



The Effect of Collaborative Prewriting Discussions on L2 Writing: Complexity, Accuracy, and Fluency (CAF)

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Abstract

The present study essayed to investigate the impact of collaborative pre-writing discussions on three aspects of writing skill namely, complexity, accuracy, and fluency (CAF). To reach this goal, 60 intermediate male EFL learners ranging from 22 to 28 years of age at Shahid Beheshti Language Center (SBLC) in Tehran, Iran participated in the study. For the purpose of homogeneity, the standardized English Proficiency Test (Preliminary English Test) was administered to 88 students. Next they were divided into two intact experimental and control groups. Following that, the experimental group which was divided into six groups of five, were exposed to and performed 40-minute-essay writing tasks held two sessions per week, lasting ninety-minutes for ten weeks with collaborative pre-writing discussions. Moreover, the students in experimental group were required to complete a questionnaire at the end of the study to find out about their feelings regarding pre-writing discussions prior to writing in L2. In addition, the control group received the same materials and collaborated with the same teacher as experimental group, except for; there were no collaborative pre-writing discussions to write the essays. After the raters were trained and familiarized with the rating process, the essays by both groups were collected and scored holistically based on the assessment measure with which the two rates were provided (Appendix 1). In order to give plausible answers to the research questions, a series of one-way ANOVAs were employed to evaluate the participants' overall performance in the two conditions. Ultimately, the results indicated that collaborative pre-writing discussions were superior to mainstream methods. Thus, the findings can have an immediate implication for EFL teachers and practitioners in the field who are searching for cutting-edge ways of developing EFL learners' writing performance.

Keywords: accuracy, collaborative prewriting, complexity, fluency, L2 writing

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1 INTRODUCTION

Various studies have pointed out foreign language learners' scaffolding one another during different group activities in classrooms. These activities include dictogloss tasks, consciousness-raising tasks, and picture narration tasks. In writing classes, learners might engage in helping each other through such common tasks as peer review of written texts (Hu & Lam, 2010; Liu & Sadler, 2003), collaborative prewriting tasks (Neumann & McDonough, 2014a, 2014b; Shi, 1998) and collaborative writing (Storch & Aldosari, 2010, 2013; Wigglesworth & Storch, 2009).

It is maintained that collaborative tasks provide learners with opportunities during which negotiating of meaning among learners takes place, learners will provide each other with feedback, and modified output will be provided for a successful communication of meaning (Gass, 2003; Long, 1996; Mackey, 2012). This type of interaction will also realize social settings within which language learners are encouraged to collaborate on various aspects of language and content in use so that they will be able to acquire new knowledge and consolidate their existing knowledge (Lantolf, 2011; Swain, 2006).

Different studies in foreign language literature have focused upon collaborative aspects of learning a language (i.e., grammar, vocabulary, spelling), but there are a few studies paying attention to learners' discussing the content and organization of the texts they are writing (Elola & Oskoz, 2010; Storch, 2005; Storch & Wigglesworth, 2007; Wigglesworth & Storch, 2009). Such studies have concluded that EFL learners tend to focus their attention on the composing process rather than such essential features as planning or revising. Although collaborative writing tasks have been identified to be effective at encouraging language learners to discuss content, organization, and language, they are widely used in EFL contexts.

Task collaboration in language learning could be particularly helpful when learners involve themselves in discussions before performing a task. Studies in foreign language learning (Donato, 1994; Otta, 2000; Swain & Lapkin, 1998) have supported the mediating role of dialogue and having the community of practices (Hall, 1995; Mondada & Pekarek Doehler, 2004; Ohta, 1995). Swain (2000) suggests that through collaborative dialogue learners could focus their attention on conveying their message and producing alternatives. To put it simply, using dialogue could give language learners the chance of language use, and at the same time an opportunity to reflect on their own language use. Swain (2000) also adds that due to this collaboration, "...together [learners'] jointly constructed performance outstrips their individual competences" (Swain, 2000, p. 111). Through collaborative writing, language learners are involved a dialogue that requires them to notice the gaps in their language production and also test new hypotheses about their language learning process.

Accuracy (correctness) is probably the oldest, most transparent and most consistent construct, referring to the degree of deviancy from a particular norm (Hammerly 1991; Wolfe-Quintero et al. 1998). Deviations from the norm are usually characterized as errors. Straightforward though this characterization may seem, it raises the thorny issue of criteria for evaluating accuracy and identifying errors, including whether these criteria should be tuned to prescriptive standard norms (as embodied by an ideal native speaker of the target language) or to non-standard and even nonnative usages acceptable in some social contexts or in some communities (Ellis 2008; James 1998; Polio 1997).

However, there is still ambiguity and debate. First, researchers have generally ignored the notion of adequacy in accomplishing a task for the more quantitative accuracy (Pallotti, 2009). Secondly, it is unclear from which dialect the accuracy standards should come. For instance, utterances, such as *I like sport* or *I went to hospital*, could be coded as accurate (in London) or inaccurate (in Pittsburgh), but in practice, a standard must be chosen.

