Errors, avoidance, and L1 transfer in English relative clauses: evidence from Sorani Kurdish learners

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Abstract

This study examines the acquisition of English relative clauses (RCs) by Sorani Kurdish-speaking learners, an under-researched population in second language acquisition (SLA). It explores how intrinsic structural complexity and prior linguistic knowledge shape learners' production, error patterns, and avoidance of RCs. Data from a sentence combination test, a sentence translation test, and a set of argumentative essays were analyzed to identify and categorize erroneous and avoided RCs. The study identifies two primary factors underlying these errors: (i) structural differences between English and Sorani Kurdish RC formation, and (ii) the universal hierarchy governing the acquisition of relative clauses. These findings highlight the influence of L1 transfer, particularly in the use of resumptive pronouns and the preference for subject over object relatives, as well as learners' tendency to avoid more complex constructions such as object relatives. Overall, the results demonstrate the combined effects of typological distance and universal cognitive constraints on the development of interlanguage.

1 Introduction

Relative clauses (RCs) are syntactic structures that modify noun phrases (NPs) and can be either restrictive, limiting the reference of the head noun, or non-restrictive, providing additional information. Within matrix clauses, RCs can be classified as nominal RCs (Example 1), adnominal RCs (Example 2), or sentential RCs (Example 3) (cf. Vries 2002). This study focuses on adnominal restrictive RCs, which modify NPs and can appear in various syntactic roles, including subject (SU) and object (DO). Since subject and object relatives differ in their internal structure and processing demands, they provide a useful testing ground for examining cross-linguistic influence. In English, these RCs are typically introduced by *wh*-pronouns, *that*, or zero marking, and may be finite (unreduced) or non-finite (reduced). Structurally, English RCs follow a head-initial pattern in which the head noun precedes the relative clause, and the relativized position inside the RC is represented by a gap (e. g., *the man* [*who __ saw the dog*] for subject relatives; the man [who the dog saw __] for object relatives). English exhibits canonical SVO word order within both matrix and relative clauses, and resumptive pronouns are generally ungrammatical in standard varieties.

(1) We took [**what** was left in the store].
(2) We took the bags [**which** were left in the store].
(3) We took the bags, [**which** cost us about 500 dollars].

Sorani Kurdish differs from English in several core grammatical properties relevant to relativization. Adnominal RCs in Sorani Kurdish postmodify NPs and are introduced by the invariant marker *ka*, which functions similarly to English *that*. However, Sorani Kurdish exhibits SOV word order in both matrix and subordinate clauses. In relative clauses, the verb typically appears clause-finally, and the relativized element may be overtly realized through a resumptive pronoun in object and oblique positions, though not in subject position. Kurdish RCs are always finite and do not permit reduced (non-finite) relatives, in contrast to English participial or reduced constructions (e. g., *the man standing there).* Moreover, while English relies on a gap strategy for relativization, Sorani Kurdish frequently licenses resumptive strategies, creating a structural asymmetry between the two systems, particularly in object relative clauses.

These contrasts can be summarized typologically as follows: (i) English SVO vs. Sorani Kurdish SOV word order; (ii) gap-only relativization in English vs. optional resumptive pronouns in Sorani Kurdish (except in subject position); (iii) availability of reduced RCs in English vs. exclusively finite RCs in Sorani Kurdish; and (iv) differences in clause-internal constituent order within object relatives. Taken together, these typological contrasts provide a principled basis for predicting transfer-driven effects in SLA. Importantly, they also suggest that subject and object relatives may impose different processing demands on Sorani Kurdish learners, particularly in configurations where L1 and L2 structures diverge most sharply.

Against this structural backdrop, two major explanatory perspectives have been proposed in the literature: universal processing constraints and cross-linguistic transfer. Both universal processing constraints and cross-linguistic transfer influence the acquisition of RCs in a second language. According to the Noun Phrase Accessibility Hierarchy (NPAH; cf. Keenan/Comrie 1977), subjects are the most accessible for relativization, followed by objects and other, more complex syntactic positions. Empirical research has consistently shown that learners find subject relatives easier than object relatives (cf. Baek 2019; Bahar 2023, 2024; Bahar/Kunter 2025a, 2025b; Diessel/Tomasello 2005; Doughty 1991; Gass 1979, 1980; Levy/Gibson 2013; Lim/Christianson 2013; Staub/Dillon/Clifton 2017). The Word Order Difference Hypothesis (cf. MacDonald/Christiansen 2002) further suggests that subject RCs are easier to process because their word order resembles canonical active clauses. More recent studies (cf. Papadopoulou et al. 2024; Wang/Zhang/Jin 2024) have reinforced the view that RC difficulty is shaped not only by universal hierarchies but also by working memory limitations and cognitive load, emphasizing the need to integrate processing and transfer perspectives.

