

Not wrong, yet not quite right: Spanish ESL students' use of gerundial and infinitival complementation

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This study presents a contrastive analysis of gerundial and infinitival complementation produced by Spanish and German ESL learners and English native speakers. An analysis of more than 1,100 attestations of the target constructions obtained from the *International Corpus of Learner English* reveals that (i) advanced learners' construction choices are not necessarily ungrammatical, yet often non-idiomatic, and (ii) German learners are overall more attuned to native-like choices than Spanish learners. A preliminary case study suggests that Spanish ESL teaching materials may benefit from incorporating results of corpus-based analyses of authentic language such as the present one. The present study seeks to close the gap between learner language research and ESL teaching materials, and to raise awareness about the gradual nature of second language proficiency.

Keywords: Spanish ESL student writing, gerundial vs. infinitival complementation, corpus linguistics, distinctive collexeme analysis, second language proficiency

Este estudio presenta un análisis contrastivo del uso de completivas de gerundio e infinitivo producidas por parte de estudiantes españoles y alemanes de inglés como lengua extranjera, así como hablantes nativos de esta lengua. Un análisis de más de 1,100 ejemplos de las estructuras estudiadas obtenidos a partir del Corpus Internacional de Estudiantes de Inglés revela que (i) las construcciones utilizadas por los estudiantes más avanzados no son necesariamente agramaticales, aunque a menudo no sean idiomáticas, y (ii) los estudiantes alemanes son, en general, más sensibles a las opciones nativas que los estudiantes españoles. Un estudio preliminar sugiere que los materiales didácticos para la enseñanza de inglés para los hablantes nativos de español podrían beneficiarse de los resultados obtenidos mediante el análisis de la lengua en uso que se encuentran en el corpus, como el actual. El presente artículo tiene por objeto cerrar la brecha entre la investigación de la lengua usada por los estudiantes y los materiales didácticos para la enseñanza de inglés como lengua extranjera, y así crear conciencia sobre el carácter gradual del aprendizaje de una segunda lengua.

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Palabras clave: redacciones en inglés como segunda lengua de parte de estudiantes españoles, complementos de gerundio e infinitivo, lingüística de corpus, análisis distintivo del collexeme, aprendizaje de segundas lenguas

Introduction

The English language offers a great variety of semantically similar complement patterns that present a challenging puzzle for learners of English as a second language (ESL). In this study, we focus on the ESL students' use of gerundial and infinitival complements as shown in (1):

- (1) a. Maria **began to feed** the squirrels. [infinitival construction]
b. Maria **began feeding** the squirrels. [gerundial construction]

Gerundial and infinitival complements differ on several semantic dimensions. Biber, Johansson, Leech, Conrad and Finegan (1998) state that the gerundial complementation expresses general events, whereas the 'to'-construction licenses a more specific reading (examples from Biber et al. 1998: 758):

- (2) a. I **tried rocking** the baby gently when it cried.
b. I **tried to rock** the baby gently when it cried.

Moreover, the gerundial construction tends to denote actuality or *realis*, whereas the infinitival construction tends to denote potentiality or *irrealis*. Accordingly, (3b) likely sounds less acceptable to native speakers than (3a) because the gerundial complement in (3b) implies that the act of bribing was carried out, not just attempted as implied by the use of the infinitival complement in (3a) – this stands at odds with the second half of the sentence "but failed".

- (3) a. Sheila **tried to bribe** the jailor but failed.
b. ??Sheila **tried bribing** the jailor but failed.

Another difference concerns the temporal interpretation of the event described: the gerundial construction denotes a simultaneous interpretation related to the utterance, whereas the infinitival construction points to the future (Quirk et al., 1985: 1191–3):

- (4) a. I **remembered filling out** the form.
b. I **remembered to fill** out the form.

Isolated examples like the above suggest that gerundial and infinitival complements are clearly distinguishable constructions. Recent corpus-based research, however, indicates that all these are tendencies at best when one

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1 considers all instances of these constructions and the verbs they instantiate.
2 Gries and Wulff (2009) used the British Component of the *International Corpus*
3 *of English* (ICE-GB) to replicate previous claims. With regard to the infinitival
4 construction, they found that associated verbs such as 'try' and 'wish' denote
5 potentiality, and that many of the other verbs are future-oriented (as, for
6 example, 'intend', 'hope', 'learn', and 'aim'). On the other hand, they found
7 that the gerundial construction evokes an interpretation in relation to the
8 frame in which the action denoted by V₁ unfolds ('avoid', 'end', 'imagine',
9 'hate', etc.) and the most distinctive gerundial verbs, 'keep', 'start', and 'stop',
10 correspondingly denote actual events. However, their study also suggested
11 that neither is the gerundial complementation restricted to follow factive
12 predicates (as claimed by Kiparsky and Kiparsky 1971: 347f.), nor are the
13 verbs in this construction necessarily implicatives (as asserted by Givón 1990:
14 534). Most importantly for the present study, they showed that many verbs
15 which, strictly speaking, license both constructions, display (varying degrees
16 of) preference towards one complementation pattern in terms of frequency of
17 use (Gries and Wulff 2009).¹