Further, assessing accuracy longitudinally may be complicated as learners attempt new lexical items and grammatical forms. As such, Norris and Ortega (2003) caution that accuracy of specific forms may not develop linearly but rather curvilinearly. This complication of accuracy of specific forms would make gauging development more difficult since it might be unclear which part of the arc the data represent. Despite such complications, researchers often measure the accuracy of the language performance of learners.

The word fluency often appears in discussions of written composition and holds an ambiguous position in theory and in practice. Written fluency is not easily explained, apparently, even when researchers rely on simple, traditional measures such as composing rate. Yet, when any of these researchers referred to the term fluency, they did so as though the term were already widely understood and not in need of any further explication. The various definitions proposed for writing fluency may have resulted from the different indicators used for measuring it. Many L1/L2 writing process studies (e.g. Chenoweth & Hayes, Hatasa & Soeda, 2000) measured writing fluency in terms of the composing rate, i.e. the number of words written per minute obtained through dividing the text quantity by the time spent writing.

Other reported measures of writing fluency include holistic scoring of the text (Ballator, Farnum & Kaplan, 1999), number of words and t-units (Elola, 2006), number of correctly spelled words written, number of sentences written, and number of letter sequences (Rosenthal, 2007). Of all these indicators, the composing rate has been the most frequently used one for assessing writers' fluency. It may be argued that the validity of the composing rate and the above product-based indicators of writing fluency is questionable. Some product based indicators of writing fluency such as the number of t-units or the sentences written in the text are more likely to reflect some quality aspects in writers' texts than the flow of their composing processes.

The third component applied in this research is complexity which was added in the 1990s, following Skehan (1989). Complexity has, thus, been commonly characterized as the extent to which the language produced in performing a task is elaborate and varied' (Ellis 2003, p. 340). There is some evidence to suggest that complexity is primarily linked to the current state of the learner's (partly declarative, explicit and partly procedural, implicit) interlanguage knowledge (L2 rules and lexico-formulaic knowledge) and is viewed as 'the scope of expanding or restructured second language knowledge' (Wolfe-Quintero *et al.* 1998, p. 4).

Thus, complexity is seen as relating primarily to L2 knowledge representation and to the level of analysis of internalized linguistic information. In contrast, fluency is primarily related to learners' control over their linguistic L2 knowledge, as reflected in the speed and ease with which they access relevant L2 information to communicate meanings in real time, with 'control improving as the learner automatizes the process of gaining access' (Wolfe-Quintero *et al.* 1998, p. 4).

The present study sets out to investigate the effect of collaborative pre-writing discussions on three aspects of writing skill namely, fluency, complexity, and accuracy. Thus, to achieve the purpose of the study, the following research questions are formulated:

1. Does pre-writing discussions have any effect on the EFL learners' overall writing performance?
2. Does pre-writing discussions have any effect on the EFL learners' writing complexity?
3. Does pre-writing discussions have any effect on the EFL learners' writing accuracy?
4. Does pre-writing discussions have any effect on the EFL learners' writing fluency?

2 LITERATURE REVIEW

Collaboration in Language Learning

Researchers have pointed out that collaboration in performing a linguistic task e.g. collaborative writing has its root in a socio-cultural perspective (Storch, 2005; Villamil & de Guerrero 1996, 1998). They have noted that in a collaborative situation writers are encouraged to make decisions regarding the necessary language to express their ideas, the content materials to include in the writing task, and to formulate the structure through which they are going to express those ideas in a collaborative way. According to Franklin (1996), “knowledge is created and re-created in the discourse between people doing things together” (p. 71). Knowledge is constructed by people working together to reach a common goal, or overlapping goals, toward which they focus their efforts and attention (Freire, 1970; Lave & Wenger, 1991; Wells, 2000; Wenger, 1998). Construction of knowledge takes place during a collaborative meaning-making process through discourse; individuals try to move towards their “own understanding through the constructive and creative effort involved in saying and in responding to what was said” (Wells, p. 74).

Collaboration in language learning could be particularly helpful when learners involve themselves in discussions before performing a task. Studies in foreign language learning (Donato, 1994; Ohta, 2000; Swain & Lapkin, 1998) have supported the mediating role of dialogue and having the community of practices (Hall, 1995; Mondada & Pekarek Doehler, 2004; Ohta, 1995). Swain (2000) suggests that through collaborative dialogue learners could focus their attention on conveying their message and producing alternatives. To put it simply, using dialogue could give language learners the chance of language use, and at the same time an opportunity to reflect on their own language use. Swain (2000) also adds that due to this collaboration, “...together [learners’] jointly constructed performance outstrips their individual competences” (Swain, 2000, p. 111). Through collaborative writing, language learners are involved a dialogue that requires them to notice the gaps in their language production and also test new hypotheses about their language learning process.

