Teaching English Language, Vol. 15, No. 1, Winter & Spring 2021, pp. 77-106

Teaching English Language Journal
ISSN: 2538-5488 – E-ISSN: 2538-547X – http://tel.journal.org
© 2021 – Published by Teaching English Language and Literature Society of Iran

Please cite this paper as follows:
Vadipoor, G., Shabani, M. B., & Esfandiari, R. (2021). The implementation of conceptual metaphor as a cognitive solution to English language writing challenges: the effects on writing proficiency and apprehension. *Teaching English Language, 15*(1), 77-106. https://doi.org/ 10.22132/TEL.2021.131257

Research Paper

The Implementation of Conceptual Metaphor as a Cognitive Solution to English Language Writing Challenges: The Effects on Writing Proficiency and Apprehension

Ghasem Vadipoor
PhD candidate, Department of English Language, Faculty of Humanities, Imam Khomeini International University, Qazvin, Iran

Mohammad Bagher Shabani[1]
Assistant Professor, Department of English Language, Faculty of Humanities, Imam Khomeini International University, Qazvin, Iran

Rajab Esfandiari
Associate Professor, Department of English Language, Faculty of Humanities, Imam Khomeini International University, Qazvin, Iran

Abstract

This study examined conceptual metaphor theory lunched by Lakoff and Johnson (1980) within a cognitive writing framework proposed by Flower and Hayes (1980). The main objectives of the study were improving Iranian EFL learners' writing proficiency, reducing their apprehension of English language writing, and moving from the traditional model of writing to the cognitive one through establishing an interaction between the learner's conceptual system and the natural experiences that form the framework of a text. To do that, a total of 120 EFL Bachelor-of-Arts (BA) students whose age ranged from 22 to 35 volunteered to participate in the study. The

[1] Corresponding author: mshabani@hum.ikiu.ac.ir

participants were first divided into two equal groups and then took part in particular training programs entitled traditional and cognitive writing courses. Using a two-way ANCOVA, the researchers, then, compared and evaluated the posttest results of both groups. The results of analysis revealed that the cognitive group experienced a remarkable growth in their posttest scores compared to the traditional one. The results indicated a fundamental change in the writing style for the cognitive group, their success in moving towards native-like writing proficiency, and a significant reduction in their apprehension of writing in English language. Using conceptual metaphors in writing provides teachers with feedback to incorporate idea generation, meaning construction and rhetorical writing in the writing courses. Findings suggest that conceptual metaphors may be worthy of teaching at universities as an effective tool in solving writing challenges, in particular apprehension of weakness in idea development.

***Keywords*:** Process Approach, Cognitive Writing Model, Conceptual Metaphor Theory, Writing Apprehension

Received: December 19, 2020
Accepted: May 19, 2021

1. Introduction

Writing as a problem-solving process is not a simple skill (Galbraith & Baaijen, 2018). By the late 1970s, a widespread decline in students' writing skill led teachers to turn their attention from product-based to process-based activities (Oral, 2012; Ungan, 2007). Many researchers (Hamer, 2004; Hyland, 2003) found that writing is no longer a simple linear activity viewed in the product approach, rather a complex set of recursive processes. The recursive nature of writing suggested a process in which the writer moves around the steps to prewrite, draft, revise and edit the text (Belbase, 2012).

In 1980, seeking to find a method to reflect the recursive nature of writing, Flower and Hayes (1980) came up with three key dimensions of writing activity including *the task environment, long-term memory, and writing process*. Focusing on the performance of professional writers during their writing activity, they found that there are three main processes, namely

planning, translating, and reviewing which operate upon the task environment at any moment in the minds of writers. Analyzing the thinking-aloud protocol collected through verbalizing the professional writers, Flower and Hayes (1980) perceived writing as a problem-solving activity through which writers communicate their thoughts, emotions, and experiences. Their investigation provided a *theoretical explanation* of how a writer's thoughts are admittedly revised, organized, and transferred into the text (Galbraith, 2009).

This study followed Flower and Hayes' cognitive model (1980) particularly in the planning phase of writing, where the memory probe initiates to explore the relevant ideas in relation to the topic (Berninger et al., 2009). However, idea generation, in the present study, is concerned with a dynamic interaction between the learners' conceptual system and the world out of his/her body (Kovecses, 2005). This study applied conceptual metaphors as extra linguistic factors to shape the task environment distinguished by Flower and Hayes (1980). Flower and Hayes (1980) distinguished the task environment as the immediate social and physical factors that influence the writing process. Accordingly, taking a full advantage of conceptual metaphors proposed by Lakoff and Johnson (1980) as social and physical factors for the purpose of idea generation, the study aimed to make a departure from the traditional model of writing to the cognitive one, reduce the EFL learners' apprehension about writing in English, and enable them to generate novel ideas from the external sources formed by their own experiences.

1.1 Purpose of the Study

Writing as a core skill needs to be mastered by students. However, "the problems arise when writers attempt to map language onto their own

thoughts and feeling" **(**Deane, Quinlan, Odendahl, Welsh, & Bivens-Tatum**,** 2008, p. 3). Students' reliance on product-oriented approach and their neglect in producing a text of their own are the reasons that prevent them from achieving an effective writing proficiency (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). Accordingly, lack of Strategic Writing Skills (SWSs) or proficiency seems to be the major problem of EFL learners. Schilperoord (2002) postulated SWSs as a series of significant steps consisting of generating idea, making plan, evaluation, and switching back and forth between the steps that happen in the mind of writers. Many studies also indicate that, due to complicated nature of writing, most EFL learners, irrespective of their level, are reluctant to perform writing task (Al-Shboul & Huwari, 2005; Erkan & Saban, 2011; Gilmore, 2009; Kara, 2013). Such a tendency seems to stem from the students' reliance on traditional methods (Stapa & Abdul-Majid, 2009).

The first serious challenge that EFL learners are grappling with can be seen in their cognitive factors. Cognitive factors, which are the pivotal dimensions of the learners' disposition, have to do with such variables as the thinking process, strategy, ability, skill, and knowledge (Piazza & Siebert, 2008). The more ability, skill, and knowledge students have for fulfilling a particular activity, the more interest they will show in their tasks. However, over the past decades, the domination of the traditional approach has extinguished EFL learners' potential cognitive factors. They are mostly encouraged to imitate a model text structured and designed by their instructors (Gabrielatos, 2002). Accordingly, creativity, in particular idea generation, never occurs in students' writing because of strict rules and imitation of written models.

