ORIGINAL PAPER

Task Type and Discussion of Language Form in L2 Pair Interaction

第二語言配對互動中的任務類型與討論語言形式

Reza Zabihi[1] ⬤ · **Danial Erfanitabar[1]** · **Mehdi Mehranirad[1]**

Abstract

This study investigated the effects of task type on L2 learners' discussion of language form during collaborative dialogues. The tasks differed in their degree of input provision: argumentative writing, dictogloss, and text editing. All collaborative dialogues were recorded, transcribed verbatim, and analyzed in terms of the frequency, type (lexical or grammatical), and outcome (correctly/incorrectly resolved or unresolved) of language-related episodes (LREs) produced during pair interactions. Results from a repeated measures ANOVA with post hoc comparisons showed that learners produced more LREs while doing the argumentative writing task than when they did the dictogloss task or the text-editing task. In addition, while learners significantly produced more lexical LREs while doing the argumentative writing task than when they performed either the dictogloss task or the text-editing task, the number of grammatical LREs produced in the text editing task was significantly higher than that produced during the completion of the other two tasks. Finally, learners significantly correctly resolved more LREs in the argumentative writing task than in the dictogloss task, but no significant difference was found either between the argumentative writing task and the text-editing task or between the text-editing task and the dictogloss task regarding the correct resolution of LREs. The effects of task type on the frequency of incorrectly resolved and unresolved LREs were also not significant.

摘要
本研究探討了任務類型對第二語言學習者在共同對話中討論語言形式的影響。議論文、段落聽寫和文本編輯這些任務所提供的輸入程度皆有所不同。學生全部的共同對話均被記錄且逐字逐句地轉錄下來，配對互動中產生的語言相關片段（LREs）的頻率、類型（字彙或文法）和結果（正確/錯誤地解決或未解決）也都進行了分析。重複幾次的ANOVA分析和事後分析比較的結果顯示，學

Extended author information available on the last page of the article

生在進行議論文寫作任務時比進行段落聽寫任務和文本編輯任務時產出更多
LREs。此外，雖然學生在進行議論文寫作任務時產生的字彙性LREs，明顯多於
進行段落聽寫任務或文本編輯任務所產生的字彙性LREs，但進行文本編輯任務
時所產生的文法LREs明顯多於其他兩項任務。最後，學生在進行議論文寫作任
務時正確解決的LREs明顯多於段落聽寫任務，但沒有發現議論文寫作任務和文
本編輯任務之間或文本編輯任務和段落聽寫任務之間關於正確解決LREs的顯著
差異。任務類型對錯誤地解決和未解決的LREs的頻率的影響也不顯著。

Introduction

The importance of peer interaction is reflected in the definitions of tasks since
they all center around communication of meaning (e.g., Long, 1985; Nunan,
1989). There is consensus among researchers that conversational interaction plays
an important role in SLA (e.g., Gass, 1997; Long, 1996; Pica, 1994) by providing
comprehensible input and negative feedback, which shows learners' structures
that are not acceptable in L2 (Long, 1996). Another significance of interaction is
that it creates a scope for learners to produce output which has three main func-
tions as proposed by Swain (1995, 2005): noticing holes in L2 knowledge, test-
ing hypotheses against target language norms, and reflecting on their own and
their partners' output. The latter function occurs through languaging, a process
allowing students to verbalize their deliberations over linguistics problems they
are faced with (Swain, 2006). This usually takes place in dialogues for making
meaning and constructing new knowledge, which are referred to as "collabora-
tive dialogues" (Swain, 2000). These dialogues can promote L2 learning because
knowledge jointly constructed through them can then be internalized by L2 learn-
ers and changed into individual knowledge (Swain, 2006). Recent research on
focus on form (i.e., techniques designed to attract learners' attention to form in
communication, Ellis, 2015) has sought ways to draw learners' attention to lin-
guistic form, without isolating these from their meaningful context (e.g., Doughty
& Williams, 1998). This usually takes place through tasks involving the genera-
tion or modification of written output that set the ground for the production of
collaborative dialogues (García Mayo, 2007; Swain & Lapkin, 2001). In order to
capture instances where learners draw each other's attention to form, collabora-
tive dialogues are studied through language-related episodes (LREs) known as
occurrences where learners talk about the language they produce, question their
language use, or correct themselves and others (Swain & Lapkin, 1998).

Researchers working from a sociocultural perspective have shown that learn-
ers' ability to generate and resolve LREs through collaborative dialogues can

be affected by task type (e.g., De la Colina & García Mayo, 2007 Mayo, 2007; García Mayo, 2002a, 2002b; Ismail & Samad, 2010; Nassaji & Tian, 2010; Storch & Wigglesworth, 2007; Yanguas & Bergin, 2018; Zabihi, 2022). As far as the effect of task type on focus on form is concerned, the small number of studies investigating task effects has not clarified the link between LREs and task type (Yilmaz & Granena, 2010). This means that while these researchers confirm that different tasks can mediate the frequency of LREs, they have obtained contradictory findings even when they compared the very same tasks (e.g., García Mayo, 2002a, 2002b; Ismail & Samad, 2010; Yilmaz & Granena, 2010). Another problem regarding previous research is that scholars have used a wide range of tasks while investigating their relation with LREs, making comparisons relatively difficult. Thus, there seems to be a need for classifying tasks based on the nature of the tasks under a specific classification where all can be compared and analyzed. We believe that this classification could be based on input orientation which will be elaborated on in the literature.