Task Planning

Furthermore, planning process of writing is regarded to be highly crucial and it influences the language that is going to be produced (Kucer, 2009). This planning, or prewriting, provides the EFL writers an opportunity to take not only the meaning of the message into account but also the kind of language to be used to convey that message. Kucer (2009) also suggests that writers obtain goals by having a plan before beginning the task. As these plans could guide the writers from the point they are in the writing process to where they wish to arrive. In fact, these plans are considered to help EFL writers to develop a concrete message which could be later shared through their writing.

Many researchers have emphasized the positive effects of task planning on learners’ language production (Bygate, 1996; Crookes, 1989; Ellis, 1987; Foster & Skehan, 1996; Iwashita et al., 2001; Ortega, 1999, 2005). According to Skehan's (1998) cognitive approach to tasks, planning before the task improves learners' language production. He argues that tasks before which learners do not have the opportunity to plan are considered to be the ones with greater cognitive difficulty, while those tasks which provide learners with planning time are the ones with less cognitive difficulty. The tasks with less cognitive difficulty can lead to an improvement in the fluency and complexity of learners' language.

According to Ellis (2005), task planning could be either unpressured on-line planning or strategic planning (pre-task planning). Yuan and Ellis (2003) suggest that "on-line planning is the process by which speakers attend carefully to the formulation stage during speech planning and engage in pre-production and post-production monitoring of their speech acts" (p. 6). The definition provided by Yuan and Ellis is similar to the one by Levelt's (1989) model of speech

processing. He also believes that allowing learners more time to complete a task helps the planning and production of speech, as language users have opportunity to search for grammatical linguistic resources, the process of pre-production monitoring is facilitated, and he is encouraged to go through the process of post-production monitoring (Yuan & Ellis 2003).

The second type of planning, pre-task planning is the stage during which learners are provided with the opportunity to think about the task before performance. Skehan (1996) suggests that pre-task planning functions as an activity whose goal is "to prepare the learners for handling the cognitive demands that a task contains and enable the channeling of attentional resources towards language form" (p. 25).

Pre-writing phase, as a pre-task planning, could be more effective if it happens through writers' collaborative discussions as this collaborative planning divides workload and saves writers' time. During these collaborative discussions, students can share ideas and make sure the information they have is accurate; they can also be more responsible to their task, etc. (Barley & Coniam, 2008; Kessler, 2009; Storch, 2011; Storch, 2005; Shehadeh, 2011). Pre-writing collaboration lets EFL writers scaffold ideas and seek assistance from stronger writers. The main advantage of collaborative tasks is obtaining assistance from an expert (Storch, 2012). The idea is backed by Vygotsky's Zone Proximal Development (ZPD), referring to the gap or difference between what learners can do with help and without.

Sweigart (1991) conducted a study to examine the effectiveness of prewriting discussions by comparing small-group discussion and whole class discussion. He noted that compared to whole class discussion small-group discussion was more effective in improving learners' knowledge. Quality of EFL learners' writing through peer talk and teacher-led prewriting discussions was investigated by Shi (1998). She also concluded that prewriting discussion had a positive effect on students' writing through helping them to produce longer texts and using more diverse vocabulary. Xianwei (2009) studied the effect of prewriting discussions on EFL learners' writing performance, and suggested that their performance improved qualitatively after discussing the topic.

Measuring Task Performance

EFL researchers (Ellis & Barkhuizen, 2005; Foster et al., 2000; Norris & Ortega, 2009) have identified three major dimensions of second language (L2) performance: complexity, accuracy, and fluency (CAF). At first glance, complex language is considered to be more advanced, accurate language to be error-free and fluent speech to be normally paced. But, considering each component, these individual elements are complex and multidimensional, and FLA researchers differ on how these components should be defined and operationalized (Housen & Kuiken, 2007). Multiple measures of each component of language performance are available, and the correlation between measures can substantiate concurrent validity of the measures (Norris & Ortega, 2009). However, the commonly agreed measures of assessing these components are in the EFL literature. Ellis and Barkhuizen (2005, p. 151) suggest measuring accuracy in terms of percentage of error-free clauses or number of errors per 100 words. Three measures of syntactic complexity have been provided, global (words per AS unit), subordination (clauses per AS unit) and sub-phrasal (words per clause). These three measures of grammatical complexity are regarded to be sufficient to capture the construct of complexity across proficiency levels. Finally, Wigglesworth and Storch (2009) consider fluency in terms of the average number of words, T-units and clauses per text.

The current study aims to investigate the effect of prewriting discussions on EFL writing. In particular, the study aims at investigating whether learners' discussions before the task have any effect on the students' writing complexity, accuracy, and fluency. The secondary purpose is to investigate students' attitudes towards prewriting discussions in writing performance. This study may help writing teachers recognize the potential value of using prewriting discussions in L2 classes in order to help students better understand the topic and improve their writing quality.

