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L1 Use in L2 Composing Context: A Disruptive or Constructive Role?

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Abstract

L1 use is commonly viewed as predominantly debilitating to L2 learning. However, more recent bilingual researchers believe that L1 is not to be taken as a barrier, but as mental weaponry which can help control or regulate L2 learning processes (Cumming, 1989; Wang, 2003). To illuminate the authenticity of the recent conviction in bilingualism, the present study set out first to find out 1) if Iranian L2 learners involved in L2 composing task backtrack to rely on their L1; (2) how often they do so if any at all; (3) under what conditions they rely on their L1; (4) and finally what functions are likely to be served while doing so. To this end, the study used a think-aloud data collection procedure. The analysis of the results indicated that the subjects more often than not resorted to their L1 in order to function properly in the L2 composing task. The total number of L1 use was 1519 within 7535 words produced by the participants. As to the third question, the analysis showed that the subjects resorted to their L1 under the following conditions: (1) initiation; (2) mental investigation; (3) rectification; (4) organization; (5) coherence construction; and (6) meaning confirmation. Their dependence on L1 while writing in L2 was taken to serve the following functions: (1) cognitive; (2) generative; (3) linguistic; (4) metacognitive; and finally (5) communicative. Overall, the results indicate strong positive role L1 plays in the EFL learners'

functioning in L2 and highlight the necessity to develop a theory of L2 writing, incorporating the unique features of L2 writing.

Keywords: bilingualism; L1 use; L2 composing task; Functions of L1 use; Conditions for L1 use

1. Introduction

Investigations into the cognitive processes of writing both in L1 and L2 have shown the writers' to-and-fro moves to meet the composing requirements. This fact indicates the dynamic nature of the writing processes in which various elements come into interaction with one another in a cyclical manner to generate a text (Bereiter and Scardamalia, 1987). The recursiveness of sub-processes in L1 is believed to be the writer's inevitable attempts to discover the new ideas, plans, goals, etc., a phenomenon known as backtracking (Manchon et al, 2000; de Beaugrande, 1984; Scardamalia & Bereiter, 1986). Similarly, L2 writers utilize the same, but apparently two-tier backtracking process in the sense that L2 writer, in addition to the regular back and forth movements along a continuum of reorganizing, reconceptualizing, or reconfiguring his attempts in L2, has L1 repository at his disposal and quite often resorts to the available resources through either L1 or L2 while composing in L2. This is because the growing text in L2 can impose some demands on L2 writer as it competes with the writer's knowledge stored in the long-term memory. In fact, L2 writing is a complex skill involving the recruitment and coordination of both L1 and L2 linguistic subskills such as retrieval of structures, grammar rules, vocabulary, and use of cognitive resources which govern the linguistic operations, including planning, and replanning activities. The important point to make is that cognitive resources are assumed to be more of a higher order nature predominantly originating in L1 and functioning to put L2 requirements in the proper place (Heredia, 1997; Qi, 1998).

Studies on L1 and L2 interaction in the composing tasks in the field of bilingualism have uncovered three different possible

approaches available on the part of the L2 learners. The first one refers to the memory structure of bilingual lexicon (see Hummel, 1993, for a review). Qi (1998) asserts that the difference in views regarding the conditions of alternating between L1 and L2 use is related to the way bilingual's memory is structured. The argument is whether a bilingual has a common storage system of word meaning, that is, if there is one underlying representation common to each word and its translation equivalent or s/he has a distinct lexical representation which could be retrieved via each language.

However, a new perspective in the domain of bilingual memory research suggests that representation of word meanings in conceptual memory are shared between languages, while the representations of word forms in lexical memory are language specific (Chen & Leung, 1989). Thus, in lexical form memory, each member of a pair of translation equivalents is differently represented, while in conceptual memory the two are represented in a single shared representation.