Literature Review

The Importance of Collaboration in Peer-Peer Interaction

From a psycholinguistic perspective, Long's interaction hypothesis (1980, 1996) states that learners' attention may turn to linguistic form when they encounter breakdowns during the communication of meaning. When learners do not succeed in understanding their interlocutor, they usually resort to the negotiation of meaning which helps them gain mutual comprehension. In an effort to achieve such mutual understanding, learners execute a wide range of strategies, such as asking an interlocutor to confirm message content or requesting the interlocutor to explain something further. These interactional moves promote L2 development in the context of peer interaction (McDonough, 2004; for recent reviews, see Philp et al., 2014, and Sato & Ballinger, 2016). The process by which two or more interlocutors identify and then attempt to resolve a communication breakdown is referred to as negotiation of meaning (Ellis, 2003). Negotiation of meaning is believed to enhance the comprehensibility of L2 input, making it more conducive to L2 development (Bygate, 1999; Foster & Ohta, 2005).

From a sociocultural theoretical perspective, primarily building on the work of Vygotsky (1978), it has been argued that learner-learner interactions contribute to language development because through such interactions learners find opportunities for languaging (Swain, 2006). When these verbalizations result in correctly resolved LREs, there is a higher possibility that they retain the co-constructed knowledge for subsequent independent use (e.g., Fernández Dobao, 2014). All the affordances created by peer-to-peer interaction emerge when students establish mutual relations grounded in sociocultural and psycholinguistic concepts. According to sociocultural theories inspired by Vygotsky's work (1978), learning refers to a process that is socially mediated and that emerges in interaction either with peers or with experts, creating favorable conditions

for languaging (Swain et al., 2011). Languaging manifests itself when learners get involved in completing communicative tasks through collaborative dialogues. Various studies (Kobayashi, 2003; Lapkin et al., 2002; Morris & Tarone, 2003; Storch, 1998, 2004; Swain & Lapkin, 1998; Tin, 2003; Zabihi & Bayan, 2020; Zabihi & Ghahramanzadeh, 2022) have demonstrated that student collaboration, frequently referred to as small-group work, is of great significance in second language (L2) acquisition, social aspects of the classroom (i.e., how learners join together), and language pedagogy since working collaboratively enables learners to have a relatively better performance than working alone (e.g., Storch, 1999). One way for benefiting from collaboration is through a specific kind of interaction known as collective scaffolding (Donato, 1994), where learners can pool their cognitive and linguistic knowledge and work together to solve their language-related problems.

Collaborative dialogues are primarily studied through LREs because they serve as overt indications that at a given moment students are focusing on form (grammar, lexicon, mechanics, or discourse; Fortune & Thorp, 2001; Loewen & Basturkmen, 2005), thereby establishing what may be a definitive connection with learning (Swain & Lapkin, 1998).

Task Type and Focus on Form in Peer-Peer Interaction

Inspired by Swain's output hypothesis (1995, 2005), a growing body of research (e.g., Kowal & Swain, 1994, 1997; Leeser, 2004; Malmqvist, 2005; Williams, 1999, 2001) has used LREs to analyze occurrences where learners direct each other's attention to form. In doing so, research has documented that the occurrence, resolution, and the type of LREs can be affected by task type (e.g., García Mayo, 2002a, b; Ismail & Samad, 2010; Swain & Lapkin, 2001; Yanguas and Bergin, 2018). Despite an agreement regarding the mediating role of tasks, results are still far from a firm conclusion due to variations in findings. For instance, two studies (Ismail & Samad, 2010; Yilmaz & Granena, 2010) compared dictogloss and jigsaw tasks but they reached different conclusions. That is to say, while the former study found dictogloss to be superior in terms of the frequency of LREs, the latter study found no difference in the frequency of LREs when comparing the two tasks. Such contradictory findings are also evident in other studies. García Mayo (2002a) administered two tasks (dictogloss and text reconstruction) to pairs of Spanish L2 learners. Quantitative and qualitative results showed that pairs generated more LREs and higher degrees of attention to form during the completion of the text-reconstruction task than when performing the dictogloss task. In another study, García Mayo (2002b) administered five tasks (multiple choice, cloze, dictogloss, text editing, and text reconstruction) to pairs of Spanish L2 learners. Analysis of her data illustrated that text editing generated a higher number of LREs compared to the dictogloss task. Looking at these studies, one could realize that in addition to contrasting results, comparing studies in terms of the frequency of LREs seems to have become more difficult as they choose different tasks such as text composition, cloze test, text editing, narrative writing, dictogloss, jigsaw, and text reconstruction (e.g., García Mayo,

2002a, b; Kaivanpanah & Miri, 2017; Swain & Lapkin, 2001; Zabihi, 2022). In order to solve this problem, there seems to be a need for a new method to classify tasks that would focus on their nature and would make comparisons possible. In order to do so, we believe that it is advisable to see these tasks from the lens of input orientation (i.e., the provided amount of linguistic input and its method of delivery) which makes comparisons much easier. Such vision indicates that an audio file (dictogloss) is either similar with a set of pictures (jigsaw) when it comes to the frequency of LREs (Ismail & Samad, 2010; Swain & Lapkin, 2001; Yanguas & Bergin, 2018) or is superior (Yilmaz & Granena, 2010); however, an input in the form of audio generates fewer LREs when compared to a text given to students (either editing or reconstruction). Last but not least, some recent studies (Kaivanpanah & Miri, 2017; Zabihi, 2022) have tried something relatively new in their selection of tasks and compared an input in the form of a text to a topic (such as narrative writing or text composition) given to learners where they play a major role in creating the input. These two studies have indicated that the latter tasks, where students have to generate input in collaboration, lead to the production of more LREs. Since the tasks used in all previous studies have their specific level of input, we aim to choose tasks with different ranges of input to see what results might emerge. In order to take the analysis of LREs a step further, we have opted to include the outcome and the type of LREs in addition to their frequency. This is because different tasks require students to pay attention to the different aspects of the language, such as grammar (text editing), vocabulary (cloze task), and sometimes a combination of these (e.g., narrative writing).

