Improving the Quality of Second Language Writing by First Language Use

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Abstract—The role of the learners' first language (L1) in learning second language (L2) writing has recently become a focus in SLA research. There have been many studies focusing on different aspects of this phenomenon. The results of these studies have shown how L1 use may play facilitative roles in producing writing in the second language. Many variables, such as task type and language proficiency, have also been studied in this regard. Yet, there seems to be a paucity of research on whether L1 use can significantly improve the quality of written productions in L2. The present study was therefore designed to peruse this question and find what aspects of writing may improve with L1 use. To this end, the written productions of 36 Persian-speaking intermediate English learners writing an argumentative paragraph were analyzed. 6 of the 12 groups were asked to collaborate in their first language and the others were limited to using the second language in their collaborations. The results of statistical comparisons between the first language and second language groups revealed that L1 use can significantly improve the overall score gained by the L2 writers. It was also found that L1 use improves the quality of L2 written productions in terms of organization/unity, development, structure, and mechanics.

Index Terms—second language acquisition, collaborative writing, first language use

I. INTRODUCTION

Rigorous research on the nature of second language writing dates back to early 1980s. Early attempts in this regard dealt more with investigating the processes through which writers managed to do writing tasks (Raimes, 1985; Cumming, 1989). Through these attempts, researchers have become more interested in finding patterns of similarity between the processes involved in L2 writing and their counterparts in the first language (L1) writing. However, research in this regard has generally tended to overemphasize the similarities between writing in L1 and L2, overlooking the "salient and important differences" (Silva, 1993) between the two processes.

Despite all the possible similarities between writing in L1 and L2, the two processes can be quite different from each other by nature. This is so, not the least because of the fact that L2 writers have at least two distinct languages at their disposal which enables them to make use of both their L1 and L2 resources to deal with the cognitively demanding task of writing in a second language. Such differences have not received due attention from second language acquisition (SLA) researchers, "resulting in little understanding of the unique features of L2 writing and a lack of coherent, comprehensive L2 writing theory" (Wang and Wen, 2002, p. 226). This, of course, may not be surprising taking into account that language teaching methodologies have hardly ever been lenient enough with the use of L1 in L2 classes.

Despite the fact that language teaching methods such as the Direct Method and the Audio-lingual (Larsen-Freeman, 2000) did not tolerate L1 use in L2 teaching, L1 use is no more considered to be inherently detrimental in second language pedagogy. That is, recent research within a socio-cultural framework has come up with numerous facilitative roles for L1 use. The majority of these studies (Brooks and Donato, 1994; Villamil and de Guerrero, 1996; Anton and DiCamilla, 1999; Swain and Lapkin, 2000) have tried to identify functions of L1 use by L2 learners engaged in different collaborative tasks. Writing has also been the focus of some of these studies, and researchers have tried to understand what goes on in an L2 writing task, and how L2 writers make strategic uses of their L1s to approach an L2 writing task.

Great supports have been provided for the studies focusing on the functions of L1 in L2 writing tasks by the socio-cultural theory of learning (Villamil and de Guerrero, 1996), which has been a tenable theoretical framework for them. The theory, as proposed by Vygotsky (1978), justifies L1use by providing "a powerful explanatory framework for

conceptualizing what is involved in language learning" (Wells, 1999, p. 249). Learning, in this theory, is believed to be mediated by cultural artifacts, one of the most significant of which is language. The theory also upholds a dialectical relation between the learner and the social world. The result of such a dialectical relation then seriously questions the view that learners are simply passive recipients of language input and teachers are nothing but providers of input. Rather, the learners, the teacher, and the socio-cultural context in which the discourse takes place cooperatively constitute what is being learned (Tsui, 2008). Therefore, as active agents in the process of learning, L2 learners and their huge background L1 knowledge are expected to play crucial roles in the learning process. L1, in this regard, has been reported to have numerous facilitative and mediating roles.