The second important approach has shown an increased interest in the influence of L1 on the acquisition of L2 (Kaplan, 1966; Chelala, 1982; Gass & Selinker, 1983; Kellerman & Sharwood Smith, 1986). Much of the second trend has focused on the way L1 may delay or affect the quality of learning L2. For example, Chelala (1982) identified 10 unsuccessful strategies employed by two women, and concluded that using L1 to compose in the L2 was in the case of these 2 women somewhat more counterproductive than productive. Kaplan (1966) compared writing samples in English from speakers of Arabic, Romance, and Oriental languages and claimed that each group displays rhetorical characteristics expressing its native discourse "logic" not acceptable in the standard English writing, emphasizing that L2 writer is at the mercy of L1 resources. This L1 negative influence on L2 learning is called ‘negative language transfer’ which is closely related to behaviourist theories of L2 learning, being predominant in the 1950s and 1960s. According to behaviourist theories, the process of language learning is a process of habit formation, and the old habits formed when

learning L1 would get in the way of learning new habits in L2, thus leading to errors. These behaviourist views, however, have been challenged by other researchers.

The synthesis of the two above-mentioned approaches has led to a third trend and a plethora of research on the role of L1 in the cognitive processes underlying L2 composing. This new perspective has shifted attention from one of L1 debilitating effect on to that of L1 facilitating role in the learning of L2. Most evidence available in this category has demonstrated that L1 plays a positive role in almost all the subcategories of the field of L2 composing, including L1 knowledge transfer (Friedlander, 1987, 1990); planning skills (Jones & Tetroe, 1987); heuristic research in thinking for production (Cumming, 1989, 1990); revising (Hall, 1990); translation (Uzawa, 1996, 1997); problem-solving (Tamamaki, 1993); and the effects of L1 composing expertise on the quality of L2 texts (Cumming, 1989). The results of these studies have strongly indicated not only the effectiveness but also the necessity of L1 use in the thinking processes of L2 composing.

To assess the controversies around the subject of L1 use in L2 context, different researchers have considered the influence of different variables. For example, Jones & Tetroe (1987) found that *L2 proficiency* constrained the amount of writers' planning while composing in L2. In consonance with this research finding, more recent studies have suggested that L2 proficiency influences the amount of L1 use and the variability of L2 writing performance (Qi, 1998; Wang, 2003).

Task difficulty is another variable examined by some of the researchers of L1-L2 interaction. Some studies have suggested that L1 use can be affected by task difficulty (Jones and Tetroe, 1987). Woodall (2002) found that for the more difficult tasks, students tended to use their L1s for longer period of time. However, some other studies go contrary to the above-mentioned findings. For example, Manchon et al. (2000) studying three intermediate EFL writers discovered that one used more L1 in the argumentative

mode than in the narrative mode whereas two used more L1 in the narrative mode than in the argumentative mode.

The effect of *language family* as another variable on the amount and duration of L1 use in L2 composing processes was investigated by Woodall (2002). He concluded that the duration of L1 use appears to have been affected by a significant interaction of L2 proficiency and language family. The intermediate-level non-cognate learners tended to use their L1s more than four times longer than their advanced learner counterparts did. This was not true for cognate learners; in this group, the advanced students used their L1s nearly twice as did their intermediate-level counterparts.

With these results, it is difficult to assess the effect of L1 use involved in the L2 composing. Moreover, such studies in our domestic situation are few and far between. Therefore, the present study is an attempt to expand our current understanding of L1 use in L2 writing, focusing specifically on: (1) if Iranian L2 learners involved in L2 composing task resort to their L1; (2) how often they do so if any at all; (3) under what conditions they rely on their L1; (4) and finally what functions are likely to be served while doing so.

2. Method

2.1 Participants

Eighty EFL students, both male and female, aged 19 to 23 who were junior students of English literature and translation at Sheikh Bahaei University, Isfahan, Iran participated in this study. They had to sign up for an advanced writing course (i.e., Essay Writing), having passed the prerequisite courses including 'Grammar 1 & 2' and 'Paragraph Writing'. Thus, they were expected to know the basic rules of grammar, different structures in English, and the way an essay is organized.

The reason for selecting these students was that they had passed the introductory courses in learning English and had developed the necessary skills for the L2 writing and therefore they were ready to pass the 'advanced writing' course.

