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Writing Task Complexity, Task Condition, and the Efficacy of Feedback

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ABSTRACT

Background. Task-based language teaching (TBLT) is still attracting considerable interest from second language teachers and researchers, partly due to unresolved issues of task sequencing and task complexity. Moreover, in spite of burgeoning attention to writing at the present stage of evolution of TBLT, the interaction of task complexity and corrective feedback in writing performance of language learners has not been explored well.

Purpose. To fill in this research gap, the present study aimed to explore the role of task complexity and task condition in learners' gain from corrective feedback in second language writing.

Method. A pretest-immediate posttest-delayed posttest design was adopted in this study. The participants of the study were 114 English as foreign language learners, randomly assigned to one of the five groups: four experimental groups and a control group. The four experimental groups differed in (a) whether they carried out the simple or complex version of a task (b) whether they did the writing task individually or collaboratively. They received feedback on their writing in three treatment sessions.

Results. Statistical analyses revealed that task condition played a larger role than task complexity in the linguistic performance of language learners who received feedback on their writing.

Implications. The findings add support to the view that selecting appropriate levels of task complexity and suitable task implementation conditions alongside providing corrective feedback enhances the different dimensions of the written performance of language learners.

KEYWORDS

writing, task type, collaborative learning, corrective feedback, accuracy

INTRODUCTION

Writing is one of the most complex skills taught in English as a foreign language (EFL) classes, and many students find it a daunting undertaking. However, this demanding activity—as Widdowson (1978) describes it—is often an inseparable part of language programs. Weigle (2002) sees education and opportunities for learning as factors of paramount importance in writing development. Task-based language teaching (TBLT) is one of the innovative language teaching methods which aims to provide this opportunity for learners by involving them in meaningful activities using the target language. TBLT has drawn ample support from second language acquisition (SLA) researchers (e.g., Ellis, 2003; Prabhu, 1987; Skehan, 1998), but designing suitable tasks with valuable gains for EFL learners remains a serious challenge for syllabus designers and curriculum developers (Baralt et al., 2014). This challenge becomes more serious in the case of L2 writing, which is a somewhat neglected modality in research on TBLT.

The studies on TBLT to date have mainly focused on oral production and explored the role of task design features such as task complexity and task implementation condition separately, often without taking into account the accurate picture of language classes. This neglect has occurred in spite of the fact that writing tasks, characterized by their problem-solving nature and their meaning-making characteristic, are potential-

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ly useful activities to be employed in task-based language teaching and research. Primary focus on speaking in much TBLT-oriented theory and research has caused setbacks in expanding the theoretical, empirical, and educational horizons of TBLT. Adequate attention to other language skills (e.g., writing) in TBLT framework can help overcome these limitations (Byrnes & Manchón, 2014).

Among task design features, task complexity is a factor whose manipulation can bring considerable changes in linguistic output (Robinson, 2001; Skehan, 1998). Moreover, the situation under which a task is implemented may have a considerable effect on the performance of learners in a particular task (Robinson, 2007). Likewise, the interaction of task complexity and task condition may affect learners' performance, which is an under-researched area in SLA studies (Kang & Lee, 2019), particularly in the written mode. In the present study, the task condition is manipulated by having participants perform individual and collaborative writing tasks. Manchón (2014) argues that performing writing tasks individually or collaboratively may have differential effects on language learners' written performance.

In addition, it is now generally accepted that the primary focus of tasks should be on meaning, together with proportionate timely attention to linguistic forms (Ellis, 2003; Long, 2000). Corrective feedback is a common methodological procedure to fulfill this objective in EFL classes. Many studies have been carried out to investigate the role of corrective feedback in second language learners' written performance; however, to the best of our knowledge, the interaction of task complexity, task condition, and corrective feedback in writing performance of foreign language learners has not been studied yet. Manchón (2014) asserts that the prominent position of corrective feedback as a critical component of interaction in writing should be recognized in TBLT-framed theoretical accounts and empirical TBLT studies, which is a neglected area in SLA research.

The effect of different task types (simple/complex), task conditions (individual versus collaborative writing), and corrective feedback on the written performance of language learners has been investigated in some studies (e.g., Bitchener, 2008; Kuiken & Vedder, 2008; Wigglesworth & Storch, 2009). However, the majority of these studies have tackled just one aspect of the topic and left other aspects untouched. The present study considers the whole picture of language classes and attempts to examine the effect of task complexity and task condition together with corrective feedback on foreign language learners' writing. To this end, the following research questions are formulated:

1. Do task complexity and task condition (individual and collaborative writing) mediate the efficacy of written feedback in affecting the accuracy of language learners' written performance?
2. Do task complexity and task condition (individual and collaborative writing) mediate the efficacy of written feedback in influencing the syntactic complexity of language learners' written output?

LITERATURE REVIEW

Task Complexity

One of the challenges facing SLA researchers concerned with gauging the influence of task design features and conditions on language learners' performance is how to determine the complexity or difficulty of tasks. Although various models and frameworks have been proposed to give guidelines on designing and sequencing pedagogic tasks, the cognition hypothesis (Robinson, 2001, 2003, 2009) and the trade-off hypothesis (Skehan, 1998, 2009) are two rather competing theoretical models in vogue today.

Skehan's (1998, 2009) trade-off hypothesis, assuming the single resource model of attention, predicts that enhancing task complexity will jeopardize the accuracy or complexity of learners' production due to the limited attentional capacity which they are able to bring to the task. He argues that complexifying the task, by itself, can lead to improvement in either accuracy or syntactic complexity of linguistic performance—but not both. Skehan (2014) elucidates that simultaneous fostering of the accuracy and syntactic complexity of the performance can occur together with complexifying the tasks, but this dual improvement happens due to different task design factors or characteristics of their implementation—not just thanks to increasing the cognitive complexity of tasks.

On the other hand, Robinson's (2001, 2003) cognition hypothesis presents a relatively novel model for task designing. Following the multiple-resource model of attention, he devalues capacity constraints. The distinguishing characteristic of Robinson's (2001) hypothesis is drawing an important theoretical distinction between resource-directing and resource-dispersing variables of task complexity. Resource-directing variables such as immediacy, number of elements, and reasoning make cognitive and conceptual demands. Robinson (2003) predicts that increasing task complexity along these dimensions directs learners' attention and memory resources to L2 structures and code concepts, so leading to interlanguage development and improvement in the accuracy and complexity of production. In contrast, increasing task complexity along the resource-dispersing variables (e.g., absence of planning time or prior knowledge) disperses attentional resources and affects production negatively.