3 METHOD

3.1 Participants

Sixty intermediate male learners ranging from 22 to 28 years of age at Shahid Beheshti University Language Center (SBLC) in Tehran, Iran attended a course of advanced writing. To ensure the homogeneity of subjects, a standardized English proficiency test (Preliminary English Test) was administered to 88 students. The test contained 50 multiple choice items of listening comprehension, 40 multiple choice items on structure and written expressions, and 50 multiple choice items of reading comprehension. Because of the nature of the study, the participants took the structure, vocabulary and reading comprehension sections of the test with a maximum possible score of 100 points. Sixty students whose scores fell ± 1 SD from the mean score were selected as the main sample for the study. Those whose scores on the test indicated one standard deviation below and above the sample mean score were selected as the experimental group in the study.

3.2 Instruments

The instruments which were applied in this study are as follows:

- A writing exam as the pretest and posttest
- Brown and Baily (2003) rubric as the rating criterion
- Retrospective questionnaire on collaborative pre-writing discussions

4 RESULTS

As mentioned earlier, to explore the participants' performance in writing under two different conditions (collaborative pre-writing discussions and mainstream), three aspects of language use were measured. A number of one-way ANOVAs were administered separately to compare the results on the measures for complexity, accuracy, and fluency (CAF).

4.1 Fluency

According to Table 1, the subjects in the mainstream group tended to produce shorter texts than students who were involved in collaborative pre-writing discussions. To assess fluency, three measures were employed. The first one was the number of words per text, that is, the average length of the text produced by collaborative pre-writing discussion group (CPDG) was 173.33 words ($SD = 24.32$) while mainstream group (MG) group produced 159.4 words ($SD = 27.21$). Regarding the other two measures of fluency (i.e. T-units and clauses per texts), pre-writing discussions resulted in higher means. Applying one-way ANOVA indicated that the difference in the groups is statistically significant (words per text: $F = 4.37$, $df1$, $p = 0.041$, $d = 0.53$; T-units per text $F = 5.83$, $df1$, $p = 0.019$, $d = 0.62$; clauses per texts $F = 5.10$, $df1$, $p = 0.028$, $d = 0.51$). The measures were all higher in the CPDG group which demonstrated that pre-writing discussions led to longer texts.

Table 1. Measures of fluency

		N	Sum	Mean	SD	F	Sig.	Effect Size
Average words per text	CPDG	30	5200	173.33	24.32	4.371	0.041	0.53
	MG	30	4782	159.4	27.21			
Average T-units	CPDG	30	406.2	13.54	2.1	5.83	0.019	0.62

per text	MG	30	363	12.10	2.5			
Average clauses per text	CPDG	30	390.6	13.02	2.40	5.10	0.028	0.51
	MG	30	352.5	11.75	2.57			

4.2 Complexity

CPDG and MG groups showed different performance in terms of complexity in both complexity measures (ratio of clauses to T-units: $F = 0.17.78$, $df 1$, $p = 0.000$, $d = 1.08$; percentage of dependent clauses: $F = 8.61$, $df 1$, $p = 0.005$, $d = 0.75$). According to table 2, significant differences were seen in the individuals' performance of the tasks.

Table 2. Measures of Complexity

		N	Mean	SD	F	Sig.	Effect Size
Clauses per T-unit	CPDG	30	1.90	.35	17.78	0.000	1.08
	MG	30	1.54	.31			
Dependent Clauses Percentage	CPDG	30	37.35	7.24	8.61	0.005	0.75
	MG	30	32.10	6.60			

4.3 Accuracy

To measure accuracy, global units were employed: error free T-units and error free clauses. As shown in Table 3, the subjects in CPDG showed higher means on both measures. The ANOVA results revealed that there were statistically significant differences for both the percentage of error free T-units and the percentage of error free clauses showing that collaborative pre-writing discussions had a positive effect on accuracy. The two groups showed different performance on all measures of accuracy, with the CPDG group producing more accurate error-free T-units percentage ($F = 26.32$, $df1$, $p < .000$, $d = 1.32$) and more error free clauses percentage ($F = 84.30$, $df 1$, $p < .0000$, $d = 1.77$). ANOVA results also indicated that there were significant statistical differences in error free T-units and error free clauses. The results for error free T-units showed that $F = 26.32$, $df1$, $p < .0001$, $d = 1.32$ and for error free clauses $F = 7.86$, $df1$, $p = 0.007$, $d = 0.84$). Overall, these results for accuracy show that collaborative pre-writing discussions resulted in more accurate performance than mainstream condition.

