ATU PRESS

ISSUES IN LANGUAGE TEACHING (ILT)
VOL. 12, NO. 1, 33-66, June 2023
https://doi.org/10.22054/ilt.2023.66211.678 Document Type: Research Paper

The Effect of Conceptual Metaphor on Writing Creativity and Metacognitive Writing Awareness

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Received: March 10, 2022**; Accepted:** February 1, 2023

Abstract
The present paper examines the theory of conceptual metaphor, using the theoretical framework of the cognitive writing model to improve EFL learners' writing creativity and metacognitive writing awareness. To that end, 120 male and female EFL Bachelor-of-Arts (BA) students majoring in English language from Foreign Languages Center at Islamic Karaj Azad University in Iran voluntarily participated in this research study. The participants were randomly assigned into two equal groups, with the experimental group receiving the cognitive instruction and the control group the traditional instruction. Using a two-way analysis of co-variance (ANCOVA) procedure, the researchers assessed the posttest scores of both groups. The results of the analysis indicated that the experimental group significantly enhanced its scores in the posttest of metacognitive writing strategies and writing creativity compared to the control group. Findings suggest that writing is not drafting and rewriting prefabricated patterns, but it is a recursive and interactive process in which writers attempt to construct meaning and create original ideas using real-life experiences. Findings also imply that conceptual metaphors are powerful literary devices for improving EFL learners' idea generation, writing creativity, and metacognitive writing awareness which deserve to be taught at universities.

***Keywords*:** Idea generation, Metacognitive writing strategies, Writing strategies, Writing creativity

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INTRODUCTION

Writing, as an essential communication skill (Hyland, 2015) and the most challenging language skill to master (Taheri & Mashhadi Heidar, 2019), has a direct impact on language performance (Hyland, 2003). However, acquiring writing skills is argued to be a major challenge for most English language learners (Mohseni & Samadiyan, 2019). From the late 1970s onwards, the low level of writing skills of many English language learners prompted teachers to modify their instructional guidelines (Oral, 2012; Ungan, 2007). However, efforts on solving the grammatical and semantic structures led them to overlook the essential effect of cognitive factors on the students' writing performance (Ziaei et al., 2019).

Flower and Hayes (1980) proposed that writing is not just a selection of language options from a list of syntactic and lexical items stored in the writer's mind, but it involves a complex interaction between a wide variety of different sources. Flower and Hayes introduced a writing model that reflected the recursive nature of writing. Their model was based on the analysis of protocols collected from the thinking process of professional writers at the time of writing. Flower and Hayes provided a theoretical illustration of what was going on in the professional learners' mind and how their thoughts were revised, organized, and appeared on the paper (Galbraith, 2009)**.** The analysis revealed that professional writers were involved in three main processes, including planning, translating, and revising, which work on two key sources of information namely "task environment and long-term memory" (Galbraith, 2009, p. 49)**.**

Planning, according to Flower and Hayes (1981), is "internal representation of knowledge" (p. 372) that organizes information retrieved from memory and determines the purpose of the final product. In other words, planning is a process in which the writer determines goals and generates ideas. Translation is "putting ideas into visible language" (p. 373), where the writer determines how thoughts to be organized and expressed. Revision is "a thinking process" (p. 376) in which the writer evaluates his or her thoughts to

generate a set of relevant and acceptable ideas. Idea generation is thought to be the most important stage of the planning phase in which the author seeks to retrieve "relevant information from long-term memory" (372).

The present study is an empirical research on Flower and Hayes' (1981) writing model in which a special idea generation strategy was implemented in the planning stage, where the memory begins to discover ideas related to the subject (Berninger et al., 2009). Unlike Flower and Hayes' model, ideas, in the present study, are generated through a dynamic interaction between the student's conceptual comprehension and their real-life experiences (Kovecses, 2005), which form the framework of their text. However, ideas, in Flower and Hayes's model, are generated through immediate social and physical factors such as peer information, critics, the teacher or classroom context, and the text written so far (TWSF).

The study used conceptual metaphors (Lakoff & Johnson, 1980) as its task environment, introduced by Flower and Hayes (1980) for idea generation, which has received less attention compared to other aspects of cognitive processes (Berninger et al., 2009).

Applying conceptual mapping and defamiliarization techniques in the writing planning stage allowed the participants to make semantic deconstruction for creating novel ideas derived from real experiences. Using defamiliarization in writing, EFL learners can frees themselves from the constrains of fixed meanings and overcome "the challenge of getting ideas to flow", which is "a common problem facing many college writers" (Rao, 2007, p.12). According to (Rezaei & Marandi, 2020), due to the predominance of product-oriented writing at universities, the cognitive processes of writing have not been paid more attention. Students mostly perceive writing in terms of drafting; they very often feel frustrated in idea generation and thought processes (Bulqiyah et al., 2021). As Johnson (1992) pointed out, "meaning is grounded more or less directly in our bodily, physical, social and cultural experiences and then elaborated by structures of imagination, i.e., metaphor" (p. 347). Based on this, writing creativity and metacognitive awareness seem

to be best predicted and enhanced through conceptual metaphors in the planning stage of writing.