18 It is not surprising that choosing between these two constructions presents
19 difficulty ~~even for advanced~~ ESL learners (Petrovitz 2001; Bourke 2007), and
20 even advanced learners often sound non-idiomatic (Celce-Murcia and Larsen-
21 Freeman 1999). While complementation features in any given ESL textbook or
22 course syllabus, there is surprisingly little research to date on how ESL
23 learners use complementation patterns. Moreover, previous research has
24 mainly focused on learner errors, suggesting that not only do ESL learners
25 make more mistakes with the gerundial construction; they also tend to
26 acquire it at a later stage of learning, and its accurate use tends to lag behind
27 that of the infinitival construction (see Anderson 1976, on Spanish and Persian
28 learners; and Schwartz and Causarano 2007, on Spanish learners of English).
29 An error analysis approach may, however, provide only a partial picture of the
30 learners' proficiency – as Gilquin (2007: 288) points out, target-like language
31 use is much more than the absence of errors: "[A]n error analysis . . . only lifts
32 a corner of the veil. Equally important are indications as to what learners get
33 right, what they underuse and what they overuse".

34 In other words, L2 accuracy should not be understood as a binary
35 phenomenon such that learners make either correct or incorrect choices –
36 much rather, L2 accuracy is a *gradual* concept in the sense that ~~at~~ a specific
37 grammatical structure is not acquired fully at once, but learners gradually
38 approach target-like use of that structure. This definition not only requires a
39 theory of second language learning that can accommodate an understanding
40 of L2 accuracy as a gradual concept, it also raises the question how to measure
41 L2 accuracy at any given level of L2 proficiency in a way that displays the
42 probabilistic nature of L2 accuracy at that level. The present paper aims to
43 propose one possible way of doing so by presenting the results of an empirical
44 case study of Spanish L2 English intermediate-level learners' use of
45 complementation in academic writing. We approach the data through the

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1 theoretical lens of construction grammar, and employ a corpus-based method
2 called distinctive collexeme analysis (DCA) that quantifies the association
3 strengths between the matrix clause verbs and the gerundial and infinitival
4 complementation patterns, respectively. By applying this statistic to the data,
5 we can not only see whether a verb is used in either complementation pattern
6 or not – we obtain a value that tells us *to what degree* a given verb is associated
7 with either pattern when taking its overall distribution into account. Results
8 obtained from native speaker corpus data are compared with the Spanish
9 learner data as well as German ESL learners at a comparable level of
10 proficiency.

11 This paper is structured as follows: we first position our study in the
12 framework of construction grammar, briefly outlining how the gerundial and
13 infinitival complementation patterns qualify as constructions as defined in this
14 theory. We then give a brief introduction into distinctive collexeme analysis as
15 the measure of choice applied in the present study. The third section describes
16 how the Spanish learner data were extracted. The fourth section presents the
17 results of the corpus-based analyses, as well as findings gathered from a
18 preliminary examination of Spanish ESL textbooks with regard to the
19 recommendations made therein on adequate use of the two complementation
20 constructions. The fifth section closes with a discussion of our main findings
21 and desiderata for future research.

22 **A constructionist approach to accuracy in L2 production**

23 **Complements as constructions**

24
25 The framework that we adopt here is construction grammar (Goldberg 1995;
26 2006), in which constructions are defined as follows:
27
28

29
30 Any linguistic pattern is recognized as a construction as long as some
31 aspect of its form or function is not strictly predictable from its component
32 parts or from other constructions recognized to exist. In addition, patterns
33 are stored as constructions even if they are fully predictable as long as they
34 occur with sufficient frequency (Goldberg 2006: 5).
35

36 In other words, morphemes, words, and even abstract syntactic patterns can
37 be defined as constructions. The two complementation patterns of interest
38 here are good candidates for constructions in this sense: as we discussed
39 earlier, each one is associated with some (if only subtle and fuzzy) semantic
40 features such as actuality (gerundial) vs. potentiality (infinitival), etc.

41 In Goldbergian construction grammar as adopted here, a complex
42 utterance is a combination of several constructions (morphemes, words,
43 syntactic patterns). For instance, we can decompose (1) into the following
44 constructions: the words 'Maria', 'began', 'to', 'feed', 'the', 'squirrels'; a NP

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1 construction; a VP construction; and, last but not least, an infinitival
2 complementation construction. The only difference between (1) and (2) is
3 the choice of complementation construction. Constructions can be combined
4 freely as long as their specifications are compatible with each other. Many verbs
5 such as 'try', 'begin', or 'start', for instance, can occur in both constructions
6 because their semantic specifications are sufficiently compatible with each
7 other. A verb like 'end', on the contrary, is not compatible with the infinitival
8 construction:

- 9
10 (5) a. ?Steffi ended to feed the squirrels every day.
11 b. Steffi ended feeding the squirrels every day.

12
13 From a constructionist perspective we can account for the ill-formedness
14 of (5a) such that 'end' strongly entails that some action was carried out on a
15 regular basis or for an extended period of time, which is not sufficiently
16 compatible with the semantic specifications of the infinitival construction.

17 Of crucial importance for the present study is that in construction
18 grammar, well-formedness is a matter of degree: it is at least in part correlated
19 with the frequency with which the constituent constructions of an utterance
20 occur together. To illustrate this point, consider the examples in (6):

- 21
22 (6) a. Maria tried to feed the squirrels.
23 b. Maria attempted to feed the squirrels.