Table 3. Measures of Accuracy

		N	Sum	Mean	SD	F	Sig.	Effect Size
Error free T-units	CPDG	30	420	7.5	1.8	26.32	0.000	1.32
	MG	30	184	5.2	1.67			
Error free T-units percentage	CPDG	30		58.45	11.57	31.16	0.000	1.44
	MG	30		41.21	12.34			

Error free	CPDG	30	570	19	5	7.86	0.007	.84
Clauses	MG	30	450	15	4.5			
Error free	CPDG	30		84.30	12.24	47.21	0.000	1.77
Clauses								
Percentage	MG	30		63.23	11.50			

4.4 Attitude Questionnaire Results

A questionnaire, consisting of seven questions, was devised to seek the subjects' opinions regarding collaborative pre-writing discussions at the end of the project. A five-point Likert Scale was used in the questionnaire, and responses were analyzed using descriptive statistics in the form of frequency analysis and percentages. The results are as follows (see Figure 1):

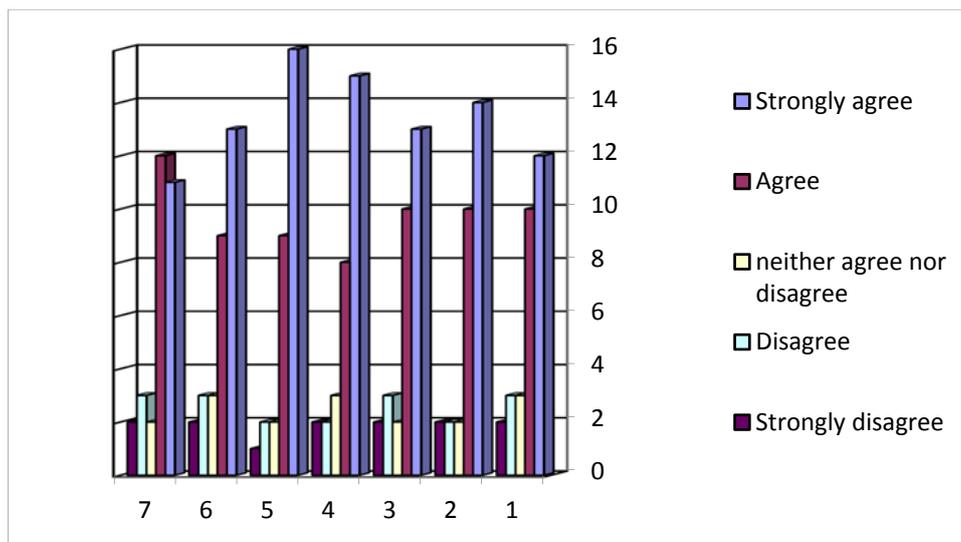


Figure 1. Learners' Perception of the CPW Task

A high percentage of the students (65%) chose “Strongly Agree” and “Agree” for (Q1) that group work writing helped them to be conscious of their writing problems. The second item was about how the subjects liked questioning and answering before the writing task. 70% strongly agreed the teacher's questions provided them a mental model which played an essential role in developing their essays (Q2). The positive atmosphere created by the collaborative learning was the key point students liked. 75% agreed that collaborative discussions helped them to lower their stress (Q3). 65% agreed that collaborative writing motivated them to do more writing and it was quite encouraging and could be considered to be different sources of knowledge (Q4). 70% of the respondents agreed that collaborative writing cultivated a sense of cooperation and acknowledgement among them. They thought sharing information facilitated interaction and learning. The CPD group members found such group activities as sharing information and generating new ideas really interesting. The subjects thought that the kind of questions rose by the teacher provoked new ideas and allowed them to organize the content of their writings (Q5). 65% of the subjects responded that the exchange of views helped them to write more carefully (Q6). Finally, 70 % of the subjects agreed that they became more analytical and critical in their writing performance. They claimed the process helped them investigate the topic from various aspects (Q7).

5 DISCUSSION

Writing is known to present a fairly challenging task for both teachers and learners (Ferris, 2003; Kroll, 1994). As rightly stated by Alexandra (2001), "Writing is undoubtedly one of the most difficult skills in learning a second language." (p. 257); the Iranian context, as an example, has shown the challenge that EFL learners are faced with in developing writing skills (Hasani & Moghadam, 2012; Mirzaii, 2012). Therefore, attempts should be made to enhance our level of understanding about writing skill and factors affecting it. To do so, the first step seems to be obtaining an objective estimation about EFL learners' writing performance, such as estimation on the principal dimensions of writing can be captured by the notions of complexity, accuracy and fluency (CAF; Housen & Kuiken, 2009). According to Housen & Kuiken (2009), "CAF have been used both as performance descriptors for the oral and written assessment of language learners as well as indicators of learners' proficiency underlying their performance; they have also been used for measuring progress in language learning" (p. 461). Assuming that CAF can be the legitimate representative of writing skill, it seems reasonable to inspect the way CAF interact with other factors (Seidlhofer & Widdowson, 1999). One major category of learning-affecting factors are learners' cognitive, metacognitive, and, generally, internal factors. CAF are three of the most important internal factors whose roles in writing have been acknowledged by the researchers (Tse & Shum, 2000). The abovementioned findings confirm the results of previous studies, accentuating the role of CAF in L2 achievement (Ai, 1999; Atkinson, 2004). The results are also in line with the findings of Sharir and Kumar (2009) which supported the positive relationship between complexity, accuracy, and fluency among Iranian EFL learners. More specifically, the results indicated that accuracy and fluency have the highest relationship complexity was the lowest one. Yet, all the relationships had large effect sizes. These findings seem to provide further systematic support for the previous researches on the relationship between CAF (Pishghadam & Javanmehr, 2011; Soleimani & Najafgholian, 2014).

