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Tolerance for Lexical Constraints in the Double Object Construction: Evidence from Brazilian Portuguese-English Bilinguals

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Abstract

This study investigates Brazilian Portuguese-English bilinguals' tolerance for lexical constraints in the English double object construction (DOC). Previous research indicates that bilinguals tend to show greater acceptance of unconventional argument structures compared to native speakers, a pattern linked to broader constructional generalizations and reduced sensitivity to competition effects. Using an acceptability judgment task, we compared bilinguals' and native speakers' ratings of grammatical and ungrammatical DOC sentences. The findings confirmed that bilinguals exhibit higher tolerance for unlicensed DOC sentences, particularly those containing cognate verbs. Item-level and participant-level analyses revealed substantial individual variability among bilinguals, indicating that higher tolerance is not uniformly distributed.

Keywords

Second Language Acquisition, Bilingualism, Double Object Construction, Tolerance for Grammatical Constraints, Acceptability Judgment Task

1. Introduction

The present study investigates bilinguals' tolerance for lexical and semantic restrictions in the English double object construction (DOC), a topic central to debates on how bilinguals balance creativity and constraint. Research on argument structure constructions shows that bilinguals often accept unconventional forms more readily than native speakers, a pattern now understood not as random error but as the result of broader generalizations and reduced sensitivity to competition effects. Building on usage-based and constructionist accounts, the first section reviews theoretical and experimental work on how bilinguals acquire and generalize argument structure constructions, describing the shift from early error-based accounts of overgeneralization to recent perspectives that view higher tolerance as a

systematic outcome of distinct learning conditions. The second section provides an overview of the English DOC, outlining the lexical, semantic, and processing factors that constrain its use and explaining why verbs such as *donate* and *explain* are typically avoided by native speakers in the DOC. It also summarizes findings with bilinguals, who show higher acceptance of these disfavored forms, reflecting broader generalizations and weaker sensitivity to distributional constraints. Finally, we present an acceptability judgment study designed to confirm and extend these findings by examining whether this tolerance is consistent across participants and items, and discuss results in relation to prior research

2. Higher Tolerance for Argument Structure Constraints in L2

Historically, what is now often referred to as higher tolerance for unconventional constructions in second language (L2) speakers was initially conceptualized under the label of overgeneralization, a term still frequently used in the SLA literature. Early accounts approached this phenomenon within the frameworks of error analysis and interlanguage theory. Richards (1971) described overgeneralization as an intralingual process, arising from bilinguals' internal strategies to simplify linguistic complexity rather than from direct L1 transfer. Selinker (1972), in introducing the notion of interlanguage, identified overgeneralization as one of five central psycholinguistic processes in L2 development. Along with language transfer, transfer of training, and communication strategies, overgeneralization was viewed as a cognitive mechanism that could lead to fossilization, with deviant forms potentially persisting despite increased exposure. These works framed overgeneralization as a natural phase within interlanguage development, reflecting bilinguals' efforts to establish form-meaning mapping.

Building on these theoretical perspectives, research in the 1980s and 1990s, strongly influenced by generative approaches to argument structure and lexical semantics, sought to explain how bilinguals generalize the use of certain syntactic structures beyond their target-like distribution (Slabakova, 2012). A well-documented example comes from the English dative alternation, where bilinguals often assumed that all verbs participating in the alternation could occur in both the double object and prepositional dative frames, despite clear semantic restrictions. This tendency, and how it manifests in judgments of English DOCs, will be illustrated in the next section. Slabakova (2012) cites several experimental studies, including Mazurkewich (1984), White (1987), Juffs (1996), and Inagaki (2001), which consistently show that bilinguals initially transfer L1-based argument structure mappings before gradually adjusting to L2-specific constraints. As the author points out, retreating from these overgeneralizations is particularly challenging, given the limited availability of indirect negative evidence in L2 input.

Additional evidence for this tendency comes from research on other argument structure constructions and from studies with the same population examined in the present investigation, namely Brazilian Portuguese-English bilinguals. Acceptability judgment tasks reported in Oliveira (2013) and Oliveira (2016) show that this population displays high acceptability ratings toward resultative constructions with licensed adjectives (1a), but also toward those with adjectives that are typically unlicensed (1b). These findings reinforce the idea that bilinguals display a greater tolerance for argument structure constructions.

(1) a. The waiter tidied the table and wiped it clean

b.*The singer dyed her hair and washed it **shiny** (Oliveira, 2016, p. 158)

More recent research, especially from usage-based and constructionist perspectives, has reframed this phenomenon under different terminology, focusing less on overgeneralization and more on reduced sensitivity to competition and noisier representations in L2 processing (Robenalt & Goldberg, 2016; Tachihara & Goldberg, 2020). Native speakers strongly favor entrenched constructions and tend to reject novel alternatives when a well-established competing form exists. In contrast, L2 speakers show higher tolerance for unconventional constructions, accepting novel pairings even when target-like alternatives are available. Tachihara and Goldberg (2020) attribute this to weaker memory for exact lexical combinations, which leads to fuzzier representational boundaries. Similarly, Robenalt and Goldberg (2016) report that bilinguals diverge more from native speakers when judging novel rather than familiar constructions, further supporting the idea of reduced sensitivity to statistical preemption.

The origins of this higher tolerance appear to be multifaceted. Cabrera and Zubizarreta (2004) emphasize the role of L1 transfer, showing that bilinguals sometimes extend argument structure constructions licensed in their L1 to contexts where they are unlicensed in the L2. Kim and Shin (2025) add evidence from online processing, showing that bilinguals experience greater difficulty integrating verbs and constructions in real-time under specific conditions. Their experiments revealed that processing becomes significantly more demanding when (i) the association strength between the verb and the construction is weak and (ii) when the verb itself is less frequent or semantically less transparent, such as abstract verbs with fewer clear semantic associations. These findings suggest that both the verb's intrinsic properties and its compatibility with a given construction influence how bilinguals comprehend and integrate argument structure patterns. In other words, when faced with verbs that are infrequent or only marginally compatible with a construction, bilinguals are more likely to rely on broader generalizations, which may contribute to their greater tolerance for unconventional combinations. These processing difficulties, combined with weaker statistical preemption, may help account for why L2 speakers are more accepting of unconventional constructions. Importantly, this tolerance can decrease with increased exposure and proficiency. Tachihara and Goldberg (2025) show that repeated exposure to conventional forms strengthens bilinguals' sensitivity to unlicensed constructions, suggesting that statistical preemption requires extended consolidation. Likewise, Robenalt and Goldberg (2016) report that only highly proficient L2 speakers display high sensitivity to competition effects.