24
25 Both 'try' and 'attempt' are semantically compatible with the infinitival
26 construction, and they are near synonyms across many contexts, yet to native
27 speakers of English, (6a) will sound (if only slightly) more well-formed than
28 (6b). (6b) is not ill-formed – it just seems that *attempt* is not the most *typical* or
29 *idiomatic* choice in this context. As we will show below, the difference in
30 idiomaticity of 'try' and 'attempt' in the infinitival construction is reflected in
31 the frequencies with which the two verbs occur in that construction. In other
32 words, the conditional frequency of 'try'|infinitival construction is much
33 higher than that of 'attempt'|infinitival construction. We outline the method
34 we used to calculate these conditional frequencies for the present study in the
35 next section.

36 A constructionist perspective ~~as outlined here~~ has several implications for
37 our understanding of second language proficiency and second language
38 teaching. First, the traditional distinction between vocabulary and syntax is
39 discarded with: instead of learning words and grammatical rules to accurately
40 combine these words, knowing a language means to know constructions
41 at different levels of complexity and abstraction, and how often these
42 constructions are combined with each other. Second, learner accuracy is not a
43 binary phenomenon: choosing a verb to go with a particular syntactic
44 construction is not either right or wrong, but can result in anything on a scale
45 ranging from perfectly accurate to entirely ungrammatical, depending on the

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1 match between the conditional frequency with which a learner uses a verb in
2 a given construction compared to the frequency with which native speakers
3 use that verb in the given construction (Wulff and Gries 2011). Several studies
4 have provided experimental and corpus-linguistic evidence that (at least
5 advanced) L2 learners of English in fact have that kind of knowledge for
6 argument structure constructions and complementation constructions (Liang
7 2002; Gries and Wulff 2005; 2009).

8
9 **Measuring accuracy in a constructionist framework:
10 collostructional analysis**

11
12 Collostructional analysis (CA) refers to a family of related corpus-linguistic
13 methods (Stefanowitsch and Gries 2003; Gries and Stefanowitsch 2004), that
14 measure the afore-mentioned association between two constructions, most
15 typically the association between a verb and a construction it occurs in. CA
16 has been applied in various domains, including dialectal variation (Mukherjee
17 and Gries 2009), ~~and~~ diachronic change (Hilpert 2006), and contrastive studies
18 of native speaker and learner data (Gilquin to appear). Wulff and Gries (2011:
19 71) point out how collostructional analysis can also be applied as a measure of
20 L2 accuracy: “Collostructional analysis is a technical operationalization of
21 accuracy when defined as native-like selection, asking: what is the likelihood
22 of a construction X in the environment of another construction Y?” The
23 present study is the first one to contrast English native speaker and Spanish L2
24 English learner data using this method.

25 The kind of collostructional analysis that we employed in the present
26 study is called distinctive collexeme analysis (DCA). A DCA is specifically
27 tailored to contrasting two (or more) constructions (not necessarily related) in
28 terms of the verbs occurring in them (Gries and Stefanowitsch 2004). If a verb
29 exhibits a significant preference for either construction, it is called a *collexeme*
30 of that construction (*collexeme* is a blend of *collocate* and *construction*). For each
31 candidate verb, four frequency values are entered into a 2-by-2 table:

- 32
33 1. the token frequency of the verb lemma in the gerundial construction;
34 2. the token frequency of the verb lemma in the infinitival construction;
35 3. the corpus frequency of the gerundial construction;
36 4. the corpus frequency of the infinitival construction.
37

38 The table is then submitted to a Fisher Yates exact test (or any other
39 association measure; see Stefanowitsch and Gries 2003: 217–8 for reasons why
40 the Fisher Yates exact test may be the preferred choice). To give one example,
41 consider Table 1, which summarizes the frequency values for the verb ‘begin’
42 in the Spanish learner data: out of 1,094 occurrences of the infinitival
43 construction, 51 occur with ‘begin’, and ‘begin’ occurs 2 times in the gerundial

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Table 1. Frequencies of *begin* in the gerundial and infinitival construction in SP-ICLE

	<i>Begin</i>	Other verbs	Total
Infinitival complementation	51	1,043	1,094
Gerundial complementation	2	177	179
Total	53	1,220	1,273

construction, which occurs 179 times overall (the remaining cell values are determined through addition and subtraction).

The Fisher Yates exact test provides a p -value which we report in its negative \log_{10} -transformed form for easier interpretation. P_{\log} values that are equal to or larger than 1.3 correspond to a probability of error of 5% or less. The p_{\log} for 'begin' is 1.86, so 'begin' is a distinctive collexeme of the infinitival construction.

Data

We retrieved all instances of words ending in 'ing' and all instances of the preposition 'to' from the Spanish component of the *International Corpus of Learner English* (SPICLE), which contains ~300 essays (~200,000 words) of intermediate to advanced Spanish learners of English (Granger et al. 2009). True hits of either complementation construction were then manually identified, yielding a sample of 179 instances of the gerundial and 1,094 instances of the infinitival construction (out of 4,807 words ending in 'ing' and 6,073 instances containing the preposition 'to'). The principal criterion to identify true hits was that the two verbs had to meet the semantic constraint that the first verb specifies the action that the second one denotes (Langacker 1991: 445). In order to ascertain correct frequency counts of the verbs instantiating the two constructions, misspelled variants as in (7) were corrected:

- (7) Most people who find happiness meet it having a mint of money to not limit what they wnt to do each time.