LITERATURE REVIEW

Conceptual Metaphor Theory

Lakoff and Johnson (1980) realized that "metaphor is pervasive in everyday life, not just in language but in thought and action" (p. 3). Their findings transformed the stylistic hypothesis of metaphor in which metaphor was considered an ornamental means aimed at reinforcing the aesthetic aspect of literary texts that were liable to decorative purposes into an intellectual process (Jensen, 2006 as cited in Hashemian & Fadaei, 2012). Lakoff and Johnson's direct challenge to the traditional approach gave rise to Conceptual Metaphor Theory (CMT) published in their seminal book *Metaphors We Live By* (1980). The new insight into metaphor brought about "three general kinds of conceptual metaphors," namely, "*structural, ontological, and orientational metaphors"* (Kovecses, 2010, p. 37).

Structural metaphors, according to Kovecses (2010), deal with organizing an abstract concept, distinguished as the source domain, with components of a concrete concept, known as the target domain, for clearer understanding. In conceptual metaphors TECHNOLOGY IS A MURDERER and LOVE IS A VICTIM, the structural components of the source domain (murderer and victim) are mapped onto the target domain (technology and love) so that the target domain will be explicitly understood. Conceptual metaphors allow us to create novel expressions which are neither poetic nor necessarily used by specialists. For example, technology has killed love.

Ontological metaphors are concerned with the perception of an abstract concept such as activity, an emotion, or an idea as a container or an entity (Lakoff & Johnson, 2003). For example, the conceptual metaphor INFLATION IS AN ENTITY gives language users a series of ideas to define physical properties to concepts, experiences, and processes (Lakoff & Johnson, 2003).

Orientation metaphors are abstract concepts given spatial orientation according to the spatial experiences of people (Kovecses, 2002). They are typically organized in interaction with space like up-down, inside-out, front-behind, shallow-deep, center-periphery, and so on (Lakoff & Jonson, 1980). For instance, the conceptual metaphors "HAPPY IS UP, SAD IS DOWN" are derived from the human body posture while he or she is happy or sad.

Conceptual Mapping

In the contemporary approach to metaphor, conceptual mapping goes beyond knowing how to discover the links between the various elements of a language. Conceptual mapping is an active learning strategy that teaches how to create ideas using critical thinking. Conceptual mapping is an invaluable combination of different ideas, thought processes, mental activities, and strategies that allow learners to disclose unknown patterns of information by constructing new structures (Kovecses, 2015).

Examining the effectiveness of concept mapping techniques on writing skills of a group of EFL learners in Iran, Mansoor and Rahimi (2011) found that the group receiving the treatment performed better in the posttest than the group receiving no intervention. In a similar study by Shakoori et al. (2017) on the effect of concept mapping strategy on writing achievement, findings showed that concept mapping techniques significantly enhanced learners' writing performance. Negari (2011), in another study, on the writing performance of sixty Iranian intermediate English learners found that teaching concept mapping strategy significantly improved students' writing skills.

Metacognitive Writing Strategy (MWS)

Metacognitive strategies as an integral part of self-regulated learning enable learners to monitor and control their cognition and develop self-regulation of the learning procedure (Hosseini, 2002; Sun & Zhang, 2022). As Diaz Larenas et al. (2017) noted, metacognitive writing strategies are concerned

with the learners' general skills and cognition which enable them to enhance their metacognitive knowledge, manage the process of learning, and track their development. Metacognitive knowledge assists learners to scheme, observe, and assess their outcomes (De Silva & Graham, 2015). In a recent study, Qin and Zhang (2019) concluded that writers with strong metacognitive knowledge plan the structure before writing, monitor the process during writing, evaluate their performance, and rethink other aspects after writing.

Analyzing the compositions produced by less and more skilled learners, Baker (2011) found that having metacognitive knowledge enables a learner to better plan, monitor and assess his/her own performance, whereas lack of metacognitive knowledge causes learners to focus more on the mechanical aspects of writing. Assessing the impact of cognitive strategy instruction on learners' writing skill development, Paris (2003) came up with a significant progress in the learners' posttest writing performance compared to their pretest. The results of a study conducted by Tabrizi and Rajaei (2016) on the effect of cognitive and metacognitive techniques on writing revealed that both strategies had a significant effect on improving students' writing skills.

Creative Writing

Creative writing is an activity that causes innovation in thinking and flourishing of writing talents (Qiangchun & Tingting, 2022). Using creativity in writing enables learners to generate novel ideas and various thoughts about a single topic (Demir, 2013). Creative writing is an innovative activity in which learners are taught to be analytical thinkers (Teng, 2019). Bilton and Sivasubramaniam (2009) noted that creative writing was developed to encourage learners to achieve self-regulation so that they could produce their own text without being apprehensive about writing or waiting for topics to be dictated by teachers. As Kaplan (2019) stated, creativity is essential for innovation, freshness, and flexibility.

Examining the relationship between various factors of working memory and the planning stage of writing, Galbraith et al. (2005) come up with a positive and significant correlation between text quality and different elements of planning such as idea generation and rhetorical groupings of content. In another study, seeking to discover the relationship between creative writing activities and the EFL learners' writing achievement, Tok and Kandem (2015) found that creativity-related exercises significantly improved writing performance of the seventh-grade English language learners. The results of a similar study conducted by Mohammed (2019) on the relationship between creative writing multi-tasks and the English learners' creative writing competence showed that using multifunctional activities of creativity in writing led to the development of learners' creative writing competence in fictional as well as nonfictional essays.