This discussion also underscores an important point: such differences should not be interpreted as evidence of deficient or problematic representations in bilinguals. Rather, they reflect how distinct learning histories and input conditions shape linguistic knowledge. Monolinguals, with dense and consistent exposure to conventionalized patterns, tend to develop finely tuned sensitivity to competition effects, whereas bilinguals, whose experience is distributed across two languages, rely on broader generalizations and tolerate greater variability. From this perspective, studying higher tolerance

contributes to understanding how different language experiences give rise to distinct, yet equally systematic, patterns of linguistic behavior.

3. The Double Object Construction

The double object construction (DOC) is one of the most extensively studied argument structure constructions in English and has been central to debates about the interaction of lexical, semantic, and usage-based factors in grammar. It licenses two adjacent noun phrases as objects, as in (1a), and alternates with the prepositional dative (1b), a relation known as the dative alternation (Gropen et al., 1989; Pinker, 1989; Goldberg, 1995; Rappaport Hovav & Levin, 2008). Although both patterns describe transfer events, they encode distinct event construals: the DOC expresses a change of possession, whereas the prepositional variant emphasizes motion toward a goal (Pinker, 1989; Goldberg, 1995). These differences are subtle but robust, shaping native speakers' intuitions even when both forms are semantically interpretable.

(2) a. Martha gave Myrna an apple

b. Martha gave an apple to Myrna (Rappaport Hovav & Levin, 2008, p. 130)

From a Construction Grammar perspective (Goldberg, 1995, 2019), the DOC is treated as a form-meaning pairing that directly encodes this transfer-of-possession meaning, independent of any particular verb. From this view, its productivity and its sensitivity to lexical and semantic constraints follow naturally from usage-based mechanisms such as entrenchment, coverage, and competition, rather than from categorical rules. The use of this construction is restricted by a set of factors that determine which verbs and arguments are acceptable in this construction. One of the most robust is the possessor constraint: the recipient must plausibly be construed as a possessor of the theme. For instance, the prepositional variant in (3a) is acceptable because *Chicago* can function as a goal, but the DOC counterpart in (3b) is rejected because cities are not prototypical possessors of cars. Similarly, (4a) is acceptable, since *Sam* can occupy the place, but (4b) is not, as Sam cannot possess the entire floor (Goldberg, 1995). Animacy is another critical factor: while the prepositional dative allows inanimate recipients (5a), the DOC strongly favors animate ones (5b), unless a metonymic possessor reading is available (5c).

(3) a. Rebecca drove her car to Chicago

b. *Rebecca drove Chicago her car (Pinker, 1989, p. 56)

(4) a. I cleared him the floor

b. *I cleared him a place to sleep on the floor (Langacker, 1991, p. 519)

(5) a. Smith threw the first baseman/*first base the ball

b. Smith threw the ball to the first baseman/first base (Rappaport Hovav & Levin, 2008, p. 144)

c. Joe sent Chicago a letter/Joe sent a letter to Chicago (Goldberg, 1995, p. 55)

Lexical factors, especially etymological origin and frequency, further constrain DOC usage. Verbs of Germanic origin such as *give*, *buy*, and *show* (6a), readily license the construction because they are frequent, highly entrenched in transfer of possession events, and strongly represented in speakers' mental

exemplars (Goldberg, 2019). By contrast, Latinate verbs, such as *transfer, purchase and display* (6b), are typically excluded. Usage-based approaches argue that competition, or statistical preemption, plays a role: highly entrenched alternative forms (e.g., donate money to Mary) preempt less-frequent DOC variants, reinforcing speakers' conservative preferences (Boyd & Goldberg, 2011). Nevertheless, this exclusion is not categorical. Certain verbs, such as *guarantee* (7), illustrate that the restriction on Latinate verbs is probabilistic rather than absolute, consistent with a Construction Grammar view in which argument structure patterns emerge from experience and are shaped by both entrenchment and usage-based generalization.

(6) a. She gave/bought/showed him a book

b. ?She transferred/purchased/displayed him a book (Goldberg, 2019, p. 40)

(7) a. She guaranteed him the story (Goldberg, 2019, p. 3)

Phonological and morphological factors also play a role in licensing DOC: verbs that are shorter and less morphologically complex, often monosyllabic or forming only one metrical foot, are more frequent in the DOC (Pinker, 1989), also illustrated in (6). However, these restrictions are not always deterministic. Experimental data indicate that acceptability judgments are gradient, with some verbs appearing in both constructions under certain pragmatic or contextual conditions. Goldberg (2019) highlights that even strongly disfavored forms may occasionally surface in naturalistic speech when contextual pressure or discourse novelty favors them. Nonetheless, native speakers consistently show strong preferences, avoiding forms that, while semantically interpretable, are unconventional.

A major theoretical question is how native speakers balance creativity and constraint: why they can extend constructions to new verbs, such as *text* (8), but systematically avoid others, such as *explain* (10). Goldberg (2019) frames this issue as the puzzle of partial productivity, proposing that two interacting mechanisms, coverage and competition, regulate extension. Coverage describes how well a set of familiar examples represents the range of possible uses of a construction, allowing new cases to be accepted if they resemble those already encountered. In other words, it reflects how comprehensively previous examples capture the possibilities of the construction, making generalization to novel instances more likely. Each instance of a construction is stored as a memory trace, and generalization is licensed when a novel instance fits within a sufficiently covered cluster of similar exemplars. High type frequency and diversity of verbs in the DOC provide broader coverage, increasing its productivity. For instance, the frequent pairing of *give*, *send*, *hand* and *buy* with animate recipients allows creative extensions to semantically similar but less frequent verbs (8). Competition, or statistical preemption, constrains overgeneralization. Speakers track which forms reliably express specific messages, and highly entrenched alternatives suppress competing novel forms. Thus, (9) is strongly preferred because it overwhelmingly occurs in relevant contexts, preempting (10). Corpus studies demonstrate that native speakers are sensitive to these distributional patterns from early stages of acquisition, with competition acting as a conservative force that limits creativity in highly entrenched domains (Boyd & Goldberg, 2011).