The final data sample was then used to carry out a distinctive collexeme analysis using Gries' (2007) R -script.

Results

Corpus analyses

In order to address the question of how target-like the Spanish learners' collexeme preferences are, we can compare the DCA results of the Spanish

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1 learner data with the ones reported in Gries and Wulff (2009) for native
2 speaker data obtained from the British component of the *International Corpus*
3 *of English* (ICE-GB), and those reported in Wulff and Gries (2011) for
4 German learner data obtained from the German component of the
5 *International Corpus of Learner English*. Table 2 lists the distinctive collexemes
6 for both constructions in all three data sets; overlapping collexemes are
7 highlighted in bold print and with a superscript that indicates which other
8 data set the collexeme also occurs in (^G for German L2 English, ^{NS} for native
9 speaker English, and ^{SP} for Spanish L2 English).

11 Spanish vs. native speaker data

12
13 For the infinitival construction, Table 2 reveals nearly no overlap of distinctive
14 collexemes: the only verb distinctively associated with the infinitival
15 construction is 'try'. Looking at the two constructions in contrast, two
16 semantic groups emerge from Table 2 both in the Spanish learner and in the
17 NS data that resonate with our previous description of the main semantic
18 differences between gerundial and infinitival constructions: most of the
19 verbs distinctively associated with the infinitival construction evoke an
20 interpretation in relation to the future (top three collexemes in the learner
21 data: 'try', 'want', 'begin'; top three collexemes NS data: 'try', 'wish', 'seek');
22 in contrast, the verbs most distinctively associated with the gerundial
23 complementation are aspectual verbs that relate to an event or action
24 unfolding during speaker time, be it the beginning ('start'), the termination
25 ('stop', 'end', 'finish', and 'get rid of'), and the continuation ('continue', 'go
26 on', 'keep', and 'keep on') of that action or event. A second group of
27 collexemes distinctive for the gerundial construction connotes liking ('enjoy',
28 'like', 'prefer').

29 While the collexemes that the Spanish learners select for both
30 constructions reflect the general semantic trends associated with these
31 constructions in the native language rather well, they differ considerably in
32 terms of the *specific* collexemes that instantiate these trends. This holds in
33 particular for the infinitival construction: most of the distinctive collexemes
34 for the infinitival construction in the NS data (such as 'tend', 'manage', 'wish',
35 'refuse', 'intend', 'plan', etc.); do not yield significant p_{\log} values in the Spanish
36 learner data. (One may argue that the corpora that the learner and native
37 speaker data were extracted from are not identical in thematic focus and genre
38 and register make-up, so naturally no complete collexemic overlap should be
39 expectable; while this caveat holds generally true, we will see below that
40 German data obtained from the same learner corpus are considerably more
41 similar to the native speaker data overall.) For the gerundial construction, we
42 find more overlap between the Spanish L2 and the NS data: 6 verbs rank
43 among the top distinctive collexemes in both data sets ('stop', 'start', 'enjoy',
44 'avoid', 'finish', and 'keep').

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Table 2. Top distinctive collexemes for the infinitival and gerundial construction in German and Spanish L2 English and NS English data

collexeme	Infinitival construction				Gerundial construction				
	Spanish L2 English		NS English		Spanish L2 English		NS English		
	p_{log}	collexeme	p_{log}	collexeme	p_{log}	collexeme	p_{log}	collexeme	
try ^{NS}	18.57	try ^{NS, SP}	39.9	try ^{G, SP}	22.44	stop ^{G, NS}	13.65	keep ^{G, SP}	76.45
need	3.02	manage ^{NS}	5	wish	5.39	continue ^G	13.50	start ^{G, SP}	35.23
seem	2.87	like ^{NS}	4.54	manage ^G	4.77	start ^{G, NS}	9.28	stop ^{G, SP}	29.45
decide	2.81	tend ^{NS}	3.66	seek	4.35	enjoy ^{G, NS}	7.74	start ^{G, SP}	11.87
begin	1.86	learn ^{NS}	2.5	tend ^G	4.06	go on ^G	6.88	avoid ^{G, SP}	11.87
pretend	1.60	begin ^{SP}	2.38	intend	3.67	keep on ^G	6.88	enjoy ^{G, SP}	11.87
		dare	1.58	attempt	3.19	mean	4.04	mind	11.87
				hope	3.19	like	3.53	remember ^G	10.14
				fail	3.09	avoid ^{G, NS}	3.38	go ^G	7.99
				like ^G	3.03	end up ^G	2.56	consider	5.45
				refuse	2.98	insist on	2.56	envisage	3.38
				learn ^G	2.1	prefer ^G	2.38	finish ^{G, SP}	3.38
				plan	1.89	finish ^{G, NS}	1.71	carry	2.53
				continue	1.53	get rid of	1.71	fancy	2.53
				afford	1.49	keep ^{G, NS}	1.71	imagine	2.53
						spend	1.71	resist	2.53
								catch	1.69
								hate ^G	1.38
								bear	1.25
								begin	1.03

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1 Also noteworthy are cases where we observe directly opposite
2 constructional associations: 'begin' strongly prefers the gerundial construction
3 in NS English, but the Spanish L2 learners significantly prefer 'begin' in the
4 infinitival construction. Conversely, 'like' and 'continue' are distinctive for the
5 gerundial construction in the Spanish L2 English data, while distinctive for
6 the infinitival construction in the English L1 data.