Skehan (1998) and Robinson (2003) seem to agree up to a point with regard to the effect of the resource-dispersing variables on language production. Stated differently, both

believe that making tasks more complex along these variables (e.g., taking away planning time) is likely to exercise a detrimental effect on the accuracy, complexity, and fluency (CAF) of production. However, they appear to diverge when it boils down to the role of the resource-directing variables. Unlike Robinson's prediction, Skehan (1998)—not having divided task complexity variables into the resource-directing and resource-dispersing types—is of view that increasing task complexity will not lead to more accurate and complex output simultaneously. He argues that task characteristics and task conditions can have selective and directing effects.

The role of task complexity in the written performance of language learners has been examined in a few studies carried out by SLA researchers (Ishikawa, 2007; Kuiken & Vedder, 2008). Johnson (2017), in a research synthesis and quantitative meta-analysis, reviewed some of the studies carried out on the effect of cognitive complexity on L2 writing. Although he found significant changes in the written performance of L2 learners as a result of the manipulation of the cognitive demands of tasks along resource-directing and resource-dispersing variables, he concluded that these findings did not support the predictions of the cognition hypothesis (Robinson, 2001, 2011). Rahimi and Zhang (2018) studied the effect of increasing task complexity on L2 writing of upper-intermediate Iranian students. They reported more complex (subordinate use) and less accurate performance in the writings of the participants who carried out cognitively complex tasks. The findings of Zhan et al. (2021) showed a significant effect of task complexity on the syntactic complexity of EFL learners' writing but not on the lexical complexity of their writing.

Operationalization of Task Complexity

We manipulated the number of elements that learners considered while performing the writing tasks to operationalize the cognitive complexity of the treatment tasks. According to the cognition hypothesis (Robinson, 2001), identifying few easily distinguished elements within a task is simpler than identifying many similar elements. Skehan (2014), viewing task difficulty inherent in tasks themselves, accepts that some features of tasks (e.g., number of elements) can account for the difficulty of tasks. However, he elaborates that the effect of these features on task difficulty may be influenced by other task features and even by the context in which the task is implemented. He suggests interconnectedness between elements in the task as a predictor of task difficulty. Ellis (2003) classifies the number of elements as a task design variable that can elicit more complex language use. Ellis (2003) considers the number of different elements and their relationship important in complexifying a task. For instance, he conceptualizes that a static task requiring learners to describe a diagram with few elements of a similar size makes less cognitive demand on them, compared to where learners are asked to describe a diagram with many elements of varying sizes.

Halford et al. (2007) assert that our attention and working memory can process four variables and above this level processing becomes demanding for learners. In the current study, participants carried out the simple version of a writing task having three criteria in mind, and they performed the complex version of the writing task considering seven criteria. They had to take into account five criteria (medium in terms of cognitive complexity) while completing the assessment tasks. Kuiken and Vedder (2008, 2011) examined the role of task complexity operationalized by the number of elements in the oral and written mode of language learners and found support for Robinson's (2001, 2003, 2009) cognition hypothesis.

Task Condition

Different aspects of task-based language teaching, including the condition under which a task is performed, have been the focus of interest for SLA researchers and practitioners in recent years. Task condition affects task performance, as the same task implemented under different conditions may yield different outcome (Larsen-Freeman & Long, 1992). Robinson (2007) in his triadic componential framework (TCF) has classified these sets of variables into two groups: participation variables (e.g., open/closed solution) which make interactional demands as well as participant variables (e.g., same/different gender) which make interactant demands.

On the other hand, Skehan's (1998) model of task complexity has included factors such as time pressure, scale, modality, and opportunity for control under the category of communicative stress. Skehan recognizes that these factors along with learners' characteristics (e.g., intelligence), interacting with the code complexity and cognitive complexity of the task, may influence the performance of the individual learner. Skehan (2014) in his framework for second language task performance has regarded task conditions as factors related to the implementation of tasks such as availability of planning time, task repetition, post-task activities, and interaction (monologue/dialogue).

In the current study, task implementation condition was manipulated by involving language learners in individual and collaborative writing. Coauthoring of a text is utilized in educational settings to help learners enjoy the benefits of the scaffolding and collaboration emphasized by Vygotsky's (1978) sociocultural theory of learning, Long's (1996) interaction hypothesis, and Swain's (1985) output hypothesis. Collaborative tasks that engage learners in a shared goal-oriented activity can provide a suitable context for learning and language development (Storch, 2013). Most studies to date have reported the positive impact of collaborative writing on accuracy (e.g., Fernández Dobao, 2012; Storch, 2005; Wigglesworth & Storch, 2009) and complexity (Storch, 2005). Shehadeh (2011), using the holistic rating procedure, reported a significant effect of collaborative writ-

ing and feedback on content, organization, and vocabulary, but not on grammar and mechanics of written performance.

Interaction of Task Complexity and Corrective Feedback

Despite a few disagreements among researchers over the definition of task and its grading, a growing consensus has emerged that the primary focus of tasks should be on meaning, together with proportionate attention to linguistic forms (Ellis, 2005). Emphasis on focus on form in TBLT has drawn on two grounds. First, the limited attentional capacity of human beings, including L2 learners, puts constraints on them, pushing them to allocate their attention to one area and neglect other areas (Schmidt, 2001). Second, when L2 learners are subject to the constraints of attentional resources, they naturally prioritize meaning at the expense of form (VanPatten, 1990). Negative feedback (e.g., written feedback) is one of the methodological procedures to invite learners' attention to linguistic forms.

Considering the interaction of task complexity and corrective feedback, Skehan's (1998) trade-off hypothesis, emphasizing the limited information processing capacity of human beings, predicts that more complex tasks allow less attention to language and, by implication, to the provided feedback. Conversely, Robinson (2001), advocating the multiple-resource model of attention, hypothesizes that communicating more complex ideas requires more syntactic resources. He argues that learners, while performing a cognitively complex task, cater to the demands of the task by employing specific linguistic features. This may lead them to be more tuned to and receptive of the feedback that addresses those features (Robinson & Gilabert, 2007).

Although the impact of task variables on language learning has been the focus of interest for SLA researchers over the past three decades, the interaction of task variables with negative feedback has not received considerable attention in this period (Révész & Han, 2006). To date, few studies have been carried out to examine this issue—limited to oral mode. For instance, Révész (2009) explored the effect of providing recasts in two types of oral tasks (simple/complex). She found greater L2 gains for learners who received recasts in cognitively complex tasks. Baralt (2013) examined the impact of cognitive complexity on feedback efficacy during on-line versus face to face interaction tasks. She found that performing cognitively complex tasks in the FTF mode while receiving recasts was the most beneficial condition for language learning. However, in the CMC mode, the cognitively demanding task plus recast was not effective (Baralt, 2013). Révész et al. (2014) investigated the effect of task complexity and input frequency on ESL learners' gain from recast. The analyses of the data obtained from assessment tasks indicated that the participants performing simple tasks enjoyed a considerable advantage in using the target linguistic form. Vahdat and Daneshkhah (2019) compared the effects of corrective feedback and task complexity on the grammatical accuracy of EFL learners' writing and found a significant positive role of direct corrective feedback in increasing the grammatical accuracy of their writing.