Though the subjects were all junior students, further attempt was made to establish their homogeneity. To this end, the researcher

announced that there would be a standard test (i.e., the OPT) which would determine their level of English proficiency. After the administration of the test, then the examinees' answer sheets were all marked. Fifty participants including 19 males and 31 females were ranked as intermediate level students using OPT criteria. Fifteen male and fifteen female students were then randomly included in the main part of the study. The reasons for not including the all 50 participants in the main part of the study were time limitation, difficult conditions imposed by think-aloud procedure in collecting data, and to benefit from randomization in order for the data to be more representative and valid.

2.2 Writing Task

To study the L1 use in the L2 writing, the participants were asked to think-aloud while composing an argumentative essay. The argumentative writing task was considered as the composing activity in this study, because it is cognitively demanding and entails thinking processes for knowledge production that involves problem-solving before producing the procedure or the result. That is, this mode of writing is more likely to involve the transformation of knowledge rather that a memory search that simply recalls the answer. This is implied in Bereiter and Scardamalia's (1987) "knowledge-telling" and "knowledge-transforming" model. In their view this mode demands high-level knowledge involving more abstract structural elements in thinking, such as goal setting, direction, and problem analysis.

To minimize the variability due to the topic knowledge, the writing task tapped into the participants' own personal background and into their opinion about a widely-discussed social issue. The topic for the argument was about the students' views on *University Entrance Exam in Iran*. The following prompt was written for this task:

'UNIVERSITY ENTRANCE EXAM IN IRAN: WHY IS IT SO IMPORTANT AND CHALLENGING?'

The participants were required to write an essay within 40 minutes. The time limit was set for all the participants in order for the data to be more comparable.

2.3 Procedure

This study drew on a think-aloud data collection procedure. To this end, the think-aloud data was preceded by a warm-up session so that the subjects would do the task as carefully as required.

2.3.1 Warm-up session

To ensure that each individual would feel comfortable thinking aloud, the researcher held a warm-up session for every participant individually prior to the actual data collection. The warm-up session helped the participants familiarize themselves with the data collection procedure. After describing the think-aloud procedure, the researcher introduced a tentative topic as a practice to the participant. The prompt was: 'Why do you learn English?' Making sure that the participant had got familiar with the procedure and had been ready to do the main task, the researcher moved to the next phase of the data collection

2.3.2 Think-aloud protocol

The thirty writing sessions were conducted over the course of one month. Each participant wrote individually in a classroom. They were provided with paper and pen, and the session was scheduled at their convenience. In order to gain insights into what goes on in the participants' mind while writing, they were asked to produce think-aloud protocols. In other words, they were asked to compose on a certain topic and to say aloud whatever, be it English or Persian, came into their thought as they wrote (Jones & Tetroe, 1987).

2.4 Data analysis

The observed protocols provided the data for the analysis. To decide on the L1 use, we carefully listened to the audio-recorded sessions of writing one by one and jotted down the L1 uses. One single case of L1 use was defined as starting with an utterance/s in L1 and ending with the next concluding utterance in the L2. In this way, the data were carefully analyzed for the L1 uses in the L2

context and then classified into possible categories of conditions on the basis of the common theme or pool of meaning running throughout the compositions. As a matter of fact, in this part we attempted to find out what the subjects were going to do in L2 by using L1.

After the first round of analysis, each audio-recorded protocol was reviewed one additional time to verify L1 uses and also to reconfirm the identified conditions for the L1 use. All the procedures were first independently followed by the two researchers and finally the unresolved points were settled to 100% agreement. In order to find the general tendency, the categories were hierarchically arranged in terms of their frequency (Zarei, 2002). And finally, the two researchers tried to explain the possible *functions* for the conditions of L1 use already identified. In other words, the last step was taken to account for the L1 use occurrences or *why the subjects resorted to their L1*.

3. Results and discussions

3.1 L1 use in L2 writing

Regarding the first and second questions, i.e., if and how often Iranian EFL learners relied on their L2 while being involved in L2 composing, the close analysis of the data revealed that Iranian subjects functioning in L2 composing context quite often backtracked to their L1. The total number of L1 use was 1519 within the 7535 words produced by the participants. As shown above, the use of L1 accounts for about 20.15% of the total words produced. This proportion seems rather small in comparison with other studies (e.g. Manchon et al., 2000, came up with 58.5% in argumentative and 52% in narrative; Guo and Liu, 1997, 55% in story telling elicited by showing pictures). Though the difference can be attributed to the different methodologies adopted, to the students' level of proficiency, or even to the students' L1 incongruity in these studies, it is, however, confirmed that L1 use is a prevailing phenomenon in L2 writing among Iranian EFL learners.