The second challenge that hinders learners' success in writing is related to their affective factors (Hyland, 2003; Pajares, 2003). Affective factors have

to do with the variables such as apprehension, motivation, self-efficacy, self-esteem, attitude, and so on (Piazza & Siebert, 2008). Writing apprehension, among them, is thought as one of the most deterrent factors that prevent students from completing their writing task (Ahrens, Meyers, Irlbeck, Burris, & Roach, 2016). Writing apprehension, which stems from the students' negative experience, their incompetent feeling about writing (Zorbaz, 2011), and lack of meta-cognitive skills (Bayat, 2014), can lead to students' failure in generating novel ideas (Tiryaki, 2012).

Applying a quasi-experimental design with pre and posttests, this study aimed to investigate the effectiveness of conceptual metaphor as a cognitive tool for developing idea generation, improving EFL learners' writing proficiency, and reducing their apprehension about writing. Helping Iranian EFL learners to overcome the writing challenges, we taught them conceptual mapping technique coined by Lakoff and Johnson (2003). The technique is typically concerned with transferring the structural components of one domain of experience onto another domain (Kovecses, 2005; Schaffner, 2004). Considering the salient similarities between Persian and English conceptual expressions (Afrashi & Vadipoor, 2011), mapping one experience onto another one can help learners to free their actual potential and create more personal thoughts and mental images during the process of writing.

1. Is there a significant difference in the writing proficiency posttest scores for the Iranian male and female upper-intermediate EFL learners who received the traditional instruction and those who benefited from the cognitive instruction?
2. Is there a significant difference in the writing apprehension posttest scores for the Iranian male and female upper-intermediate EFL learners who received the traditional instruction and those who benefited from the cognitive instruction?

2. Review of the Literature

2.1 Process Approach

Acquiring writing skills is thought to be the major challenge for the EFL learners (Mohseni & Samadiyan, 2019). The process approach, which emerged as a reaction to the product approach was the result of a large number of researches conducted on literacy acquisition (Leki & Silva, 2004; Hyland, 2003). It came to help students to improve their writing skills by developing the recursive nature of writing (Grubb & Gabriner, 2013). Unlike the product-oriented approach, which emphasizes the mechanical aspects of writing and imitating the existing models (Shabani & Goljani, 2015), the process approach placed emphasis on producing a text through a series of stages including planning, drafting, revising, and evaluating (Gillespie & Graham, 2014). It brought major alterations to writing and was an excellent achievement for both teachers and students. Teachers, in the process method, took on the role of facilitators to guide the students without exercising their ideas (Christie, 2006), and students were no longer viewed as passive recipients waiting for a counsellor to prescribe them what and how to write (Kuzu, 2007). In the process approach, students were given opportunity to express their own ideas (Silva, 1997), think, make decision, and apply their ideas to a topic (Pritchard & Honeycutt, 2007).

Although the process approach brought about an ideal movement in writing and liberated students from constrains of the product approach, it was criticized by a number of researchers. Flower and Hayes (1981) argued that "stage models of writing" only "model the growth of the written product, not the inner process of the person producing it" (p. 367). In a similar vein, Bayat (2014) proposed that process writing approach does not account for the mental processes done by a writer during the process of writing. Hyland (2003) noted that there is still not a clear-cut idea of how students should proceed with the process; thus, we need new approaches to motivate our

students to improve their writing abilities. Downs and Wardle (2007) stated that students mostly perceive writing in terms of drafting, they very often fail to take care of the series of events for idea generation. However, some other researchers acknowledged the effectiveness of process the approach in improving their students' writing skill (Belinda, 2006; Harris, Santangelo, & Graham, 2010).

2.2 Cognitive Writing Model

Applying the *thinking aloud* protocol and giving ground to the task environment, Flower and Hayes (1980) made considerable contribution to clarifying the steps of the process approach. Flower and Hayes (1980) proposed that the process approach works based on four key factors. The first factor has to do with a series of distinctive thinking processes. The second one refers to interconnectivity of these processes. The third one deals with a goal-directed thinking process driven by the writer's network of goals, and the last one is related to producing sub-goals and changing the main goals at times. Their research highlighted a dynamic interaction between the processes occurring at any moment in the minds of writers (Van den Bergh & Rijlaarsdam, 2007). In this respect, Jahin and Idrees (2012) argued that writing is a deep-thinking process in which ideas are generated, scrutinized, assessed, organized, and transferred into the text.

2.3 Conceptual Metaphor Theory

For most of us, a metaphor is defined as a "hidden comparison without using comparative linguistic markers or as substitution of one word for another" (Glucksberg, 2001, p. 5). However, from a cognitivist's point of view, a metaphor is no longer the sheer literary device, but a thought process extracted from people's natural experiences to shape both their communication and the way they think (Lakoff & Johnson, 2003).

In the late 1970s, Lakoff and Johnson (2003) began to realize that "metaphor is pervasive in everyday life, not just in language but in thought and action" (p. 3). Their finding made a complete change in the studies on metaphor and transformed the traditional thoughts from viewing metaphor as a literary device for ornamenting language into metaphor as a thought process (Jensen, 2006 as cited in Hashemian & Fadaei, 2012). Their challenge with the Aristotelian notion of metaphor led to identification of three types of metaphors namely *Structural Metaphor*, *Orientational Metaphor,* and *Ontological Metaphor.*

Structural Metaphors are a type of conceptual metaphor in which the target domain is well comprehended through the structural components of the source domain (Kovecses, 2002). According to Kovecses (2010) the domain from which metaphorical expressions are driven to understand another domain is the source domain, while the domain comprehended via the first domain is called the target domain. In Lakoff and Johnson's well-known conceptual metaphor LOVE IS A JOURNEY "the source domain is mapped onto the target domain whereby the structural components of the base schema are transferred to the target base" (Schaffner, 2004, p. 1259). For example, *this relationship is not going anywhere. We are in a dead-end road.*

Orientational Metaphors are a type of conceptual metaphors that give a spatial orientation to concepts based on human spatial experiences (Kovecses, 2002). For example, concepts of *happy* and *sad* can be conceptualized as: Happy is up and sad is down in the expressions the teacher looks up today or the teacher looks down today (Kovecses, 2010). In this respect, the upward orientation refers to the positive status, while the negative status is representative of the downward orientation.

Ontological metaphors are concerned with the metaphorical expressions generated through visualizing entities or abstract concepts such as emotion,

idea, or even activity as concrete objects (Kovecses, 2002, 2005, 2010). For example, in the expression ‘keep my advice in your mind’ and ‘never let it escape from your mind’, the concept of mind is considered as a container and the concept of advice is viewed as an object within a container.