Research Questions

As shown above, few studies to date have attempted to assess the effectiveness of task type on the frequency of LREs (e.g., García Mayo, 2002a) or on the outcome of these episodes (e.g., Yilmaz & Granena, 2010). Although several studies have found empirical evidence for the mediating role of tasks on the generation of LREs through using different types of these activities, to the best of our knowledge, there is a rarity of studies applying the same tasks (dictogloss and text reconstruction or cloze task and composition task) in different contexts to see if similar results emerge. For example, while García Mayo (2002a) used dictogloss and text reconstruction, Swain and Lapkin (2001) adopted jigsaw and dictogloss tasks, and Ismail and Samad (2010) used dictogloss and opinion gap tasks to claim that LRE production can be affected by task type. In addition, given that these tasks vary in terms of the level of input orientation, it can be considered a mediating factor in the generation of LREs that, as far as we know, has not been investigated in any study. Another point to note is that although the aforementioned studies reached the same conclusion regarding the link between task type and LREs, their primary focus was on learning vocabulary (Kaivanpanah & Miri, 2017), attention to form (García Mayo, 2002b), or learning grammar (Zabihi, 2022). This means that there was no room for a more thorough analysis of LREs but their frequency and therefore, it is still not clear what types of LREs dominated students' conversations and what outcomes

they reached. With that in mind, we use two tasks that are rarely put together (i.e., text editing and dictogloss) to see if the results converge with previous studies, and in order to shed more light on the effect of input orientation on task performance, we chose argumentative writing as the third task since it has the lowest level of input among our tasks and makes the concept of "having tasks with varying levels of input orientation" possible. This research will use three tasks with varying levels of input orientation to examine the frequency (i.e., the number of times when LREs emerge), type (i.e., lexical or grammatical), and outcome (i.e., solved correctly or incorrectly and unresolved) of LREs produced while students work collaboratively:

1. Does task type have a significant effect on the frequency of LREs produced in L2 peer interaction?
2. Does task type have a significant role in the type of LREs (lexical or grammatical) learners produce in L2 peer interaction?
3. Does task type have a significant role in the outcome (solved correctly, solved incorrectly, and unresolved) of LERs learners produce in L2 peer interaction?

Method

Participants

Twenty-four English as a Foreign Language (EFL) learners (female, $n = 18$; male, $n = 6$; $M_{age} = 22.79$, range $= 18$–32) agreed to take part in this research by signing informed consent forms and were offered extra course credit for their participation. It is worth noting that the small number of participants was due to the restrictions caused by the COVID-19 pandemic. These learners were first-year college students with at least 5 years of formal English instruction at school. They were put into 12 self-selected pairs and were asked to complete three tasks (argumentative writing, dictogloss, and text editing). All students were native speakers of Farsi and were selected according to English proficiency level based on their scores on a version of the Oxford Placement Test (OPT, Dave, 2004) and the proficiency reports we received from the institution where they studied English. Out of a total of 50 EFL learners who took the OPT, 24 *independent users* (B1 and B2) were selected based on the levels defined by the Common European Framework of Reference for Languages (Council of Europe, 2001) as the desired participants of the study.

Tasks

The tasks used in this study were argumentative writing (Appendix A), dictogloss (Appendix B), and text editing (Appendix C). These tasks were assigned since they have varying levels of input orientation. In fact, input orientation increases from argumentative writing to dictogloss and finally text editing. Simply said, while argumentative writing gives participants only a topic to write about, in a dictogloss task, students listen to an audio for two times and collaboratively write down what

they have understood. The text editing task has the highest level of input orientation because students have a text at their disposal containing flaws that should be corrected. Following Storch's (2008) argument that engaging learners in constructing a joint written text can open up noticeable opportunities for collaborative dialogues, an argumentative writing task was assigned to students. This task requires learners to jointly write about a given topic (The prompt was: How far do you agree with "It's not government's fault that young people can't find jobs, it's because they are not qualified"), discuss their arguments, and give their reasons. We decided to use an argumentative writing task because previous scholars have claimed that an unstructured task like argumentative writing can draw learners' attention to lexis (Adams, 2007), promote vocabulary learning (Kaivanpanah & Miri, 2017), and encourage the generation of more LREs (Zabihi, 2022). The second task, i.e., dictogloss, was carried out in three phases: In the first phase, students listened to a recorded audio without being allowed to take any notes; in the second phase, the audio was played again and this time students could take notes if they deemed it necessary; in the last phase, all pairs were asked to collaboratively write down the audio they heard as precisely as possible based on what they understood and their notes. The dictogloss task has widely been used in previous studies (e.g., García Mayo, 2002a, b; Ismail & Samad, 2010; Yilmaz & Granena, 2010) because this task has proved to be effective as far as encouraging learners to reflect on their output is concerned. In addition, this task propels learners to explain their choices and work together to reconstruct a text, which may deepen their awareness of language form (Kowal & Swain, 1994; Lapierre, 1994; Swain, 1998; Swain & Lapkin, 2000, 2001). The third task was text editing which has been used in previous research (e.g., García Mayo, 2002b) and has proven to be effective in eliciting learners' attention to a range of grammatical choices in a given text (Storch, 1997, 2007), leading to a more effective learning experience in both the short and long terms (Zabihi, 2022). Therefore, a text was given to students that comprised 300 words containing flaws in five different areas within their level of proficiency (prepositions, conditional clauses, collocations, passive structures, and past tenses), demanding learners to find errors and correct them while interacting with their pair members.

