep_phrase)	496	19	515	21,54	(c_pronoun_headed_prep_phrase) (i_pronoun_headed_prep_phrase)	46	0	46	0
(c_reflexive_pronoun) (i_reflexive_pronoun)	0	0	0	0	(c_pronoun_headed_reflexive_pronoun) (i_pronoun_headed_reflexive_pronoun)	1	0	1	0
(c_rel_clause_relativepronoun_f/nf_d/nd) (i_rel_clause_relativepronoun_f/nf_d/nd)	98	6	104	6,8	(c_pronoun_headed_rel_clause_f_d) (i_pronoun_headed_rel_clause_f_d)	5	0	5	0
(c_rel_clause_which_sentential) (i_rel_clause_which_sentential)	4	0	4	0					
(c_zero_rel_clause_f/nf_d/nd) (i_zero_rel_clause_f/nf_d/nd)	51	0	51	0	(c_pronoun_headed_zero_rel_clause_f_d) (i_pronoun_headed_zero_rel_clause_f_d)	4	0	4	0

(c_rel_clause_cleft) (i_rel_clause_cleft)	1	0	1	0					
(c_rel_clause_nf) (i_rel_clause_nf)	2	0	2	0					
(c_nonfinite_clause_to_inf) (i_nonfinite_clause_to_inf)	96	0	96	0	(c_pronoun_headed_nonfinite_clause_to_inf) (i_pronoun_headed_nonfinite_clause_to_inf)	1	0	1	0
(c_nonfinite_clause_ed_clause) (i_nonfinite_clause_ed_clause)	21	0	21	0	(c_pronoun_headed_nonfinite_clause_ed_clause) (i_pronoun_headed_nonfinite_clause_ed_inf)	1	0	1	0
(c_nonfinite_clause_ing_clause) (c_nonfinite_clause_ing_clause)	20	0	20	0	(c_pronoun_headed_nonfinite_clause_ing_clause) (i_pronoun_headed_nonfinite_clause_ing_clause)	3	0	3	0
(c_minor_complexpostmod) (i_minor_complexpostmod)	0	0	0	0					
(c_minor_postponed) (i_minor_postponed)	0	0	0	0					
(c_minor_discontinuous) (i_minor_discontinuous)	0	0	0	0					
	856	25	881	2,83%		70	0	70	0%

Appendix 7: Text type: Noun-headed NP (normalized data)

	B2 CORPUS						C1 CORPUS					
Type of Noun-headed NP postmodification	Informal email			Article			Formal email			Letter of endorsement		
C: Correct sentences I: Incorrect sentences R: Ratio error of normalization	No. of occurrences			No. of occurrences			No. of occurrences			No. of occurrences		
	C	I	R	C	I	R	C	I	R	C	I	R
(c_apposition) (i_apposition)	11	0	0	7	0	0	7	0	0	15	0	0
(c_adjectival_phrase) (i_adjectival_phrase)	0	1	3,2	6	1	2,3	4	0	0	5	0	0
(c_adverbial_phrase) (i_adverbial_phrase)	14	0	0	19	0	0	22	0	0	14	0	0
(c_prep_phrase) (i_prep_phrase)	149	11	35,2	220	16	36,9	212	9	22,8	284	10	20,6
(c_reflexive_pronoun) (i_reflexive_pronoun)	0	0	0	0	0	0	0	0	0	0	0	0
(c_rel_clause_relativepronoun_f/nf_d/nd) (i_rel_clause_relativepronoun_f/nf_d/nd)	46	3	9,6	52	7	16,2	45	1	2,53	53	5	10,3
(c_rel_clause_which_sentential) (i_rel_clause_which_sentential)	0	0	0	0	0	0	1	0	0	3	0	0
(c_zero_rel_clause_f/nf_d/nd) (i_zero_rel_clause_f/nf_d/nd)	9	0	0	33	0	0	19	0	0	32	0	0
(c_rel_clause_cleft) (i_rel_clause_cleft)	0	0	0	1	0	0	1	0	0	0	0	0
(c_rel_clause_nf) (i_rel_clause_nf)	0	0	0	1	0	0	1	0	0	1	0	0
(c_nonfinite_clause_to_inf) (i_nonfinite_clause_to_inf)	37	1	3,20	53	3	6,9	55	0	0	41	0	0
(c_nonfinite_clause_ed_clause) (i_nonfinite_clause_ed_clause)	21	0	0	6	1	2,3	12	0	0	9	0	0

(c_nonfinite_clause_ing_clause) (i_nonfinite_clause_ing_clause)	9	0	0	7	0	0	6	0	0	14	0	0
(c_minor_complexpostmod) (i_minor_complexpostmod)	0	0	0	0	0	0	0	0	0	0	0	0
(c_minor_postponed) (i_minor_postponed)	0	0	0	0	0	0	0	0	0	0	0	0
(c_minor_discontinuous) (i_minor_discontinuous)	0	0	0	0	0	0	0	0	0	0	0	0
	296	16	5,15 %	405	28	6,46 %	385	10	2,53 %	471	1 5	3,1 %
	312			433			395			486		

Appendix 8: Text type: Pronoun-headed NP (normalized data)

	B2 CORPUS						C1 CORPUS					
Type of Pronoun-headed NP postmodification	Informal email			Article			Formal email			Letter of endorsement		
	No. of occurrences			No. of occurrences			No. of occurrences			No. of occurrences		
C: Correct sentences I: Incorrect sentences R: Ratio error of normalization	C	I	R	C	I	R	C	I	R	C	I	R
(c_pronoun_headed_apposition) (i_pronoun_headed_apposition)	0	0	0	0	0	0	0	0	0	1	0	0
(c_pronoun_headed_reflexive_pronoun) (i_pronoun_headed_reflexive_pronoun)	0	0	0	0	0	0	1	0	0	0	0	0
(c_pronoun_headed_adjectival_phrase) (i_pronoun_headed_adjectival_phrase)	2	0	0	8	0	0	2	0	0	5	0	0
(c_pronoun_headed_adverbial_phrase) (i_pronoun_headed_adverbial_phrase)	2	0	0	0	0	0	1	0	0	0	0	0
(c_pronoun_headed_prep_phrase) (i_pronoun_headed_prep_phrase)	19	0	0	24	0	0	17	0	0	29	0	0
(c_pronoun_headed_rel_clause_f_d) (i_pronoun_headed_rel_clause_f_d)	0	0	0	6	0	0	3	0	0	2	0	0
(c_pronoun_headed_zero_rel_clause_f_d) (i_pronoun_headed_zero_rel_clause_f_d)	1	0	0	2	0	0	1	0	0	3	0	0
(c_pronoun_headed_nonfinite_clause_to_inf) (i_pronoun_headed_nonfinite_clause_to_inf)	2	0	0	1	0	0	0	0	0	1	0	0
(c_pronoun_headed_nonfinite_clause_ed_clause) (i_pronoun_headed_nonfinite_clause_ed_inf)	0	0	0	1	0	0	0	0	0	1	0	0
(c_pronoun_headed_nonfinite_clause_ing_clause) (i_pronoun_headed_nonfinite_clause_ing_clause)	1	0	0	0	0	0	2	0	0	1	0	0
	27	0	0%	42	0	0%	27	0	0%	43	0	0%