2.4 Writing Apprehension

Writing apprehension coined by Daly and Miller (1975) is defined as "a subjective complex of attitudinal, emotional, and behavioral interaction which reinforces each other" (p.11). Many researchers have reported that writing apprehension, as an affective factor, negatively affects writing quality and quantity (Erkan & Saban, 2011; Lee, 2005). Research findings suggest that many EFL learners with a high level of writing apprehension are unwilling to write and very often display negative remarks about writing (Al Asmari, 2013; Hammann, 2005).

It is argued that lack of ability in generating appropriate ideas is one of the strongest predictors of writing apprehension (Al-Khasawneh, 2010; Al-Shboul, 2015; Hyland, 2003). The proponents of the cognitive approach proposed that the quality of writing highly depends on ~~on~~ the types of idea embedded in a text (Hayes, 1996; Galbraith, 2009; Galbraith, Ford, Walker, & Ford, 2005). According to Rao (2007), "getting ideas to flow" which is a serious challenge for many college students causes learners to feel incapable of writing and apprehensive about it (p.12).

3. Method

3.1 Participants

One hundred and twenty EFL Bachelor-of-Arts (BA) students whose age ranged from 22 to 35 volunteered to participate in the study. The students all majoring in English language were chosen from different classes of Foreign Language Center of the Islamic Karaj Azad University. 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. The participants were all Persian native speakers and had already passed the essay writing course in university.

3.2 Instrumentation

Data for the study were collected through the instruments administered twice as pre and posttests. In the first phase of the study, to measure the participants' English knowledge and select a homogenized sample group, a proficiency test developed by Macmillan (2012) was administered to the students. The test consisted of 50 multiple-choice grammar and vocabulary items and the students had 60 minutes to answer them. Applying research randomizer (Urbaniak & Plous, 2013), the homogenized sample was classified into two different levels consisting of an equal number of males and females.

Daly and Miller's Writing Apprehension Test (2013) first developed in 1975 and known as the most common, valid, and reliable measurement tool for measuring both ESL and EFL learners' writing apprehension (Argaman & Abu-Rabia, 2002; Cheng et al., 1999; Cornwell & McKay,1999; Lee, 2005) was used by the researchers to measure the learners' writing apprehension. The scale was composed of 20 statements in a 5-point Liker format.

Collecting data on the candidates' writing proficiency, the researchers used a five-paragraph essay in which the candidates were asked to answer an IELTS question within 90 minutes using at least 250 words. The reason for choosing a single subject was to avoid the effect of topic variance. Cambridge Writing Assessment level-C1 (2016) developed by Cambridge University for the advanced exams was used to collect data with regard to writing proficiency test. The rubric was used to measure the learners' writing proficiency in terms of *content, communicative achievement (complexity and*

flexibility of ideas), organization (cohesion and coherence), and *language (a range of vocabularies and complex grammatical forms).*

3.3 Data Collection Procedure

The study adapted a pre and posttest quasi-experimental research design based on studying the effects of conceptual metaphors on writing. The procedure was implemented in four main steps. However, to examine the true effectiveness of interventions in writing, we first made it clear to the students that the study is a voluntary work and the data will be used for research purposes only. In the first step, applying Macmillan (2012) English proficiency test, the researchers selected a homogenous sample consisting of 120 candidates. In the second step, to measure the learners' writing proficiency and writing apprehension, the learners were first divided into two equal groups composed of males and females and then administered two pretests. Thereafter, in the third step, the groups benefited from two distinctive training courses. To find out the significant effect of the interventions, the researchers set off two posttests in the fourth step.

Classifying the participants randomly and equally into two experimental groups, the researchers asked the groups to sit for two pretests including a writing apprehension and a writing proficiency test. The former test included a scale consisting of 20 statements in a five-point Likert scale, and the latter included an IELTS writing question in which students were asked to write a 5-paragraph essay consisting of at least 250-words within 90 minutes. In the third stage, both groups benefited from independent training programs on argumentative essay writing. The first group benefited from the traditional method, which is common in many educational and academic centers, while the second one enjoyed the cognitive approach towards writing. In the last step, to find any probable changes in the learners' performances, the volunteers took the posttests one week after the completion of the training

courses. Subsequently, the results of both pre and posttests were rated and compared by three competent raters to find out the true changes in the learners' scores as well as the effectiveness of the treatments.

3.3.1 Traditional Group Training

Preparing candidates to achieve mastery of academic writing proficiency, the researchers used IELTS Preparation and Practice (Denise Young & Neilane Liew, 2013) and Academic Writing from Paragraph to Essay (Dorothy E. Zemach & Lisa A. Rumisek, 2005) as the sources of teaching**.** The traditional group consisting of 60 male and female EFL learners got the mastery of academic writing including *pre-writing, drafting, revising,* and *rewriting*. Some of the most important activities are presented briefly below.

a) Analysis of the question: learning how to analyze the question through breaking the question down into comprehensible elements, candidates learned how to find out the gray areas of a question and the significant connection between the elements.
b) Paragraphing: In the second step of pre-writing, candidates were taught to divide a text into meaningful paragraphs so that they could understand the concept of cohesiveness and apply a rich diversity of reference links.
c) Brainstorming and organizing the ideas: In the third step of pre-writing, the participants learnt how to gather ideas related to the topic and the key points they had already detected in the questions. They were then asked to list their ideas and write phrases, clauses, or sentences about them.
d) Editing: In the last step of the pre-writing process, the candidates turned to their lists and mind maps to choose the most interesting and appropriate ideas.
e) Writing topic sentences or solutions: In the first step of writing, the candidates learned paraphrasing techniques.
f) Writing thesis statements: analyzing a series of written introductions, the candidates learnt to express their main ideas for supporting the bodies.
g) Organizing the body of essay: In this section, they learnt to organize a coherent text using discourse markers.
h) Conclusion: For the last paragraph, the candidates learnt to restate the thesis statement and give their own suggestions as well.