(8) John texted Bill the news (Yang & Montrul, 2016, p.121)

(9) Explain this to me

(10) *Explain me this (Goldberg, 2019, p. 85)

The acquisition of the DOC in a second language presents additional challenges. Brazilian Portuguese (BP), for instance, lacks a fully productive DOC, relying predominantly on prepositional ditransitives, and has only marginal, highly lexicalized DOC-like patterns (Zara, 2014). Consequently, BP-English bilinguals must acquire not only the form but also the subtle lexical and semantic constraints regulating its use. Previous studies indicate that bilinguals, even at high proficiency levels, are more prone to overgeneralization. Goldberg (2019) argues that adult bilinguals are particularly vulnerable to such errors because they have reduced access to competition mechanisms: their strongly entrenched L1 patterns interfere with the fine-grained distributional learning required for statistical preemption.

Oliveira and Penzin (2019) provide empirical support for this tendency toward overgeneralization among Brazilian bilinguals. In an acceptability judgment task targeting unlicensed DOCs, they found that BP-English bilinguals were significantly more tolerant than native speakers of verbs that are strongly disfavored in this construction, such as *donate* and *explain*. Even highly proficient bilinguals assigned intermediate to high ratings to these sentences, whereas native speakers consistently rejected them. This pattern suggests that bilinguals rely on broader constructional generalizations and are less sensitive to the subtle distributional constraints that limit DOC productivity in English. Although proficiency improved overall accuracy, sensitivity to these lexical-semantic restrictions remained below native levels, consistent with Goldberg's (2019) claim that reduced access to competition mechanisms hampers bilinguals' ability to retreat from overgeneralization.

Agirre and Mayo (2014) report similar findings for Basque/Spanish bilinguals learning English as a third language. Using two online acceptability judgment tasks, they also found that bilinguals, regardless of proficiency, were consistently more accurate with prepositional dative constructions than with DOCs. Crucially, participants frequently accepted unlicensed Latinate verbs in DOCs. Although higher proficiency improved overall accuracy, even high proficiency bilinguals failed to reach native-like performance regarding illicit Latinate DOCs. These results converge with Oliveira and Penzin's (2019) findings and further support the view that limited sensitivity to distributional constraints and reduced competition effects underlie L2 overgeneralization of the DOC.

These findings raise an important question: are bilinguals' higher tolerance for unlicensed DOCs a consistent pattern, or could it vary across groups and specific lexical items? The two studies discussed above focused on overall results, which leaves open questions about how individual participants behave and whether certain sentences are systematically judged as more acceptable than others. This study seeks to confirm and extend the findings of Oliveira and Penzin (2019) with a comparable set of sentences. In addition to verifying whether the general pattern of higher acceptance for unlicensed DOCs holds, we aim to better understand how this higher tolerance emerges: do bilinguals generally rate all unlicensed DOCs as more acceptable than native speakers, or is the higher overall acceptance driven by a subset of

particularly tolerated items? We also ask whether this behavior is consistent across bilinguals or concentrated in a smaller group of participants. This more fine-grained analysis contributes to a clearer understanding of how bilinguals acquire and use the lexical and semantic constraints of the English DOC.

4. Methodology

The acceptability judgment task (Oliveira & Sá, 2013; Schütze & Sprouse, 2014; Sá et al., 2022) is a widely used technique in second language acquisition (SLA) research to investigate speakers' sensitivity to grammatical constraints. In this task, participants are asked to rate the naturalness or acceptability of sentences, typically on a Likert scale, based on how they sound, rather than on prescriptive grammatical rules. This method provides insight into speakers' underlying grammatical representations by eliciting ratings that reflect their intuitions about well-formedness. Unlike categorical grammaticality judgments, acceptability ratings capture fine-grained variability, making them particularly suitable for studying bilinguals, who often display gradient sensitivity and optionality when evaluating novel or less frequent constructions.

4.1 Participants

The study included 55 participants: 30 Brazilian Portuguese-English bilinguals and 25 native speakers of English. The native speaker group reported English as their native language, with one also reporting Japanese, and another one, Arabic. Their ages ranged from 18 to 37 years (M = 23.2). The majority were American (92%, n = 23), with one participant identifying himself as Canadian (4%, n = 1) and another as both American and Spanish (4%, n = 1). In terms of education, most had completed or were pursuing a bachelor's degree (68%, n = 17), followed by those with a graduate-level education (12%, n = 3).

The bilingual group was a convenience sample primarily composed of undergraduate and graduate students from the Federal University of Minas Gerais (UFMG). Their ages ranged from 19 to 37 years (M = 24.1). All bilinguals were native speakers of Brazilian Portuguese and had high levels of English proficiency. The group was evenly divided by gender (50% male, 50% female), and most were born in Minas Gerais (63%, n = 19). On average, participants began learning English at age 10.4 and reported using the language confidently outside the classroom by age 16.6. Most had never visited an English-speaking country (66%, n = 20), while 26% (n = 8) had spent less than a month abroad. Regarding the most impactful learning context, 46% (n = 14) attributed their English development to independent study and 36% (n = 11) to language schools or private classes.

Bilingual participants answered a questionnaire about the distribution of their language use habits between Portuguese and English. They were asked how often they perform a series of activities on a Likert scale ranging from "I only do it in Portuguese" (1) to "I only do it in English." (5) with the extra option "I don't do this activity" (0). The results varied considerably, with receptive skills (reading and listening) displaying a preference toward using more English than Portuguese, while production skills (writing and speaking) showed opposite results. Appendix A presents the full distribution for each question. Furthermore, when asked to self-assess their own English skills, the majority of answers were

"fluent", which was the highest level, for all skills (56% for reading, 50% for listening, and 43% for speaking), besides writing, where "average" and "fluent" both had 33% of answers. Their global level of knowledge in English was also mostly rated as "fluent" (46%).