While universal accounts explain broad asymmetries between subject and object relatives, they do not fully capture language-specific variation. Cross-linguistic influence plays a crucial role in shaping learners' interlanguage systems. L1 transfer can determine both the types of errors learners make and the structures they avoid in the L2 (cf. White 2000; Ellis 1994; Leung/Williams 2014). For Sorani Kurdish learners of English, transfer is particularly plausible in object relatives, where the L1 permits resumptive pronouns and verb-final order, whereas English requires a gap and maintains SVO order. Such structural mismatches increase processing challenges, and may trigger either non-target-like production or strategic avoidance. For example,

languages with resumptive pronouns or differing word order patterns may lead learners to overgeneralize or misapply L2 RC structures (cf. Bahar/Kunter 2025a, 2025b). These findings suggest that transfer interacts with learners' developmental readiness, making it difficult to assume that universal hierarchies alone can explain relative clause acquisition (cf. Tryzna/Ivanov/Al-Bader 2025).

Despite extensive research, avoidance behavior has often been underexplored or treated as a deficiency rather than a deliberate strategy (cf. Ortega 2014; Bahar 2024). Yet growing evidence suggests that avoidance, like error-making, can function as an adaptive mechanism to regulate cognitive load during L2 production. Thus, a comprehensive account of RC acquisition must consider not only what learners produce incorrectly, but also what they strategically avoid. This perspective remains absent in studies on learners from typologically distinct L1s, including underexamined Iranian languages such as Sorani Kurdish and typologically related varieties such as Kurmanji Kurdish and Persian.

By investigating both errors and avoidance strategies in subject and object RCs, this study addresses a critical gap in SLA research. Rather than treating avoidance as a peripheral phenomenon, the study situates it within broader accounts of interlanguage development, reconceptualizing avoidance as an adaptive mechanism that operates alongside error production. The analysis foregrounds the interaction between typological distance and processing constraints, illustrating how L1 transfer and universal factors jointly shape learner behavior. Focusing on Sorani Kurdish speakers, an underexamined population in SLA, allows the study to extend existing theoretical claims to a typologically distinct context and to outline general pedagogical implications for the instruction of complex RCs.

2 Objectives of the study

This study investigates the production and avoidance of English subject and object RCs by Sorani Kurdish-speaking learners. It aims to (i) identify and classify errors in both subject and object RCs, specifying how these errors index syntactic complexity and processing demands, and (ii) examine the extent to which such errors reflect first-language influence. In addition, the study documents patterns of avoidance across RC types and identifies the strategies learners employ, examining how avoidance systematically co-occurs with error-making under conditions of increased processing demand. The analysis further explores the combined role of universal constraints and L1 transfer, with explicit reference to contrasts between English and Sorani Kurdish, such as word order and the use of resumptive pronouns, and assesses how these contrasts condition both error types and avoidance choices. Finally, the study seeks to integrate avoidance into accounts of interlanguage development by empirically demonstrating its adaptive, cognitively motivated role and to derive pedagogical recommendations tailored to learners from typologically distant L1 backgrounds.

Research Questions:

1. What are the most common errors made by Sorani Kurdish-speaking learners when constructing English subject and object relative clauses, and how do these reflect cognitive and transfer-related influences?
2. Which types of relative clauses do these learners typically avoid, and what strategies underlie this avoidance?
3. How do avoidance and error-making function as complementary strategies for managing syntactic complexity, and what does this reveal about the interplay of universal constraints, L1 transfer, and cognitive load in interlanguage development?

3 Method

3.1 Participants

This study involved two groups of participants, each completing distinct elicitation tasks to enhance the reliability of the findings. The first group comprised 24 final-year undergraduate students, all native speakers of Sorani Kurdish, pursuing degrees in either English language teaching or English translation studies. Their ages ranged from 20 to 35. All participants demonstrated comparable English proficiency, as indicated by their performance in prior university grammar courses included in their academic program, making additional placement testing unnecessary. This group provided data through argumentative essays, allowing analysis of RC use in an extended written context.

The second group consisted of 45 native speakers of Sorani Kurdish, aged 21 to 30 (25 females, 20 males), with intermediate English proficiency and limited exposure to native English speakers. They completed a sentence combination test and a translation test to assess RC comprehension and production. To ensure group homogeneity, participants undertook a grammar placement test before the experiment, scoring between 56 and 94 (mean = 75.87/120). This confirmed consistent proficiency levels across participants from diverse educational backgrounds. By incorporating different elicitation tasks for each group, the study provides a comprehensive assessment of the challenges learners face in acquiring English relative clauses, enhancing the robustness and validity of the findings.