Literature review suggests that creativity in writing has a significant contribution to the development of writing skill and is an essential tool for expressing feelings, thoughts, emotions, and experiences. Therefore, creative writing strategy can be an alternative way to encourage EFL learners to use their linguistic capabilities, manipulate expressions in interesting ways, and become autonomous writers.

PURPOSE OF THE STUDY

The primary goal of the study was to identify any significant changes occurring in the posttest scores of EFL learners' metacognitive writing strategies and writing creativity using a quasi-experimental design with pre and posttest. However, the main purpose of this study was to investigate the practical effectiveness of conceptual metaphors as a task environment in improving metacognitive writing awareness and creativity of the English language learners so that they could develop idea generation during the writing process.

Developing the metacognitive awareness of English language learners through concept mapping, researchers aimed to enable them to create original, flexible, fluent, and elaborated ideas. What this study has brought to this partnership is a deeper perception of conceptual metaphors and the mental process that takes place when there is an abstract understanding of an objective perspective. Perception of one concept with the structure of another concept might help EFL learners to enhance their metacognitive awareness and realize how to plan, organize, and generate original ideas. The researchers, therefore, used the following research questions to achieve the goals set in the study:

1) Is there a significant difference in the writing creativity post-test scores for the Iranian male and female advanced EFL learners who received the traditional instruction and those who benefited from the cognitive instruction?
2) Is there a significant difference in the metacognitive writing strategies post-test scores for the Iranian male and female advanced EFL learners who received the traditional instruction and those who benefited from the cognitive instruction?

METHOD

Participants

One hundred and twenty undergraduate (BA) students between the ages of 22 and 35 participated in this research. The students, all of whom majored in EFL, were chosen from the Foreign Languages Department at Islamic Karaj Azad University in Iran. The participants were selected according to their results obtained on a placement test developed by Macmillan (2012). All participants were randomly selected to participate in this study, although there were few outliers, the researchers decided to retain the cases because the trimmed mean and mean values were not significantly different in this study. The participants were all Persian native speakers, and came from different

cities of two neighboring provinces of Iran, namely Tehran and Alborz. They were mostly of similar social and educational background, and generally keen to improve their English writing skills. To monitor the within-group variance and control males and females' test results separately, the study kept the proportion of males and females in equal balance for each group explained clearly in the section of procedure.

Raters

Three trained raters, who had doctoral degrees in TEFL and each one had at least a 5-year experience teaching at university, were asked to assess the candidates' written essays using the analytical rubric developed by Crossley et al. (2016).

Procedure

In the first step, to assess the English knowledge of candidates and to select a homogeneous sample group, an English proficiency test (EPT) was administered. In the second step, after classifying the sample into two equal groups consisting of male and female participants, two pretests including writing creativity and metacognitive writing awareness were administered. In the third step, two special training courses were held in which the first group benefited from traditional training and the second group enjoyed cognitive training. Finally, both groups took part in two posttests of writing creativity and metacognitive writing awareness.

To have a homogeneous sample group on English Language Proficiency, Macmillan placement test (2012) was used. The test, which was a speed test, consisted of 50 grammar and vocabulary questions that scored one point for each correct answer. The first 40 items assessed the participants' grammar knowledge and the last 10 assessed their vocabulary knowledge. The entire test lasted 25 minutes and the scoring was done by the researchers. Having administrated the language proficiency test, the researchers used a

randomizer software (Urbaniak & Plous, 2013) to assign the homogeneous sample into two equal groups of male and female participants.

To assess the candidates' writing creativity, a valid analytical rubric (see appendix A) developed by Crossley et al. (2016) based on Torrance Test of Creative Thinking (TTCT) (1981a) was used. TTCT is thought to be one of the best instruments for evaluating creativity in writing (Rababah et al., 2013; Rababah, 2018). The scales completely overlap with theories of planning in the cognitive approach and are used for evaluation of idea generation (Cheung et al., 2001; Majid et al., 2003). As Richard and Schmidt (2002) pointed out, idea generation technique is one of the most practical theories of creativity, which look for possible ways to generate different ideas. The rubric assesses four scales of idea generation, namely, *fluency, originality, flexibility*, and *elaboration* introduced as the main components of creativity in TTCT (Bart et al., 2017) and two sub-scales including *cognitive* and *linguistic styles*.

Based on the rubric, fluency refers to the ability of the learner to generate novel ideas, flexibility is concerned with the ability of the learner to come up with diversity of ideas, originality has to do with the ability of the learner to generate distinct and personal ideas and elaboration is concerned with the imagination and exposition of ideas. Cognitive style has to do with metaphor and simile, while linguistic style is concerned with word play (Al-Meida et al., 2008; Crossley et al., 2016; Rababah, 2013).