Procedure

Data Collection

A repeated measures (within-subjects) design was adopted in this study in order to avoid the risk of individual differences getting involved. One week before assigning the tasks and after taking OPT, 24 intermediate students from among a total of 50 were selected as participants of the current study. Pairs carried out the three tasks in three consecutive sessions. Before data collection began, ethics approval was granted by the language center and informed consent was obtained from all participants. The tasks (text editing, dictogloss, and argumentative writing) were assigned in three consecutive sessions, and in order to control for any possible effects of order

of presentation on task performance, tasks were counterbalanced across three groups of four pairs. Pairs 1 to 4 were put into group 1, pairs 5 to 8 were put into group 2, and pairs 9 to 12 were put into group 3. Each group followed its specific order for carrying out the tasks, with group 1 doing argumentative writing, dictogloss, and text editing; group 2 doing dictogloss, argumentative writing, and text editing; and group 3 doing text editing, argumentative writing, and dictogloss. Learners were asked to prioritize speaking in English when doing tasks. They were allowed to use their L1 (Persian) only when they were faced with a communication barrier. This is because translanguaging leads to more effective communication among learners, while speaking only in L2 could discourage students from discussing linguistic issues (García, 2009). All conversations across twelve pairs were recorded and then transcribed verbatim for analysis.

Data Coding and Analysis

All the transcripts were coded for LREs. In this study, instances, where pair members faced a linguistic problem and tried to mutually resolve it through talking about the language they produced, questioning the language they produced, and giving justifications for their linguistics choices, were considered LREs (Swain & Lapkin, 1998). Two raters independently identified and coded LREs. The first rater was an assistant professor of applied linguistics who had prior knowledge of coding LREs. The second rater was an M.A. student of applied linguistics whose research was related to LREs and has been trained to code these episodes. Based on the Spearman-Brown Prophecy Formula, the inter-rater reliability was high (α = .88). The two raters then discussed and resolved all discrepancies. All disagreements between raters were discussed and resolved. LREs were sorted into three categories: frequency, type, and outcome. Frequency is the number of times when an LRE emerges; type refers to the nature of LREs being lexical or grammatical. In lexical LREs, learners talk about meaning, spelling, or the choice of lexical items. The following is an instance of Lexical LRE:

(1) S1: *aval mikhasti begi ala raghme, are*? (At first, you wanted to say "despite," right?)
(2) S2: *ohoom, apart from manzooram bood. Doroste? Nazari?* (Yeah, I meant to say "apart from." Is that correct? Any idea?)
(3) S1: *despite ham mishe goft* (You can also say "despite.")
(4) S2: *aha* (Alright.)
(5) S1: *benazaret kodoom behtare begim, despite ya apart from?* (Which one is better? "despite" or "apart from"?)
(6) S2: *harchi khodet mikhay ro bego. Man mikham begam ala raghme* (Whatever you like. I just want to say "despite.")

In grammatical LREs, learners talk about the grammatical aspects of the language they produce, such as singular or plural, past or present tense, gerund or

infinitive, and the like. The following is an instance in which learners produce grammar-related LREs:

(1) S1: hamin ke bazi az afrade khas daraye emtiazati hastan (Some people have privilege over others)
(2) S2: bayad felesh mofrad bashe ya jam? Have ya has? (Should we use plural or singular verb? "Have" or "has"?)
(3) S3: has dige (We should use "has.")

Finally, the outcome of LREs was further compartmentalized into three sub-categories following Swain (1998): solved correctly, problem not solved or disagreement about the problem solution (unresolved), and problem solved incorrectly. Correctly resolved LREs took place when the correct target language form or an appropriate explanation for it was provided. Here is an example of a correctly resolved LRE:

(1) S1: *Khob begim tashkhis midan? Mishnasan*? (Should we say they identify? They know?)
(2) S2: *yani chi?* (What do you mean?)
(3) S1: *baraye verbesh migam. Mishnasan estedadeshoono? Chi behtare?* (For the verb. They know their talent? What is better to say?)
(4) S1: *recognize?* (Recognize?)
(5) S2: *bale* (Yes.)

An LRE was categorized as unresolved when learners dropped the topic because they either could not find an answer to the problem or could not reach a mutual solution. In the following example, student 1 (S1) tries to ask about the noun form of a verb, but the other student (S2) disagrees with her pair member on the ground that the whole idea is erroneous in her vision:

(1) S1: *Prefer mishe dekhalat, esmesh chie?* ("Prefer" means interfere, what is the noun form of it?)
(2) S2: *chi?* (What?)
(3) S1: *na, prefer nemishe. Dekhalat chi mi she?* (No, that is not "prefer." How do you say interfere?)
(4) S2: *kolan motevaje jomlat nemisham* (I do not understand your sentence at all.)
(5) S1: *mikham begam dekhalate mardom va dolat tasir dashte* (I want to say that interference from government and people has had an impact.)
(6) S2: *na, mardom ke dekhalat nemikonan* (No, people do not interfere.)

Instances where one's attempt to start an LRE was unnoticed by the other learner were coded as unresolved as well:

(1) S1: *All people were entering, bad az start 'ING' darim? When the door, all people start? Started? Badesh fel be che soorate?* (All people were entering…,

Table 1 Descriptive statistics: production of LREs across the three tasks

LRE production		Frequency	
	N (pairs)	*M*	*SD*
Task type			
Argumentative	12	10.750	3.84
Dictogloss	12	3.833	2.08
Text editing	12	7.917	3.17

should we use "ING" after star? When the door, all people start? Started? What form of the verb should we use after this?)

(2) S2: *Ye lahze, inja chi dashtam mineveshtam?* (Hold on a second, what was I saying in this part?)

An LRE was incorrectly solved when the learners agreed on a solution that was not target-like, agreed on an erroneous grammatical structure, or when they provided an incorrect explanation:

(1) S1: *Economic a miad ya an?* (Should we say "a economic" or "an economic"?)
(2) S2: *A economic. Fekr mikonam 'a' bayad biari. Aha, bayad 'a' bashe.* (A economic. I think you should use "a," yeah, that is correct. We should use "a.")