3.2 Elicitation tasks

Data for this study were collected from three sources: (i) a sentence combination test, (ii) a sentence translation test, and (iii) 48 argumentative essays written by 24 native speakers of Sorani Kurdish. The combination and translation tests served as the primary data sources, while the essays provided supplementary contextual data.

The sentence combination test (16 items; see Appendix Table A1) was evenly divided between subject and object relatives. Participants were instructed to combine two sentences into a single sentence containing a relative clause. For example:

(4) A: I know the tall lady.
B: The tall lady is living around here.

The sentence translation test (16 items; see Appendix Table A2) required participants to translate sentences from their native language into English. Interlinear glosses show the word-by-word translation with grammatical abbreviations (EZF = ezafe, PTCP = participle, COP = copula, POSS = possessive). For example:

(5) ئەو پیاوەی لەوێ ڕاوەستاوە باوکمە

Ew pîyawe-y	lewê	rawestaw-e	bawk-m-e.
that man-EZF	there	stand.PTCP-COP	father-1SG.POSS-COP

'The man who is standing over there is my father'.

Both tests were adapted from Bahar (2023) and designed to elicit RCs in controlled contexts. To reduce potential order effects, item order was randomized within participants. In addition, participants produced 48 argumentative essays (approx. 250 words each; total ~12,000 words) on topics related to their real-life experiences. Essays were completed at home, without strict time limits, and participants were permitted to consult dictionaries or grammar references but instructed not to seek external assistance. Although the essays contained relatively few relative clauses, they provided valuable supplementary insights into natural language use. Overall, the sentence combination and translation tests constitute the core data, while the essays support analysis by offering contextual and developmental perspectives on RC production.

3.3 Procedure

The argumentative essays were collected and systematically examined for erroneous RCs. Errors identified were extracted and categorized by type, and the RC types that participants avoided were also documented. Before administering the sentence combination and translation tests, participants were briefed on the content and provided with sample items. The combination test was administered first to minimize potential priming effects from the first language. Participants had 40 minutes to complete both tests (20 minutes per test), and the tests were collected and scored separately. For the error-and-avoidance analysis, the number of erroneous RCs and avoided RCs (unanswered test items) was counted separately for subject and object relatives. A detailed error analysis classified errors into multiple types to identify patterns in RC acquisition, while avoided RCs were quantified to examine avoidance strategies. Minor grammatical or lexical errors that did not affect the overall RC structure were excluded. Table 1 summarizes the error types used for classification across both the elicitation tasks and the essays.

Error Types	Error Example	Target Form
Using presumptive pronouns	*This is the child who they found him	This is the child who they found.
Changing word order in the RC	*She fed the baby who is my nephew	The baby who she fed is my nephew
Missing matrix clause	*The girl who you introduced	I know the girl who you introduced.
Missing verb in the RC	*There is a person who we do not well	There is a person who we do not know well.
Wrong place of RC and matrix clause	*The girl who cut her finger broke the window	The girl who broke the window cut her finger
Missing relative markers	*There is a small baby always cries	There is a small baby who always cries.
Wrong constituent order	*There is a person who do not we know well	There is a person who we do not know well.
Wrong NPmat role	*The girl knows who you introduced	I know the girl who you introduced.
Missing relative clause	* I know a very strong person	I know a person who is very strong.

Note: NPmat refers to the syntactic functions of noun phrases within the matrix clause.

Table 1: Examples of error types

4 Results

The analysis comprises two main parts: (i) a comparison of the overall frequency of errors and avoided RCs between subject and object relatives across the sentence combination and translation tests, and (ii) a detailed error analysis, identifying the most frequent error types for each RC type and examining task-related differences.

In the combination test, participants produced 720 RCs (360 subject and 360 object relatives), resulting in 163 errors and 88 avoided RCs. The translation test yielded 160 errors and 106 avoidances out of 720 RCs. Table 2 presents the absolute and relative frequencies of correct, incorrect, and avoided RCs in both tests. For example, in the combination test, 52 erroneous subject relatives accounted for 14.4% of the total, while 27 avoidances represented 7.5%, leaving 281 cases (78.1%) correctly formed. These differences were statistically significant: combination test ($\chi^2 = 52.934$, df = 2, $p < 0.001$) and translation test ($\chi^2 = 83.201$, df = 2, $p < 0.001$).