To measure the candidates' writing metacognitive awareness, a metacognitive writing questionnaire developed, validated, and proved reliable by O'Neil and Abedi (1996) for assessing academic achievement was utilized (see Appendix B). The validity of the questionnaire relies strongly on construct and content validity techniques. According to the construct validity approach, the following predictions have been made about state metacognition: (a) Planning, self-examination, cognitive strategies and awareness have a positive relationship. (b) Metacognitive state predicts success more than metacognitive trait. (c) Higher levels of state metacognition lead to better academic performance. (d) higher levels of state

metacognition will be exhibited in more difficult tasks; (e) Individuals with higher levels of education show higher levels of government metacognition (O'Neil & Abedi, 1996).

The questionnaire consisted of 20 close-ended statements in a 5-point Likert scale that from almost never being true to me to almost always being true to me. The scale measured the participants' metacognitive strategies pertinent to their knowledge of self-checking, planning, awareness, and cognitive strategies. According to O'Neil and Abedi (1996), reliability levels for full-state subscales ranged from 0.77 for self-test to 0.81 for cognitive strategy.

Data Collection Procedure

Research data was collected using the instruments applied as pre and posttests. Determining whether the sample data was drawn from a normally distributed population for dividing them randomly into two equal groups, test of normality was used. Both groups were asked to participate in writing creativity and metacognitive writing strategies tests.

To collect data on the candidates' writing metacognitive awareness, the researchers asked the participants to answer a questionnaire developed by O'Neil and Abedi (1996) within 5 minutes. To have a retrospective state instruction, the participants were asked to appear for the respective test immediately after the writing creativity test. The reason, according to O'Neil and Abedi (1996), was to allow the researchers to collect the data representing what the candidates did during the writing process for a more accurate assessment. The highest score for the metacognitive strategy was 100 and the lowest score was 20.

To collect data on writing creativity, the researchers used three trained raters, who had doctoral degree in TEFL and each one had at least a 5-year teaching experience at university. The raters were asked to assess the candidates' written essays using the analytical rubric developed by Crossley et al. (2016). The rubric assesses six analytical items corresponding to a 6-

point Likert scale that ranged from 1 (minimum) to 6 (maximum). Based on the rubric, *fluency* refers to the ability of the learner to generate novel ideas, *flexibility* is concerned with the ability of the learner to come up with diversity of ideas, *originality* has to do with the ability of the learner to generate distinct and personal ideas and *elaboration* is concerned with the imagination and exposition of ideas. Cognitive style has to do with metaphor and simile, while linguistic style is concerned with word play (Crossley et al., 2016).

Data Analysis

The researchers analyzed the data using the Statistical Package for Social Sciences (SPSS 25). To calculate the scores obtained in the pre and posttests and answer the questions proposed earlier, statistical and logical techniques were used systematically as follows:

The normality of the data was first verified using Kolmogorov-Smirnov (K-S) and Shapiro-Wilk statistics (see Appendix C). Then, feeding data into a two-way analysis of covariance, the researchers analyzed and interpreted the scores of writing creativity and metacognitive writing strategies obtained by the participants in their pre and posttests. Two-way analysis of covariance (ANCOVA) procedure was employed because each of the questions had two independent variables, a dependent variable and a covariate. According to Pallant (2016), "two-way ANCOVA involves two independent categorical variables, one dependent continuous variable, and one or more continuous covariates" (p. 250). In addition, "ANCOVA increases the power of an *F* test for a main effect or interaction by removing predictable variance associated with CV(s) from the error term" (Tabachnick & Fidell, 2013, p. 197). Using the intra-class correlation coefficient (ICC), the researchers estimated the reliability coefficients between the evaluators.

RESULTS

Difference in the Writing Creativity Posttest Scores for the Male and Female Advanced EFL

Analyzing and interpreting the results obtained by three competent raters from the writing creativity tests, the researchers examined the main effect of interventions on the writing creativity utilized by the EFL learners in their writing process. Controlling for the pretest scores, the researchers examined the effects of interventions on the writing creativity of both male and female participants under the study so that they could distinguish the existence of any interaction effects of the study as well.

Scatterplots and the regression line slops in Figure 1 display a positive relationship between pre and posttest for both experimental groups. Thus, the assumption of linear relationship was not violated.

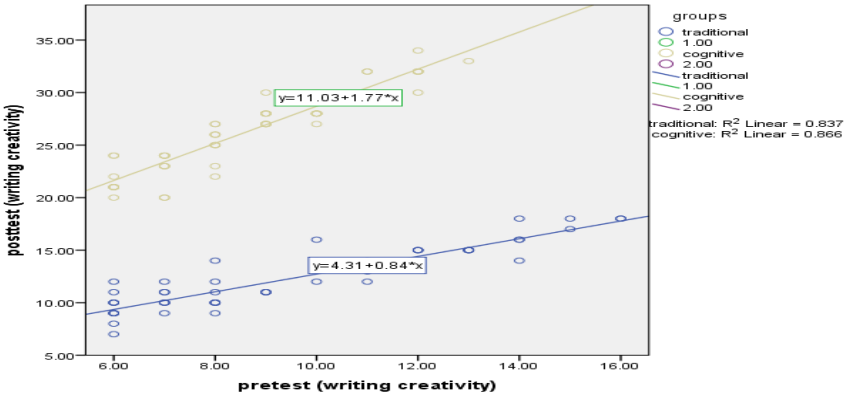

Figure 1: Linearity Assumption for Creative Writing

Table 1 indicates that neither the main effect of gender, F (1, 115) = .230, p = .632, $ŋp^2$= .002 nor the interaction between gender and method, F (1, 115) = 2.090, p = .018, $ŋp^2$ = .018 is significant. However, the predicted main effect of method is shown significant with large effect size F (1, 115) = 2516.3, p < .001, $ŋp^2$ = .956. Based on Cohen's (1988) guidelines, it explains approximately 96% of the variance. Whereas the effect size for sex is displayed extremely small ($ŋ^2$ =.002). Table 1 shows that our covariate, F (1, 115) = 330.07, p < .001, $ŋp^2$= .742, is statistically significant and explains almost 74 percent of the variance in the dependent continuous variable.