Proficiency in the bilingual group was assessed using the Updated Vocabulary Levels Test (UVLT; Webb, Sasao & Ballance, 2017), a widely used diagnostic of receptive lexical knowledge. The UVLT consists of five frequency levels: 1000, 2000, 3000, 4000, and 5000 most frequent word families. At each level, participants complete 10 clusters of six words (three targets and three distractors) by matching definitions to words. The test is designed to measure receptive knowledge of high-frequency vocabulary, with the 5000-word level generally associated with high proficiency, as knowledge of the most frequent 5000 families accounts for over 95% of written texts in English. In this study, 26 bilinguals scored at level 5 and 4 at level 4, the latter group was removed to keep the group of high-proficiency bilinguals as uniform as possible, but their individual ratings distributions are presented below. In sum, the bilingual group can be characterized as highly proficient overall.

4.2 Materials

The materials consisted of 16 English double-object sentences, equally divided into grammatical (GD) and ungrammatical (UD) items. The GD sentences were formed with verbs that conventionally license the DOC pattern (*offer, award, bake, send, hand, serve, lend,* and *show*), whereas the UD sentences included verbs that do not typically allow this construction (*return, report, deliver, carry, explain, donate, submit* and *pull*). The full sentences are listed in the results section. The selection of verbs was guided by lexical constraints described in previous literature (e.g., Gropen et al., 1989; Goldberg, 2019; Oliveira & Penzin, 2019), aiming to maximize the contrast between grammatical and ungrammatical items. To mitigate potential task effects and reduce awareness of the experimental focus, 32 filler sentences were also included. These fillers represented a variety of English sentence structures unrelated to the DOC, such as transitive and intransitive constructions, and were evenly distributed across the task to avoid clustering of experimental items. The final set, therefore, comprised 48 sentences presented in randomized order. All sentences were controlled for length and lexical complexity to minimize processing differences unrelated to argument structure. Each item was presented individually, and participants rated its acceptability on a seven-point Likert scale, ranging from 1 (*totally unacceptable*) to 7 (*totally acceptable*). The scale was displayed together with the sentence on the same screen throughout the task.

4.3 Procedures

Participants completed an acceptability judgment task individually in a quiet environment. They were informed that the task was not about prescriptive grammar rules but about how natural each sentence sounded to them, as if they were judging whether it could occur in everyday communication. Before starting the experimental items, participants completed a brief training session with five practice sentences to familiarize themselves with the procedure and the seven-point Likert scale (1 = *totally unacceptable*, 7 = *totally acceptable*). The 48 sentences (16 experimental and 32 fillers) were presented

in randomized order using a computer interface. Each sentence appeared in the center of the screen along with the rating scale, which remained visible until a response was provided. Participants made their judgments by clicking a rating from 1 to 7. There was no time limit for responses, but participants were encouraged to rely on their first intuition rather than analyze the sentences extensively. A short break was offered automatically after approximately half of the sentences to minimize fatigue. The entire task took approximately 10 to 15 minutes to complete.

5. Results

This section reports the descriptive and inferential results of the acceptability judgment task, comparing native speakers and bilinguals on grammatical (GD) and ungrammatical (UD) double-object sentences. The descriptive data reveal important differences in how the two groups evaluated the sentences. Figure 1 shows the score distribution for native speakers. GD sentences are almost unanimously rated at the highest point of the scale, with scores strongly concentrated at 7, whereas UD sentences are consistently rejected, clustering in the lower range. Figure 2, in contrast, presents the ratings of the bilingual participants. Although they also rated GD positively, their judgments spread more broadly across the higher ratings of the scale, with 6 and 5 occurring more frequently than among native speakers. Their ratings for UD sentences are notably variable, distributed across the entire scale and frequently occupying intermediate scores. Overall, native speakers showed a clearer distinction between GD and UD sentences. This variability suggests a less categorical rejection of UD among bilinguals, consistent with arguments by Tachihara and Goldberg (2020) that bilingual speakers tend to adopt more flexible evaluative strategies for novel constructions.

Nevertheless, some bilinguals, especially Participant 34, clearly distinguished GD from UD, indicating that sensitivity to lexical constraints can emerge in individual cases. Interestingly, her background does not differ markedly from other participants in ways that would readily explain this performance. She is a 32-year-old graduate who works as an English teacher, a profile shared by several others in the group. According to the questionnaire, she began learning English at age 16 and felt confident using it by 17. Although she has traveled abroad, she reports spending no more than one week in countries where English is the dominant language. Her reported language use shows a strong preference for English in receptive activities and a slight preference for English in productive ones (see Appendix A for individual responses).

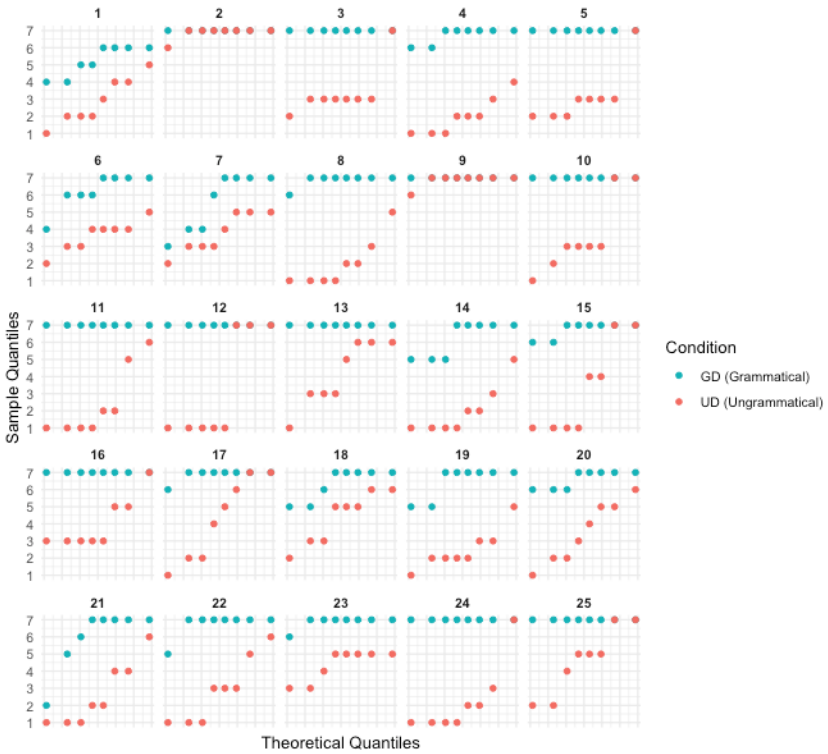

Figure 1. Native Speakers' Individual Acceptability Judgment Ratings Distribution for Grammatical and Ungrammatical Double-Object Sentences