3.3.2 Cognitive Group Training

To improve the learners' writing proficiency equivalent to that of native language writers, the researchers got the benefit of three essential books namely Metaphors We Live by (Lakoff & Johnson, 2003), Meanings and Metaphors (Lazar, 2003), and Idiom Organizer (Wright, 2002). Having briefly reviewed the structure of an academic essay, which was explained earlier, the researchers detailed Flower and Hayes' Cognitive Theory in Writing (1980) mentioned in the literature review of this study. In the next step, the candidates were taught the conceptual metaphor theory (Lakoff & Johnson, 2003) discussed thoroughly in the literature review of the study. Teaching conceptual metaphor theory and introducing a wide range of well-known conceptual metaphors, the researchers showed how it is possible to conceptualize one domain of experience in terms of another (Kovecses, 2010) and then generated a large number of idiomatic expressions out of conceptual metaphors. For instance, the following expressions about the concepts of LOVE show how fixed meanings after deconstruction have generated many novel rhetorical expressions out of conceptual metaphor LOVE IS JOURNEY & LOVE IS PATIENT (Kovecses, 2010; Lakoff, 2006).

We may have to go our separate ways.
Their relationship is off the track.
Their marriage is on the road to recovery
Their marriage is on its last legs.

The hermeneutic relationship between metaphors and understandings suggested that "metaphors and models do not have static, one-off meanings, but are potentially capable of revealing multiple meanings, which can be progressively disclosed by the to-and-fro movement of the hermeneutic circle" (Snodgrass & Coyne, 1991, p. 15). The processes of mapping and brainstorming were, therefore, directed at conceptualizing the structure of one domain of experience in terms of another domain (Kovecses, 2005). The

most important activities practiced by the cognitive group consisting of 60 male and female-EFL learners are as follows:

a) Matching: In the first step, candidates got familiar with the concept of source and target domains proposed.
b) Fill in the blanks: This activity was aimed at enriching the learners' ability in conceptualizing the structure of one domain in terms of another.
c) Completion activities: This activity enabled the learners to recognize the constituent elements of both target and source domains.
d) Telling stories based on pictures: This activity strengthened the learners' visualization feature.
e) Association of idioms with mental images: This activity raised the learners' awareness about the relationship existing between their experiences and the conceptual metaphors.
f) Translating the metaphorical expressions into their own language
g) Picturizing their experience with regard to entities in terms of something else. This activity helped the learners to highlight the latent paths, see behind the text, visualize the intertextuality among the elements, and realize that meaning is not fixed.

3.4 Data Analysis

Applying Kolmogorov-Smirnov (K-S) and Shapiro-Wilk, in the first step, the study tried to find out whether the data were normal or not. In the next step, to interpret the data collected from the candidates' pre and posttests including writing proficiency and writing apprehension tests, and to find out meaningful differences between the scores, a Two-Way Analysis of Covariance procedure (ANCOVA) was run. The researchers decided to use the two-way ANCOVA procedure for the following reasons. First, each of the questions has two independent categorical variables, namely, method and gender, one dependent continuous variable, and one dependent continuous covariate. As Pallant (2016) put it, "two-way ANCOVA involves two independent categorical variables, one dependent continuous variable, and one or more continuous covariates" (p. 250). The second reason was to control the effect of other factors that may influence the variable of interest

(Tabachnic & Fidell, 2013), because we needed to make sure the group differences were due to the influence of the treatments. Third, ANCOVA can increase the sensitivity of the F-test or probability of the differences between the groups through removing the influence of covariate (Tabachnic & Fidell, 2013). To estimate the reliability coefficients between the raters, the researchers used Intraclass Correlation Coefficient (ICC).

4. Results

4.1. Preliminary Analyses

To control any possible violations of the assumptions pertaining to the main phase of the study, a series of preliminary statistical analyses were first conducted.

Table 1
Test of Skewness and Kurtosis for Normal Distribution

Skewness		Kurtosis	
Statistic	Std. Error	Statistic	Std. Error
-.200	.221	-.394	.438

The skewness and kurtosis values shown in Table 1 are -0.2 and -0.395 respectively. According to George and Mallery (2010), skewness and kurtosis values between -2 and +2 are acceptable. The skewness and kurtosis values fallen within the acceptable range indicate that the data is fairly normal and the assumption of the test has been met.

Table 2
Test of Normality of the Distribution of Scores

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

The results of Kolmogorov-Smirnov test in Table 2 suggest that the assumption of normality has not been violated because the Sig. value of 0.197 is much greater than 0.05.

4.1.1 Inter-Rater Reliability

To assess the consistency of the raters' ratings across the subjects and determine the degree of agreement among them, we applied Intraclass Correlation Coefficient (ICC) and chose Two-Way Mixed Effects Model with consistency type to evaluate the level of linear relationship between three raters. The results obtained from Intraclass Correlation Coefficient are presented in Table 3.

Table 3
Intraclass Correlation Coefficient for Assessing the Consistency of the Raters

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Item	N
Pretest traditional group	.881	.886	3
Posttest traditional group	.887	.888	3
Pretest cognitive Group	.885	.888	3
Posttest cognitive group	.890	890	3

Evaluating the inter-rater reliability among the raters and measuring the internal consistency among them, we wanted the value of Cronbach's Alpha for Intraclass Correlation Coefficient to be greater than 0.7 (Devellis, 2012; Plant, 2016). The values of 0.7 or higher indicate an acceptable level of reliability. However, values below 0.7 indicate that the subjects are not correlated or share no covariance. Table 2 indicates that all measures investigated in this study enjoy high reliability indexes.

4.2 Main Analysis

4.2.1 Investigation of the first research question

Analyzing posttest writing proficiency results, the researchers aimed at identifying the difference between the scores obtained by the volunteers in both groups, and detecting the effects of interventions on the students' writing proficiency. The researchers also attempted to find whether the

differences in the results were due to between-group variance or within-group variance (interaction).

Table 4
Posttest writing proficiency (Dependent Variable)

Group	Gender	Mean	Std. Deviation	N
Traditional group	Male	70.9667	9.76088	30
	Female	74.6000	9.21244	30
	Total	72.7833	9.58652	60
Cognitive group	Male	84.8667	7.48209	30
	Female	88.8333	8.71417	30
	Total	86.8500	8.29708	06
Total	Male	77.9167	11.11159	60
	Female	81.7167	11.42565	60
	Total	79.8167	11.38330	120

The mean scores of the posttest writing proficiency presented in Table 4 indicate a significant difference between the scores obtained by the cognitive and the traditional groups. As it is shown in Table 4, the total mean scores for the traditional and cognitive group are 72.78 and 86.85, respectively. The values representing the standard deviations in Table 4 indicate that the data points are not spread out for both cognitive and traditional groups. Table 4 also separates the values out by gender and indicates that there is not a significant difference between the scores obtained by male and female students in both groups.