3.2 Conditions of L1 use in L2 writing

The third question sought under what conditions Iraninan EFL learners backtracked to use their L1. The first point to make is that this study concentrated on identifying the immediate concerns that the participants held and expressed during the composing processes (e.g., concerns about ideas, organization, language and task requirement), and then attempted to categorize the L1 uses according to the concerns the participants themselves addressed. In fact attempts were made to find out recurrent themes or pool of meanings within the subjects' L1 reliance.

The analysis of the data showed that the subjects resorted to their L1 for the following identified issues which are all classified into six categories. Of course, the results need to be reconfirmed or investigated in future research studies. Following is an elaboration on the recognized categories which are presented in the order of high to low frequency of occurrence (table 1).

Table1: Classification of L1 Use (conditions) in L2 Context

No.	Category	Frequency	Percentage
1	Initiation (I)	500	32.9
2	Mental Investigation (MI)	399	26.2
3	Rectification (R)	305	20.07
4	Organization (O)	135	8.88
5	Coherence Construction (CC)	127	8.36
6	Meaning Confirmation (MC)	53	3.48
Total		1519	100

3.2.1 Initiation (I)

The participants in this study demonstrated the use of L1 to present a meaning before using L2 to continue a line of thought; that is, in the course of composing, the writers' prime goal was to initiate

thinking in L1. In fact, they showed that their thought was initiated through a feeling or mental image, either linguistic or non-linguistic, which was later converted into the linguistic message in writing via an encoding process. This is what Bruner (1990) has called 'Meaning Readiness'. One must search for appropriate linguistic signs to represent such meaning readiness, via either L1 or L2, before the meaning could be verbalized. Therefore the first identified condition in which to use L1 is the initiation into the process of writing.

> Example: "Too zehnam hamash donbale ye dalil ya shahedi baraye eedeam boodam. Ta ye eede too zehnam miomad be farsi bara khodam bastesh midadam ba'd be fekre yaftane mo'adele engilisish boodam" (Participant, from interview)
>
> Translation: [My mind was always searching for a support or a reason for my idea. Once an idea occurred to my mind, I developed the idea in Persian and then started to find English equivalences.]

In fact, the participants used their L1 whenever an idea could be more easily expressed. As we can see in the example, the L1 use resulted from the participant's need to use a language that could articulate his idea most efficiently.

Following is another example of L1 use for the purpose of generating an idea from the think-aloud protocol:

> Example: "Hala che dalili baraye in eedeam biaram ke monaseb bashe? Bayad dalili bashe ke sabet kone raveshe fe'li baese esterese ziad mishe ke amalkerde daneshamoozan ra paeen miare. Ahha, ye jomle az ye ravanshenase ma'roof yadam oomad ke be onvane dalil migam".
>
> Translation: [Now what reason should I bring here for this idea? It should be such a suitable reason that proves the idea about the present method increasing students' stress and negatively affecting the students' performances. Ahha,

I remember a famous psychologist's statement in this relation. I write this statement as a reason for my idea.]

Out of 1519 cases of L1 use, 500 cases (32.9%) fall in this category.

3.2.2 Mental investigation (MI)

Searching for the L2 equivalent is another recognized L1 use category which is described and exemplified in this part. The participants in this study used their L1 to search for L2 lexical items; making a choice appropriate to the required contextual features:

Example 1: "To administer a "jame' chi mishe? Faragir, umm, umm, hame janebe, emtehane hame janebe, ahha, " comprehensive."

Translation: [What is the equivalent of "jame' " umm, umm, faragir, umm, hame janebe, hame janebe exam, ahha "comprehensive".]

Example 2: "items, choices, alternatives. Umm "Kodoomashoon baraye in jomle behtare? Item ke be har ye so'al migan. Choice ham ke be nazer nemiad ma'na ra beresoone. Pas 'alternative' behtare.