Test	RC type	Correctly formed	Erroneously formed	Avoided
Combination	Subject	281 (78.1%)	52 (14.4%)	27 (7.5%)
	Object	188 (52.2%)	111 (30.8%)	61 (16.9%)
Translation	Subject	285 (79.2%)	52 (14.4%)	23 (6.4%)
	Object	169 (46.9%)	108 (30.0%)	83 (23.1%)

Table 2: Frequency and proportion of the correctly formed, erroneously formed, and avoided RCs in the sentence translation and sentence combination tests

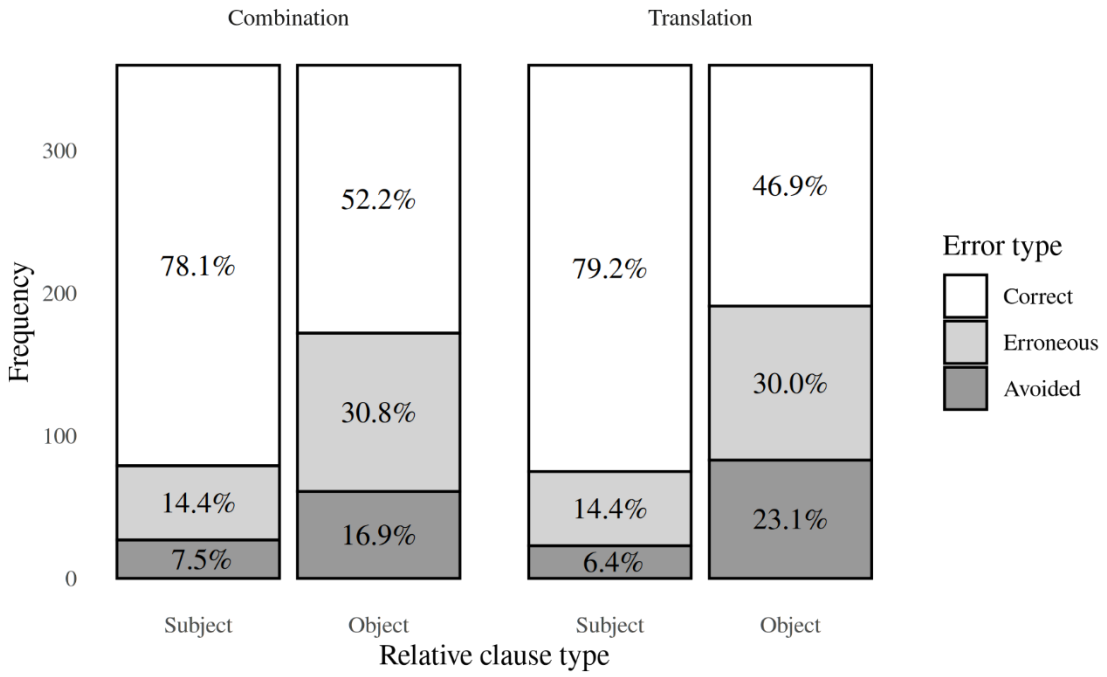

Figure 1: Distribution of responses in the sentence combination test (left) and sentence translation test (right) by relative clause type and error type

Figure 1 presents the results by RC type (subject vs. object). In each column, white bars represent correctly formed RCs, while dark gray bars indicate avoided RCs. The left columns correspond to the combination test, and the right to the translation test. The figure shows that participants produced more than twice as many errors with object relatives compared to subject relatives across both tests, indicating greater processing difficulty. This pattern aligns with previous findings that subject relatives are generally easier to acquire (cf. Aydin 2007; O'Grady/Lee/Choo 2003; Diessel/Tomasello 2005; Izumi 2003; Gibson 2000; Utzeri 2007). Object relatives also exhibited higher rates of avoidance, particularly in the translation test (83 cases, 23.1%) compared to the combination test (61 cases, 16.9%). However, this difference was not statistically significant ($\chi^2 = 4.413$, df = 2, p = 0.110).

To assess learner performance more precisely, errors in subject and object relatives were systematically categorized according to the criteria presented in Tables 3 and 4. Each error type corresponds to a specific structural challenge in RC construction, allowing both quantitative comparison and qualitative interpretation. Percentages were calculated relative to the 360 possible responses per RC type, ensuring comparability across structures and test formats.

As shown in Table 3, the Combination Test reveals a clear asymmetry between subject and object relatives, with object relatives exhibiting substantially higher overall error rates (30.8%) than subject relatives (14.4%). Importantly, the distribution of error types differs qualitatively across the two constructions. In object relatives, the most frequent errors involve the use of resumptive pronouns (16.4%) and changes in word order within the RC (9.7%), both of which reflect properties available in Sorani Kurdish. Their prominence suggests increased reliance on L1-based strategies when learners process structurally more complex configurations.