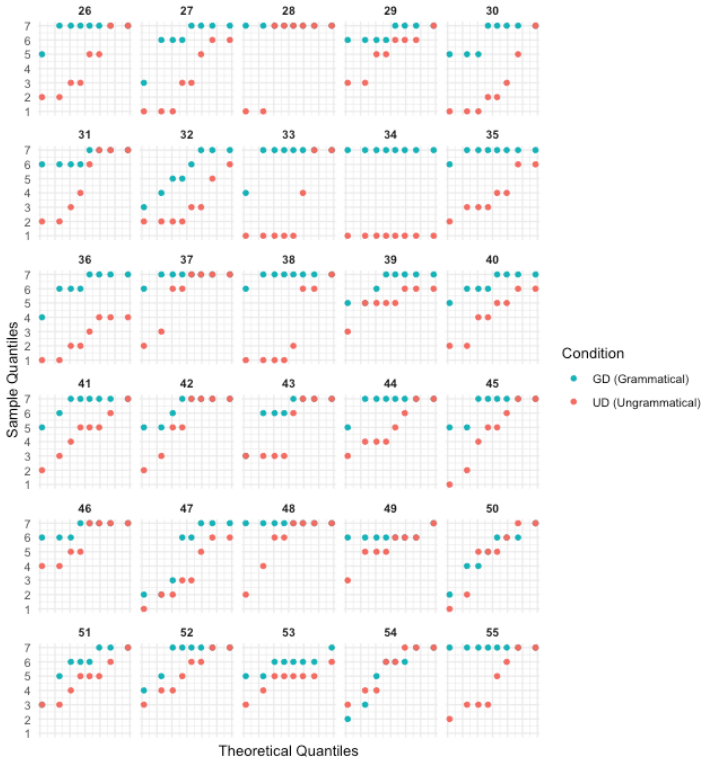

Figure 2. Bilinguals' Individual Acceptability Judgment Ratings Distribution for Grammatical and Ungrammatical Double-Object Sentences

To ensure the reliability and comparability of the data, seven participants were excluded prior to the statistical analysis. Two native speakers (participants 2 and 9) and one bilingual (participant 28) were removed because they consistently assigned the highest rating (7) across the entire task, suggesting they did not take the task seriously. Additionally, as we mentioned previously, four bilingual participants (participants 43, 47, 52, and 53) were excluded because they scored at level 4 on the VLT, whereas all remaining bilinguals achieved level 5, ensuring a homogeneous group of highly proficient speakers.

Figure 3 presents the distribution of acceptability judgments for each of the 16 sentences, allowing for a detailed inspection of item-level patterns. The grammatical sentences (4101–4108) were consistently rated at the top of the scale by both groups, confirming their high acceptability. Interestingly, native speakers overwhelmingly concentrated their ratings at 7 for all grammatical items, listed in (11). Bilinguals also favored high ratings for these sentences but showed slightly greater dispersion for some items.

(11) a. The gardener offered Lily a flower (4101)

b. The teacher awarded the student a certificate (4102)

c. The chef baked the president a cake (4103)

d. The principal sent the teacher an email (4104)

e. Bill handed the professor the paperwork (4105)

f. The waiter served Josh his food (4106)

g. The businessman lent the client some money (4107)

h. The author showed the reader the new book (4108)

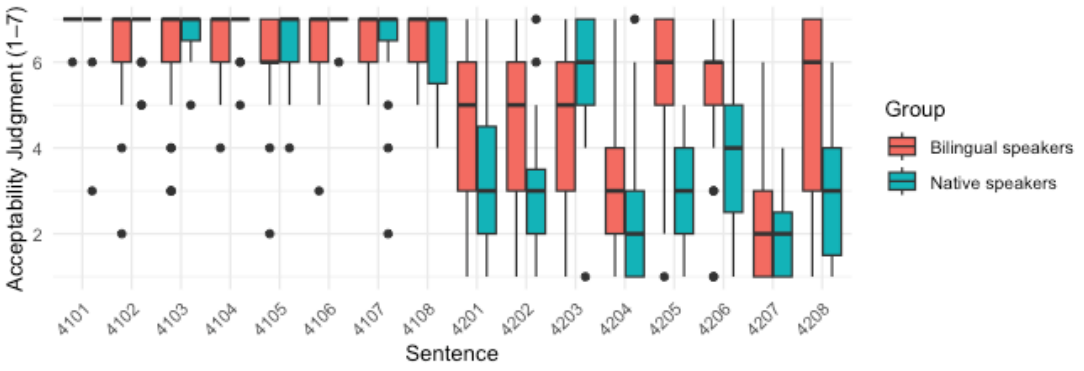

Figure 3. Distribution of Acceptability Judgment Ratings across Sentences for Grammatical and Ungrammatical Double Object Constructions by Group

The ungrammatical sentences (4201–4208) revealed clearer differences between the two groups. Native speakers largely rejected most UD items, with ratings concentrated at the lower end of the scale, whereas bilinguals displayed considerable variability, assigning intermediate and even high ratings to several sentences. This divergence was especially pronounced for (4202), (4205), (4206) and (4208), which received much higher and more widely distributed ratings from bilinguals than from native speakers.

Interestingly, all these verbs can be expressed in BP with a cognate (*reportar, explicar/explanar, doar, submeter*). By contrast, items such as (4201), (4204), (4207) were rejected more consistently by both groups, though bilinguals still used a slightly broader range of scores. In these sentences, these verbs are usually expressed by non-cognate words in BP (*devolver, levar, empurrar).*

(12) a. The professor returned the librarian the book (4201)

b. The client reported the security an emergency (4202)

c. The driver delivered the client the product quickly (4203)

d. The athlete carried the coach the trophy (4204)

e. Chloe explained Josh the problem (4205)

f. The singer donated the fan a CD (4206)

g. John pulled Josh the box (4207)

h. The student submitted the professor the paperwork (4208)

A notable exception was *deliver* (4203), which yielded unexpectedly high ratings, particularly among native speakers, suggesting that this construction may be perceived as grammatical or at least acceptable in certain contexts. Given this atypical behavior and its potential to bias the overall pattern of group differences, data from this item were excluded from subsequent analyses. Overall, these item-level patterns reinforce the general group differences: native speakers maintained a categorical distinction between grammatical and ungrammatical sentences, while bilinguals evaluated UD constructions in a more gradient and flexible manner.