Corrective Feedback in Individual and Collaborative Writing

Many studies have been conducted to assess the role of corrective feedback in the written performance of language learners, and most of them have reported the positive effect of this kind of feedback at least on the accuracy of writing (Liu & Brown, 2015). However, the role of written corrective feedback (WCF) in different writing task conditions has not been studied enough. Regarding the role of corrective feedback in individual and collaborative writing, Vygotsky's (1978) sociocultural view of learning assumes teacher's feedback as a form of assistance (scaffolding) which helps learners, especially those who process this feedback collaboratively, develop the meditation of corrective feedback within the zone of proximal development (ZDP). Long's (1996) interaction hypothesis, Swain's (1985) output hypothesis, and Kellogg's (1996) model of writing also provide a convenient rationale for the positive impact of WCF on the linguistic performance of learners in collaborative writing.

Kellogg's (1996) influential cognitive model of writing demonstrates how cognitive and motivational factors influence composing processes. His model is composed of three basic recursive and interactive systems, with each system involving two components: formulation (planning and translation), execution (programming and executing), and monitoring (reading and editing). Formulation involves setting goals by the writer and his lexical and syntactic choice to express his intended ideas. The term execution is used by Kellogg (1996) to refer to converting the output of translation into production schema for the appropriate motor systems involved and the actual act of writing (Ellis & Yuan, 2005). Monitoring involves reading and correcting the errors of the written output in micro (linguistic) and macro (organizational) levels. Interaction and shared decision-making in different stages of writing— proposed by Kellogg (1996)—may improve the writing performance of learners who practice writing in collaboration. The key role of collaborative writing in L2 development is highly valued by SLA researchers (Storch, 2013).

Few studies have examined the effect of collaborative processing of WCF on the writing of language learners. Storch and Wigglesworth (2010) and Kassim and Luan (2014) have reported positive effects for this kind of processing on the revision and generating new texts. Kim and Emeliyanova (2019) studied ESL learners' writing accuracy while performing individual and collaborative processing of written feedback. Although the writing accuracy of both groups improved after three treatment sessions, no noticeable difference was found between them. Of course, in their study,

the participants just processed the teacher's feedback collaboratively, but they performed the writing tasks individually in the treatment sessions. Recently, Mujtaba et al. (2021 investigated the impact of individual and collaborative processing of WCF on second language writing and found better written performance, in terms of accuracy and revision behavior, for participants who processed the WCF collaboratively. In the current study, writing tasks in the treatment sessions were performed in two different conditions (individually and collaboratively). Also, the syntactic complexity of the written products of the participants was measured to check a possible deleterious effect of WCF on other dimensions of writing.

METHOD

Design

A pretest-posttest-delayed posttest design was adopted to examine the interaction of task complexity and negative feedback in the written mode under different conditions. Cognitive demands of tasks and their implementation condition—each with two levels—were manipulated as the independent variables of the study. The dependent variables were gains made through time, i.e., from the pretest to the immediate posttest and to the delayed posttest in the accuracy and syntactic complexity of writing. The participants were divided into five groups: a control group that did not receive feedback on their writing and four experimental groups who performed the simple or complex version of the same task individually or collaboratively and received WCF.

Participants

The participants of the study were 114 undergraduate university students learning English as a foreign language at universities of Iran. One hundred and twenty-two students who scored one standard deviation above and below the mean in a language proficiency test were selected from a total of 180. Five students were excluded due to absence in treatment or assessment sessions, and three students were identified as outliers. Therefore, the final number of participants was 114 (48 male and 66 female). Their comparability was examined by the analysis of the data obtained from the pretest. Their age ranged from 19 to 30 years (M = 22.36, SD = 2.70). Their native language was Azari Turkish (n = 84) and Persian (n = 30). There was no significant difference between groups regarding the number of years studying English, $F(4, 109) = .60$, $p = .65$. None of the participants had the experience of living in an English-speaking country.

Assessment Tasks

Three writing tests were utilized as the pretest, immediate posttest, and delayed posttest. In each test, the participants were asked to write on a hypothetical topic (e.g., offering a mobile phone to a person called John). They were given a leaflet of eight mobile phones. None of the mobile phones in the leaflet met all John's five criteria (reasonable price, design, camera, battery life, display device). The learners had to offer John the most suitable mobile phone based on his likes, discuss their selection, and justify it. They had to complete the writing tasks in 40 minutes using at least 150 words. Three comparable writing tasks were used in the pretest and posttests. These tasks were medium in terms of the cognitive demands they imposed on the participants because the learners had to consider five criteria in performing the assessment tasks, but they had to consider three and seven criteria in the simple and complex versions of the treatment tasks, respectively. The comparability and validity of the tests were checked and assured by three experts in the field of language teaching and testing.

Treatment Tasks

The participants in the four experimental groups received three treatment sessions. In these sessions, the students were presented with writing prompts. These treatment tasks were similar to the pretest and posttests in terms of instructions given and stages followed. However, the complexity of the tasks varied by decreasing or increasing the number of the criteria that participants had to consider while writing. In the simple task (see appendix A), they offered a product to Jack considering three criteria (a hypothetical situation). In the complex task (see appendix B), the participants carried out a similar task, taking into account Jack's seven criteria. Moreover, in the simple version of the task, the students were presented with information on five types of the product in question (e.g., automobile) in a table, but in the complex task, the participants had to consider the information about eight types. As Robinson (2001) asserts, identifying few easily distinguished elements within a task is simpler than identifying many similar elements. The students in all experimental groups received corrective feedback. The validity of these tasks was checked by a group of experts in material development for EFL learners.

Procedure

First, the comparability of the participants' level of English proficiency was checked by Nelson English Language Proficiency Test. The learners recruited were randomly assigned into four experimental groups and a control group. The four experimental groups differed as to (a) whether they performed the simple or complex version of the writing task (b) whether they carried out the writing task in pairs or in isolation during the treatment sessions. In other words, the participants were placed in one of these five groups:

Group 1: performed simple tasks individually and received WCF on their errors (simple individual)

Group 2: performed complex tasks individually and received WCF on their errors (complex individual)

Group 3: performed simple tasks in pairs and received WCF on their errors (simple collaborative)

Group 4: performed complex tasks in pairs and received WCF on their errors (complex collaborative)

Group 5: performed free writing activities and just took part in the pretest and posttests (control group)

The participants in five groups took a writing pretest. Then, all the experimental groups involved received three treatment sessions. In each treatment session, the participants wrote a text based on a simple or complex writing prompt. The first author read their written outputs and underlined their erroneous structures (indirect unfocused corrective feedback). Prior to the next treatment session, he returned the texts to the participants. They were supposed to pay enough attention to the underlined parts and provide their correct forms in 15 minutes. The participants in the individual groups had to do this job by themselves, but those placed in the collaborative groups could discuss the errors and reach a consensus on the correct form. The control group did some free writing activities and followed the conventional syllabus of the university. The same stages were followed in two other treatment sessions.