Table 4 shows that this asymmetry is not specific to a single task but remains evident in the Translation Test. Once again, object relatives display significantly higher error rates (30.0%) compared to subject relatives (14.4%), closely matching the pattern seen in the Combination Test. The same two error types, resumptive pronouns (15.6%) and word order changes within the RC (8.3%), predominate in object relative constructions, indicating consistent and systematic learner behavior across different tests. The repetition of these error patterns reinforces the idea that they reflect underlying grammatical representations rather than performance-related effects linked to a particular task.

In contrast, subject relatives in the Translation Test, as in the Combination Test, exhibit a wider variety of lower-frequency error types, including incorrect NPmat roles, missing matrix clauses, absent verbs in the RC, and missing relative markers. These errors are more evenly spread out and do not cluster around transfer-related strategies, indicating that they mainly stem from processing challenges and difficulties in structural integration rather than direct L1 influence.

Taken together, Tables 3 and 4 provide converging evidence that learners treat subject and object relatives as structurally distinct constructions. The concentration of transfer-related errors in object relatives across both tests supports the claim that increased syntactic complexity amplifies reliance on L1-based strategies. At the same time, the more diffuse error patterns in subject relatives point to general processing constraints rather than transfer. This test-independent asymmetry reinforces the broader argument that the interaction of syntactic complexity, processing load, and L1 influence shapes interlanguage development.

Error type	**Subject relatives**	**Object relatives**	**Total**
Using resumptive pronouns	-	59 (16.4%)	59
Changing word order in the RC	-	35 (9.7%)	35
Missing matrix clause	16 (4.4%)	13 (3.6%)	29
Missing verb in the RC	12 (3.3%)	-	12
Wrong place of RC and matrix clause	10 (2.8%)	-	10
Missing relative markers	8 (2.2%)	-	8
Wrong constituent order	6 (1.7%)	-	6
Wrong NPmat role	-	4 (1.1%)	4
Total	**52 (14.4%)**	**111 (30.8%)**	**163**

Note**:** Percentages are relative to the total number of observations per RC type (N=360).
NPmat refers to the syntactic functions of noun phrases within the matrix clause.

Table 3: Frequency and percentage distribution of error types in tach RC in the combination test

Error type	Subject relatives	Object relatives	Total
Using resumptive pronouns	-	56 (15.6%)	56
Changing word order in the RC	-	30 (8.3%)	30
Wrong NPmat role	14 (3.9%)	11 (3.1%)	25
Missing matrix clause	12 (3.3%)	11 (3.1%)	23
Missing verb in the RC	8 (2.2%)	-	8
Wrong constituent order	7 (1.9%)	-	7
Missing relative markers	7 (1.9%)	-	7
Missing relative clause	4 (1.1%)	-	4
Total	**52 (14.4%)**	**108 (30.0%)**	**160**

Note: Percentages are relative to the total number of observations per RC type (N=360). NPmat refers to the syntactic functions of noun phrases within the matrix clause.

Table 4: Frequency and percentage distribution of error types in each RC in the translation test

Figure 2 reveals systematic differences in the distribution of error types across subject and object relatives.

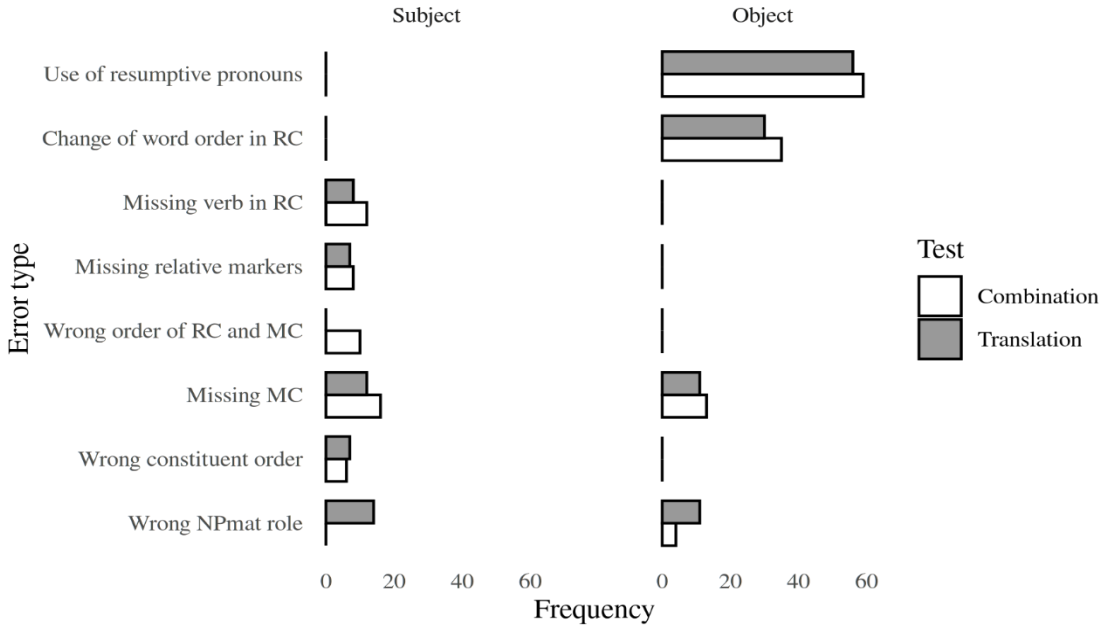

Figure 2: Frequency of errors by error type and test type for subject relatives (left) and object relatives (right)