Results

Table 1 shows the descriptive statistics for the frequency of LREs produced across the three task types. In light of the repeated-measures design, learners' LRE production for each task was summed and compared to determine whether there was a variation that could be attributed to task type. Before running ANOVAs, we checked the assumption of Homogeneity of Variance using Mauchly's test and the result was not significant ($p = .135$), suggesting that the variances of differences were not significantly different and the data met the assumption required by ANOVA. Furthermore, results from a repeated measures ANOVA generally showed that the effect of task type on the frequency of LREs produced by the learners was statistically significant, $F(2, 22) = 18.153$, $p = .000$. The effect size for task type using partial eta squared (η_p^2) was 0.623, representing a large effect (based on Cohen, 1988: small = .0099; medium = .0588; large = .1379). In addition, post hoc pairwise comparisons with Bonferroni correction showed that learners significantly produced more LREs while doing the argumentative writing task ($p = .000$) and the text editing task ($p = .006$) than when they did the dictogloss task. The mean values also indicated that learners produced more LREs when doing the argumentative writing task than when they did the text editing task. However, the difference was not significant ($p = .227$).

Table 2 shows the descriptive statistics for the frequency of types of LREs produced across the three task performances. Learners' production of lexical and

Table 2 Descriptive statistics: types of LREs produced across the three tasks

LRE type		Lexical LREs		Grammatical LREs	
	N (pairs)	M	SD	M	SD
Task type					
Argumentative	12	8.83	3.63	1.83	1.85
Dictogloss	12	3.17	1.74	0.67	0.77
Text editing	12	1.75	0.86	6.17	2.98

Table 3 One-way repeated-measures ANOVA: tests of within-subjects effects

Task type	df	Mean square	F	p	η_p^2
LREs	2	145.08	18.153	.000	.623
Lexical LREs	2	168.58	39.952	.000	.784
Grammatical LREs	2	100.77	19.717	.000	.642
Correct resolutions	2	57.028	12.553	.000	.533
Unresolved resolutions	2	4.083	2.655	.093	.194
Incorrect resolutions	2	9.028	4.812	.053	.304

grammatical LREs for each task was compared to determine whether there was a variation that could be attributed to task type. First, Mauchly's test of Homogeneity of Variance was run and the results were not significant for lexical LREs ($p = .076$) and grammatical LREs ($p = .107$), indicating that the data met the assumption required by ANOVA. Furthermore, results from a repeated measures ANOVA showed that the effect of task type on the frequency of lexical LREs was statistically significant, $F(2, 22) = 39.95$, $p = .000$, partial eta squared (η_p^2) = 0.784: large effect size (see Table 3). Post hoc pairwise comparisons with Bonferroni correction revealed that learners significantly produced more lexical LREs while doing the argumentative writing task than when they performed either the dictogloss task ($p = .000$) or the text editing task ($p = .000$). The mean values also indicated that, although learners produced more lexical LREs during the completion of the text editing task than in the dictogloss task, the difference was not significant ($p = .056$). On the contrary, regarding grammatical LREs, a comparison of means showed that, among the three tasks, learners produced the highest number of grammatical LREs when completing the text editing task. ANOVA results showed a statistically significant effect of task type on the frequency of grammatical LREs, $F(2, 22) = 19.71$, $p = .000$, partial eta squared (η_p^2) = 0.642: large effect size. In addition, ANOVA results showed that the number of grammatical LREs produced in the text editing task was significantly higher than that produced during the completion of the argumentative writing task ($p = .009$) and the dictogloss task ($p = .000$).

Finally, Table 4 shows the descriptive statistics for the resolution of LREs produced across the three task types. Learners' performances on the three tasks were compared regarding the resolution of LREs to see if there was a variation that could be attributed to task type. First, Mauchly's test of Homogeneity of Variance was run

Table 4 Descriptive statistics: resolution of LREs across the three tasks

LRE resolution		Correct		Unresolved		Incorrect	
	N (pairs)	M	SD	M	SD	M	SD
Task type							
Argumentative	12	7.167	2.91	1.583	1.67	2.000	1.70
Dictogloss	12	2.833	1.58	0.667	0.88	0.333	0.65
Text editing	12	4.583	2.19	1.750	1.35	1.583	1.97

and the results were not significant for correctly resolved LREs ($p = .515$), incorrectly resolved LREs ($p = .062$), and unresolved LREs ($p = .897$), indicating that the data met the assumption required by ANOVA. Furthermore, results from a repeated measures ANOVA generally showed that the effect of task type on the frequency of correctly resolved LREs produced by learners was statistically significant, $F(2, 22) = 12.55$, $p = .000$, partial eta squared (η_p^2) = 0.533: large effect size. More specifically, post hoc pairwise comparisons with Bonferroni correction showed that learners significantly correctly resolved more LREs during the completion of the argumentative writing task ($p = .000$) than they did in the dictogloss task ($p = .000$). However, no significant difference was found either between the argumentative writing task and the text-editing task ($p = .078$) or between the text-editing task and the dictogloss task ($p = .188$) regarding the correct resolution of LREs. Our results also showed a non-significant effect of task type on the frequency of unresolved LREs ($F(2, 22) = 2.65$, $p = .093$) and incorrectly resolved LREs ($F(1.361, 14.970) = 4.812$, $p = .053$), indicating that none of the tasks performed by the learners has led them to resolve LREs incorrectly or leave them unresolved more often than the other two.

Discussion and Conclusion

The first research question asked whether task type would impact the frequency of LREs. Statistical analyses revealed that, overall, learners produced more LREs when working on argumentative writing. Therefore, our study lends support to previous research claiming that task type could be a mediating factor in the production of LREs (e.g., Swain & Lapkin, 2001; García Mayo, 2002a, b). However, these findings are contrary to what Ismail and Samad (2010) found, as their research showed that dictogloss (a task with more input) increases the production of LREs, while here, a task with the least level of input (argumentative writing) generated the highest number of LREs. Also, our research defies Yanguas and Bergin's (2018) claim that tasks (with varying levels of input) do not affect the production of LREs. One explanation for our findings might be that when students work on the argumentative writing, unlike other tasks, they need to talk more as this task requires providing reasons and supporting their claims. Therefore, it is not counter-intuitive to suggest that learners will have more chances to produce LREs when they talk more. Another

explanation for such finding could be that argumentative writing provides learners with the least level of input, meaning that they need more negotiation for choosing words and structures that all require talking about their linguistic productions. In view of this, second language teachers can use argumentative writing or other tasks with lower levels of input to promote negotiation of meaning and communication between learners.