Table 1: Tests of Between-Subjects Effects: Posttest Writing Creativity

Source	Df	Mean Square	F	Sig.	Partial Eta Squared
Pretest	1	870.535	330.076	.000	.742
Methods	1	6636.428	2516.300	.000	.956
Sex	1	.607	.230	.632	.002
Methods * Sex	1	5.512	2.090	.151	.018

As shown in Table 2, both groups had approximately the same average score for creative writing pretest, and in practice, learners managed to achieve the mean score of 9.34 in the pretest. Although the mean posttest score improved compared to the pretest for both groups, this change was not significant for the traditional group. The table shows that the mean score of the traditional group in the posttest is approximately 12 compared to 9.50 in the pretest, while the mean score of the cognitive group in the posttest is 27 versus 9.50 in the pretest.

Table 2: The Mean Scores of the Posttest Writing Creativity

			95% Confidence Interval	
Groups	Mean	Std. Error	Lower Bound	Upper Bound
Traditional	12.037a	.212	11.617	12.456
Cognitive	27.213a	.212	26.794	27.633

Note. Pretest mean (writing creativity) = 9.3417

Figure 2 clearly shows a significant change in the mean posttest score for the cognitive group compared to the pretest, while the changes for the traditional group are not significant for either male or female students.

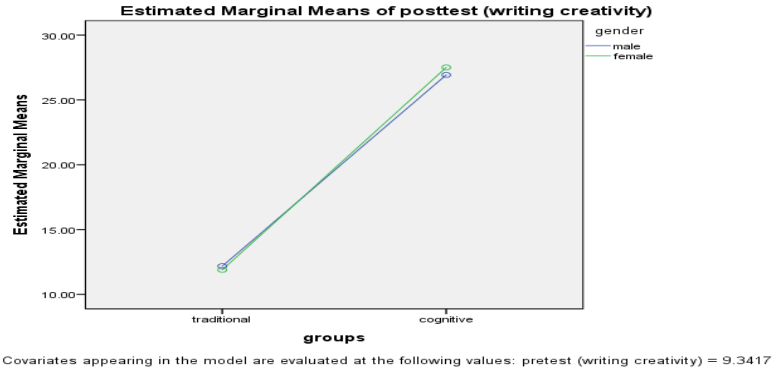

Figure 2: Relationship Between Pre and Posttest Writing Creativity Results

Difference in the Metacognitive Writing Strategies in the Posttest Scores for the Male and Female Advanced EFL Learners

Analyzing and interpreting the results obtained from the pre and posttest metacognitive writing strategy, the researchers investigated the main effect of interventions on the metacognitive processing used by the Iranian EFL learners during their writing process. The researchers were also interested in exploring the effects of interventions on the metacognitive awareness of both male and female participants under study so that they could distinguish the existence of any interaction effects of the study.

As displayed in Figure 2, the assumption of linearity is not violated because there is a positive linear relationship between posttest and pretest in both groups.

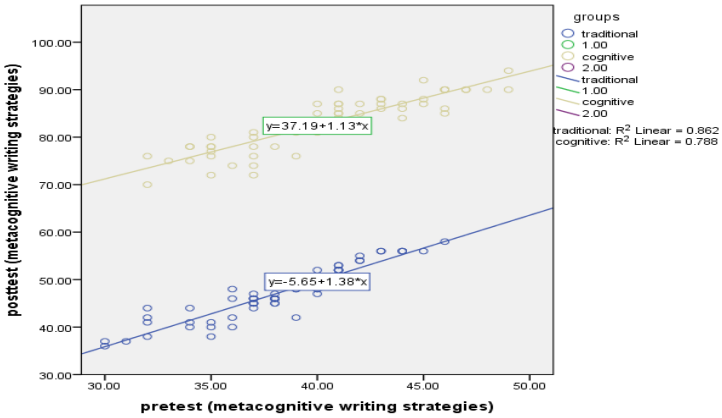

Figure 2
Linearity

Assumption for Metacognitive Writing Strategies

Table 3 indicates that the predicted main effect of method is significant with large effect size, F (1, 115) = 5197.1, $p < .001$, ηp^2=.97.8, while the predicted main effect of sex, F (1, 115) = 3.76, p = .055, ηp^2=.032, is not significant. Moreover, the effect size for sex was very small. The value of the effect size for sex ($\eta^2 = 0.32$) indicates insignificant effect size based on Cohen's 1988 guidelines. However, this value for the methods ($\eta^2 = 0.978$) displays a large effect size. The interaction between gender and method is also not significant, F(1, 115) = .043, p = .836, $\eta p^2 < .001$. The Sig value of the interaction effect (p = 0.836) indicates that the male and female participants did not answer differently to the interventions. Table 5 indicated that the influence of covariate, F (1, 115) = 510.44, $p < .001$, ηp^2 =.816 was significant.