To determine whether the distributional differences in error types between subject and object relatives (Figure 2) were statistically significant, we analyzed the frequency with which each participant produced the eight error types, separately for the combination and translation tests. Participant ID was treated as a random effect, and error frequency served as the dependent variable in an Aligned Rank Transform ANOVA (ART ANOVA), conducted using the ARTool package (cf. Kay et al. 2021) in R (R Core Team 2021). Although generalized linear mixed-effects models are commonly recommended for count data, the ART ANOVA was chosen

because it is a robust non-parametric alternative that accommodates factorial designs with repeated measures, avoids assumptions of normality and homogeneity of variance, and allows for testing of main effects and interactions in a straightforward and interpretable manner (cf. Wobbrock et al. 2011). Given the frequency counts and the study's factorial design, ART ANOVA provides a statistically sound and practical method for analyzing the error distributions in subject and object relative clauses. This non-parametric approach is appropriate for data that deviate from normality, such as the frequency counts observed in this study (cf. Feys 2016: 367).

For the combination test, ART ANOVA revealed significant main effects for RC type ($F = 232.211$, $df = 1$, $p < 0.001$) and error type ($F = 15.075$, $df = 7$, $p < 0.001$), as well as a significant interaction between the two ($F = 56.189$, $df = 7$, $p < 0.001$). Tukey post-hoc comparisons (using art.con()) indicated no significant differences among error types for subject relatives. However, for object relatives, significant differences emerged between: (i) "resumptive pronoun" errors and both "missing matrix clause" and "wrong NPmat role" errors; and (ii) "word order change in RC" and both "missing matrix clause" and "wrong NPmat role" errors. No significant difference was found between "resumptive pronoun" and "word order change" errors.

In the translation test, ART ANOVA results similarly showed a significant main effect for RC type ($F = 129.592$, $df = 1$, $p < 0.001$), a significant effect for error type ($F = 11.632$, $df = 7$, $p < 0.001$), and a significant interaction between the two ($F = 31.759$, $df = 7$, $p < 0.001$). Tukey post-hoc comparisons echoed the combination test findings: no significant differences were found among error types for subject relatives. For object relatives, however, significant differences emerged between (i) "resumptive pronoun" and both "missing matrix clause" and "wrong NPmat role," and (ii) "word order change in RC" and both "missing matrix clause" and "wrong NPmat role." As in the previous test, there was no significant difference between "resumptive pronoun" and "word order change" errors.

Overall, the analysis confirms that subject relatives produce significantly fewer errors than object relatives, as illustrated in Figures 1 and 2. Errors in subject relatives are relatively rare and distributed across a limited range of types, with no significant differences in frequency among them. In contrast, object relatives exhibit a clear pattern, with the most common errors involving resumptive pronouns and altered word order, consistently observed across both the combination and translation tests.

Findings from the argumentative essays corroborate this pattern. Of the 66 RCs identified, subject relatives accounted for 55 cases (83.3%), whereas object relatives were much less frequent (11 cases, 16.6%). Three of the eleven object relatives contained errors, all involving resumptive pronouns, while all subject relatives were error-free. This distribution aligns with the avoidance patterns of object relatives observed in the controlled tests (see Table 2).

5 Discussion

This study offers novel insights into the acquisition of English RCs by Sorani Kurdish-speaking learners, highlighting the complex interplay between avoidance, error-making, and first language transfer in interlanguage development. Unlike previous research that often treats avoidance and errors as separate phenomena, our findings demonstrate that learners employ both strategies as complementary mechanisms to manage the cognitive demands of syntactically

complex structures. Notably, object RCs were frequently either avoided or produced with L1-influenced forms, such as resumptive pronouns, indicating that avoidance is not merely a developmental gap but a strategic response to processing limitations. In this way, the study shows how universal constraints, L1 transfer, and cognitive load jointly shape learner behavior.