The second research question asked whether task type would affect the type of LREs produced (i.e., lexical or grammatical) during peer interaction. Our analyses illustrated that learners significantly produced more lexical LREs while doing the argumentative writing task than when they performed the dictogloss task. This finding is different from what Yilmaz and Granena (2010) found because their study indicated that the dictogloss task contributed to the generation of more lexical LREs. The difference in the results of Yilmaz and Granena (2010) could be justified by the fact that, in their study, prior to carrying out the tasks, participants had the chance to practice doing the tasks in face-to-face mode. This could have increased learners' familiarity with the tasks and thus, instead of finding dictogloss a barrier to producing lexical LREs, learners used this as an opportunity to talk more about lexis-related issues. The higher frequency of lexical LREs in our study might be due to the fact that argumentative writing, as the task with the lowest amount of input, requires learners to talk more about abstract words that can create more negotiation for choosing the right lexis. Concerning grammatical LREs, the text-editing task contained a significantly higher number of these episodes compared to argumentative writing and dictogloss. This finding corroborates earlier claims about the appropriateness of the text-editing task for eliciting grammatical type of LREs (e.g., Storch, 1997, 2007). Thus, it is reasonable to conclude that structured tasks like text editing can better shift learners' attention to grammatical features compared to unstructured tasks such as argumentative writing that usually tend to draw learners' attention to lexical features or even semi-structured tasks like dictogloss (Adams, 2007). This finding implies that if L2 educators want to draw learners' attention to formal aspects of language, they can use text editing. Simply put, in order to provide some sort of practice after teaching grammar, teachers can use text editing or other tasks that provide a framework in the form of a text (input) so that learners can dedicate most of their attention to grammatical features.

The third research question asked whether the type of task used would mediate the resolution of LREs. Results indicated that learners correctly resolved more LREs while doing argumentative writing compared to the time when they performed the dictogloss task. This finding supports Yilmaz and Granena's (2010) findings in that their analysis showed that jigsaw (as a task with a lower level of input) led to more correctly resolved LREs compared to the dictogloss task. However, what Yanguas and Bergin (2018) found is contradictory as they concluded that task type does not lead to a significant difference in the outcome of tasks. Our finding might be justified by the assumption that when learners work on tasks allowing them to choose words and structures by themselves, they usually use those that they know well; thus, they can easily explain their choices upon being asked by their interlocutors. As a result, those tasks that offer less input (e.g., argumentative writing) and let learners generate output can benefit students more because they create affordances

for pair members to find gaps in their knowledge and fill them with the help of their interlocutors.

Finally, it is important to bear in mind that the empirical results reported herein should be considered in the light of some limitations that could be addressed in future research. First, since our study showed that tasks with less input (argumentative writing) promoted a higher number of lexical LREs compared to dictogloss which differs from what previous research (e.g., Yilmaz & Granena, 2010) found, more investigation is needed to ensure which task encourages more LREs and which type dominates interaction. Another point of note is to include learners of other proficiency levels to see if their conversations are dominated by grammatical or lexical issues and whether the same results emerge. In addition, given that our study focused on independent users of English (both B1 and B2 levels), one might argue that the participants' mixed proficiency could downgrade the validity of the results, as previous research has shown that learners' L2 proficiency may have a great impact on task performance, collaborative dialogues, and interaction dynamics (e.g., Storch & Aldosari, 2012; Vahdany et al., 2016; Watanabe & Swain, 2007). Finally, due to homogenizing students in terms of proficiency, one could argue that the study lacks ecological validity because it was not carried out in a regular L2 writing classroom, and that the findings may not be directly applicable to such a context. In view of this, future research could enhance the ecological validity of this line of research by exploring the effect of task type and input orientation in the context of L2 writing classrooms.

Appendix 1

Argumentative writing

Topic: How far do you agree with "It's not governments' fault that young people can't find jobs, it's because they are not qualified."

Instructions: *Choose one side with your pair member and try to discuss your reasons. Please note that in order for your performance to be accepted by the test taker, you MUST write at least 200 words and provide three reasons along with their supporting sentences.*

Appendix 2

Dictogloss

The following text was played for students in the form of a two-minute audio file.

Instructions: *Listen to the audio file carefully and write the main points on your notebooks. Be careful that the audio will be played once and after it, you should try to write it down with your partner **as precisely as** you can. You will lose marks if you forget to write main points.*

The speaker answers the question of "What are the three changes that you would like to see in schools?" Well, if you ask me, I would say that school materials are a bit outdated and that is where we should start. School subjects should be attractive to students and be useful in their daily lives, which means that they should also prepare students for the market. We can start with having collaborative projects in and outside schools so that students can work together. Just imagine how exciting it can be if students spend several hours in the jungle working on a science project. The second thing that should be changed is the topic and method of teaching because we all know that learning practically can be easy and enjoyable, unlike the boring books that we currently have in schools. We must start with choosing the topics that students like and that help find their dream job in the future and to change the teaching method, schools can bring successful people from the outside world. It could be absolutely fantastic if we had a lesson about fashion and the teacher was a designer. I guess students would love that idea. Last but not the least, schools should have a 'Tech Day' when all students can bring their phones and laptops both for learning by using technology and for having fun. Let's say every Monday students bring their phones and laptops and during the class time, teachers help them use tech for doing their homework and students learn how to use it for their benefit. During the break time, all students can come together playing online games and taking some pictures. I wish I could take my phone to school.

Appendix 3

Text editing

Instructions: Correct the errors in the text and insert words where necessary.