Such appreciation of L1 as a tool for mediation has motivated scholars to demonstrate the potential benefits of using L1 in L2 teaching and learning, the majority of which have focused on learners' use of the first language in collaborative tasks (Brooks and Donato, 1994; Villamil and de Guerrero, 1996; Anton and DiCamilla, 1999; Swain and Lapkin, 2000; Storch and Wigglesworth, 2003; Scott and De la Fuente, 2008; Centeno-Cortes and Jimenez, 2004; Storch and Aldosari, 2010). However, since most of these studies have been concerned with functions of L1 use, there seems to be a need to further investigate whether L1 use in L2 writing leads to the production of texts with higher quality. The present study was hence designed to address this latter issue by investigating how L1 use affects the quality of L2 learners' written productions.

Review of the Literature

Many of the studies dealing with the issue of L1 use in L2 writing seem to agree that L2 learners make use of their L1 in one way or another (Kobayashi and Rinnert, 1992; Cohen and Brooks-Carson, 2001). Studies in this regard have had many different designs and, as van Weijen et al. (2009) put, have been "carried out for a number of different reasons and with varying research goals" (p. 236). In the following, a brief review of some of these studies will be provided.

Some studies in this regard set out to compare L1 and L2 writing processes and tried to find how L1 writing strategies are transferred into L2 writing (Uzawa and Cumming, 1989; Whalen and Menard, 1995; Wolfersberger, 2003). L1 use, for these studies, meant the strategy of translating from the first language into the second during writing. A similar view was also shared by other studies focusing on the influence of learners' characteristics namely writing expertise and L2 proficiency in L2 writing (Cumming, 1989; Sasaki, 2004).

A second trend of research into L2 writing comprised several studies considering L1 use as an independent variable by instructing participants to plan either in their L1 or their L2 before writing their L2 texts (Akyel, 1994; Lally, 2000) or by instructing participants to write a text in their L1 and then translate it into their L2 (Cohen & Brooks-Carson, 2001; Kobayashi & Rinnert, 1992). However, the results yielded by these studies have been complicated to a high degree due to the fact that participants in the direct writing condition reported using their L1 very often while writing in their L2, even though they were not supposed to (Cohen and Brooks-Carson, 2001; Kobayashi and Rinnert, 1992).

The third category includes studies investigating the effect of L2 proficiency on L1 use (e.g., Wang, 2003; Wang & Wen, 2002; Woodall, 2002). The main drawback of these studies was a lack of clear operational definition for L1 use. In other words, the results of these studies have been mixed largely because they did not have a unique definition for what L1 use is. Lay (1982), as a case in point, found more L1 use on certain topics than on others and reported that more L1 use improved the quality of the final draft of the written text. Yet, it remained unclear what ''more L1 use'' actually meant. In a similar attempt, Woodall (2002) investigated the relation between L2 proficiency, task difficulty, and L1 use. According to his ANOVA results, he concluded that "less proficient L2 learners switched to their L1s more frequently than more advanced learners, and that more difficult tasks increased the duration of L1 use in L2 writing" (p. 7). Nevertheless, Wang (2003), dealing with the same issue, came up with different results, and concluded that frequency of L1 use varied only slightly among different proficiency level learners.

Of course, there have been more precise studies too, making attempts to calculate the extent to which L1 was used during writing in L2, by reporting the overall percentage of L1 words in L2 think-aloud protocols (Wang and Wen, 2002), the mean number of language switches per task (Woodall, 2002; Wang, 2003), and the time length that L1 use occurred during L2 writing (Woodall, 2002).

Finally, the fourth group of studies, to which the present study is more directly linked, has focused specifically on the role that L1 use plays during L2 writing. In a seminal study, focusing on the use of L1 in the collaborative interaction of adult learners of Spanish engaged in writing three informative paragraphs, Anton and DiCamilla (1999) found that L1 serves a critical function in helping students achieve mutual understanding of various aspects of the task, that is to maintain intersubjectivity (mutual understanding of the task in hand), which in turn lets them provide each other with scaffolded help, and externalize their inner speech.

Brooks and Donato (1994), investigating the dialogue of eight learners of Spanish, observed that the L1 was used for three functions. The first function was meta-talk which was illustrated by learners using their L1 to comment on their L2 use. The authors argue that this enabled the participants to take control of the task discourse and thus initiate and sustain verbal interaction. The other two functions served by the L1 were to establish a joint understanding of the task and to formulate the learners' goals.