After three treatment sessions, the participants took the posttest. The control group received the posttest, too. The accuracy and syntactic complexity of the participants' written production were coded and analysed. After two weeks, another posttest was administered, and their written products were coded and analysed to assess the retention of any possible treatment effect. The collected data were analysed using SPSS20. Table 1 demonstrates the summary of the steps taken to carry out the study.

Measures

Following the guidelines of Wolfe-Quintero et al. (1998) and consulting the measures adopted in the previous studies on writing (e.g., Kuiken & Vedder, 2008; Skehan & Foster, 1999; Tavakoli & Rezazadeh, 2014), we measured accuracy by the proportion of error-free T-units to all T-units. Any error in syntax, morphology, and lexical choice (if the word obscured meaning) was considered, but errors in spelling, punctuation, or capitalization were ignored. Syntactic (structural) complexity was judged by the average number of clauses per T-unit. The participants' written products were coded and scored by the first author who had a Ph.D. in teaching English as a foreign language (TEFL) and has taught English at universities of Iran for about 17 years. To ensure the reliability of coding and scoring, 20% of the written products of the participants were coded and scored by an independent expert colleague who held a master degree in TEFL. He was briefed on the procedure and guidelines to be taken in coding and scoring the texts. Inter-coder and inter-rater reliability coefficients were .92 and .94, respectively.

Data Analysis

The collected data were analyzed using SPSS 20. The normality of the collected data was confirmed by normality tests (Kolmogorov-Smirnov statistic) and graphical assessments (Histograms, Normal Q-Q plot, box plot). Therefore, parametric tests were employed to analyze the data. To assess the effect of task complexity (simple/complex), task condition (individual/collaborative), written feedback, and their interaction on the accuracy and syntactic complexity of language learners' written performance, first, descriptive statistics were calculated for each group's pretest, immediate posttest, and delayed posttests performance. Then, considering the design of the study and having checked the assumptions underlying ANOVA tests, including normality and homogeneity of variance, we conducted three separate

Table 1

Data Collection Procedure

Week	Activity
1	Proficiency test
2	Pretest
3	First timed writing
4	Returning the first writing +Feedback processing
5	second timed writing Returning the second writing +Feedback processing
6	Third timed writing Returning the third writing +Feedback processing
7	Immediate posttest
9	Delayed posttest

one-way ANOVAs for two measures of written performance to compare the participants' performance in the pretest, immediate posttest, and delayed posttests. Post-hoc comparisons are also conducted to find out which groups are significantly different from one another. Next, a two-way ANOVA was conducted for the posttests in order to explore the role task complexity and task condition combined with WCF in the possible changes in the written production of the participants. In all analyses run, the significance level was set at .05 and Cohen's (1988) guidelines were used to decide on the effect size. Cohen (1988) has suggested benchmarks to identify small (η^2 = 0.01), medium (η^2 = 0.06), and large (η^2 = 0.138) effects.

RESULTS

Results for the First Research Question

To answer the first research question, descriptive statistics, including means and standard deviations, were computed for the accuracy measure. As shown in Table 2, the group that performed the simple task collaboratively and received written feedback had the highest mean in the posttests. Contrarily, students who received corrective feedback while doing the complex task individually had the worst performance in this measure.

Three One-way ANOVAs were performed for the pretest and posttests after examining the assumptions underlying ANOVA tests. Results of the pretest for the accuracy measure of the written products did not show a statistically significant difference between groups, $F(4, 109) = .12$, $p = .97$, indicating the comparability of the five groups at the outset of the study. Therefore, any probable difference between the control and experimental groups in the posttests can be attributed to the treatment. The results of the one-way ANOVA indicated a statistically significant difference for five groups in the posttests, $F(4, 109) = 13.84$, $p = .00$ for the immediate posttest and $F(4, 109) = 12.73$, $p = .00$ for the delayed posttest.

In order to compare the difference between groups in the immediate posttest, the Tukey HSD test was run. The results indicated that the mean score of the accuracy of writing for the simple individual group (M=.75, SD= .09) was significantly different from the simple collaborative (M=.85, SD=.09) and control (M=.65, SD=.11) groups. The participants in the simple individual group who received WCF on their writing showed less gain in their accuracy of their writing than the participants of the simple collaborative group who got the same feedback. Nevertheless, the participants in the simple individual group made more gain than the control group who did not receive WCF. Moreover, the writing accuracy of the complex individual group (M=.69, SD=.11) was significantly less than the writing accuracy of the simple collaborative and complex collaborative (M=.81, SD=.08) groups. The accuracy of simple collaborative group was significantly higher than the accuracy of the control group. Also the participants in the complex collaborative group produced significantly more accurate texts than the control group in the immediate posttest. The other two by two comparisons

Table 2

Descriptive Statistics for the Measure of Accuracy in the Pretest and Posttests

Group	N	Test	Mean	SD
Simple individual	23	Pretest	.61	.17
		Posttest 1	.75	.09
		Posttest 2	.72	.10
Complex individual	23	Pretest	.60	.18
		Posttest 1	.69	.11
		Posttest 2	.69	.10
Simple collaborative	22	Pretest	.58	.14
		Posttest 1	.85	.09
		Posttest 2	.82	.09
Complex collaborative	22	Pretest	.59	.11
		Posttest 1	.81	.08
		Posttest 2	.78	.07
Control	24	Pretest	.59	.14
		Posttest 1	.65	.11
		Posttest 2	.63	.10

between groups did not show statistically significant difference.

The Tukey HSD test was also run to compare the means of the accuracy of the five groups in the delayed posttest. The results showed a significant difference between the simple individual (M=.72, SD=.10) and simple collaborative (M=.82, SD=.09) groups as well as between the simple individual and control (M=.63, SD=.10) groups. The learners who performed the simple treatment tasks individually and received WCF on their writing produced less accurate texts than the simple collaborative group who got the same feedback, but these learners (simple individual group) wrote more accurate texts than the control group who did not receive WCF on their writing. The analysis also showed the mean score for complex individual group (M=.69, SD=.10) was significantly different from the simple collaborative and complex collaborative (M=.78, SD=.07) groups. The learners who conducted the complex tasks individually had less gain in the accuracy of their writing, compared to those who performed the simple collaborative and complex collaborative tasks. The difference between the simple collaborative and control groups as well as between the complex collaborative and control groups was statistically significant, showing better performance of collaborative groups in comparison with the control group. There was no statistically significant difference between the other pairs of groups.