Table 5
Test of Between-Subjects Effect (Posttest writing proficiency)

Source	Type III Sum of Square	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10447.515[a]	4	2611.879	60.406	.000	.678
Intercept	2816.857	1	2816.857	65.147	.000	.362
Pretest	4077.348	1	4077.348	94.299	.000	.451
Group	7108.417	1	7108.417	164.399	.000	.588
Sex	104.293	1	104.293	2.412	.123	.021
Group*Sex	22.919	1	22.916	.530	.468	.005
Error	4972.452	115	43.239			
Total	779904.000	120				
Corrected Total	15419.967	119				

Table 5 indicates that the *p*-value for interaction is greater than .05 (p = .468). It suggests that the interaction is not statistically significant. A close look at the main effects reveals that the *p* value for group is significant (p< .001), while it is not significant for sex (p= .123). The results suggest that males and females did not respond differently to the two different teaching programs and the *p* value for covariate was statistically significant (p< .001).

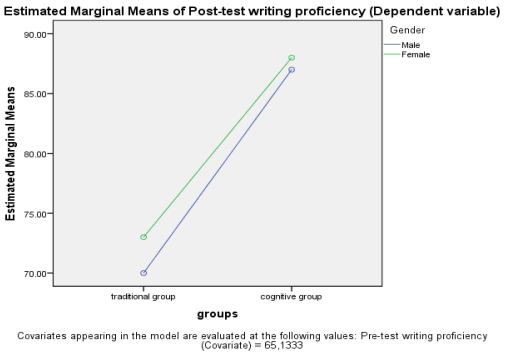

Figure 1. Relationship between pretest and posttest writing proficiency scores

Figure 1 provides us with the adjusted means for the posttest writing proficiency scores separated by group of instructions as well as gender. As it is shown in Figure 1, there is no interaction between the two independent variables. Figure 1 clearly suggests that male and female learners had responded in the same way to the programs. Although females in both groups appeared better than males, the differences were not statistically significant.

4.2.2 Investigation of the second research question

Investigating the main effect and interaction effect of the study, the researchers analyzed and interpreted the results obtained by both groups on the writing apprehension posttest. They attempted to find out whether the changes in the scores obtained by both cognitive and traditional groups had been due to the interventions. In other words, the researchers were also

interested in detecting whether the impact of one variable is influenced by the level of another variable. And if there is an interaction between two independent variables, is the interaction significant?

Table 6
Posttest writing apprehension (Dependent Variable)

Groups	Sex	Mean	Std. Deviation	N
Traditional group	Male	61.2667	8.55382	30
	Female	61.6333	8.66169	30
	Total	61.4500	7.60336	60
Cognitive group	Male	49.1333	9.11510	30
	Female	50.1333	9.46038	30
	Total	49.6333	9.22408	60
Total	Male	55.2000	10.68787	60
	Female	55.8833	9.97130	60
	Total	55.5417	10.29799	120

As indicated in Table 6, the total mean score for traditional group is close to 61, while the value for the cognitive group is about 49. The result demonstrates that the teaching instructions had significantly different effects on the participants' writing apprehension scores.

Table 7
Test of Between-Subjects Effect (Posttest writing apprehension)

Source	Type III Sum of Squares	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11604.832[a]	2901.208	328.721	.000	.920
Intercept	523.790	523.790	59.348	.000	.340
Pretest	7398.807	7398.807	838.321	.000	.879
Group	2496.909	2496.909	282.912	.000	.711
Gender	.855	.855	.097	.756	.001
Group*Gender	10.476	10.476	1.187	.278	.010
Error	1014.960	8.826			
Total	382805.000				
Corrected Total	12619.792				

If we look at the line corresponding to Group * Gender in Table 7, we can see that the *p*-value is greater than .05 ($p = .278$). It means that the interaction in our study was not statistically significant. Therefore, the changes in the posttest scores had been under the influence of instructional programs because the *p* value for group is significant ($p < .001$). The *p*-value for the

pretest is less than .05 ($p < .001$). It suggests that our covariate is significant and there is a strong relationship between covariate and the posttest.

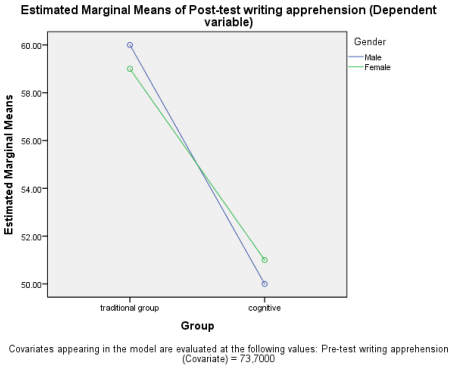

Figure 2. Relationship between pretest and posttest writing apprehension

Figure 3 indicates that there is no interaction between the two independent variables. It clearly suggests that males and female had responded approximately in the same way to the instructional programs.

5. Discussion

Seeking to find out the effectiveness of conceptual metaphors in the EFL learners' writing proficiency and writing apprehension, the researchers obtained findings described in detail in the previous section. Comparing the writing proficiency posttest scores of the two groups, the researchers came up with a significant difference between the performance of the two groups. Mean scores of the posttest writing proficiency revealed that the cognitive group outperformed the traditional one. Essay analysis indicated that cognitive group students managed to map their thoughts, emotions, and feelings onto language and transfer their thought onto paper. In other words, applying conceptual metaphor as a task environment, participants in the cognitive group could map their thoughts onto language and overcome the major writing problem proposed by Dean et al. (2008). The following

excerpts were written by five students from cognitive group on the writing proficiency posttest in response to the following question.

Many people believe that modern technology has more harm than benefit on everyone's life. To what extent do you agree with this opinion? Use specific reasons and examples to support your answer.