In another study, focusing on the stories written in L2 by student pairs as the outcome of dictogloss or jigsaw tasks, Swain and Lapkin (2000) reported that the students used their L1 for three principal purposes: (1) moving the task along,

(2) focusing attention, and (3) interpersonal interaction. Within a socio-cultural framework, Storch and Wigglesworth's (2003) study of English learners, engaged in joint composition and reconstruction tasks, also revealed that students used their shared L1s for task management, testing clarification, determining meaning and vocabulary, and explaining grammar.

Having analyzed the discourse of Spanish-speaking university English learners engaged, this time, in peer revision of their L2 writing, Villamil and De Guerrereo (1996) also came up with some functions of L1 use by learners doing writing tasks. Based on the data collected from the discourse of learners engaged in peer revision of their L2 writing, they concluded that L1 was an essential tool for making meaning of texts, retrieving language from memory, explaining and expanding content, guiding their action through the task, and maintaining dialogue. In a more recent attempt, Kibler (2010), also focused on the oral interaction of adult learners during an extended writing activity, and came up with the conclusion that "L1 offers strategic opportunities for interaction and blurs the boundaries between expert and novice writers" (p. 121).

As the literature reviewed above suggests, research results on the functions of L1 use in L2 writing have been varied to a high extent, but L1 functions such as planning, generating ideas or content and solving linguistic problems are among the most reported ones (Beare, 2000; Centeno-Cortes and Jimenez, 2004). The process of collaborative writing in L2 has also been recently studied by Ahmadian, Pouromid and Nickkhah (2015). They found that giving L1 a role and banning it in collaborative writing yield different results in terms of task processing. The results of comparisons between the groups which used L1 and those who did not indicated that while the former groups focused on task management, task clarification and grammar, the latter groups were more concerned with vocabulary and content.

In summary, the literature indicates that a good number of studies have dealt with functions of L1 use in collaborative tasks, and more specifically in collaborative writing. However, there seems to be room for further research in areas less investigated thus far. One such area is to investigate the quality of the learners' final written outputs to see what specific aspects of writing improve as a result of letting L1 a role in collaborative writing. The present research was thus designed to address this gap and answer the following questions:

1. Does L1 use in L2 writing improve the overall writing ability?
2. What aspects of L2 writing improve with L1 use?

Based on these two research questions, the following null hypotheses were generated:

1. L1 use in L2 writing does not improve overall writing ability.
2. None of the aspects of L2 writing improves with L1 use.

II. THE STUDY

A. Participants

The present study was conducted in a private language school in Iran. 36 intermediate learners of English learning English as a foreign language took part in the study whose ages ranged from 16 to 23 years old. They were selected to take part in the study based on the results of institute placement tests which proved them to possess intermediate language proficiency. After the preliminary screening to cater for language proficiency variable, the participants were divided into 12 same-sex groups of three. In fact, the data was finally collected from 8 male and 4 female groups.

B. Data Collection

The data collected for the purpose of this study comprised the final written outputs of the 12 groups which was produced as a result of collaborative interaction among each group members. Six of the groups (4 male and 2 female) were randomly asked to use only English (L2 groups) in their collaborations as well as while performing the writing task, while the other half (4 male and 2 female) were required to use their mother tongue, Farsi (L1 groups). Each group was given a written prompt to start the collaboration with, and then prepare an argumentative paragraph in response to it. The prompt was "What are the effects of modern technology on our lives?" which was the same for all groups. The writing task was not constrained by time limits. The final written drafts were gathered for further analyses, at the end of the session, and the whole data collection process was observed by the researchers who did not interfere with the writing process.

The 12 written productions were then rated by a detailed writing rating scale to see what aspects of writing might have improved as a result of using L1 in the L2 writing process. Paulus's (1999) rating scale was used because of its detailed analysis of many writing aspects. It in fact deals with rating the different aspects of organization/unity, development, cohesion/coherence, structure, vocabulary and mechanics. Besides these 6 aspects, a 7th one, named "overall," was also calculated to wrap all the scores given to the 6 aspects up. The rating process was done by two independent raters to ensure inter-rater reliability.