7 Finally, it should be noted that several verbs are distinctive for the
8 gerundial construction in the native speaker data, but not attested at all in the
9 Spanish learner data, including 'envisage', 'fancy', 'imagine', 'resist', 'catch',
10 or 'hate'; the only exception here is 'consider', which occurs 5 times in the
11 gerundial construction in the Spanish L2 data, but does not yield significance.
12 The verb 'fail' deserves particular attention in this context because although
13 it ranks among the most distinctive infinitival collexemes in English L1, it
14 does not appear in the Spanish L2 English data.

15
16 **Spanish vs. German learner data**

17
18 In order to address the question to what extent the overlap between the
19 Spanish L2 and the English native speaker data may be attributed to transfer
20 effects, we can glean some answers from comparing the Spanish learner data
21 with German learner data.

22 Turning first to the infinitival construction, we can see in Table 2 that there
23 is just as little overlap between the Spanish and the German data as there is
24 between the Spanish and the native speaker data: the only collexemes shared
25 between both learner groups are 'try', which is in accord with native speaker
26 preferences, and 'begin', which runs counter to native speaker preferences. In
27 German, the translation equivalents for 'begin', 'anfangen' and 'beginnen', are
28 strongly associated with the infinitival construction ('zu' is the German
29 infinitive marker), which may invite transfer:

- 30
31 (8) Es **fang an zu regnen**. / Es **begann zu regnen**.
32 It **began to rain**.

33
34 Likewise, the Spanish word for 'begin', 'empezar', is a prepositional verb
35 always followed by an infinitive as in (9). Similar to examples (11) and (12) in
36 note 5, it is conceivable that the Spanish learner falsely aligns the preposition
37 'a' in Spanish with the infinitival marker 'to' in English.

- 38
39 (9) Completamente extravertido y a voz en grito **empiezo a exclamar**.²
40 Completely extrovert and, at the top of my voice, I begin to cry out.

41
42 When we compare the German and the native speaker preferences for the
43 infinitival construction, we see that this is largely because the German learners
44 are, in fact, very similar to the native speakers in terms of the collexemes they

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1 prefer to use in the infinitival construction: of the seven collexemes in the
2 German learner data, all but 'dare' are also collexemes of the infinitival
3 construction in the NS data. From this, we may conclude that while both
4 learner groups use verbs in the infinitival construction that reflect its main
5 semantic function (in contrast to the gerundial construction), the German
6 learners are much more attuned to the specific collexemes that occupy the
7 infinitival construction than the Spanish learners are. The one striking
8 exception here is again 'begin': both learner groups strongly prefer to use it in
9 the infinitival construction, which runs counter to native speaker preferences.

10 As far as the gerundial construction is concerned, the overlap between the
11 two learner groups is much bigger: 'stop', 'continue', 'start', 'enjoy', 'go on',
12 'keep on', 'avoid', 'prefer', 'finish', and 'keep' are among the top collexemes in
13 both data sets. This also matches native speakers' preferences rather well.

14 Aside from their non-idiomatic preference of 'begin' in the infinitival
15 construction, another commonality between the Spanish and German learners
16 is the marked preference of phrasal verbs such as 'keep on' and 'go on' in the
17 gerundial construction. Wulff and Gries (2009: 16) speculated about this
18 characteristic in the German data and explained that the possible underlying
19 motivation³ for the frequent use of these verbs could be the attempt by
20 German learners to transfer a construction in German, 'X ist am V_{infinitive}' ('X is
21 V_{ing}'):
22

23 [T]he combination of the preposition *am* with the bare form of a verb is one
24 of the few ways in which progressive aspect can be expressed in German.
25 The semantics of the gerundial complementation construction are
26 sufficiently compatible with a progressive reading, and learners may fill
27 the slot of the German *am* with the particle of the phrasal verb.
28

29 In Spanish, there is no such structure that would invite transfer, so we can
30 only speculate that one of the following applies: (i) students memorize lists of
31 verbs used in each construction and they use them systematically; (ii) they
32 associate the gerund with the meaning of the main verb (we also find the main
33 verbs 'keep' and 'go' among the most distinctive ones, although 'go' does not
34 yield statistical significance), disregarding the particle; or (iii) they associate
35 the gerund with the particle, considering that it will work as if it were a
36 preposition; one rule that many Spanish ESL text books point out is that
37 prepositions are frequently followed by a gerund form.⁴
38

39 Two other collexemes stick out when comparing the German and Spanish
40 learners with the native speaker data: 'like' and 'continue'. Unlike the Spanish
41 learners, the German learners correctly prefer 'like' in the infinitival
42 construction; both learner groups, however, share the non-target-like
43 preference of 'continue' in the gerundial construction. One way to account for
44 this may be that while the German learners are, overall, more attuned to the
45 collexeme preferences of L1 English, they continue to struggle with
collexemes that do not yield particularly high p_{\log} values ('like' yields a p_{\log}

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1 value of 3.03 in the native speaker data, 'continue' a value of 1.53). As one
2 anonymous reviewer points out, this may be related to the fact that the
3 learners receive much less exposure to these examples because they are, as
4 their p_{\log} values in native language indicate, much less frequent in comparison,
5 so they are harder to catch the learners' attention.