In addition, a two-way ANOVA was conducted to assess the impact of independent variables (task complexity and task condition) along with WCF on the accuracy of the participants' writing in the posttests, as the assumptions had not been violated. In the immediate posttest, the interaction effect between task complexity and task condition was not statistically significant, $F(1, 86) = .29$, $p = .58$, $\eta^2 = .003$. The effect size for the interaction was small; therefore, it was not surprising that the analysis did not show statistically significance for this interaction. However, there was a significant main effect for task complexity, $F(1, 86) = 5.51$, $p = .02$, $\eta^2 = .06$, indicating the medium effect of cognitive complexity of tasks on the accuracy of the participants' writing . Also a significant effect was found for task condition, $F(1, 86) = 25.31$, $p = .00$, $\eta^2 = .22$, which shows a large effect size for this variable. Regarding the delayed posttest, again the interaction between task complexity and task condition was not significant, $F(1, 86) = .02$, $p = .86$, $\eta^2 = .00$. The analysis of main effects provided a significant statistical effect just for task condition $F(1, 86) = 22.20$, $p = .00$, $\eta^2 = .20$ (a large effect size). The main effect of task complexity did not reach statistical significance, $F(1, 86) = 1.85$, $p = .17$, $\eta^2 = .02$. This finding shows that the participants could not preserve the positive effect of receiving WCF in less complex tasks for a longer time.

Results for the Second Research Question

To answer the second research question, means and standard deviations of the syntactic complexity of the participants' written performance are presented in Table 3.

Again, a one-way ANOVA was run to compare the performance of the participants in this measure. Like the accuracy measure, the structural complexity of the written products were comparable at the pretest, $F(4, 109) = 1.32$, $p = .26$. How-

Table 3

Descriptive Statistics for the Measure of Syntactic Complexity in the Pretest and Posttests

Group	N	Test	Mean	SD
Simple individual	23	Pretest	1.32	.13
		Posttest 1	1.28	.10
		Posttest 2	1.30	.15
Complex individual	23	Pretest	1.37	.11
		Posttest 1	1.36	.12
		Posttest 2	1.34	.13
Simple collaborative	22	Pretest	1.31	.14
		Posttest 1	1.33	.11
		Posttest 2	1.35	.11
Complex collaborative	22	Pretest	1.40	.17
		Posttest 1	1.44	.14
		Posttest 2	1.47	.16
Control	24	Pretest	1.34	.18
		Posttest 1	1.32	.17
		Posttest 2	1.38	.15

ever, their performance changed in the posttests and the difference reached statistical significance, $F(4, 109) = 4.20$, $p = .003$ in the immediate posttest and $F(4, 109) = 4.17$, $p = .003$ in the delayed posttest. Table 3 shows that the participants in the experimental group who performed the complex treatment tasks collaboratively and received feedback on their writing produced written outputs with the highest syntactic complexity in both posttests.

Next, the Tukey HSD test was conducted to assess the pairwise difference of the means of the five groups in the immediate posttest. Results showed a significant difference between the simple individual (M=1.28, SD=.10) and complex collaborative (M=1.44, SD=.14) groups as well as between the complex collaborative and control (M=1.32, SD=.17) groups. The learners who performed complex tasks collaboratively during treatment sessions and received feedback on their writing produced more complex structures than the participants who were placed in the simple individual and control groups. The other two by two comparisons between groups in the immediate posttest did not show significant difference. The results of post-hoc comparisons using the Tukey HSD for the syntactic complexity of learners' writing in the delayed posttest indicated a significant difference for the pairwise comparison of the simple individual (M=1.30, SD=.15) and complex collaborative (M=1.47, SD=.16) groups and also between the complex individual (M=1.34, SD=.13) and complex collaborative groups. The participants who were placed in the complex collaborative group and were given WCF feedback on their writing produced significantly more syntactically complex texts than those who were placed in the simple individual and complex individuals groups. The difference between other pairwise comparisons was not statistically significant.

Furthermore, a two-way ANOVA was run to evaluate the impact of task complexity, task condition, and their interaction on the efficacy of written feedback in affecting the syntactic complexity of writing. In the immediate posttest, a significant effect was not found for the interaction between task complexity and task condition, $F(1, 86) = .30$, $p = .58$, $\eta^2 = .004$, allowing us to examine the main effect of the independent variables on the written performance of the participants. A significant effect was found for the effect of task complexity, $F(1, 86) = 13.24$, $p = .00$, $\eta^2 = .133$, showing a medium effect size for this variable. Likewise, there was a significant effect for task condition, $F(1, 86) = 5.74$, $p = .01$, $\eta^2 = .06$ (a medium effect size). Similar results were obtained for the delayed posttest. Again, the interaction between task complexity and task condition was not significant, $F(1, 86) = 1.14$, $p = .28$, $\eta^2 = .01$. Tests of main effects revealed a significant effect for task complexity and condition, $F(1, 86) = 7.33$, $p = .008$, $\eta^2 = .07$ for task complexity and $F(1, 86) = 8.95$, $p = .004$, $\eta^2 = .09$ for task condition. These results indicated that task complexity and task condition affected the syntactic complexity of the participants' writing who received WCF on their output. Of course, the effect size of these variables was medium.

DISCUSSION

Findings regarding the role of task complexity and task condition in learners' gain from written feedback (research question 1) revealed that task complexity affected the accuracy of the participants in the immediate posttest but not in the delayed posttest. However, in both posttests, the learners who performed cognitively simple tasks during the treatment sessions had the highest means in the accuracy of their writing. The other independent variable (task condition) yielded a significant effect on the accuracy of the participants' writing in the two posttests. Simple collaborative tasks combined with written feedback provided more gains for language learners in terms of accuracy.

Similar to our findings, Révész et al. (2014) have reported higher oral production gains for English language learners performing simple tasks. Nevertheless, our findings are not consistent with the study of Révész (2009). She has found more gains for learners who received recasts in complex tasks. Baralt (2013) has found the same results in the FTF mode. However, her study has revealed that learners performing cognitively simple tasks enjoyed the benefits of receiving recasts in the CMC mode. Taking the similarities of the CMC mode and the written mode explored in this study, the findings seem similar in this case. Our findings were not similar to those of Kim and Emeliyanova (2019) who did not find a noticeable difference between the written products (in terms of accuracy) of the language learners who processed corrective feedback individually or collaboratively. Of course, in their study, all participants involved in the treatment sessions carried out the writing tasks individually, and just the correcting of errors was done in pairs.