Table 3: Tests of Between – Subjects Effects: (Metacognitive Writing Strategies)

Source	Df	Mean Square	F	Sig	Partial Eta Squared
Pretest	1	3019.196	510.446	.000	.816
Methods	1	30739.932	5197.104	.000	.978
Sex	1	22.242	3.760	.055	.032
Method * Sex	1	.254	.043	.836	.000

Table 4 shows that the mean posttest score improved compared to the pretest for both groups. However, this change was not significant for the traditional group. The table indicated that mean score of the traditional group at posttest increased to 48.50 compared to 39. 24 at pretest, while mean score of the cognitive group at posttest increased significantly to 81.59 compared to 39.24 at pretest.

Table 4: Mean Scores in Posttest Metacognitive Writing Strategies

			95% Confidence Interval	
Groups	Mean	Std. Error	Lower Bound	Upper Bound
Traditional	48.501a	.319	47.869	49.134
Cognitive	81.599a	.319	80.966	82.231

Note. Pretest (metacognitive writing strategies) = 39.2417.

Figure 3 displays no interaction effect between method and gender as two independent variables. The results for male and female participants in both groups had been approximately the same.

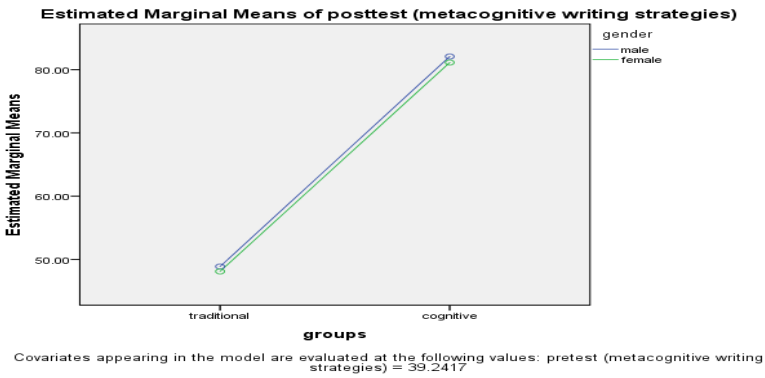

Figure 4 Relationship between Pretest and Posttest Metacognitive Writing Strategies

DISCUSSION

Detailed analysis of the findings using SPSS (version 25) revealed the effect of interventions on the participants' writing creativity and metacognitive writing strategies. The analysis clearly revealed the significant impact of conceptual metaphors on writing creativity and metacognitive writing awareness.

Entering the average human ratings obtained from the six analytical cases of the rubric into a two-way ANCOVA statistic, the researchers found a significant difference between the mean scores of the two groups. The results indicated that the essays written by the cognitive group were scored significantly higher in terms of originality, elaboration, fluency, and flexibility of the ideas as well as metaphor and word play than the traditional group. Findings revealed a link between creativity and conceptual metaphors produced by the candidates in the cognitive group. The results revealed that the cognitive group was able to create the main patterns of conceptual expression through the interaction between their conceptual system and their experiences, while the traditional group adhered to existing patterns and ideas.

To realize the effect of conceptual metaphors on writing creativity empirically, an excerpt produced by a female student in the cognitive group in response to the following IELTS writing question was analyzed.

> *To improve the quality of his life, man invited technology into his simple party. A great number of guests are not going to accept the newcomer and insisting on dismissing the stranger from their friendly circle. They believe that technology has come to disturb the serenity of their party with his silly dance. They believe that technology is drying up the intertwined roots of ethic and culture by imposing its hegemony. Opening many immoral paths towards people, technology invite them to follow his guidelines. I agree with them and think technology has come to change the harmony of the world.*

Flexing her world views and adapting them to the views of others, the writer was able to share her experiences clearly with her readers. Manipulating her experiences into flexible and sophisticated metaphorical expressions, she managed to generate original, flexible, fluent, and elaborated ideas such as TECHNOLOGY IS AN UNINVITED GUEST; WORLD IS THE SCENE OF A PARTY; PEOPLE ARE GUEST; WORLD IS HOST; LIFE IS MUSIC; And TECHNOLOGY IS AN INTRUDER. The writer's image schemata allowed her to discover the conceptual metaphors existing behind the text. Such hermeneutic learning demonstrates the heuristic function of conceptual metaphors, and the concepts explored are perfect examples of the creativity of conceptual metaphors. Reflecting on the expressions produced in this text, we can definitely realize the aesthetic and rhetorical nature of conceptual metaphors which have given a native-like flavour to the text.

The structural conceptual metaphor TECHNOLOGY IS A DICTATOR entailed other conceptual metaphors such as LIFE IS AN ENTITY; ETHIC AND CULTURE ARE TREES; PEOPLE ARE SERVANTS, which have no relation to each other outside of this context. These entailments represent the creative nature of conceptual metaphors and meaningful learning process. According to Novak (1998), meaningful learning leads to creative achievements in that "a creative person sees how to make the right connections between concepts in two domains of knowledge that were previously regarded as unrelated, or in some case, even contradictory" (p.78). Defamiliarization, although indicative of a semantic deconstruction, is responsible for constructing the new meaning and explicitness of the text as well.