6 Also, both learner groups may have overgeneralized the association of the
7 gerundial construction with aspectual verbs such as 'start', 'stop', and 'end'
8 (and, to a lesser extent, the association of the gerundial construction with
9 verbs of liking: German learners strongly prefer 'hate' in the gerundial
10 construction as well, again going against native speaker preferences). In the
11 case of 'continue', Spanish learners may be invited to negative transfer
12 because its translation equivalent in Spanish is one of the few verbs that take
13 the gerundial construction in Spanish, as shown in (10):

- 14
15 (10) Aún **continúo preguntándome** —había escrito el maestro anterior—
16 cómo aquel fanatismo lúcido y abnegado del joven Luciano ha venido
17 a desembocar en esta mezquina dominación tribal y en esta ciega
18 avidez de sangre. . . I **continue asking myself**-the former teacher had
19 **written-how that lucid, selfless fanaticism of young Luciano has**
20 **derived in this mean tribal domination and in this blind eagerness**
21 **of blood . . .**

22
23 As far as 'like' is concerned, on the contrary, negative L1 transfer can be
24 ruled out: both 'gustar' and 'querer', the two translation equivalents of 'like'
25 in Spanish, only occur with infinitival complementation.

26 27 Instruction materials used in Spanish ESL

28
29 In order to further investigate why overall, the Spanish learners seem to
30 be less attuned to the idiomatic verb-construction combinations than the
31 German learners, we surveyed eight popular Spanish ESL textbooks and
32 grammars (listed in the Appendix) and took inventory of the rules and
33 recommendations these references make as far as the adequate choice of
34 construction is concerned. Obviously, this analysis can neither lay claim to
35 provide a comprehensive overview of the materials used in Spanish ESL
36 instruction, nor is it a representative impression of Spanish ESL students'
37 input; however, it ~~serves only~~ as a pointer to more in-depth future studies
38 examining the role of input and instruction.

39 Table 3 lists the verbs (in alphabetical order) for which at least one of the
40 textbooks (titles are abbreviated; see the Appendix) explicitly recommend
41 using it only with the gerundial construction. Verbs that are significantly
42 distinctive for either construction in the native speaker or the Spanish learner
43 data are listed as ING and TO, respectively; verbs at least attested in the data
44 are listed as (ING)/(TO) to indicate their distributional trend. Sixteen verbs

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Table 3. Verbs referenced in Spanish ESL instruction materials as taking gerundial complementation

Verb	Textbook(s)	NS preference	Spanish NNS preference
avoid	C, D	ING	ING
bear	B, G	(ING)	NA
carry on	B	ING	(ING)
catch	B	ING	NA
consider	C, D	ING	(TO)
deny	B, E	NA	(ING)
enjoy	B, E, F, H	ING	ING
finish	C, D	ING	ING
give up	B, C, D	NA	(ING)
go on	B	NA	ING
help	B	ING	ING
insist on	B	NA	ING
keep	B	ING	ING
keep on	B	ING	ING
look forward to	B	NA	(ING)
mind	C, D	ING	(ING)
miss	B	(ING)	NA
practis ce	C, D	(ING)	NA
prevent	B	NA	(TO)
stand	B, C, D, G	(TO)	NA
stop	B, E	ING	ING

are referenced in the instruction materials as occurring with gerundial complementation, but are attested neither in the native speaker nor the Spanish learner data ('admit', 'burst out', 'detest', 'feel like', 'find', 'insist', 'mention', 'object to', 'postpone', 'put off', 'put up with', 'risk', 'see to', 'suggest', 'swear', and 'tolerate').

Overall, Table 3 suggests that the ESL instruction materials make adequate suggestions in the sense that the verbs they list as taking predominantly or exclusively the gerundial construction are indeed significantly distinctive of the gerundial construction in authentic native speaker data. Likewise, the Spanish learners seem to use these verbs in a target-like fashion. The only minor exceptions here are 'consider' and 'prevent', which, while not yielding significant *p* values, are attested in the infinitival construction in the learner data.⁵ What is striking, however, is that with the exception of textbook B (*Morfosintaxis*), which stands out as the material that lists the majority of verbs actually attested also in native speaker data, the number of verbs suggested by other materials is rather scarce. Also, when we contrast Table 3 with the list of highly distinctive collexemes of the gerundial construction in the native speaker data, we find that some of the most strongly associated collexemes are

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Table 4. Verbs referenced in Spanish ESL instruction materials as taking infinitival complementation