It seems that the findings do not provide strong support for Skehan's (1998, 2009) trade-off hypothesis and Robinson's (2001, 2009) cognition hypothesis, although better performance (in terms of accuracy) of students placed in the simple groups partially backs up Skehan (1998, 2009). Emphasizing the limited attentional capacity of learners, he argues that learners performing complex tasks have to divide their attention to the writing task prompted by many elements and the points that they have learned through feedback. They prioritize meaning at the expense of form and they don't benefit considerably from the feedback. Ellis & Yuan (2005), taking Kellogg's (1996) model of writing (formulation, execution, monitoring) in view, argue that when learners experience simple task implementation condition, there is a little pressure on formulation processes, as learners are required to retrieve a few ideas from their long-term memory and combine them to provide a proposition. They also engage in the translation processes with relative ease where they choose relevant vocabularies and grammar to encode their ideas. Consequently, learners will have more attentional resources available in the other two stages to reflect on the provided corrective feedback, revise their product, and have an accurate linguistic output.

These findings also corroborate the social constructivist (Vygotsky, 1978) view of language learning and Swain's output hypothesis (1985), which underscore the role of collaboration and social interaction in language learning. Learners who performed the writing tasks collaboratively had the opportunity to deliberate on teacher's feedback together and also get immediate feedback from their peers. These negotiations and interactions between pairs in collaborative writing helped them engage more deeply with the feedback and enjoy the benefits (Wigglesworth & Storch, 2012). As Mujtaba et al. (2021) state, learners who perform the treatment tasks individually and receive unfocused WCF (as with the current study) may encounter problems in effective processing and internalizing the WCF and consequently have little gains from this feedback. The cognitive complexity of the writing tasks might exert more pressure on the attentional capacity of these learners and makes them prioritize targets during conducting cognitively demanding tasks.

The second research question addressed the impact of task complexity and task condition combined with corrective feedback on the syntactic complexity of the written performance of the language learners. The statistical analyses showed a significant effect of task complexity and task condition on the structural complexity of EFL learners' writing. Students who performed complex writing tasks during the treatment sessions and received feedback on their writing did better in the following posttests in terms of their writing complexity. Moreover, participants put in the collaborative groups produced texts with more structural complexity in the posttests, compared to those who performed the treatment tasks with the same level of complexity (simple/complex) in isolation.

Cognitively demanding tasks can encourage learners to use more complex structures in their written performances. A task that requires considering many elements is expected to invite more syntactically complex structure and more varied and specific lexis because learners have to distinguish and compare all the different elements (Michel, 2011). The beneficial effect of task complexity on the structural complexity of the learners' output can also be explained by the arguments put forward by Givón (1985) and Robison (2001). They argue that demanding tasks and contexts encourage higher levels of awareness and elicit a production characterized by greater use of morphology and syntactic subordination. Of course, this small amount of increase in the structural complexity of the texts produced by the learners performing complex tasks and even decrease in the output of the learners performing simple tasks can be due to avoidance strategy exploited by the participants. In other words, language learners who received written feedback tried to yield short and simple sentences in the following tests, thereby receive less feedback on their accuracy.

These findings again support the social constructivist (Vygotsky, 1978) view of language learning, Swain's output hypothesis (1985), and limited attentional capacity of learners advocated by Skehan (1998) and Schmidt (2001). From the cognitive perspective, it can be said that easing the load of attention of learners in collaborative tasks and having two minds in different stages of writing postulated in Kellogg's (1996) model, particularly in the formulation and monitoring stages, leave more attentional resources available for learners to produce more complex sentences and get the benefits of given feedback. The learners who performed the treatment tasks individually had to rely on their own attentional resources and could not get a big advantage form these treatment sessions to improve the structural complexity of their written outputs. It can be argued that each of these variables (task complexity, task condition and WCF) has their own effect on writing performance. Asking learners to write cognitively demanding texts individually along with processing unfocused WCF pushes them to use lots of attentional resources to complete the assigned tasks. Consequently, these learners might lack attentional capacity to notice and process linguistics forms. Schmidt (2001), admitting the limitations of the working memory and human beings' attentional capacity, argues that giving attention to one area leaves less free attentional resources to be exploited in other areas. Collaboration between students in small groups can compensate for these limitations.

CONCLUSION

This study has highlighted the impact of task complexity and task condition on the efficacy of written feedback in affecting the written performance of EFL learners. Theoretically, it lends support to Vygotsky's (1978) social constructivism and Kellogg's (1996) model of writing. Specifically, the results indicate that the synergy between simple tasks and collaborative condition helps language learners make more gain from written feedback and thereby improve the accuracy dimension of their writing. Less pressuring contexts created by simple tasks are optimized by the advantages of using partner's attentional capacity in different stages of writing (formulation, execution, monitoring). This combination provides a suitable context for language learners to make use of the opportunities of focus on form and advance their L2. A similar synergic relationship between complex tasks and collaborative conditions sets the scene for the improvement of language learners in the structural complexity of their writing.

Given the paucity of research on the interaction of task complexity and corrective feedback in the written mode, the findings of the study might have important implications for educational theoreticians and practitioners involved. Writing educators, curriculum developers, and syllabus designers can benefit from these findings. Carefully controlling task complexity and task condition in writing classes may lead to the balanced development of different aspects of writing. For instance, engaging learners in simple collabo-

rative tasks and giving feedback to them is an ideal mix to foster the accuracy of their written product.

It is plausible that a number of limitations have influenced the results obtained. To begin with, only one general measure is used to operationalize the constructs of accuracy and syntactic complexity. Skehan (2014) prefers these general measures, especially for detecting the influence of variables on language learning and development. The second limitation relates to our collaborative groups. The participants in the pair groups chose their partners freely. While performing the treatment tasks, in spite of our instructions and efforts, we noticed that some participants in the pairs were active and dominant. Nevertheless, few learners were standing on the sidelines and didn't involve themselves in collaboration as we expected. Controlling other factors such as "willingness to communicate" might compensate for this drawback. Rather small sample size is the other limitation of this study, which makes it difficult to generalize the findings to the target population.

We are currently in the process of investigating the role of individual differences in the written performance of language learners engaged in performing simple/complex tasks in different conditions (individual/collaborative) while receiving feedback. Further studies might concentrate on other types of writing or use different criteria to make changes in the complexity of the tasks. The moderating role of other individual differences (e.g., willingness to communicate) of learners as well as learning styles and strategies alongside task complexity, task condition, and feedback in writing can be fruitful and promising areas for future studies.