The descriptive statistics summarized in Table 1 confirm the visual patterns observed in Figures 2 and 3. Both groups clearly distinguished grammatical from ungrammatical sentences, but the groups differed in how they distributed their ratings. Native speakers show a more categorical pattern, with GD ratings strongly concentrated at the highest end of the scale and UD ratings clustered in the lower range. Bilinguals, while also favoring GD, used a slightly wider range of scores for these sentences and showed markedly greater variability for UD, with ratings spanning the entire scale. This variability, already evident in Figure 3, indicates a less clear-cut rejection of ungrammatical constructions by bilinguals, which aligns with the hypothesis that their evaluative strategies are more flexible and gradient than those of native speakers.

Table 1. Means (M) and Standard Deviations (SD) of Acceptability Judgments by Group and Condition

Group	Condition	M	SD
Bilinguals	GD	6.40	1.01
	UD	4.30	2.09
Native Speakers	GD	6.64	0.83
	UD	2.92	1.67

Figure 4 provides a direct comparison between groups by displaying the overall distribution of scores for GD and UD. For GD, native speakers show a clear preference for the highest rating, concentrating almost exclusively on 7, whereas bilinguals distribute their scores more frequently across 6 and 5, despite still favoring high ratings. For UD, the intermediate mean observed for bilinguals reflects a highly variable pattern rather than uniform moderate acceptance: their ratings span the full range, with 7, 6, and 5 being used most frequently. In contrast, native speakers exhibit a much more categorical pattern, assigning predominantly low ratings and rarely using the upper end of the scale. Together, these patterns reinforce the interpretation that native speakers maintain a stricter distinction between grammatical and ungrammatical constructions, while bilinguals show greater variability and a more graded evaluative behavior.

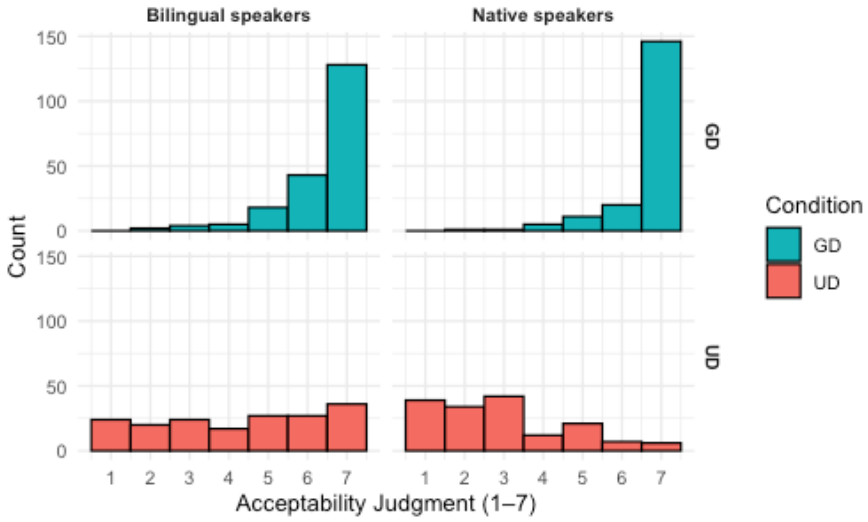

Figure 4. Distribution of Acceptability Judgment Ratings for Grammatical (GD) and Ungrammatical (UD) Sentences by Group

An ordinal mixed-effects model confirmed these descriptive patterns. The analysis included Profile (Bilinguals vs Native Speakers) and Condition (GD vs. UD) as fixed effects, with random intercepts for participants and sentences and by-participant random slopes for condition. The model was fit using the clmm function from the ordinal package (Christensen, 2019) in R (version 4.5.0; R Core Team, 2025), running in RStudio (version 2024.12.1+563). The interaction between group and condition was significant, as shown by a likelihood ratio test comparing the full model to a model without the interaction ($\chi^2(1) = 14.14$, $p < .001$), indicating that the effect of condition differed by group. Post-hoc comparisons confirmed this interaction: for GD, native speakers assigned significantly higher ratings than bilinguals (Estimate = –0.96, SE = 0.46, z = –2.10, p = .036); for UD, bilinguals rated the sentences significantly higher than native speakers (Estimate = 1.77, SE = 0.46, z = 3.89, $p < .001$). Figure 5 illustrates these effects, with native speakers showing a sharper distinction between GD and UD than bilinguals, whose judgments for UD sentences were markedly more variable and lenient.

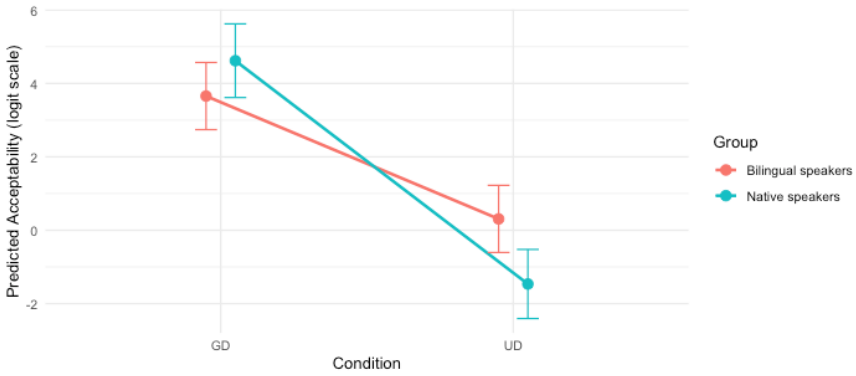

Figure 5. Predicted Acceptability Ratings by Group and Condition

6. Discussion

The present study confirms previous findings that bilingual speakers exhibit higher tolerance for lexical and semantic constraints in the English DOC. Specifically, BP-English bilinguals showed significantly greater acceptance of ungrammatical DOC sentences containing unlicensed verbs (e.g., *explain, donate, submit*) compared to native English speakers. This pattern aligns closely with Oliveira and Penzin (2019) and Agirre and Mayo (2014), reinforcing the robustness of bilinguals' broader constructional generalizations and their weaker sensitivity to the subtle distributional constraints that regulate DOC productivity.