> In the past, young lovers used to bring their feelings and emotions onto paper. They conveyed their passions to their beloved through pouring fiery words onto papers, whereas, at present, they text their feelings through emails or short message service which are entirely empty of passion and true love. Unfortunately, the meaning of true love has lost in the tumult of technology. (Respondent 1)
>
> Nowadays, we have been all imprisoned behind the invisible tall walls. Children shackle themselves with their gadgets and stay in strike for a long time without talking to anybody or having something. Smart phones have turned into portable jails that play the role of a kind jailor. (Respondent 2)
>
> Hunger will gradually take lives of many people and kill humanity and ethics. Technology has come to eradicate hunger and nurture humanity. With the advent of technology in the agricultural industry, farmers were armed to fight against hunger and free their family from the claw of hunger. (Respondent 3)
>
> The insatiable desire of this untamed and aggressive animal for shedding the blood of suppressed people clearly reveals its unjustifiable presence in our life. For example, thousands of innocent people are being sacrificed in Iraq and Syria by the terrorists like Isis who have been empowered by technology. (Respondent 4)
> Whether we like it or not, technology has nested on our life for decades. Behind the silence and unseen fly of this predator lie deadly waves. No one is able to escape from them and nowhere is safe and free of such lethal waves. (Respondent 5)

The above excerpts highlight conceptual mappings between two domains and the interaction between their conceptual system and the world around them. The expressions clearly affirm that meanings are not inherent in words and can be created by individuals themselves within context. The conceptual metaphors behind the above expressions are TECHNOLOGY IS A WITCH; TECHNOLOGY IS A JAILOR; TECHNOLOGY IS A HERO; HUNGER IS

A MONSTER; TECHNOLOY IS A WILD ANIMAL; and TECHNOLOGY IS A BAT, respectively. The writers attempted to transfer the structural components of technology in terms of a witch, jail, hero, and bat to give new meanings to the concept of technology. These finding sheds light on the notion proposed by Johnson (1992) and Kovecses (2010) who opined that meaning is not inherent feature of the word. Johnson (1992) argued that "meaning is grounded more or less directly in our bodily, physical, social and cultural experiences and then elaborated by structures of imagination, namely metaphor" (p. 347).

Assessing writing proficiency posttest results by three qualified raters revealed that all students in the cognitive group were able to write 310 to 410 words, while in the traditional group few students were able to reach 250 words. This finding is consistent with critical discourse theories in which metaphors are considered key factors in developing new word meanings and idea generation (Anderson**,** 1996).

Typically, it is unusual to say hunger is an animal and technology is a human being. However, in a particular context, it is possible to construct novel metaphorical expressions based on such unusual parts. This finding is consistent with the opinions of Amabile (2013) and Mayer (1999) that creativity demands producing novel ideas which are different from the ideas created by others**.** To assess creativity of the volunteers in writing, the researchers also used a method called *consensual assessment technique*, in which raters had to rely on their intuition about creativity without receiving any precise definition of it (Baer & McKool, 2009). The reports submitted by three qualified raters were an indication of consensus among them about the creativity in cognitive group writing.

With regard to the second question, the results indicated a significant change in the mean scores of the participants in the writing apprehension test

after the treatment. The findings showed that cognitive training program was significantly effective in reducing the EFL learners' fear of writing. It seems that the better performance of cognitive group students was due to applying cognitive strategy. This finding provides evidence for the claim proposed by Dean (2010) about applying cognitive learning strategy for creating a better piece of composition. The study showed that students with low writing apprehension managed to create high-quality texts compared to those with high writing apprehension. This finding is similar to the results obtained by many researchers on writing apprehension (Al-Shboul & Huwari, 2015; Daud & Kassim, 2005**;** Erkan & Saban, 2011). Analyzing the papers, the researchers found that the writing apprehension scores of the students who wrote shorter and produced undeveloped texts were significantly high. This finding is in line with the results of Onwuegbuzie and Collins (2001) in which students with high apprehension level produced shorter and less developed texts. The researchers also found that gender had no significant effect on writing apprehension scores. This finding is confirmed by the results of Masse and Popvich (2003), who also found no evidence of differences in apprehension due to gender.

6. Conclusion and Implication

This study provides us with a deeper understanding of the relation between writers' conceptual system and the world around them. Findings highlighted the importance of conceptual metaphors in generating new flexible ideas, constructing novel meaning, producing creativity in text, reducing writing apprehension, and holding the target reader's attention. Using conceptual metaphors as task environment provided feedback to teachers in helping students to overcome the problem of idea generation and writing apprehension. It is argued that the main factor leading to writing apprehension is the EFL learners' disability in generating and translating

ideas. Conceptualizing one domain of experience in terms of another domain, the study offered empirical evidence for developing learners' autonomy in generating and manipulating ideas. Assessing the papers, the raters provided evidences that greater use of new complex ideas by writers was an indication of higher quality and successful writing.

The results of the study have important implications for generating novel ideas, constructing meaning, and writing theories within cognitive perspective. Findings revealed that writers are no longer limited to stored ideas in long-term memory for retrieving, although we do not deny retrieval technique. Applying conceptual mapping strategy, EFL learners could generate ideas that have never been heard or used by others. Since creativity in writing is the result of generating original ideas, these findings, indubitably, have implications for theories of creativity. As Khany and Malekzadeh (2015) put it, to foster creativity in the classroom, creativity as one of the most effective factors in education should be considered in teacher education programs.

Importantly, to the best of our knowledge, no study has explored the relationship between conceptual metaphors and idea generation. However, further studies are warranted for better understanding of the relationship between writers' conceptual system and the world out of their minds in exploring conceptual metaphors for generating original ideas. In addition, exploring conceptual metaphors and generating metaphorical expressions are difficult and, to a certain extent, a far-reaching prospect for inexperienced and non-professional EFL learners. Nevertheless, in light of such limitations, due to the remarkable findings of the study, it seems that conceptual metaphors deserve a particular attention in writing courses offered at universities.

References

Afrashi, A., & Vadipoor, G. (2011). A cognitive approach to translation of conceptual metaphors in documentary films. *Translation Studies Quarterly, 9*(34), 39-54.

Ahrens, C. A., Meyers, C., Irlbeck, E., Burris, S., Roach, D. (2016). Exploring agricultural communications students' perceptions of communication apprehension and writing apprehension in the classroom. *Journal of Agricultural Education, 57*(2), 119-133.

Al Asmari, A. (2013). Investigation of writing strategies, writing apprehension, and writing achievement among Saudi EFL-major students. *International Education Studies, 6*(11), 130.

Al-Khasawneh, F. M. S. (2010). Writing for academic purposes: Problems faced by Arab postgraduate students of the college of business*, UUM. ESP World, 9*(2), 1-23.

Al-Shboul, Y., & Huwari, I. F. (2015). The causes of writing apprehension through students' perspective. *Journal of Language Teaching and Research, 6*(3), 535-544.

Amabile, T. (2013). Componential theory of idea generation. In E. Kessler (Ed.), *Encyclopedia of management theory* (pp. 135-140). Thousand Oaks, CA: Sage.

Ambrose, S.A., Bridges, M.W., DiPietro, M., Lovett, M.C., & Norman, M.K. (2010). *How learning works: Seven research-based principles for smart teaching*. San Francisco, CA: Jossey-Bass.