Last week, when Mr. Rose announce that his new shop was going to open in January 1st and the products were going to be sold with a 50% discount, everyone in the town was happy but they had to put reservations for entering the shop because many people wanted to go there. All people were looking forward to the event and those who were interested in buying a lot of products made an appointment to talk to the manager in person and get more discount. I bet you would have gone there if your house was near that shop.

On the day of opening, everyone was waiting outside the shop while keeping their tickets in their hands. When the doors are being opened, all people started entering the shop. One person was buying a 60" TV and another one was buying cheap electronic products. New designer clothes are put on sale. There were fancy jackets for men and colorful dresses for women. It was clear that all the costumers are going to make large profits because they continued shopping for 3 hours without taking a break. At the last hours you could see that some costumers were running out money because they had spent whatever they had. When the shopping was over, people rushed to the counters to pay and go out but there was something wrong. Perhaps all the costumers had a mistake.

A small placard catch their attention, those who bought TV realized that they have had to pay an extra money if they wanted to get their products with guarantees. It was totally annoying and some people were push others to have a fight by the

owner. If they knew that it was a scam, they won't buy all that stuff. All the costumers were deceived that day.

Author Contribution Author 1 and author 3 contributed to the study conception and design. Material preparation, data collection, and data coding were performed by author 1 and author 2. Data analysis was performed by author 1. The manuscript was written by author 1 and author 2 and reviewed and edited by author 3. All authors read and approved the final manuscript.

Declarations

Ethics The work reported has not been previously published, that the piece—in present or revised form— is not being considered for publication in other venues. We confirm that the data from human subjects have been collected in accordance with the standards and guidelines of the human subjects review board at our institution.

Conflict of Interest The authors declare no competing interests.

References

Adams, R. (2007). Do second language learners benefit from interacting with each other? In A. Mackey (Ed.), *Conversational interaction in SLA* (pp. 29–51). Oxford University Press.

Bygate, M. (1999). Quality of language and purpose of task: Patterns of learners' language on two oral communication tasks. *Language Teaching Research, 3*, 185–214.

Council of Europe. (2001). *Common European Framework of Reference for languages: Learning, teaching, assessment*. Cambridge University Press.

Dave, A. (2004). *Oxford placement test 1*. Oxford University Press.

De la Colina, A. A., & García Mayo. M. P. (2007). Attention to form across collaborative tasks by low-proficiency learners in an EFL setting. In M. P. García Mayo (Ed.), *Investigating tasks in formal language learning* (pp. 91–116). Clevedon: Multilingual Matters.

Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33–56). Ablex.

Doughty, C., & Williams, J. (1998). *Focus on form in classroom second language acquisition*. Cambridge University Press.

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford University Press.

Ellis, R. (2015). *Understanding second language acquisition* (2nd ed.). Oxford University Press.

Fernández Dobao, A. (2014). Vocabulary learning in collaborative tasks: A comparison of pair and small group work. *Language Teaching Research, 18*, 497–520.

Fortune, A., & Thorp, D. (2001). Knotted and entangled: New light on the identification, classification and value of language related episodes in collaborative output tasks. *Language Awareness, 10*(2&3), 143–160.

Foster, P., & Ohta, A. S. (2005). Negotiation for meaning and peer assistance in second language classrooms. *Applied Linguistics, 26*, 402–430.

García, O. (2009). *Bilingual education in the 21st century: A global perspective*. Wiley-Blackwell.

García Mayo, M. P. (2002a). The effectiveness of two form-focused tasks in advanced EFL pedagogy. *International Journal of Applied Linguistics, 12*, 156–175.

García Mayo, M. P. (2002b). Interaction in advanced EFL pedagogy: A comparison of form-focused activities. *International Journal of Educational Research, 37*, 323–341.

García Mayo, M. P. (2007). *Investigating tasks in formal language learning*. Multilingual Matters.

Gass, S. M. (1997). *Input, interaction, and the second language learner*. Lawrence Erlbaum.

Ismail, L., & Samad, A. A. (2010). The effects of tasks on language-related episodes (LREs) during focus-on-form instruction. *Language Education in Asia, 1*, 87–98.

Kaivanpanah, S., & Miri, M. (2017). The effects of task type on the quality of resolving language-related episodes and vocabulary learning. *TESOL Journal, 8*(4), 920–942.

Kobayashi, M. (2003). The role of peer support in ESL students' accomplishment of oral academic tasks. *The Canadian Modern Language Review, 59*, 337–368.

Kowal, M., & Swain, M. (1994). Using collaborative language production tasks to promote students' language awareness. *Language Awareness, 3*, 73–93.

Kowal, M., & Swain, M. (1997). From semantic to syntactic processing: How can we promote metalinguistic awareness in the French immersion classroom? In R. K. Johnson & M. Swain (Eds.), *Immersion education: International perspectives* (pp. 284–309). Cambridge University Press.

Lapierre, D. (1994). *Language output in a cooperative learning setting: Determining its effects on second language learning*. Unpublished Master's thesis. University of Toronto: Canada.

Lapkin, S., Swain, M., & Smith, M. (2002). Reformulation and the learning of French pronominal verbs in a Canadian French immersion context. *Modern Language Journal, 86*, 485–507.

Leeser, M. (2004). Learner proficiency and focus on form during collaborative dialogue. *Language Teaching Research, 8*, 55–81.

Loewen, S., & Basturkmen, H. (2005). Interaction in group writing tasks in genre-based instruction in an EAP classroom. *Journal of Asian Pacific Communication, 15*(1), 171–189.

Long, M. (1980). *Input, interaction, and second language acquisition*. Unpublished doctoral dissertation, University of California, Los Angeles, United States.

Long, M. (1985). A role for instruction in second language acquisition: Task based language training. In K. Hyltenstam & M. Pienemann (Eds.), *Modeling and assessing second language development* (pp. 77–99). Multilingual Matters.

Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). Academic Press.