Verb	Textbook(s)	NS preference	Spanish NNS preference
afford	B, D	TO	(ING)
agree	B, D	NA	(TO)
ask	B, D	NA	(TO)
attempt	B	TO	(TO)
decide	B, D, E	(TO)	TO
expect	B, D, H	NA	(TO)
fail	B	TO	NA
forget	B	(TO)	(TO)
hesitate	B	(TO)	(TO)
hope	B, D, H	TO	(TO)
intend	B	TO	(TO)
learn	B, D	TO	(TO)
manage	B, D	TO	(TO)
need	B, D	NA	TO
offer	D	(TO)	(TO)
plan	D	TO	(TO)
prefer	E	(TO)	ING
prepare	D	(TO)	(TO)
pretend	B	(TO)	TO
promise	B, D, H	(TO)	(TO)
refuse	B, D	TO	(TO)
threaten	B	NA	(TO)
try	B	TO	TO
use	B	NA	(TO)
want	B, C, D, H	TO	TO
wish	B	TO	(TO)

apparently not mentioned in any of the instruction materials, including highly frequent (and hardly topic-specific) verbs such as 'start', 'end', 'remember', 'imagine', or 'hate'. It seems, then, that most instruction materials do not provide the Spanish learners with wrong advice – they just do not necessarily provide them with the most comprehensive or most idiomatic input.

In an analogy to Table 3, Table 4 lists the verbs referenced in the ESL instruction materials as taking the infinitival construction. Two other verbs are mentioned in the instructional materials, but not attested in either the native speaker or the Spanish learner data ('demand' and 'trouble').

Looking at Table 4, a very similar picture emerges for the infinitival construction as we saw before for the gerundial construction: the textbook recommendations match native speaker preference quite well overall. Similarly, when we compare the verbs in Table 4 with the most distinctive collexemes of the infinitival construction in the native speaker data, we find

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Table 5. Verbs referenced in Spanish ESL instruction materials as taking both gerundial and infinitival complementation

Verb	Textbook(s)	NS preference	Spanish NNS preference
begin	B	(ING)	TO
continue	B	TO	ING
hate	E	ING	NA
like	E	TO	ING
love	E	(TO)	(TO)
start	E	ING	ING

that the overlap is much larger than for the gerundial construction: of the top 15 distinctive collexemes in the native speaker data, only four ('seek', 'tend', 'like', and 'continue') are not referenced in any of the ESL instruction materials we examined. Again, however, we see that there are two references in particular that are responsible for the lion's share of this overlap: *Morfosintaxis* (B) and *Bonus 2° bachillerato* (D). Furthermore, even these textbooks introduce a series of verbs that are not even attested in the native speaker data with the infinitival construction (e.g. 'agree', 'ask', 'expect', etc.).

Finally, Table 5 lists the verbs that license both constructions according to the ESL instruction materials. What stands out in Table 5 is the fact that one ESL material in particular (*Grammar in gobbets*) lists several verbs as licensing both constructions which in fact show significant constructional preferences in native speaker data: 'continue', 'hate', 'love', and 'start' do in fact all occur in both constructions, but overwhelmingly in just one construction. With the exception of 'start', the Spanish learners are apparently not aware of these probabilistic preferences, as is evidenced by the fact that their significant preferences stand in direct opposition to the native speakers' preferences.

In summary, we can conclude that the ESL instruction materials do not provide wrong advice, but at the same time, the majority of them are far from providing input that would aid the Spanish learners in making truly idiomatic (as opposed to grammatically correct) decisions on which verb to pair with which complementation construction.

Discussion

The main findings of the present study can be summarized as follows:

- Spanish (and German) ESL learners are better attuned to the verb-specific preferences associated with the gerundial construction than with those of the infinitival construction;

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- 1 • German ESL learners and Spanish ESL learners share certain
2 overgeneralization tendencies—~~errors~~, including the overuse of phrasal
3 verbs and aspectual verbs in the gerundial construction;
4 • overall, German learners outperform Spanish ESL learners in terms of the
5 overlap of specific verbs attested in the learner data compared to the native
6 speaker data;
7 • Spanish (and, to a lesser extent, German) ESL learners' difficulty with the
8 infinitival construction may partially be accounted for by flawed L1-L2
9 alignments and negative transfer from the L1;
10 • with few exceptions, Spanish ESL instruction materials do not provide
11 inadequate advice regarding the specific verbs to be used in gerundial/
12 infinitival complementation, but they largely fail to provide (dense)
13 input on verbs that are particularly highly associated with these two
14 constructions in L1 English; at the same time, they reference verbs that,
15 while principally licensed by the two constructions, are not attested in a
16 large-scale corpus of native English.

17
18 In consequence, the Spanish ESL learners represented in ICLE appear
19 less proficient than the German ESL learners, not because they make
20 *ungrammatical* verb choices in the two constructions, but because their choices
21 are not entirely *idiomatic* or target-like. This reinforces Pawley and Syder's
22 (1983) distinction between 'native-like fluency' and 'native-like selection' as
23 two separate components of second language proficiency, and provides an
24 empirical illustration of Howarth's (1998) claim that:

25
26 many learners fail to understand the existence of the central area of the
27 phraseological spectrum between free combinations and idioms. It is in
28 handling restricted collocations that errors of both a lexical and
29 grammatical structure constantly occur. Moreover, learners need to
30 understand that restricted collocations make up a significant part of a
31 typical native speaker's production in both speech and writing. (Howarth
32 1998: 186)