Anderson, J. M. (1996). Historical linguistics. In K. Malmkjaer (Ed.), *The linguistics encyclopedia* (pp. 189-216). London: Routledge.

Argaman, O., & Abu-Rabia, S. (2002). The influence of language anxiety on English reading and writing tasks among native Hebrew speakers. *Language, Culture and Curriculum, 15*(2), 143-160.

Baer, J., & McKool, S. (2009). Assessing creativity using the consensual assessment technique. In C. Schreiner (Ed.), *Handbook of assessment technologies, methods, and applications in higher education* (pp. 1-13). Hershey, PA: IGI Global.

Bayat, N. (2014). The effect of the process writing approach on writing success and anxiety. *Educational Sciences: Theory & Practice*, *14,* 1123−1141.

Belbase, M.R. (2012). *The process-genre approach: Some ideas for teaching writing in Nepal*. Retrieved from http://neltachoutari.wordpress.com

Belinda, H. (2006). Effectiveness of using the process approach to teach writing in six Hong Kong primary classrooms. *Working Papers in English and Communication,* 17(1).

Berninger, V. W., Richards. Stock, P., Abbott, R., Trivedi, P., Altemeier, L., & Hayes, J. R. (2009). FMRI activation related to nature of ideas generated and differences between good and poor writers during idea generation. *British Journal of Educational Psychology Monograph Series II*, *6*, 77-93.

Cambridge English Language Assessment. (2016). *Assessing writing performance-level C1*. Retrieved from https://cambridgeenglish.org/images/cambridge-english-assessing-writingperformance-at-level-c1.pdf

Cheng, Y., Horwitz, E. K., & Schallert, D. L. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning, 49*(3), 417-446.

Christie, F. (2006). Literacy teaching and current debates over reading. In R. Whittaker, M. O'Donnel, & A. McCabe (Eds), *Language and literacy, functional approaches* (pp. 45-65). London: Continuum.

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

Cornwell, S., & McKay, T. (1999). *Measuring writing apprehension in Japan.* Paper presented at the Annual Meeting of the Japan Association of Language Teachers, Maebashi, Japan.

Daly, A., & Miller, M. D. (1975). The empirical development of an instrument to measure writing apprehension. *Research in the Teaching of English, 9*(3), 242-249.

Daly, J. A., & Miller, M. D. (2013). *Writing apprehension test* (WAT) [Measurement Instrument]. Database for the Social Science. Retrieved from http://midss.ie

Daud, N. M., & Kassim, N. L. A. (2005). Second language writing anxiety: Cause or Effect. *Malaysian Journal of ELT, 1*(1), 1-19.

Dean, D. (2010). *What works in writing instruction: Research and practices*. USA: National Council of Teachers of English.

Deane, P., Quinlan, T., Odendahl, N., Welsh, C., & Bivens-Tatum, J. (2008). *Cognitive models of writing: Writing proficiency as a complex integrated skill. CBAL literature review writing* (ETS Research Report No. RR-08-55). Princeton, NJ: ETS.

DeVellis, R.F. (2012). *Scale development: Theory and applications*. Thousand Oaks, California: Sage.

Denise, Y., Neilane, L., & Bridget, A. (2013). *IELTS preparation and practice*. Oxford: Oxford University Press.

Dorothy, E. Z., & Lisa, A. R. (2005). *Academic writing from paragraph to essay*. Oxford, U.K: Macmillan Education.

Downs, D. & Wardle, E. (2007). Teaching about writing, righting misconceptions: (Re)envisioning First-year composition as Introduction to writing studies." *College Composition and Communication*, 58 (4), 442-584.

Erkan, D. Y., & Saban, A. I. (2011). Writing performance relative to writing apprehension, self-efficacy in writing, and attitudes towards writing: A correlational study in Turkish tertiary-level EFL. *The Asian EFL Journal Quarterly, 13*(1), 164-192.

Flower, L., & Hayes, J. (1980). The cognition of discovery: Defining a rhetorical problem. *College Composition and Communication, 31* (1), 21-32 Published by: National Council of Teachers of English.

Flower, L. & Hayes, J. (1981). A cognitive process theory of writing. *College Composition and Communication, 32*(4), 365-387.

Gabrielatos, C. (2002). EFL writing product and process. *ERIC*. ED476839. Retrieved from http:// www.gabrielatos.com/Writing.pdf

Galbraith, D. (2009). Writing as discovery. *Teaching and Learning Writing*, *2*(6), 5-26.

Galbraith, D., & Baaijen, V.M. (2018) The work of writing: Raiding the inarticulate, *Educational Psychologist*, 53(4), 238-257.

Galbraith, D., Ford, S., Walker, G., & Ford, J. (2005). The contribution of different components of working memory to planning in writing. *L1 Educational Studies in Language and Literature*, *15*, 113-145.

Glucksberg, S., & McGlone, M. S. (2001). *Understanding figurative language: From metaphors to idioms*. Oxford: Oxford University Press.

George, D., & Mallery, M. (2010). *SPSS for windows step by step: A simple guide and reference* (10th ed.) Boston: Pearson.

Gillespie, A., & Graham, S. (2014). A meta-analysis of writing interventions for students with learning disabilities. *Exceptional Children, 80*(4), 454-473.

Gilmore, A. (2009). Using online corpora to develop students' writing skills. *ELT Journal, 63*(4), 363-372.

Grubb, W.N. & Gabriner, R. (2013). *Basic skills education in community colleges: Inside and outside of classrooms.* New York, NY: Routledge.

Harmer, J. (2004). *How to teach writing*. Harlow: Longman.

Hammann, L. (2005). Self-regulation in academic writing tasks. *International journal of teaching and learning in higher education, 17*(1), 15-26.

Harris, K. R., Santangelo, T., & Graham, S. (2010). Meta-cognition and strategies instruction in writing. In H. S. Waters & W. Schneider (Eds.), *Metacognition, strategy use, and instruction* (pp. 226–256). New York, NY: The Guilford Press.

Hashemian, M. & Fadaei, B. (2012). L2 learners' strategy preference in metaphorical test performance: Effects of working memory and cognitive style. *Issues in Language Teaching (ILT),1*(2), 297-321.

Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1-27). Mahwah, NJ: Lawrence Erlbaum.

Hyland, K. (2003). *Second language writing*. Cambridge: Cambridge University Press.

Jahin, H., & Idrees, w. (2012). EFL major student teachers' writing proficiency and attitudes towards learning English, *Journal of Taibah University, KSA*, 9-72.

Johnson, M. (1992). Philosophical implications of cognitive semantics. *Cognitive Linguistics*, *34*, 345-366.