C. Data Analysis

The first step to analyze the collected data was to make sure of the inter-rater reliability of the two raters. In order to do so, Pearson's correlation test was run by the SPSS (version 22.0) software. After that the results of the ratings for the written productions of the L1 groups were compared with those of the ratings for L2 groups. These analyses were also done by the SPSS software both descriptively and also inferentially to prove whether or not the observed differences

between the two groups were statistically significant. Independent samples t-test was used to ensure the statistical significance of the findings.

III. RESULTS

Some differences were found between the task-completion times of the two groups with a basic descriptive analysis of the data collected. The following two tables describe how the two groups differed from each other in terms of the time they spent on completing the whole writing task.

TABLE 1.
TASK COMPLETION TIME FOR L1 GROUPS

	Task completion time
L1F1*	22':59"
L1F2	17':05"
L1M1**	20':02"
L1M2	22':59"
L1M3	28':07"
L1M4	5':20"
Total	*116':02"*

*L1F1-2: L1 Female groups
**L1M1-4: L1 Male groups

As is shown in Table 1, most of the L1 groups took from 17 to 28 minutes to complete the writing task. L1M4, however, seemed to have completed the task in less than six minutes. The overall time spent by the six L1 groups was also calculated to be 116 minutes and 2 seconds. Table 2 summarizes the counterparts of these findings for L2 groups.

TABLE 2.
TASK COMPLETION TIME FOR L2 GROUPS

	Task completion time
L2F1*	22':03"
L2F2	13':21"
L2M1**	19':58"
L2M2	33':27"
L2M3	14':23"
L2M4	21':35"
Total	*125':26"*

*L2F1-2: L1 Female groups
**L2M1-4: L1 Male groups

According to Table 2, L2 groups took between 13 to 33 minutes to complete the task. The overall figure calculated for task completion in L2 groups was also calculated to be 125 minutes and 26 seconds. A comparison of the figures in Table 1 and Table 2 also indicates that L2 groups took relatively more time to complete their writing tasks compared with L1 groups.

As explained earlier, before processing the results of the data collected from L1 and L2 groups, it was necessary to ensure the inter rater reliability of the ratings of the two raters. Therefore, Pearson's correlation test was run for the scores given to the writing samples by the two writers. Table 3 summarizes the results.

TABLE 3.
PEARSON CORRELATION TEST OF INTER RATER RELIABILITY

		Rater 1	Rater 2
Rater 1	Pearson Correlation	1	.853**
	Sig. (2-tailed)		.000
	N	12	12
Rater 2	Pearson Correlation	.853**	1
	Sig. (2-tailed)	.000	
	N	12	12

**. Correlation is significant at the 0.01 level (2-tailed).

As the table shows, there was a significant correlation between the two raters in terms of scoring the 12 written production of L1 and L2 groups. The correlation is significant at the 0.01 level. Therefore, it can be concluded that there exists an acceptable level of inter rater reliability and the data could be further processed.

The scores given to the writing samples of L1 and L2 groups by the two raters were then computed by SPSS to come up with the average scores. Table 4 shows the computed scores of the raters for each aspect of the written production of the 6 L1 groups based on Paulus's (1999) rating scale.

TABLE 4.
COMPUTED SCORES FOR L1 GROUPS

	Organization/ Unity (20)	Development (20)	cohesion/ coherence (20)	Structure (15)	Vocab. (15)	Mechanics (10)	Overall (100)
L1G1	14.00	16.00	16.00	13.50	10.50	7.00	77.00
L1G2	16.00	14.00	16.00	9.00	7.50	7.00	69.50
L1B1	18.00	14.00	14.00	13.50	6.00	8.00	72.00
L1B2	14.00	16.00	14.00	12.00	7.50	7.00	70.50
L1B3	16.00	14.00	16.00	13.50	7.50	8.00	75.00
L1B4	8.00	8.00	8.00	4.50	3.00	4.00	35.50
TOTAL	*86/120*	*82/120*	*84/120*	*66/90*	*42/90*	*41/60*	*398/600*