Our results revealed interesting distinctions between the two groups. While native speakers displayed highly categorical judgments, strongly favoring grammatical DOC sentences and systematically rejecting ungrammatical ones, bilinguals' judgments were notably more variable. This variability is consistent with usage-based accounts (Robenalt & Goldberg, 2016; Tachihara & Goldberg, 2020), which propose that bilinguals have fuzzier representations and reduced sensitivity to competition effects. As a result, bilinguals do not categorically reject unlicensed constructions when they remain semantically interpretable and contextually plausible.

A closer look at item-level analyses provided important insights into how this higher tolerance emerges. Interestingly, bilinguals displayed greater acceptance specifically for verbs that have clear cognate counterparts in Brazilian Portuguese (e.g., *reportar, explicar/explanar, doar, submeter*). However, given that the DOC is not productive in Brazilian Portuguese, the higher acceptance observed cannot straightforwardly be attributed to direct L1-to-L2 transfer. Instead, this finding may reflect a broader familiarity effect, where bilinguals are more tolerant of verbs that are semantically transparent or lexically similar to their L1 counterparts, despite structural differences. Conversely, verbs lacking clear cognates in BP (e.g., *return, carry, pull*) were generally rejected more consistently, highlighting that lexical familiarity and semantic transparency likely influence bilinguals' acceptability judgments independently of direct syntactic transfer.

Moreover, while bilingual participants collectively demonstrated higher acceptance, substantial variability among individual participants was evident. Some bilinguals showed high sensitivity to DOC

constraints, distinguishing clearly between grammatical and ungrammatical forms. This indicates that higher tolerance is not uniformly distributed across bilinguals but concentrated within specific subgroups or individuals. Such individual variability underscores the importance of examining participant-level differences rather than solely relying on group-level analyses, as it can reveal how factors like proficiency, linguistic background, and exposure influence constructional acquisition and generalization.

These findings have important implications for theories of L2 acquisition, particularly those adopting a usage-based construction grammar framework. They highlight the need to account for the nuanced ways bilinguals manage competing constructions and lexical-semantic constraints, suggesting that higher tolerance is not simply an error but a systematic adaptive strategy reflecting distinct bilingual experiences. Future research should further explore these individual differences and investigate longitudinally whether increased exposure and proficiency can sharpen bilinguals' sensitivity to DOC constraints over time, thus gradually aligning their judgments more closely with L2 usage.

The present findings also have implications for language teaching, particularly for raising learners' awareness of subtle lexical and semantic constraints in argument structure constructions. The higher tolerance observed among bilinguals suggests that they may benefit from explicit instruction that highlights which verbs are strongly favored or disfavored in the DOC, as these distinctions are unlikely to be acquired solely through exposure. Activities that contrast grammatical and ungrammatical DOCs could help learners develop greater sensitivity to competition effects and the distributional patterns that guide English usage. Importantly, given the individual variability observed, teaching approaches might need to be personalized, with some learners requiring more focused input or feedback to refine their judgments. By incorporating such targeted attention to verb-construction pairings, instruction can support bilinguals in moving beyond broader generalizations and developing intuitions about argument structure that more closely reflect patterns of L2 usage.

7. Conclusion

The present study provides further evidence that Brazilian Portuguese-English bilinguals exhibit higher tolerance for lexical and semantic constraints in the English DOC compared to native speakers. Our findings support prior research indicating that bilinguals' judgments are more gradient and variable, reflecting broader generalizations and reduced sensitivity to competition effects. Crucially, detailed item-level and participant-level analyses revealed that higher acceptance appears strongly influenced by lexical familiarity. The observed individual differences underscore the importance of considering variation among bilingual speakers when exploring the acquisition of constructional constraints. Overall, these results highlight the systematic nature of bilinguals' adaptive strategies in managing competing constructions and lexical-semantic constraints, offering valuable insights for usage-based and construction grammar approaches to second language acquisition. Future studies should examine longitudinal effects of proficiency and exposure to further clarify how bilinguals progressively align their constructional judgments to the L2 usage.

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Appendix A - Data from the applied questionnaire

Basic information

Age:

19	6% (n=2)
20	10% (n=3)
21	16% (n=5)
(n=19)	
22	13% (n=4)
23	16% (n=5)
24	16% (n=5)
26	3% (n=1)
29	3% (n=1)
32	6% (n=2)
33	3% (n=1)
37	3% (n=1)

Mean = 23.83

Brazilian state of birth:

Bahia	3% (n=1)
Espírito Santo	6% (n=2)
Minas Gerais	63%
Amazonas	3% (n=1)
Pará	3% (n=1)
Rio de Janeiro	3% (n=1)
Rio Grande do Norte	3% (n=1)
Rondônia	3% (n=1)
São Paulo	10% (n=3)

Education:

Finished high school	3% (n=1)
Graduate	10% (n=3)
Undergraduate	76% (n=23)
Specialization	3% (n=1)
Master's and above	6% (n=2)

Sex:

Male	50% (n=15)
Female	50% (n=15)

On learning English

Age when you started learning English:

5	6% (n=2)
6	10% (n=3)
7	3% (n=1)
8	3% (n=1)
9	10% (n=3)

Age when you consider having started using English somewhat confidently, whether being written or oral, outside classroom context, that is, for your goals and personal or professional interests:

12	3% (n=1)
13	3% (n=1)
14	26% (n=8)
15	20% (n=6)
16	6% (n=2)

10	13% (n=4)	17	13% (n=4)
11	20% (n=6)	18	3% (n=1)
12	13% (n=4)	19	3% (n=1)
13	10% (n=3)	20	10% (n=3)
15	3% (n=1)	21	3% (n=1)
16	3% (n=1)	25	3% (n=1)
18	3% (n=1)	29	3% (n=1)
Mean = 10.40		Mean = 16.63	

For how long, in total, have you been in countries outside of Brazil where English is the language spoken by the population:

I've never been in any (n=20)	66%
Less than a month (n=8)	26%
More than a month (n=2)	6%

The period of learning that, according to you, had the biggest impact for you to reach your level of global skills in English happened mostly:

In language schools or private classes (n=11)	36%
In private middle or high school (n=2)	6%
Through coexistence and/or interaction with English speakers (n=3)	10%
Through independent studies, without systematic intervention from teachers (n=14)	46%