33
34 The extent to which ESL teaching materials impact (Spanish) learners'
35 use of complementation constructions is a question that requires further
36 systematic and more comprehensive research into teaching materials and
37 their interaction with other sources of learner input than we could provide
38 here. Similarly, more studies are needed that examine the use of different
39 structures across learner groups from different L1 backgrounds, across
40 different proficiency levels, and across registers and genres. Nonetheless, the
41 results of the preliminary case study presented here suggest that Spanish
42 teaching materials may benefit from presenting this grammar topic in a
43 fashion that more adequately reflects actual native language use. Maybe
44 most importantly, learners (at least at intermediate to advanced levels
45 of proficiency) could potentially benefit hugely from understanding that

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1 choosing a verb and the complementation pattern to go with it is not just
2 a matter of right or wrong, but that some verbs are associated with
3 these complementation patterns much more strongly than others. Text
4 books could easily incorporate information as provided in Table 2 to raise
5 learners' awareness for which verbs are most strongly preferred in either
6 complementation construction. Depending on the proficiency level of learners,
7 this list could comprise only the top most significantly distinctive collexemes,
8 and be extended to incorporate, or replaced by, verbs further down the list in
9 order to build a comprehensive vocabulary.

10 More generally speaking, the present study may be taken as one of many
11 examples of how corpus-based studies of authentic language provide insights
12 into language that would otherwise escape one's attention. While it may be
13 too cumbersome to have students replicate the exact analysis presented here
14 in the classroom, a simple query of the two patterns in a large-scale corpus of
15 English (such as, say, the *Contemporary Corpus of American English*, which is
16 freely available online⁶), may already be a powerful way to raise learners'
17 awareness of which verbs occur in these constructions most frequently. Such
18 data-driven, explorative learning approaches have been gaining attention in
19 corpus linguistics and TESOL as of late, reporting promising results overall
20 (see Braun 2006 and Chambers 2007 for recent overviews).

21 In summary, we hope to have illustrated the usefulness of corpus-based
22 and quantitative investigations into learner language, and to have provided a
23 starting point for future research.

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26 Jiyoung Yoon, and two anonymous reviewers for their helpful comments on an earlier
27 version of this paper.
28
29

30 Notes

- 31
32
- 33 1. To complicate matters even more, many ESL learners struggle with the proper use
34 of the gerundial construction in particular since this construction is much rarer
35 than the infinitival construction (in English and Spanish, for instance; see Schwartz
36 and Causarano 2007), or it is completely absent in many languages (as in German;
37 see Mair 2003). Consequently, depending on their L1 background, ESL learners
38 may not benefit from positive transfer when acquiring the two constructions
39 in English.
 - 40 2. All Spanish examples were taken from the *Real Academia de la Lengua* unless
41 indicated otherwise.
 - 42 3. An alternative explanation offered by one anonymous reviewer is that German
43 speakers may associate the gerund with the nominalized infinitive construction (as
44 opposed to the ordinary form preceded by the infinitival marker *zu* 'to') in these

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1 instances: the particles could be misinterpreted as nominal markers, resulting in a
2 preference for the gerundial construction.

- 3 4. Among the ESL teaching materials we surveyed for our analysis, textbook C and
4 textbook H, for instance, mention this rule (see the Appendix for full references):
5

6 We use the gerund: (1) as the subject of a sentence. Example: "smoking is
7 bad for you", (2) after prepositions. Example: "the thought of going on holiday
8 was exciting", and (3) after certain verbs. Example: "he admitted stealing
9 the bikes". (textbook C: 104; emphasis added)
10

11 The gerund. Uses: (1) subject of a verb. Example: "smoking is bad for
12 you", (2) object of a verb. Example: "do you like cooking?", (3) the
13 complement of *to be*. Example: "his favourite activity is watching
14 television", (4) after prepositions. Example: "she's very good at listening to
15 people", (5) after determiners. Example: "the bombing of civilians
16 horrified everyone", (6) after possessive adjectives, object pronouns or
17 nouns. Example: "I hope you don't mind his/him/John coming here",
18 (7) after adjectives. Example: "regular swimming is very good for you",
19 (8) in certain expressions. Example: "it's no use trying to help her".
20 (textbook H: 111; emphasis added).
21

- 22 5. As in Example (9), Spanish learners' preference for the infinitival construction in
23 these cases may be due to the learners' flawed interlanguage analysis of structural
24 correspondences between Spanish and English. For *consider*, for instance, while
25 the Spanish verb *considerar* is not followed by an infinitival complement, it
26 frequently occurs with *that*-complements that contain infinitives as in (11). The
27 complementizer *que* could be falsely aligned with the preposition *to* in English.
28

29 (11) Y no sólo estoy muy satisfecho de haberlo hecho, sino que **considero**
30 que **defender** la democracia es algo por lo que puede merecer la
31 pena llegar a sacrificar la vida.

32 And I am not only proud of having done it, but I also **consider** that
33 **to defend** the democracy is something that may be worth sacrificing
34 your life for.
35

36 An analogous explanation may hold for *prevenir*, the Spanish word for
37 *prevent*:
38

39 (12) Te **prevengo** que no **soy** una amante cómoda.
40 I **prevent** you that I am not a lazy lover.
41

- 42 6. <<http://corpus.byu.edu/coca/>>
43

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23 **Appendix: ESL textbooks and grammar books analysed**

- 24
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