Malmqvist, A. (2005). How does group discussion in reconstruction tasks affect written language output? *Language Awareness, 14*(2 & 3), 128–141.

McDonough, K. (2004). Learner-learner interaction during pair and small group activities in a Thai EFL context. *System, 32*, 207–224.

Morris, F. A., & Tarone, E. E. (2003). Impact of classroom dynamics on the effectiveness of recasts in second language acquisition. *Language Learning, 53*, 325–369.

Nassaji, H., & Tian, J. (2010). Collaborative and individual output tasks and their effects on learning English phrasal verbs. *Language Teaching Research, 14*, 397–419.

Nunan, D. (1989). *Designing tasks for the communicative classroom*. Cambridge University Press.

Philp, J., Adams, R., & Iwashita, N. (2014). *Peer interaction and second language learning*. Routledge.

Pica, T. (1994). Research on negotiation: What does it reveal about second-language learning conditions, processes, and outcomes? *Language Learning, 44*, 493–527.

Sato, M., & Ballinger, S. (2016). Understanding peer interaction: Research synthesis and directions. In M. Sato & S. Ballinger (Eds.), *Peer interaction and second language learning: Pedagogical potential and research agenda* (pp. 1–30). John Benjamins.

Storch, N. (1997). The editing talk of adult learners. *Language Awareness, 6*, 221–232.

Storch, N. (1998). A classroom-based study: Insights from a collaborative text reconstruction task. *ELT Journal, 52*, 291–300.

Storch, N. (1999). Are two heads better than one? Pair work and grammatical accuracy. *System, 27*, 363–374.

Storch, N. (2004). Using activity theory to explain differences in patterns of dyadic interactions in an ESL class. *The Canadian Modern Language Review, 60*, 457–480.

Storch, N. (2007). Investigating the merits of pair work on a text editing task in ESL classes. *Language Teaching Research, 11*, 143–159.

Storch, N. (2008). Metatalk in a pair work activity: Level of engagement and implications for language development. *Language Awareness, 17*, 95–114.

Storch, N., & Aldosari, A. (2012). Pairing learners in pair work activity. *Language Teaching Research, 17*, 31–48.

Storch, N., & Wigglesworth, G. (2007). Writing tasks: The effects of collaboration. In M. García Mayo (Ed.), *Investigating tasks in formal language learning* (pp. 157–77). Clevedon: Multilingual Matters.

Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.), *Principle and practice in applied linguistics: Studies in honor of H. G. Widdowson* (pp.125-144). Oxford: Oxford University Press.

Swain, M. (1998). Focus on form through conscious reflection. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 64–81). Cambridge University Press.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dia-logue. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97–114). Oxford University Press.

Swain, M. (2005). The output hypothesis: Theory and research. In E. Hinkel (Ed.), *Handbook on research in second language teaching and learning* (pp. 471–484). Lawrence Erlbaum.

Swain, M. (2006). Languaging, agency and collaboration in advanced language proficiency. In H. Byrnes (Ed.), *Advanced language learning: The contribution of Halliday and Vygotsky* (pp. 95–108). Continuum.

Swain, M., Kinnear, P. & Steinman, L. C. (2011). *Sociocultural theory in second language acquisition: An introduction through narratives*. Bristol: Multi lingual matters.

Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *Modern Language Journal, 82*, 320–337.

Swain, M., & Lapkin, S. (2000). Task-based second language learning: The uses of the first language. *Language Teaching Research, 4*(3), 251–274.

Swain, M., & Lapkin, S. (2001). Focus on form through collaborative dialogue: Exploring task effects. In M. Bygate, P. Skehan, & M. Swain (Eds.), *Researching Pedagogic Tasks: Second Language Learning, Teaching, and Testing* (pp. 99–118). Longman.

Tin, T. B. (2003). Does talking with peers help learning? The role of expertise and talk in convergent group discussion tasks. *Journal of English for Academic Purposes, 2*(1), 53–67.

Vahdany, F., Ajabshir, Z. F., Jafarigohar, M., & Soleimani, H. (2016). The frequency and resolution of language related episodes in collaborative dialogue of homogeneous and heterogeneous dyads. *International Journal of English Language & Translation Studies, 4*(4), 53–66.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Watanabe, Y., & Swain, M. (2007). Effects of proficiency differences and patterns of pair interaction on second language learning: Collaborative dialogue between adult ESL learners. *Language Teaching Research, 11*, 121–142.

Williams, J. (1999). Learner-generated attention to form. *Language Learning, 49*, 583–625.

Williams, J. (2001). The effectiveness of spontaneous attention to form. *System, 29*, 325–340.

Yanguas, I., & Bergin, T. (2018). Focus on form in task-based L2 oral computer-mediated communication. *Language Learning & Technology, 22*, 65–81.

Yilmaz, Y., & Granena, G. (2010). The effects of task type in synchronous computer-mediated communication. *ReCALL, 22*, 20–28.

Zabihi, R. (2022). The effects of task type on the resolution of grammatical cognitive conflict episodes and grammar learning. *The Language Learning Journal, 50*(3), 297–309.

Zabihi, R., & Bayan, M. (2020). Are two voices better than one? Comparing aspects of text quality and authorial voice in paired and independent L2 writing. *Written Communication, 37*(4), 512–535.

Zabihi, R., & Ghahramanzadeh, B. (2022). Proficiency pairing and engagement with language in L2 peer interaction. *System, 105*, 102725. https://doi.org/10.1016/j.system.2022.102725

Zhang, M. (2018). Collaborative writing in the EFL classroom: The effects of L1 and L2 use. *System*, *76*. https://doi.org/10.1016/j.system.2018.04.009

Authors and Affiliations

Reza Zabihi[1] · **Danial Erfanitabar[1]** · **Mehdi Mehranirad[1]**

✉ Reza Zabihi
  zabihi@hotmail.com

1   English Department, University of Neyshabur, Neyshabur, Iran