Addressing the first research question, errors in subject relatives were infrequent and lacked systematic patterns, suggesting that learners possess a relatively strong command of these structures. In contrast, object relatives posed persistent challenges. Both sentence combination and translation tests showed higher frequencies of errors and avoidances for object relatives (Table 2), reflecting increased processing demands associated with complex syntactic hierarchies. These findings align with prior research demonstrating that subject relatives are generally less taxing for learners (cf. Aydin 2007; Diessel/Tomasello 2005; Izumi 2003; Gibson 2000; O'Grady/Lee/Choo 2003; Utzeri 2007) and reflect differences in working memory load between subject and object RCs. Recent research by Papadopoulou et al. (2024) further supports this view, showing that RC acquisition in L2 learners involves complex syntactic processing that interacts with both L1 transfer and cognitive constraints. Thus, RQ1 is answered by confirming that subject RCs are relatively unproblematic, while object RCs generate systematic error types rooted in both processing and transfer. The most common errors in object relatives were:

- Use of resumptive pronouns (e. g., **This is the child that they found her* instead of *This is the child that they found*), reflecting transfer from Sorani Kurdish, where such structures are grammatical. This indicates that learners rely on familiar L1 patterns to reduce cognitive load, consistent with cross-linguistic influence.
- Shifts from object to subject RCs (e. g., **She fed the baby who is my nephew* instead of *The baby who she fed is my nephew*), demonstrating a preference for canonical word order and cognitively simpler structures, supporting the Word Order Difference Hypothesis (cf. MacDonald/Christiansen 2002).

Together, these findings reinforce the answer to RQ1 by showing that learners' error patterns are systematic and grounded in both universal and L1-specific factors.

Regarding the second research question, avoidance was most pronounced with object RCs. Learners employed distinct strategies, including leaving items unanswered, rephrasing target object relatives into subject relatives, and relying on simpler clausal structures. These strategies highlight that avoidance is not random omission but a deliberate means of reducing processing demands. By explicitly identifying avoidance strategies, the study shows learners adaptively regulate their output in response to complexity.

Consistent with universal acquisition patterns, subject RCs were produced with greater accuracy than object RCs (cf. Keenan/Comrie 1977; Diessel/Tomasello 2005). However, the persistence of L1-influenced errors reveals that developmental readiness alone is insufficient for target-like performance. Sorani Kurdish learners' reliance on resumptive pronouns and SOV word order demonstrates that L1 transfer actively modulates both the form and timing of RC acquisition, extending previous findings on transfer effects in second language acquisition (cf. Ellis 1994; White 2000; Leung/Williams 2014; Tryzna/Ivanov/AlBader 2025). This addresses

RQ3 by illustrating how L1 transfer and universal constraints interact, with cognitive load determining whether learners avoid or attempt object RCs.

The dual strategy of avoidance and error-making illustrates that learners navigate syntactic difficulty not by passively failing but by strategically regulating their production according to processing capacity and familiarity with input. This integrated perspective fills a notable gap in the literature, where avoidance has often been considered only as a symptom of deficiency rather than a deliberate interlanguage mechanism (cf. Ortega 2014; Bahar 2024). Here lies the novelty of this study: avoidance and error-making are reconceptualized as complementary strategies within a unified framework, providing fresh insight into interlanguage development.

The study also highlights the critical role of cognitive load in shaping learner behavior. Learners avoided object RCs when their processing demands exceeded available cognitive resources, while errors occurred when learners attempted these constructions under high load. This finding aligns with recent work emphasizing the influence of cognitive constraints on language processing and production (cf. Papadopoulou et al. 2024; Wang/Zhang/Jin 2024). By considering both avoidance and error-making as interconnected strategies, the study advances theoretical models such as the Word Order Difference Hypothesis (cf. MacDonald/Christiansen 2002), showing that L1-specific transfer and cognitive limitations jointly determine learners' interlanguage trajectories.

Pedagogically, these results have important implications. Traditional recommendations, such as increasing exposure or general scaffolding, are insufficient for learners whose L1 includes features absent in English. Effective instruction must provide explicit contrastive analysis to highlight ungrammatical L1 structures, such as resumptive pronouns, and scaffolded practice to gradually increase learners' engagement with complex RCs. Such targeted interventions directly address the interplay of L1 transfer, processing load, and markedness, promoting accurate production while preventing fossilization. This approach refines pedagogical guidance in second language acquisition by demonstrating that interventions must be strategically tailored to learners' linguistic backgrounds and cognitive constraints (cf. Hawkins 2007; Leung/Williams 2014; Bahar 2024).