As stated above, complexity of learners' writing compositions exhibited the lowest correlation. One possible reason for this might be the trade-off between accuracy and fluency, on one hand, and complexity, on the other. According to Limited Attentional Capacity Model (Skehan, 1996), human beings have a restricted information processing capacity, and the more complicated the tasks are, the more attentional resources the L2 learners require (Skehan, 1998). Accordingly, trade-off effects may exist among the three dimensions of language production (CAF); (Skehan & Foster, 2001). In other words, as focus is put on the accuracy, the complexity and fluency of the production may be less and vice versa. The findings of the present study can highlight the influential factors in developing writing among EFL learners. This gives EFL teachers and researchers the information required to humanize the process of writing instruction (Ashwell, 2000; Chandler, 2003; Fazio, 2001). The findings not only lead to a better understanding about the nature of writing difficulties, but, more importantly, they could lead to finding a reliable way to treat learners' weaknesses and problems in developing their writing skills.

6 CONCLUSION

The present study investigated the impact of collaborative pre-writing discussions on three aspects of writing skill, mainly, complexity, accuracy, and fluency. Statistically, collaborative pre-writing discussions were superior to mainstream methods. Thus, the findings can have an immediate implication for EFL teachers and practitioners who are searching for cutting-edge methods and strategies to develop EFL learners' writing performance. It is worth mentioning that pre-writing techniques applied in this study can help learners generate ideas and; thereby, organize their writing tasks. In addition, the study offers alternative techniques to the mainstream and conventional procedures employed in EFL writing classes. Further, collaborative pre-writing discussions can help learners develop deeper insights into topics and,

finally, familiarize themselves with more and mature ideas to include in their writing tasks and motivate EFL teachers to do more research on the usefulness and efficacy of collaborative pre-writing discussions in writing skill or at various levels of English language proficiency.

7 REFERENCES

- Ai, X. (1999). Creativity and academic achievement: An investigation of gender differences. *Creativity Research Journal*, 12(4), 329-337. doi:10.1207/s15326934crj1204_11.
- Atkinson, D. (2003). L2 writing in the post-process era: Introduction. *Journal of Second Language Writing* 12 3-15.
- Atkinson, S. (2004). A comparison of the relationship between creativity, learning style preference and achievement at GCSE and degree level in the context of design and technology project work. Paper presented in DATA International Research Conference on Creativity and Innovation, Sunderland University, England, Sheffield.
- Barley & Coniam, (2008). Using wikis to enhance and develop writing skills among secondary school students in Hong Kong. *System: An International Journal of Educational Technology and Applied Linguistics*, 36 (3), 437-455.
- Bygate, M. (1996). Effects of task repetition: Appraising the developing language of learners. In J. Willis, & D. Willis (Eds), *Challenge and change in language teaching* (pp. 136-46). London, UK: Heinemann.
- Chen, ML. (2004). *A Study of the Effects of Cooperative Learning Strategies on Student Achievement in English as a Foreign Language in a Taiwan College* (NY: ProQuest Information and Learning Company).
- Cole, KS. (2012). Promoting cooperative learning in an expository writing course. *Journal of International Education Research* 8(2) 113-124.
- Cotterall, S. (1995). Promoting learner autonomy through the curriculum: Principles for designing language courses. *ELT journal* 54(2) 109-117.
- Crookes, G. (1989). Planning and inter language variation. *Studies in Second Language Acquisition*, 11, 367-383
- Depaz, I., & Moni, RW. (2008). Using peer teaching to support cooperative learning in undergraduate pharmacology, School of Biomedical Sciences Educational Research Unit, The University of Queensland, Brisbane. Available <http://www.bioscience.headacademy.ac.uk/journal/vol11/beej-11-8.aspx/>
- Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33–56). Norwood, NJ: Ablex.
- Ellis, R. (1987). Interlanguage variability in narrative discourse: Style in the use of the past tense, in *Studies in Second Language Acquisition*, 9, 12-20.
- Ellis, R. (2005). Planning and task- based performance: Theory and research. In Ellis R. (Ed.), *Planning and task performance in a second language* (pp.3- 34). Amsterdam: John Benjamins Publishing Company.
- Elola, I., & Oskoz, A. (2010). Collaborative writing: Fostering foreign language and writing conventions development. *Language Learning and Technology*, 14(3), 51–71.
- Foster, P. & Skehan, P. (1996). The influence of planning and task type on second language acquisition. *Studies in Second Language acquisition*, 18,299-323.
- Franklin, U. (1996). *Introduction. Towards an Ecology of Knowledge*. University of Toronto.
- Freire, P. (1970). *Pedagogy of the oppressed*. New York, NY: Seabury Press.
- Gass, S. (2003). Input and interaction. In C. Doughty & M. Long (Eds.), *Handbook of second language acquisition* (pp. 224–255). Oxford, UK: Blackwell.