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DECLARATION OF COMPETING INTEREST

None declared.

AUTHOR CONTRIBUTION STATEMENT

E. Ghaderi: Conceptualization, Investigation, Formal Analysis, Data Curation, Writing-Original Draft.

A. Rouhi: Conceptualization, Project Administration, Validation.

A. R. N. Tabrizi: Methodology, Resources.

M. Jafarigohar: Supervision, Writing-Reviewing and Editing.

F. Hemmati: Writing-Reviewing and Editing.

REFERENCES

Baralt, M. (2013). The impact of cognitive complexity on feedback efficacy during online versus face-to-face interactive tasks. *Studies in Second Language Acquisition, 35,* 689–725. https://doi.org/10.1017/S0272263113000429

Baralt, M., Gilabert, R., & Robinson, P. (2014). An introduction to theory and research in task sequencing and instructed second language learning. In M. Baralt, R. Gilabert, & P. Robinson (Eds.), *Task sequencing and instructed second language learning* (pp. 1–34). Bloomsbury. http://dx.doi.org/10.5040/9781472593665.ch-001

Bitchener, J. (2008). Evidence in support of written corrective feedback. *Journal of Second Language Writing*, *17*, 102–118. https://doi.org/10.1016/j.jslw.2007.11.004

Byrnes, H., & Manchón, R. M. (2014). Task-based language learning: Insights from and for L2 writing: An introduction. In H. Byrnes & R. M. Manchón (Eds.), *Task-based language learning: Insights from and for L2 writing* (pp. 1–23). John Benjamins.

Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

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

Ellis, R. (2005). Planning and task-based performance: Theory and research. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 1–34). John Benjamins. https://doi.org/10.1075/lllt.11.03ell

Ellis, R., & Yuan, F. (2005). The effects of careful within-task planning on oral and written performance. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 167–192). John Benjamins. https://doi.org/10.1075/lllt.11.11ell

Fernández Dobao, A. (2012). Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing*, *21*(1), 40–58. https://doi.org/10.1016/j.jslw.2011.12.002

Givón, T. (1985). Function, structure, and language acquisition. In D. Slobin (Ed.), *The cross-linguistic study of language acquisition* (pp. 1008–1025). Lawrence Erlbaum.

Halford, G. S., Cowan, N., & Andrews, G. (2007). Separating cognitive capacity from knowledge: A new hypothesis. *Trends in Cognitive Sciences*, *11*, 236–242. https://doi.org/ 10.1016/j.tics.2007.04.001

Ishikawa, T. (2007). The effect of manipulating task complexity along the [+/–Here-and-Now] dimension on L2 written narrative discourse. In M. P. Garcia Mayo (Ed.), *Investigating tasks in formal language learning* (pp. 157–176). Multilingual Matters. https://doi.org/10.21832/9781853599286-010

Johnson, M. D. (2017). Cognitive task complexity and L2 written syntactic complexity, accuracy, lexical complexity, and fluency: A research synthesis and meta-analysis. *Journal of Second Language Writing*, *37*, 13–38. https://doi.org/10.1016/j.jslw.2017.06.001

Kang, S., & Lee, J. (2019). Are two heads always better than one? The effects of collaborative planning on L2 writing in relation to task complexity. *Journal of Second Language Writing*, *45*, 61–72. https://doi.org/10.1016/j.jslw.2019.08.001.

Kassim, A., & Luan, N. (2014). The roles of collaborative dialogue in enhancing written corrective feedback efficacy. *Malaysian Journal of ELT Research*, *10*, 16–30. https://doi.org/10.1177%2F1362168819831406

Kellogg, R. T. (1996). A model of working memory in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences and applications* (pp. 57–71). Lawrence Erlbaum.

Kim, Y., & Emeliyanova, L. (2019). The effects of written corrective feedback on the accuracy of L2 writing: Comparing collaborative and individual revision behavior. *Language Teaching Research*. 1–22. https://doi.org/10.1177/1362168819831406.

Kuiken, F., & Vedder, R. (2008). Cognitive task complexity and written output in Italian and French as a foreign language. *Journal of Second Language Writing, 17*(1), 48–60. https://doi.org/10.1016/j.jslw.2007.08.003

Kuiken, F., & Vedder, I. (2011). Task complexity and linguistic performance in L2 writing and speaking: The effect of mode. In P. Robinson (Ed.), *Second language task complexity: Researching the cognition hypothesis of language learning and performance* (pp. 91–104). John Benjamins. https://doi.org/10.1075/tblt.2.09ch4

Larsen-Freeman, D., & Long, M. (1992). *An introduction to second language acquisition research*. Longman.

Liu, Q., & Brown, D. (2015). Methodological synthesis of research on the effectiveness of corrective feedback in L2 writing. *Journal of Second Language Writing, 30*, 66–81. https://doi.org/10.1016/j.jslw.2015.08.011

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

Long, M. H. (2000). Focus on form in task-based language teaching. In R. Lambert & E. Shohamy (Eds.), *Language policy and pedagogy: Essays in honor of A. Ronald Walton* (pp. 179–192). Benjamins. https://doi.org/10.1075/z.96.11lon

Manchón, R.M. (2014). The internal dimension of tasks: The interaction between task factors and learner factors in bringing about learning through writing. In H. Byrnes & R. M. Manchón (Eds.), *Task-based language learning: Insights from and for L2 writing* (pp. 27–53). Amsterdam: John Benjamins. https://doi.org/10.1075/tblt.7.02man

Michel, M. (2011). Effects of task complexity and interaction on L2 performance. In P. Robinson (Ed.), *Second language task complexity: Researching the cognition hypothesis of language learning and performance* (pp. 141–174). John Benjamins.

Mujtaba, S. M., Reynolds, B. L., Parkash, R., & Singh, M. K. M. (2021). Individual and collaborative processing of written corrective feedback affects second language writing accuracy and revision. *Assessing Writing*, *50*, 100566. https://doi.org/10.1016/j.asw.2021.100566

Prabhu, N. S. (1987). *Second language pedagogy*. Oxford University Press.

Rahimi, M., & Zhang, L. J. (2018). Writing task complexity, students' motivational beliefs, anxiety and their writing production in English as a second language. *Reading and Writing, 32*(3), 761–786. https://doi.org/10.1007/s11145-018-9887-9

Révész, A. (2009). Task complexity, focus on form, and second language development. *Studies in Second Language Acquisition*, *31*, 437–470. https://doi.org/10.1017/S0272263109090366

Révész , A., & Han, Z. (2006). Task content familiarity, task type, and efficacy of recasts. *Language Awareness*, *3*, 160 –179. https://doi.org/10.2167/la401.0

Révész, A., Sachs, R., & Hama, M. (2014). The effects of task complexity and input frequency on the acquisition of the past counterfactual construction through recasts. *Language Learning*, *64*(3), 615–650. https://doi.org/10.1111/lang.12061

Robinson, P. (2001). Task complexity, cognitive resources, and syllabus design: A triadic framework for examining task influences on SLA. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 285–316). Cambridge University Press. https://doi.org/10.1075/tblt.1.12tas

Robinson, P. (2003). The cognition hypothesis, task design, and adult task-based language learning. *Second Language Studies*, *21*(2), 45–105.