Translation: [Which one fits in this sentence? 'Item' is referred to as one separate question. 'Choice' can not convey the meaning here. So, 'alternative' is more suitable.]

This category included 399 cases (26.2%) of L1 use.

3.2.3 Rectification (R)

Revising and correcting were two writing processes in which the writer went back in the produced text and made any change s/he felt necessary. Revising and correcting cases in the participants' performance happened so often. In this part, we observed both revising structures and correcting spellings. Following are some examples:

Example 1: "Each of the students want to enter "want es mikhast ya na? are mikhad yadame each age fael bood fe'l mofrad miamad."

> Translation: [Does want need "s"? Ok, it needs "s". I remember that if "each" was subject of a sentence, then the subject is considered as singular.]
>
> Example 2: "In the present curcamstences ee emlaye cercemstenca eshteba neveshtam bayad avazesh konam, khob are injooriye…."
> Translation: [the spelling is not correct. I should correct it. Well, ok it is….]

The quantitative analysis of the data showed that the participants used their L1 in 305 cases (20.07%) to revise and correct structures and spellings.

3.2.4 Organization (O)

Organizing as one of the processes involved in any composition, may be defined as the way the writer is going to plan his or her ideas in the text. In any composition, a considerable amount of time is allocated to planning and replanning before starting the formal text. The analysis of the data showed that the participants switched to their L1 when planning the composition. Following is an example of L1 use behavior for the purpose of organizing the writing:

> Example: "Khob avval bayad tarhe kolli ra taeen konam. Be nazar miad ke in maghale bayad be soorate estedlali neveshte shavad banabarin bayad ghalebe kolli ra avval dar nazar begiram. Avval ye moghadame, ba'd nazare khodamo too seta parageraph sabet konam, too parageraphe akhar ham ye jambandi mikonam. "
>
> Translation: [Well, first I have to determine the overall plan. It seems that this essay should be written argumentatively, so I must have a general plan. First an introduction, then development of my idea within three paragraphs and last I will write the conclusion in one paragraph.]

Based on the data collected, the subjects always relied on their L1 when organizing and planning information in their mind. 135

cases (8.88%) of L1 use were related to the participants' organizing of the ideas.

3.2.5 Coherence construction (CC)

Whenever the participants doubted whether their current written statements were semantically related to each other or not they used their L1 to check and establish the semantic coherence of ideas within or between paragraphs. The following is an example of a participant's retrospection:

> Example: "Ba'zi mavaghe' fekr mikardam chizi ke daram minevisam mostaghiman nazaram ra sabet nemikone, banabarin too zehnam be farsi chand bar rabeteshoona tahlil mikardam ta shakkam bartaraf beshe, ba'd edame midadam."
> Translation: [Sometimes I doubted about the semantic relations between what I was writing and the main idea. In those cases I analyzed these relations in my mind in Persian in order to remove the doubt, and then I continued.]

127 cases (8.36%) of L1 use fell in this category.

3.2.6 Meaning confirmation (MC)

Another category of L1 use and of course the last one in terms of the frequency of occurrence was "lexical meaning confirmation". The participants tried to confirm their choice of an L2 word by checking the suitability of its equivalent in L1 in order to be assured of the use. Following is an example from think-aloud protocol:

> Example: "In order to examine… "barresi kardan (L1)", examine "barresi kardan" the appropriacy of Konkoor …"

When the participant who produced the above statement was asked to state the reason why she switched to L1 after producing the L2 word, she answered:

> Example: "Baraye motmaen shodan nesbat be dorost entekhab kardane kalame az lahaze ma'na farsisho too zehnam migoftam."

> Translation: [I repeated the Persian equivalent of the word in my mind in order to be sure of the appropriacy of the choice of word in terms of meaning.]

The data in this category supports Cumming's findings (1990) that cross-linguistic problem-solving is an effective means of verifying linguistic choices. It also supports Qi's finding (1998) that conceptual knowledge is shared across languages and can be accessed via either L1 or L2. 53 cases (3.48%) of L1 use were categorized as CLM.