- Hall, K. J. (1995). "Aw, man, Where you goin'?" Classroom interaction and the development of L2 interactional competence. *Issues in Applied Linguistics*, 5, 37–62.
- Hasani, M. T., & Moghadam, C. R. (2012). The effect of self-assessment on Iranian EFL learners' writing skills. *The Iranian EFL Journal*, 8(5), 371-388.
- Hirst LA & Slavik C (2005). Effective language education practices and native language survival. In: Native American Language Issues, edited by Reyhner J. (Choctaw, OK: NALIB Board of Executors) 133- 142.
- Housen, A., & Kuiken, F. (2009). Complexity, accuracy, and fluency in second language acquisition. *Applied Linguistics*, 30(4), 461–473. doi: 10.1093/applin/amp048.
- Iwashita, N., McNamara, T., & Elder, C. (2001). Can we predict task difficulty in an oral proficiency test? Exploring the potential of an information-processing approach to task design. *Language Learning*, 51, 401–436.
- Kessler, G. (2009). Student-initiated attention to form in wiki-based collaborative writing. *Language Learning & Technology*, 13, 79–95.
- Kucer, S. B. (2009). Dimensions of literacy: A conceptual base for teaching reading and writing in school settings. New York, NY: Routledge.
- Lantolf, J. P. (2011). The socio-cultural approach to second language acquisition: Sociocultural theory, second language acquisition, and artificial L2 development. In D. Atkinson (Ed.), *Alternative approaches to second language acquisition* (pp. 24–47). New York, NY: Routledge.
- Lave, J., & Wenger, E. (1990). *Situated Learning. Legitimate Peripheral Participation*. Cambridge, UK: Cambridge University Press.
- Lave, J., & Wenger, E. (1998). *Communities of Practice. Learning, Meaning, and Identity*: Cambridge University Press.
- Levelt, W. (1989). *Speaking: From intention to articulation*. Cambridge: The MIT Press.
- 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). San Diego, CA: Academic Press.
- Mackey, A. (2012). *Input, interaction and corrective feedback in L2 learning*. Oxford, UK: Oxford University Press.
- Mirzaei, M. (2012). Consciousness-raising instruction and its effect on Iranian EFL learners' use of the mechanics of writing. *The Iranian EFL Journal*, 8(5), 139-156.
- Mohamed M. & Mahmoud, A.W. (2014). The effectiveness of using the cooperative language learning approach to enhance EFL writing skills among Saudi University Students. *Journal of Language Teaching and Research* 5(3) 616-625.
- Mondana, L., & Pekarek Doehler, S. (2004). Second language acquisition and situated practice: Task accomplishment in the French second language classroom. *The Modern Language Journal*, 88, 501-518.
- Murphy, L. (2008). Supporting learner autonomy: Developing practice through the production of courses for distance learners of French, German and Spanish. *Language Teaching Research* 12 (1) 83-102.
- Neumann, H., & McDonough, K. (2014a). Exploring the relationships among student preferences, prewriting tasks, and text quality in an EAP context. *Journal of English for Academic Purposes*, 15, 14–26. doi: <http://dx.doi.org/10.1016/j.jeap.2014.05.002>
- Otta, A. (2000). Rethinking interaction in SLA: Developmentally appropriate assistance in the zone of proximal development and the acquisition of L2 grammar. In J. Lantolf (Ed.), *Sociocultural theory and second language acquisition* (pp. 51–78). Oxford, UK: Oxford University Press.
- Otta, A. (1995). Applying sociocultural theory to an analysis of learner discourse: Learner-learner collaborative interaction in the zone of proximal development. *Issues in Applied Linguistics*, 6, 93–121.