In sum, the present study makes several contributions to second language acquisition theory and practice. Conceptually, it reconceptualizes avoidance as an active, adaptive mechanism, highlights the interplay of L1 transfer with universal constraints, and shows that errors and avoidance are complementary strategies reflecting the same underlying cognitive pressures. Empirically, it provides evidence that Sorani Kurdish-speaking learners' RC acquisition is shaped by a convergence of syntactic markedness, input frequency, L1 influence, and cognitive processing demands. Pedagogically, it offers actionable guidance for designing interventions that promote syntactic accuracy in learners from typologically distinct L1 backgrounds. By integrating these dimensions, the study fills a gap in the literature, offering both a theoretical framework and practical strategies for understanding and supporting interlanguage development in complex syntactic domains.

6 Conclusion

This study examined the production and avoidance of English RCs by Sorani Kurdish-speaking learners, providing new evidence from a typologically underexplored L1 group. The findings confirm the universal ease of subject relatives compared to object relatives, but go further in showing that avoidance and error-making are not independent outcomes. Instead, they function as complementary, adaptive strategies that learners use to manage the high cognitive load of object relatives. Crucially, the prevalence of resumptive pronouns demonstrates that L1 transfer actively shapes error patterns, while systematic avoidance reveals learners' strategic regulation of syntactic complexity. This reconceptualization challenges traditional views that frame avoidance as a mere deficiency, instead of highlighting its developmental role within interlanguage.

By integrating universal processing constraints, L1-specific transfer, and cognitive load, this study advances SLA theory and pedagogy. It underscores that effective instruction must provide explicit contrastive input and scaffolded practice to counteract entrenched L1 influence and prevent fossilization. Ultimately, the research contributes both a theoretical framework for understanding how avoidance and error interact in L2 development and practical guidance for supporting learners from typologically distinct backgrounds.

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Appendix

Subject relatives	Object relatives
1. A: The girl is usually loud. B: The girl is living in our building.	1. A: The baby is my nephew. B: She fed the baby.
2. A: The man sends the pictures later. B: The man is taking the pictures.	2. A: The child has an old bike. B: We took the child to the park.
3. A: This is my friend. B: My friend lives in another city.	3. A: This is my classmate. B: I invited my classmate to the party.
4. A: This is my teacher. B: My teacher speaks 3 languages.	4. A: This is our house pet. B: We bought our house pet from a pet shop.
5. A: There is a little girl. B: The little girl is from London.	5. A: There is a little boy. B: A bee bit the little boy at the park.
6. A: There is a cute baby. B: The cute baby drinks a lot of milk.	6. A: There is a small cat. B: I found the small cat in the street.
7. A: I know the tall lady. B: The tall lady is living around here.	7. A: My friend met the girl. B: We invited the girl to the party.
8. A: We met the young man. B: The young man sold his new car.	8. A: She called the manager. B: We met the manager at the coffee shop.

Table A1: Sentence combination test

	Subject relatives	**Object relatives**
Transliteration	1. Ew pîyawey lewê rawastawa bawki mine.	1. Berêwberekey ke to pêt nasîwîn be nêwbange.
The English translation	1. 'The man who is standing over there is my father.'	1. 'The manager who you introduced is famous.'
Transliteration	2. Kiçekey ke pencerey šikand penceî birî.	2. Mamostayekey ke to xošit dewîst tušî rudawêkî hat u ço bot
The English translation	2. The girl who broke the window cut her finger.	2. The teacher who you like had an accident.
Transliteration	3. Ewe ew pîyaweye ke lew dewr u pište dejît	3. Ewe ew keseye ke to banghêštit kird.
The English translation	3. This is the man who is living around here.	3. This is the person who you invited.
Transliteration	4. Ewe ew pîyaweye ke rudawa hat u ço key dîwe.	4. Ewe ew mindaleye ke dozyanewe.
The English translation	4. This is the man who saw the accident.	4. This is the child who they found.
Transliteration	5. Mindalêkî sawa heye ke berdewam degrît.	5. Mamostayekî nwêya ke hemu mindalekan deynasin.
The English translation	5. There is a little baby who always cries.	5. There is a new teacher who all the students know.
Transliteration	6. Mindalêkî biçuk heye ke zor be bašî šetranc geme dekat.	6. Kesêk heye ke eme be bašî naynasîn.
The English translation	6. There is a small child who plays chess well.	6. There is a person who we do not know well.
Transliteration	7. Min yêkêk denasim ke zor be hêza	7. Min ew kiçey ke to pêt nasandîn denasim.
The English translation	7. I know a person who is very strong.	7. I know the girl who you introduced.
Transliteration	8. Çaw pêkewtinêkman legel ew kese hebu ke namekey nardbu.	8. Ewan peywendîyan bew jine kird ke to dîtit.
The English translation	8. We met the person who sent the letter.	8. They called the woman who you met.

Table A2: Sentence translation test