As the table indicates, the computed scores for *organization/unity* ranged from 8 to 16 for the different groups resulting in a total sum of 86 out of 120. As for *development*, the scores were between 8 and 16 and the total value was 82 out of 120. Similarly, for *cohesion/coherence* the scores were between 8 and 16 too, but with a total value of 84 out of 120. For the next aspect, that is *structure,* the scores were between 9 and 13.5 resulting in a total score of 66 out of 90. As with *vocabulary,* the scores ranged from 3 to 10.5 with a total of 42 out of 90, and for *mechanics* the scores were between 4 and 8 with a total of 41 out of 60. All in all, the aggregate scores for all L1 groups (6x100) with regard to all the six aspects equaled 389 out of 600. Table 5 summarizes the counterpart results for L2 groups.

TABLE 5.
COMPUTED SCORES FOR L2 GROUPS

	Organization/ Unity (20)	Development (20)	cohesion/ coherence (20)	Structure (15)	Vocab. (15)	Mechanics (10)	Overall (100)
L2G1	10.00	8.00	6.00	3.00	4.50	5.00	36.50
L2G2	8.00	8.00	6.00	6.00	4.50	4.00	36.50
L2B1	8.00	10.00	8.00	9.00	6.00	4.00	45.00
L2B2	6.00	8.00	6.00	6.00	7.50	5.00	38.50
L2B3	6.00	8.00	4.00	6.00	7.50	4.00	35.50
L2B4	4.00	10.00	4.00	3.00	4.50	2.00	27.50
TOTAL	42/120	52/120	34/120	33/90	33.5/90	24/60	219.5/600

As is shown in Table 5, the scores gained by the 6 L2 groups on *organization/unity* were between 4 and 10 with a total of 42 out of 120. For *development,* the scores gained ranged from 8 to 10 and the total value was 52 out of 120. As with *cohesion/coherence,* the scores were between 4 and 8 and the total value was as low as 34 out of 120. For *structure,* the scores gained were between 3 and 9 while the total score was 33 out of 90. As far as *vocabulary* is concerned, different groups gained values of 4 and 7.5 and the total score equaled 33.5out of 90. In *mechanics,* the scores were between 2 and 5 and the total value was 24 out of 60. Finally, the overall score gained by the 6 L2 groups concerning all six aspects of writing was 219.5 out of 600.

A comparison of the figures in tables 4 and 5 indicates that the raters scored the writing outputs of L1 groups higher than L2 groups in all aspects of the rating scale. This means that, apparently, the L1 groups which were allowed to use their L1 in their collaboration and while writing outperformed the L2 groups which were not allowed to make use of their L1 knowledge at least explicitly and verbally. This, of course, is only based on the descriptive account of the scores gained by L1 and L2 groups. To draw any further conclusions about the results, inferential statistics was also required. Table 6 shows the results of independent samples t-test run to assess the statistical significance of the written productions of L1 and L2 groups.

TABLE 6.
INDEPENDENT SAMPLES T-TEST FOR THE SCORES GAINED BY L1 AND L2 GROUPS

	T	Df	Sig. (2-tailed) P=0.05	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Organization/unity	4.454	8.260	.002	7.33333	1.64655	3.55707	11.10959
Development	3.962	6.212	.007	5.00000	1.27366	1.90910	8.09090
Cohesion/coherence	5.926	7.236	.001	8.33333	1.40633	5.02978	11.63689
Structure	3.149	8.362	.013	5.50000	1.74642	1.50287	9.49713
Vocabulary	1.071	8.204	.315	1.25000	1.16726	-1.43011	3.93011
Mechanics	3.782	9.238	.004	2.83333	.74907	1.14545	4.52121
Overall	4.461	6.297	.004	30.00000	6.72537	12.73008	46.26992

As table 6 shows, the difference observed in the scores gained by L1 and L2 groups in Table 5, can be argued to be statistically significant in all aspects of writing except vocabulary at the level of *p=0.05*. In fact, according to the results the *p* value estimated by the t-test is .002 for *organization/unity,* .007 for *development*, .001 for *cohesion/coherence*, .013 for *structure,* .004 for *mechanics,* and .004 for *overall,* all of which are below the *p value* for significance. It was only *vocabulary* with a *p* equal to .315 that did not feature a significant difference between the performance of L1 and L2 groups.