The results are consistent with the findings presented by Fraser (2006), who studied the creative nature of metaphorical expressions and concluded that learners should be given opportunity to create their own metaphorical expressions. Producing original and elaborated expressions was empirical evidence for the theory of creativity proposed by Amabile (2013), who defined creativity as generating novel ideas different from those created by others. The result also confirms the notion of internal and external

creativity suggested by Kovecses (2005). Internal creativity, according to Kovecses (2005), involves the cognitive process of expanding, developing, and integrating conceptual components in the source domain for understanding the target, while external creativity involves cases in which the target domain receives new and additional elements of the source domain in the conceptualization process.

The assessment results showed that the essays containing a large number of conceptual metaphors were scored higher in terms of *flexibility* and *fluency*, as well. This finding is consistent with the outcomes of the study done by Crossley et al. (2016) on idea generation. The results also verified the outcomes of the research conducted by Hansen et al. (2011), who concluded that using novel metaphors enhanced creativity in writing, and also those of Sanchez et al. (2013), who identified a direct relationship between recognition of metaphors and creative thinking process.

The results revealed that the cognitive group was successful in creating a wide range of novel ideas out of a single concept (technology) and represent it from different points of view. This finding is consistent with the notion of creativity proposed by Rababah et al. (2013) and outcomes of the study done by Cakir (2016) on flexibility and diversity of conceptual metaphors. Metaphorical expressions entailed from the central concept 'TECHNOLOGY IS A STRANGER' clearly imply creativity and fluency of the ideas. This finding is supported by Wechsler (2006), who argued that making connections through metaphor is the most important characteristic of creativity.

The analysis of ANCOVA procedure suggested that the cognitive group scored much higher in the posttest of metacognitive writing awareness than the traditional group. Changes in posttest scores of writing creativity showed that participants in the cognitive group could improve their results using metacognitive strategies. This finding confirms the outcome of the study conducted by Ridhuan et al. (2011) on writing strategy. This finding is also in line with the outcomes of the researchers (Gan et al., 2004; Chien,

2012; Lai, 2009), who concluded that successful students use metacognitive strategies effectively to improve their writing proficiency.

Conducting a retrospective metacognitive test, the researchers found that raising learners' awareness of metacognitive strategies could help them to overcome the writing challenges. Therefore, the success of learners in the cognitive group can be attributed to the fact that metacognitive strategy provided them with a meaningful structure, which enabled them to generate novel ideas that had never been heard or expressed by others. This finding is supported by many recent studies (e.g., Flavell, 2016; Gupta & Woldemariam, 2011; Schoonen et al., 2009; Yanyan, 2010), who reported that there is a direct relationship between metacognitive awareness and writing proficiency.

The analysis of the essays revealed that the cognitive group had a clearer understanding of the planning, revising, and transferring strategies than the traditional group. None of the participants in the cognitive group left their essays incomplete. This finding is consistent with Baker (2011), who found that having metacognitive knowledge enables learners to better plan, monitor, and evaluate their own performances, whereas less skilled writers focused mostly on grammar and mechanical aspects of writing.

Raising learners' metacognitive awareness shaped their understanding of what they had already experienced and perceived. These findings are consistent with those of previous researchers (e.g., Azevedo & witherspoon, 2009; Veenman et al., 2006), who have reported that self-regulation derived from metacognitive awareness helps students to communicate their thought, knowledge, and strategies across the context.

The results of ANCOVA analysis also revealed no interaction between male and female participants. Although females performed better than males in both groups, the difference proved negligible. The analysis of the results showed that male cognitive functions were comparable to female cognitive functions. This might be due to the similar experiences that male and female students acquired about the world around them. Since our experience is the main basis for the formation of conceptual metaphor,

understanding conceptual metaphors can be equal for male and female participants. In addition, experiences are essentially understandable as well as communicable for the members of a community who inherit the same culture. Thus, the participants' conceptual mapping and schema structure could be almost identical for male and female students structuralizing one concept in terms of daily experiences. This finding supports the finding of Hamedneh and Ayasrah (2010), who did not find any differences in creative thinking skills across gender.

CONCLUSION AND IMPLICATIONS

Findings suggest that creativity in writing is not a linear process of drafting and rewriting prefabricated patterns. The results provide empirical evidence for the theory of the Flower and Hayes model (1980), which shows that writing is not merely the transmission of default ideas, but the issue of creating or discovering ideas that should be reflected in the paper.

Using semantic deconstruction and defamiliarization techniques instead of relying solely on retrieving the information stored in long-term memory, the cognitive group was able to create a coherent and explicit relationship between two different areas of experience and come up with new ideas that had not yet been used by others. The results demonstrated that using conceptual metaphors contributes to the significant improvement in the ability of EFL learners to generate novel ideas and improve the quality of their products. Conceptual metaphors provide EFL learners with a depth realization of the relationship between their conceptual scheme and natural experiences that form their schemas.