Robinson, P. (2007). Criteria for classifying and sequencing pedagogic tasks. In M. P. Garcia-Mayo (Ed.), *Investigating tasks in formal language settings* (pp. 7–26). Multilingual Matters. https://doi.org/10.21832/9781853599286-004

Robinson, P. (2009). Syllabus design. In M. H. Long & C. J. Doughty (Eds.), *Handbook of second and foreign language teaching* (pp. 294 –310). Blackwell.

Robinson, P. (2011). Task-based language learning: A review of issues. *Language Learning*, *61*(S1), 1–36. https://doi.org/10.1111/j.1467-9922.2011.00641.x

Robinson, P., & Gilabert, R. (2007). Task complexity, the cognition hypothesis, and second language learning and performance. *International Review of Applied Linguistics*, *45*(3), 161–176. https://doi.org/10.1515/iral.2007.007

Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3–32). Cambridge University Press. https://doi.org/10.1017/CBO9781139524780.003

Shehadeh, A. (2011). Effects and student perceptions of collaborative writing in L2. *Journal of Second Language Writing*, *20*, 286–305. https://doi.org/10.1016/j.jslw.2011.05.010

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford University Press.

Skehan, P. (2009). Modeling second language performance: Integrating complexity, accuracy, fluency and lexis. *Applied Linguistics*, *30*(4), 510–532. https://doi.org/10.1093/applin/amp047

Skehan, P. (2014). The context for researching a processing perspective on task performance. In P. Skehan (Ed.), *Processing perspectives on task performance* (pp. 1–26). John Benjamins. https://doi.org/10.1075/tblt.5.01ske

Skehan, P., & Foster, P. (1999). The influence of task structure and processing conditions on narrative retellings. *Language Learning*, *49*(1), 93–120. https://doi.org/10.1111/1467-9922.00071

Storch, N. (2005). Collaborative writing: Product, process, and students' reflections. *Journal of Second Language Writing*, *14*, 153–173. https://doi.org/10.1016/j.jslw.2005.05.002

Storch, N. (2013). *Collaborative writing in L2 classrooms: New perspectives on language and education*. Multilingual Matters.

Storch, N., & Wigglesworth, G. (2010). Learners' processing, uptake, and retention of corrective feedback on writing. *Studies in Second Language Acquisition*, *32*, 303–334. https://doi.org/10.1017/S0272263109990532

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensive output in its development. In S. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp. 235–253). Newbury House.

Tavakoli, M., & Rezazadeh, M. (2014). Individual and collaborative planning conditions**:** Effects on fluency, complexity and accuracy in L2 argumentative writing. *Journal of Teaching Language Skills*, *5*(4), 85–110. https://doi.org/10.22099/jtls.2014.1857

Vahdat, S., & Daneshkhah, N. (2019). Comparison of the effects of written corrective feedback and task-complexity manipulation on the grammatical accuracy of EFL learners' writing. *Journal of Teaching Language Skills*, *37*(4), 167–194. https://doi.org/10.22099/jtls.2019.33549.2688

VanPatten, B. (1990). Attending to form and content in the input: An experiment in consciousness. *Studies in Second Language Acquisition, 12*(3), 287–301. https://doi.org/10.1017/S0272263100009177

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

Weigle, S. C. (2002). *Assessing writing.* Cambridge University Press.

Widdowson, H. (1978). *Teaching language as communication*. Oxford University Press.

Wigglesworth, G., & Storch, N. (2009). Pair versus individual writing: Effects on fluency, complexity, and accuracy. *Language Testing*, *26*, 445–466. https://doi.org/10.1177%2F0265532209104670

Wigglesworth, G., & Storch, N. (2012). What role for collaboration in writing and writing feedback. *Journal of Second Language Writing*, *21*, 364–374. https://doi.org/10.1016/j.jslw.2012.09.005

Wolfe-Quintero, K., Inagaki, S., & Kim, H. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity***.** University of Hawaii Press.

Zhan, J., Sun, Q., & Zhang, L. J. (2021). Effects of manipulating writing task complexity on learners' performance in completing vocabulary and syntactic tasks. *Language Teaching Research*, 1–22. https://doi.org/10.1177/13621688211024360

APPENDIX A

A Simple Version of the Writing Task

Jack wants to buy an automobile. He wants to buy an automobile which has a **high** engine capacity, **low** fuel consumption, and a **reasonable** price. Look at the information about some automobiles in the following table. No automobile meets all Jack's criteria; however, a reasonable choice has to be made. Which automobile, do you think, is the most suitable one for Jack, considering all of his criteria? **Why**? Write a paragraph using at least 150 words and discuss your answer. Try to convince the reader that your choice is right and support it with arguments.

Automobile	engine capacity (CC)	fuel consumption (liter)	Price ($)
A	1800	8.5	21400
B	2400	8.5	25350
C	2200	8	24520
D	2000	10	22400
E	1600	7	27420

APPENDIX B

A Complex Version of the Writing Task

Jack wants to buy an automobile. He wants to buy an automobile which has a **small** size, a **high** engine capacity, a **fairly heavy** weight, **low** fuel consumption, **high** safety, a **reasonable** price, and **high** speed. Look at the information about some automobiles in the following table. No automobile meets all Jack's criteria; however, a reasonable choice has to be made. Which automobile, do you think, is the most suitable one for Jack, considering all of his criteria? **Why**? Write a paragraph using at least 150 words and discuss your answer. Try to convince the reader that your choice is right and support it with arguments.

automobile	size(mm)	engine capacity (CC)	weight (kg)	fuel consumption (liter)	number of airbags	Price ($)	top speed (km/h)
A	4157×1781×1449	1800	1350	8.5	6	21400	185
B	4045×1675×1597	2000	1450	10	6	25350	195
C	3935×1700×1457	2200	1437	8	4	24520	200
D	4165×1676×1456	2400	1389	7	4	22400	190
E	4007×1776×1519	1600	1502	8.5	4	27420	210
F	4155×1674×1423	2000	1423	7.5	2	26380	220
G	3990×1690×1490	2200	1522	9	2	29450	200
H	4155×1700×1450	1800	1490	6	4	28340	205