IV. DISCUSSION

The majority of studies concerning the use of L1 in L2 writing, as reviewed in the literature, have been dealing with how L1 is used in L2 writing, and why learners switch to their L1s while writing in L2. Other studies have also investigated the role of language proficiency and also writing task type in the amount of L1 use by L2 writers. The present study, on the contrary, focused on the outcome of the writing process and was designed to investigate whether giving L1 a role in L2 writing process improves the quality of the written output. The results of the analyses have indicated that L1 use could significantly improve L2 writing in the aspects of *organization/unity, development, cohesion/coherence, structure* and *mechanics*. The difference caused by the use of L1, however, was not significant as far as *vocabulary* was concerned.

Though studies with a focus similar to the present research are not easy to find in the literature, the results of the present study could be argued to bear some resemblance to some previous research. Some researchers (Scott, 1996; Wang and Wen, 2002; Woodall, 2002; and Wang, 2003) have come to the conclusion that L1 is fundamentally beneficial to learners' L2 writing in generating ideas. As Scott (1996), for instance, says, generating ideas and organizing them in a coherent manner can be cognitively demanding and complex for L2 writers. Scott contends that the complexity becomes more severe if the topic given is culture orientated with L2 and is unfamiliar to the students, which, as a result, hampers their idea generation. Research findings also support Scott's views indicating that L2 writers switch to L1 to generate and organize ideas (Wen, 2002) especially when they face challenging tasks (Woodal, 2002). Therefore, Woodal strongly recommends the use of L1 to generate and organize ideas. The result of the present study also can be argued to support these studies, since the use of L1 seems to have significantly contributed to the production of quality texts in terms of organization, unity, and coherence.

Weijen et al (2009) also found that L1 has a facilitative role in L2 writing, especially in generating ideas, planning, and meta-comments (grammar and structure), solving linguistic problems such as vocabulary issues for backtracking, stylistic choices and as a means to prevent cognitive overload. Similar findings were also offered by Beare and Bourdages (2007) and Lally (2008). Although none of these studies directly corroborated the contribution of L1 use to text quality, on second thoughts, conclusions can be drawn about such an effect. In this regard, the findings of the present study are in line with them except for vocabulary. While these studies have shown that L1 is used in L2 writing to facilitate the use of vocabulary, the present study has indicated that L1 use does not lead to improvements in the use of vocabulary in L2 writing.

As far as the use of vocabulary is concerned, the results of the present research also contradict the findings offered by Murphy and de Larios (2010). In their study, it was suggested that letting learners use their mother tongue in different stages of writing process enables them to search for more L2 vocabularies and enhance their use of the words. They believed this is a strategic use of L1 which leads to improvements in vocabulary use. This was not the case with the results of the present study, however. In fact, although L1 use was found to cause significant improvements in many aspects of writing, there was no such improvement in vocabulary use.

Setting distinctions between different learner roles during L2 writing, Manchon, de Larios and Murphy (2009) put that L1 use occurs more efficiently when L2 writers are maintaining Controller roles rather than Writer roles. They believe that in contrast to the Writer role during which L2 writers focus more on the content of what they are saying, Controller role gives them the chance to attend to the formal aspects of the writing task. Making use of the L1, according to the authors, is more observable when the learners are maintaining this latter role. They also argue that L1 use during the controller role gives L2 writers an "extra cognitive capacity to be used for planning, revising and monitoring purposes" (p. 115). The findings of their research seems to have been corroborated by the results of this study too, since as a result of making use of the so called "extra cognitive capacity," L1 groups significantly outperformed L2 ones in *organization/unity and development,* which counterparts to Manchon, de Larios and Murphy's "planning" and also *structure* and *mechanics* which could be grouped within their "revising and monitoring purposes."