3.3 Functions of the L1 use in L2 context

Thinking about the observed behaviors, one may come up with new thoughts about functions of observed L1 use in L2 context. As shown below in Table 2, five different functions can be identified for the conditions under which the subjects had to rely on their L1. The interesting point is that none of those conditions can be associated with the interfering role the first language is believed to play. Though the subjects in this study were all at intermediate level, we did not come up with even one single case of L1 negatively affecting the quality of L2. The identified functions are presented and justified below:

3.3.1 Cognitive function

The idea that L1 is effective in L2 composing process provides important evidence supporting the notion that conceptual knowledge which is shared across L1 and L2 may be accessed cross-linguistically. In other words, knowledge may well be tied to a shared rather than a separate conceptual store in a bilingual's memory. In the categories of conditions ‘mental investigation’ and ‘coherence construction’, there appeared to be one single strand of meaning and function running. That is, in both cases the subjects found L2 situations hard to handle in their L2, so they resorted to their L1 to secure their position. Therefore these two conditions were identified as being cognitively oriented where some mental inquiry is made to settle the L2 problems

3.3.2 Generative function

This category shows that the subjects in this study were often able to *encode an idea quickly in L1 before developing it further in L1 or L2*. This finding suggests that certain non-linguistic feelings or experiential mental images are cognitively demanding and difficult to encode, hence required to be accessed through L1_ the stronger and more reliable language of a bilingual person. Two explanations can be offered here. First, the degree of difficulty at which a specific target word or phrase is processed in an encoding process is related to L1 use in generating and initiating ideas, as it is evident in this study. Second, it may relate to what Friedlander (1990) has called the topic knowledge factor which refers to L1 conceptualizations of ideas and concepts in the learners' mind during their lives.

In relation to the development of a thought through constant alternations between L1 and L2, the data suggests that, in addition to the use of L2, L1 makes it possible for a thought to be developed cross-linguistically without slowing down the pace of thinking. It also compensates for the possible failure to produce effective output in L2 only (Qi, 1998). In other words, L1 enabled an initiated thought to continue to develop and helped generate content which the participants sometimes felt less competent to produce when they used L2 only. Thus we assumed that the first condition 'initiation' has got a *generative function* to serve.

3.3.3 Linguistic function

Reviewing the data and table 1 shows that the condition 'rectification' refers to the subjects attempts to solve their linguistic deficiencies. In this category they tried to revise and correct their language structures and spelling errors. This linguistic function offers an important insight for the language researchers and educators, that is, though learning another language is commonly regarded as largely L1-L2 linguistic interface, the findings here indicate that linguistic function among others rank third and only in terms of the frequency of occurrence, and not necessarily in terms

of quality of the writing. So they need to attend to other quality features of L2 writing.

3.3.4 Metacognitive function

A brief look at the categories of L1 use behaviors triggers in the mind the idea that the main areas in which the participants tended to use L1 may be included in the *metacognitive strategies* used in language performance. Organizing and planning can be an instance of metacognitive function, but further research is needed to investigate the extent of the possible relationship between metacognitive strategies and L1 behavior which in turn needs a psycholinguistic analysis of metacognitive strategies and the general level of knowledge demands they need in order to be exploited by the learner, because high level of knowledge demands was observed as a general factor potentially influencing L1 use behavior (Qi, 1998).

3.3.5 Communicative function

The participants in the study also revealed that they needed to depend on L1 in the L2 composing process whenever they failed to communicate their ideas. Not being sure of the meaning of especially lexical items, the subjects attempted to compare and contrast the meanings of those items first in their L1 and then they decided on the appropriacy of the intended items. Thus 'meaning confirmation' was taken to represent this category.

As a final word, it is worth noting that two prevailing factors can be recognized (and discussed in this study) to influence the observed behavior, i.e., 'Topic Knowledge' factor (Friedlander, 1990) and 'High Level of Knowledge Demand' (Qi, 1998). Based on the data in the present study, it may be suggested that topic knowledge can be made more meaningful if it is discussed in terms of the level of knowledge demands. It is possible that an L2 learner accesses the topic knowledge in L1 in which the topic knowledge was processed and acquired. In this case, accessing the topic knowledge in an L2 in which the information has never been reprocessed would be more cognitively demanding than accessing

the knowledge in L1, where the information was processed and stored in memory. Also, it can be concluded that the level of knowledge demands may be a basic variable that influences L1 use and determines whether knowledge may best be accessed and processed in L1 or in L2 composing task (Qi, 1998).