On habits with the English language

Scale: 0 = I don't do this kind of activity
1 = Only in Portuguese
2 = More in Portuguese than in English
3 = Equally in English and in Portuguese
4 = More in English than in Portuguese
5 = Only in English

How often do you…

… read articles from newspapers and magazines:

0	23% (n=7)
1	0
2	40% (n=12)
3	20% (n=6)
4	16% (n=5)

… read content for professional (work) and/or academic (study) reasons, such as manuals, technical or scientifical texts etc.:

0	6% (n=2)
1	6% (n=2)
2	10% (n=3)
3	30% (n=9)
4	33% (n=10)

5	0
… read for pleasure and as a leisure activity:	
0	0
1	6% (n=2)
2	23% (n=7)
3	40% (n=12)
4	20% (n=6)
5	10% (n=3)
… search for information online (spoken content):	
0	0
1	0
2	13% (n=4)
3	33% (n=10)
4	33% (n=10)
5	20% (n=6)
… listen to music:	
0	0
1	0
2	6% (n=2)
3	10% (n=3)
4	63% (n=19)
5	20% (n=6)
… write any type of text:	
0	0
1	3% (n=1)
2	56% (n=17)
3	30% (n=9)
4	6% (n=2)
5	3% (n=1)
… try to learn the lyrics to songs I liked:	
0	3% (n=1)
1	0
5	13% (n=4)
… search for information online (written content):	
0	0
1	0
2	13% (n=4)
3	20% (n=6)
4	46% (n=14)
5	20% (n=6)
… try to watch movies, tv shows and other similar content:	
0	0
1	3% (n=1)
2	3% (n=1)
3	3% (n=1)
4	50% (n=15)
5	40% (n=12)
… play games in which there are spoken lines:	
0	20% (n=6)
1	3% (n=1)
2	0
3	16% (n=5)
4	36% (n=11)
5	23% (n=7)
… exchange electronic messages (e-mails, on the phone, on Facebook or similar):	
0	0
1	20% (n=6)
2	53% (n=16)
3	20% (n=6)
4	3% (n=1)
5	3% (n=1)
… have conversations with people who speak the language fluently:	
0	0
1	13% (n=4)

2	3% (n=1)	2	46% (n=14)
3	20% (n=6)	3	33% (n=10)
4	43% (n=13)	4	3% (n=1)
5	30% (n=9)	5	3% (n=1)

On content consumption

Scale: 1=never / 2=rarely / 3=sometimes / 4=frequently / 5=always

How often do you…

	… watch shows, movies, TV shows spoken or dubbed in Portuguese:		*… watch shows, movies, TV shows spoken in English with Portuguese subtitles:*
1	16% (n=5)	1	26% (n=8)
2	53% (n=16)	2	10% (n=3)
3	16% (n=5)	3	20% (n=6)
4	10% (n=3)	4	33% (n=10)
5	3% (n=1)	5	10% (n=3)

	… watch shows, movies, TV shows spoken in English with English subtitles:		*… watch shows, movies, TV shows spoken in English without subtitles:*
1	0	1	10% (n=3)
2	20% (n=6)	2	13% (n=4)
3	26% (n=8)	3	20% (n=6)
4	36% (n=11)	4	40% (n=12)
5	16% (n=5)	5	16% (n=5)

On self-assessment

I rate my reading skill in English as:		*I rate my oral comprehension skill in English as:*	
Beginner	0	Beginner	0
Basic	3% (n=1)	Basic	3% (n=1)
Average	6% (n=2)	Average	10% (n=3)
Advanced	33% (n=10)	Advanced	36% (n=11)
Fluent	56% (n=17)	Fluent	50% (n=15)

I rate my writing skill in English as:		*I rate my speaking skill in English as:*	
Beginner	3% (n=1)	Beginner	3% (n=1)
Basic	0	Basic	0
Average	33% (n=10)	Average	16% (n=5)
Advanced	30% (n=9)	Advanced	36% (n=11)

Fluent	33% (n=10)	Fluent	43% (n=13)

I rate my global level of knowledge in English as:

Beginner	0
Basic	0
Average	13% (n=4)
Advanced	40% (n=12)
Fluent	46% (n=14)

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Basic information

Age:	*Brazilian state of birth:*	*Education:*	*Sex:*
32	Norte	Graduate	Female

On learning English

Age when you started learning English:
16

Age when you consider having started using English somewhat confidently, whether being written or oral, outside classroom context, that is, for your goals and personal or professional interests:
17

For how long, in total, have you been in countries outside of Brazil where English is the language spoken by the population:
Less than a month (1 week)

The period of learning that, according to you, had the biggest impact for you to reach your level of global skills in English happened mostly:
Through independent studies, without systematic intervention from teachers

On habits with the English language

How often do you…

… read articles from newspapers and magazines:
4 More in English than in Portuguese

… read content for professional (work) and/or academic (study) reasons, such as manuals, technical or scientifical texts etc.:
5 Only in English

… read for pleasure and as a leisure activity:
5 Only in English

… search for information online which content is written:
5 Only in English

... search for information online which content is spoken:

5 Only in English

... try to watch movies, tv shows and other similar content:

5 Only in English

... listen to music:

3 Equally in English and in Portuguese

... play games in which there are spoken lines:

0 I don't do this kind of activity

... write any type of text:

4 More in English than in Portuguese

... exchange electronic messages (e-mails, on the phone, on Facebook or similar):

3 Equally in English and in Portuguese

... try to learn the lyrics to songs I liked:

4 More in English than in Portuguese

... have conversations with people who speak the language fluently:

3 Equally in English and in Portuguese

On content consumption

How often do you…

... watch shows, movies, TV shows spoken or dubbed in Portuguese:

1 Never

... watch shows, movies, TV shows spoken in English with Portuguese subtitles:

1 Never

... watch shows, movies, TV shows spoken in English with English subtitles:

3 Sometimes

... watch shows, movies, TV shows spoken in English without subtitles:

4 Frequently

On self-assessment

I rate my reading skill in English as:

Fluent

I rate my oral comprehension skill in English as:

Fluent

I rate my writing skill in English as:

Fluent

I rate my speaking skill in English as:

Fluent

I rate my global level of knowledge in English as:

Fluent