Focusing on the quality of L2 texts, Yigzaw (2012) also concluded that L1 use improves idea development and incorporating sufficient content in L2 writing. His findings are also only partly supported by the present research. Developing and organizing ideas are also found to be significantly better while using L1 in L2 writing, yet as far as content and the use of vocabulary is concerned; the findings of the two studies differ.

Ahmadian, Pouromid and Nickkhah (2015) also observed the collaborative interactions of L2 writers and compared L1 and L2 collaborations. They found that the use of L1 in collaborative writings significantly increases L2 writers' awareness of task management, task clarification and grammar, but does not affect attention to vocabulary selection and content. Their findings are in line with the results of the present study, since none of the two studies showed a significant attention to vocabulary as a result of L1 use in L2 writing.

V. CONCLUSION AND IMPLICATIONS

Earlier on, it was believed that the separation of the learners' L1 from L2 in language teaching classes would yield more beneficial results. Recently, however, research in SLA has made it possible to look at the issue from a more critical aspect. The result has been a shift of attitudes towards an appreciation of potential L1 roles in SLA. Support for L1 use comes largely from the socio-cultural theory of learning. Research within this framework has shown how L1 use

can facilitate L2 learning. L1, in this regard, is argued to be a tool for mediation, especially in group and pair-work activities. Therefore, collaborative writing has also been investigated to show what roles L1 can play in joint writing tasks. Studies in this regard have been by and large dealing with the similarities of L1 and L2 writing processes. Many studies, as reviewed in the literature, have investigated the role of language proficiency and task variance in the learners' use of their L1 while doing an L2 writing task. However, whether or not L1 use can lead to obtaining better scores in writing has not been dealt with yet.

The present study therefore set out to investigate this latter point by comparing the written output of learners who used L1 in L2 writing and those who did not. The results indicated that L1 use in L2 writing significantly improves overall writing score. It was also shown that the five writing aspects of *organization/unity, development, cohesion/coherence, structure* and *mechanics* improve as a result of L1 use. *Vocabulary*, on the other hand, did not feature any significant improvement.

These findings can be better understood in the light of research within the framework of Cognitive Load Theory (CLT) which is an instructional theory based on human cognitive architecture addressing the limitations of working memory (Mayer, 2005). According to Sweller (2005) CLT addresses deals with the limitations of working memory capacity and the construction of schema automation in long-term memory. Before the incoming data is transferred to long-term memory, it needs to pass through working memory. It is at this point that overloading working memory with cognitively demanding tasks and activities may impede this transfer process. The conclusion derived from this for language pedagogy is therefore the fact that the reduction of workload on working memory may well boost language performance.

Cognitive load is the overall mental activity of the working memory at a certain point of time (Cooper, 1998). Sweller (2007) identifies two kinds of cognitive load. First, intrinsic cognitive load is caused by the incoming stimulus, and hence cannot be manipulated by instructional interventions. Second is extraneous cognitive load which is a function of instructional intervention. This latter type of cognitive load, therefore, can be manipulated by making change in the instructional setting or task type. With this in mind and back to the findings of the present study, it can be concluded that the use of L1 in collaborative writing can alter the task in a way that the second type cognitive load is reduced. As a result, once allowed to make use of their L1, learners score higher on a writing task.

The findings can also guide for teacher trainers and textbook developers as well as teachers themselves. If the use of L1 can enhance the quality of learner interactions, the awareness of the teachers and all other stakeholders of language teaching need to be raised. According to the results of the statistical analyses, using L1 leads to more organized writing and heightens the attention to form and structure. Learners using L1 write more coherently and develop their paragraphs far better. All these reasons are enough for language teachers to reconsider their policies towards L1 use. Further research is of course necessary to delineate the subtleties involved in using L1 in L2 writing. The present study only investigated the use of L1 in argumentative paragraphs, yet it might go without saying that paragraph mode may be a potential variable affecting the results. Similarly, an investigation of the beneficial roles of L1 in each of the three phases of writing, that is, planning, drafting, and revising, can yield more enlightening results.

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