- Ortega, L. (1999). Planning and focus on form in L2 oral performance. *Studies in Second Language Acquisition*, 21, 109-148.
- Seidlhofer, B., & Widdoson, H. (1999). Coherence in summary: The content of appropriated discourse. In W. Bublitz, U. Lenk, & E. Ventola, (Eds.), *Coherence in spoken and writtendiscourse* (pp. 205-219). Amsterdam: John Benjamins. doi:10.1075/pbns.63.15sei
- Shehadeh, A. (2011). Effects and student perceptions of collaborative writing in L2. *Journal of Second Language Writing*, 20, 286-305.
- Shi, L. (1998). Effects of prewriting discussions on adult ESL students' compositions. *Journal of Second Language Writing*, 7(3), 319-345.
- Skehan, P. (1996). A framework for the implementation of task-based instruction. *Applied Linguistics*, 17, 38-62.
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: Oxford University Press.
- Skehan, P., & Foster, P. (1997). Task type and task processing conditions as influences on foreign language performance. *Language Teaching Research*, 1(3), 185-211. doi: 10.1177/136216889700100302.
- Storch, N. (2005). Collaborative writing: Product, process, and students' reflections. *Journal of Second Language Writing*, 14(3), 153-173.
- Storch, N., & Wigglesworth, G. (2007). Writing tasks: The effects of collaboration. In M. d. P. García Mayo (Ed.), *Investigating tasks in formal language learning* (pp. 157-177). Clevedon, UK: Multilingual Matters.
- Storch, N., & Aldosari, A. (2010). Learners' use of first language (Arabic) in pair work in an EFL class. *Language Teaching Research*, 14(4), 355-375.
- Storch, N. (2011). Collaborative writing in L2 contexts: Processes, outcomes, and future directions. *Annual Review of Applied Linguistics*, 31, 275-288.
- Storch, N., & Aldosari, A. (2013). Pairing learners in pair work activity. *Language Teaching Research*, 17(1), 31-48.
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97-114). Oxford: Oxford University Press.
- Swain, M. (2006). Linguaging, agency, and collaboration in advanced second language proficiency. In H. Byrnes (Ed.), *Advanced language learning: The contributions of Halliday and Vygotsky* (pp. 95-108). London, UK: Continuum.
- Swain, M. & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *Modern Language Journal* 82(3) 320-337.
- Sweigart, W. (1991). Classroom talk, knowledge development, and writing. *Research in the Teaching of English*, 25, 260-296.
- Tse, S. K., & Shum W. C. (2000). *Teaching Chinese language writing in secondary school: Theory and design*. Hong Kong: Hong Kong Education Department.
- Villamil, O. S., & de Guerrero, M. C. M. (1996). Peer revision in the L2 classroom: Social-cognitive activities, mediating strategies, and aspects of social behavior. *Journal of Second Language Writing*, 5, 51-75.
- Wells, G. (2000). Dialogic inquiry in education. Building on the legacy of Vygotsky. In C. Lee & P. Smagorinsky (Eds.), *Vygostkian perspectives on Literacy research. Constructing meaning through collaborative inquiry* (pp. 51-85). Cambridge, UK: Cambridge University Press.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. New York, NY: Cambridge University Press.
- Wertsch JV (2007). Mediation. In: *The Cambridge Companion to Vygotsky*, edited by Daniels, H., Cole, M. & Wertsch, A. Cambridge: Cambridge University Press. 178-192.
- Wigglesworth G and Storch N (2009). Pair versus individual writing: Effects on fluency, complexity and accuracy. *Language Testing* 26(3) 445-466.

- Xianwei, P. (2009). Effects of prewriting discussion on the language quality of argumentative writings. *CELEA Journal*, 32(5), 16-24.
- Yuan, F. & Ellis, R. (2003). The effects of pre-task planning and on-line planning on fluency, complexity, and accuracy in L2 monologic oral production. *Applied Linguistics*, 24 (1), 1-27.

Appendix 1

	Elements of Writing	Category/Rating Scale	Description
1	Organization, Introduction, Body, and Conclusion	20 – 18, 17 – 15, 14 – 12, 11 – 6, 5 – 1	Excellent to Good, Good to Adequate, Adequate to Fair, Unacceptable, Not college level work
2	Logical Development of ideas, Content	20 – 18, 17 – 15, 14 – 12, 11 – 6, 5 – 1	Excellent to Good, Good to Adequate, Adequate to Fair, Unacceptable, Not college level work
3	Grammar	20 – 18, 17 – 15, 14 – 12, 11 – 6, 5 – 1	Excellent to Good, Good to Adequate, Adequate to Fair, Unacceptable, Not college level work
4	Punctuation, Spelling, and Mechanics	20 – 18, 17 – 15, 14 – 12, 11 – 6, 5 – 1	Excellent to Good, Good to Adequate, Adequate to Fair, Unacceptable, Not college level work
5	Style and Quality of Expression	20 – 18, 17 – 15, 14 – 12, 11 – 6, 5 – 1	Excellent to Good, Good to Adequate, Adequate to Fair, Unacceptable, Not college level work

Analytic scale for rating composition tasks suggested by Brown and Bailey in H.D. Brown (2003: 244-245)

Appendix 2

Learners' perception of collaborative pre-writing discussions Questionnaire

1. Collaborative pre-writing discussions helped me to be conscious of their writing problems
strongly agree b. agree c. neither agree nor disagree d. strongly disagree e. disagree
2. I liked pre-writing activities especially discussions about the topic.
a. strongly agree b. agree c. neither agree nor disagree d. strongly disagree e. disagree
3. Using collaborative pre-writing discussions helped me to lower my stress while writing.
a. strongly agree b. agree c. neither agree nor disagree d. strongly disagree e. disagree
4. Collaborative pre-writing motivated me to do more writing.
a. strongly agree b. agree c. neither agree nor disagree d. strongly disagree e. disagree
5. Collaborative writing cultivated a sense of cooperation and acknowledgement.
a. strongly agree b. agree c. neither agree nor disagree d. strongly disagree e. disagree
6. The exchange of views helped me to write more carefully.
a. strongly agree b. agree c. neither agree nor disagree d. strongly disagree e. disagree
7. I have become more analytical and critical in my writing.
a. strongly agree b. agree c. neither agree nor disagree d. strongly disagree e. disagree