Table 2: Categories of functions for L1 use

No.	Functions	Frequency	Percentage
1	Cognitive	526	34.6
2	Generative	500	32.9
3	Linguistic	305	20.07
4	Metacognitive	135	8.8
5	Communicative	53	3.48
Total		1519	100

4. Conclusion

Generally, it is claimed that L2 writing may be impeded by the available L1 resources simply because the two languages can be interchangeably used. However, as the results of the present study shows, unlike the commonplace claims, the use of L1 is especially beneficial to the improvement of the L2 writing skill.

This study, as an introductory investigation, has uncovered some basic patterns of L1 use and has offered some possible functions for the occurrences. The results indicate that L1 use is generally a positive process from which L2 writers can benefit very much in order to make appropriate linguistic or rhetorical choices. Though some scholars (e.g., Chelala, 1982; Kaplan, 1966; Gass & Selinker, 1983) have found the L1 use experience as impeding, especially in the contexts of speaking or even listening, we can almost strongly claim that L2 writing can capitalize much on the L1 available resources to improve. With the above point in mind, we may come to the conclusion that L2 writing, if not all other L2 skills, seems to

be supportive of the compound bilingualism where the conceptual representation of the two languages are believed to converge.

Another important finding is that L2 writing is less of linguistic challenge than other global features of writing. This is well documented in the variety of functions detected, of which only one is linguistic.

5. Implications

From the theoretical point of view, the findings of this study make extensive contributions not only to the theories of bilingualism and consequently bilingual studies but to the cognitive sciences in general. This study sheds light on some aspects of the bilinguals' mind and cognitive structures and may raise so many other questions and hypotheses which in turn will broaden our understanding of the procedures involved in the processes of becoming bilingual.

More specifically, the findings may enrich our understanding of the cognitive and metacognitive processes involved in the process of L2 composing resulting in extensive contributions to the designation of a more comprehensive model of writing than those which have already been introduced. There have been many studies on the L2 writing process (Bosher, 1998; Kamimura, 1996; Zamel, 1983), but they seem to give the impression that L2 writing process is at best the same as if not negatively affecting L1 writing process. Such an assumption can partly explain why there is no coherent, comprehensive theory of L2 writing (Silva, 1993). As Silva (1993) argues, it is necessary to develop a theory of L2 writing, making use of L1 research when such research is relevant, but incorporating the unique features of L2 writing. On the other hand, the results of this study suggest that L1 use in the context of L2 composing can have beneficial effects. Second language writing instructors may find ways to incorporate the strategic use of this behavior into the classroom, such as during planning and backtracking sub-processes (Friedlander, 1990; Manchon et al., 2000).

6. Limitations of the study

While the present study investigated L1 use in L2 context by adopting a research design using think-aloud data collection procedure, it suffers from certain limitations.

From a research methodology perspective, this study used concurrent think-aloud protocols as the main source of insights into the participants' L2 writing processes. Admittedly, this method of eliciting data has some drawbacks, such as slowing down learners' thinking processes (Ericsson & Simon, 1980) and creating reactivity problems (Jannssen et al., 1996; Stratman & Ham-Lyons, 1994). That is, writers' verbalizations may interfere with their thinking processes while they are composing. To minimize the possible effects of these drawbacks, this study had held a warm-up session for every participant before they started to compose. In this phase, the participants practiced thinking aloud a lot until they got familiar and felt comfortable with this method of data collection.

Another limitation related to the methodology is the cross-sectional design this study adopted to find answers to the research questions which in turn resulted from the time limitation the researcher was confronted with. As this study is psycholinguistic in nature, adopting longitudinal design may reveal many more aspects of learners' cognitive structures and also cognitive processes involved in L2 composing.

The last limitation to be mentioned here relates to the facilities such as a tape-recorder needed to conduct such research. Any distraction from the environment may change the participant' focus of attention and result in some unintentional interruptions which in turn affects the findings of the study.

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