Idea generation, which was predicted in this study, contributes significantly to improving creativity in writing. Accordingly, one of the most important implications of this study can be attributed to theories of creativity, especially idea generation. Another important implication of the study can be attributed to the acquisition of native-like proficiency using conceptual metaphors. Findings show that enhancing metacognitive awareness helps

EFL learners to activate prior experiences gained in real-life situations and link them to related content schemata to create native-like metaphorical expressions. Raising EFL learners' metacognitive awareness shapes their perception of what they have already experienced, empower their autonomy, free their minds from rational restraints, and allow them to create their own metaphorical expressions. Accordingly, to generate native-like expressions, EFL teachers are recommended to enhance their students' metacognitive awareness using conceptual mapping and defamiliarization techniques.

It can be concluded that acquiring native-like skills in writing requires increasing metacognitive awareness of EFL learners. As Boers et al. (2006) put it, the ability to use metaphorical expressions is one of the main characteristics of mastery of high language proficiency. English writing teachers can, therefore, address the model to help English students to improve their skill in producing rhetorical literary texts which are highly creative and communicative. Teaching conceptual mapping strategy as a creative tool for generating novel ideas, EFL writing teachers are suggested to encourage creative writing with literary thinking for generating novel utterances that have never written or spoken by anybody else.

Conceptual metaphors are meaning-making resources that make a pragmatic interaction between utterances and the context. Constructing meaning using defamiliarization as a powerful strategy is a practical training in creativity and aesthetic experience in writing, which is overlooked among non-natives due to the difficulty and complexity of the writing task. EFL writing teachers can get their students to look through a different type of lens for objects and entities and think more about the world, experiences, and culture to explore the link exists between them for meaning construction, creativity, and aestheticism.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendixes

Appendix A: Analytical rating scale for assessing creativity (Crossley et al., 2016)
Read each essay carefully and then assign a score on each of the points below. For the following evaluations, you will need to use a grading scale between 1 (minimum) and 6 (maximum).

We present here a description of the score as a guide using the example of *does not meet the set criterion in any way* versus *meets the set criterion in every way*. For example, a grade of 1 would relate to not meeting the criterion in any way, and a grade of 4 would relate to somewhat meeting the criterion. The distance between each grade (e.g., 1-2, 3-4, 4-5) should be considered equal. Thus, a grade of 5 (*meets the criterion*) is as far above a grade of 4 (*somewhat meets the criterion*) as a grade of 2 (*does not meet the criterion*) is above a grade of 1 (*does not meet the criterion in any way*).

Score	Definition
1	Does not meet the criterion in any way
2	Does not meet the criterion
3	Almost meets the criterion but not quite
4	Meets the criterion but only just

5	Meets the criterion
6	Meets the criterion in every way

Part	Score
1. Ideas	
1.1 Fluency The essay contains many unique ideas within the essay.	1 2 3 4 5 6
1.2 Flexibility The essay contains a variety of different ideas (e.g., many different categories of ideas).	1 2 3 4 5 6
1.3 Originality The essay contains ideas that are unique across essays.	1 2 3 4 5 6
1.4 Elaboration The essay includes information that expands on the main idea(s) contained in the essay.	1 2 3 4 5 6
2. Style	
2.1 Metaphor & Simile (cognitive style) The essay involves original comparisons that construe entities outside of their content domain(s).	1 2 3 4 5 6
2.2 Word Play (linguistic style) The essay includes the use of sounds, meanings, or forms of words that are unexpected or original.	1 2 3 4 5 6
TOTAL	

Appendix B: The Metacognitive Writing Strategy Questionnaire O'Neil and Abedi (1996)

	Statements	Almost never	Usually not true of me	Somewhat true of me	Usually true of me	Almost always

		true of me				true of me
1	I was aware of my own thinking during writing					
2	I checked my work while I was doing it					
3	I attempted to discover the main ideas in the writing question.					
4	I tried to understand the goal of the writing questions before I attempted to answer.					
5	I was aware of which thinking technique or strategy to use and when to use it.					
6	I corrected my mistakes.					
7	I asked myself how the writing questions related to what I already knew.					

8	I tried to determine what the writing required.					
9	I was aware of the need to plan my course of action.					
10	I almost always knew how much of the writing I had left to complete.					
11	I thought through the meaning of the writing questions before I began to answer them.					
12	I made sure I understood just what had to be done and how to do it.					
13	I was aware of my ongoing thinking processes.					
14	I kept track of my progress and, if necessary, I changed my techniques or strategies.					

15	I used multiple thinking techniques or strategies to solve the writing question.					
16	I determined how to solve the writing question.					
17	I was aware of my trying to understand the writing question before I attempted to solve them.					
18	I checked my accuracy as I progressed through the writing.					
19	I selected and organized relevant information to solve the writing question.					
20	I tried to understand the writing question before I attempted to solve it.					
TOTAL						

Scales Items

_ _

Awareness 1, 5, 9, 13, 17
Cognitive Strategy 3, 7, 11, 15, 19
Planning 4, 8, 12, 16, 20
Self-Checking 2, 6, 10, 14, 18

Appendix C:

Test of Normality of the Distribution of Scores

Kolmogorov-Smirnov			Shapiro-Wilk		
Statistic	Df	Sig.	Statistic	Df	Sig.
.072	120	.197	.988	120	.392