Khany, R., & Malekzadeh, P. (2015). Associations among EFL teachers' professional identity, professional vitality and creativity. *Teaching English Language, 9* (2), 37-74

Kara, S. (2013). Writing Anxiety: A Case study on students' reasons for anxiety in writing. *Anadolu Journal of Educational Sciences International, 3* (1).

Kovecses, Z. (2010). *Metaphor* (2nd). Oxford: Oxford University Press.

Kovecses, Z. (2005) *Metaphor in culture: Universality and variation.* New York and Cambridge: Cambridge University Press.

Kuzu, A. (2007). Views of pre-service teachers on blog use for instruction and social interaction. *Turkish Online Journal of Distance Education-TOJDE, 8*(3).

Lakoff, G. (2006). The contemporary theory of metaphor. In D. Geeraerts (Ed.). *Cognitive linguistics: Basic readings* (pp. 185-238). Berlin: Mouton de Gruyter.

Lakoff, G., & Johnson, M. (1980). *Metaphor we live by*. Chicago: The University of Chicago Press.

Lakoff, G., & Johnson, M. (2003). *Metaphors we live by*. London: The University of Chicago Press.

Lakoff, G., Turner, M. (1989). *More than cool reason. A field guide to poetic metaphor.* Chicago: University of Chicago Press.

Lazar, G. (2003). *Meaning and metaphors: Activities to practice figurative language.* Cambridge: Cambridge University Press.

Leki, I. & Silva, T. (2004). Family matters: The influence of applied linguistics and composition studies on second language writing studies – past, present and future. *Modern Language Journal, 88*, 1-10.

Lee, S. (2005). Facilitating and inhibiting factors in English as a foreign language writing performance: A model testing with structural equation modeling. *Language Learning, 55*(2), 335-374.

Macmillan Placement Test (2012). *Upper intermediate and advanced placement test*. Retrieved from www.macmillianstraigtforward.com/resources/tests/

Masse, M., & Popvich, M., (2003). Individual assessment of media writing student attitudes: recasting the riff and stacks writing apprehension measure. *Journalism and Mass Communication Quarterly, 82*(2), 339-355.

Mayer, R. E. (1999). Fifty years of idea generation research. In R. J. Sternberg (Ed.), *Handbook of idea generation* (pp. 449-458). Cambridge: Cambridge University Press.

Mohseni, A., & Samadian, S. (2019). Analysis of cohesion and coherence in writing performance of Iranian intermediate EFL learners. *Issues in Language Teaching (ILT), 8*(2), 213-242.

Oral, G. (2012). *Again, we are writing*. Ankara: Pegem Academy Publication.

Onwuegbuzie, A. J., & Collins, K. (2001). Writing apprehension and academic procrastination among graduate students. *Perceptual and motor skills, 92*(2), 560.

Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading and Writing Quarterly, 19*, 139-158.

Pajares, F., & Valiante, G. (2001). Gender differences in writing motivation and achievement of middle school students: A function of gender orientation? *Contemporary Educational Psychology, 24,* 366-381.

Pallant, J. (2016). *SPSS survival manual: A step by step guide to data analysis using SPSS program* (6th ed.) London, UK McGraw-Hill Education.

Piazza, C. L., & Siebert, C. F. (2008). Development and validation of a writing dispositions scale for elementary and middle school students. *The Journal of Educational Research, 101*, 275-285.

Pritchard, R. J., & Honeycutt, R. L. (2007). Best practices in implementing a process approach to teaching writing. In S. Graham, C. A. MacArthur, & J. Fitzgerald (Eds.). *Best practices in writing instruction* (pp. 28−49). New York: The Guilford Press.

Rao, Z. (2007). Training in brainstorming and developing writing skills. *ELT Journal, 6*(1), 100- 106.

Rusinovci, X. (2015). Teaching writing through process-genre based approach. *US-China Education Review A, 5*(10), 699-705.

Schaffner, CH. (2004). Metaphor and translation. Some implications of a cognitive approach. *Journal of Pragmatic, 36*, 1253-1269.

Schilperoord, J. (2002). On the cognitive status of pauses in discourse production. In T. Olive &C. M. Levy (Eds.), *Contemporary tools and techniques for studying writing* (pp. 61-90). Boston: Kluwer Academic.

Shabani, M. B., & Goljani, S. (2015). Enhancing discourse markers awareness among Iranian EFL learners: A product-process based view. *Teaching English Language,9* (2), 97-122.

Silva, T. (1997). Second language composition instruction: Developments, issues, and directions in ESL. In B. Kroll (Ed.). *Second language writing* (pp. 11−23). Cambridge: Cambridge University Press.

Snodgrass, A., & Coyne, R. (1991). *Models, metaphors and the hermeneutics of designing.* Unpublished manuscript, University of Sydney, Faculty of Architecture.

Stapa, S. H., & Abdul-Majid, A. H. (2009). The use of first language in developing ideas in second language writing. *The European Journal of Social Sciences, 7*(4), 41- 47.

Tabachnick, B.G. & Fidell, L.S. (2013). *Using multivariate statistics* (6th ed.). Boston: Pearson Education.

Tiryaki, E. N. (2012). Determining writing anxieties of university students from different variables. *Journal of Language and Literature Education*, *1*(1), 14−21.

Ungan, S. (2007). Development of and importance of writing skills. *Erciyes University Journal of the Institute of Social Sciences, 23*, 461-472. Retrieved from http://sbedergi.erciyes.edu.tr/sayi_23/sayi_23.htm.

Urbaniak, G. C., & Plous, S. (2013). Research randomizer (Version 4.0) [Computer software]. Retrieved from http://www.randomizer.org/

Van den Bergh, H., & Rijlaarsdam, G. (2007). The dynamics of idea generating during writing: An online study. In G. Rijlaarsdam (Series Ed.) & D. Galbraith, M. Torrance, & L. van Waes (Vol Eds.), *Studies in writing: Vol. 20. Writing and cognition: Research and applications* (pp. 125 – 150). Oxford, England: Elsevier.

Wright, J. (2002). *Idioms Organizer: Organized by metaphor, topic and key word*. Boston: Thomson Heinle.

Zorbaz, K. Z. (2011). Writing apprehension and measurement of it. *e-Journal of New World Sciences Academy*, *6*(3), 2271−2280.

2021 by the authors. Licensee Journal of Teaching English Language (TEL). This is an open access article distributed under the terms and conditions of the Creative Commons Attribution–NonCommercial 4.0 International (CC BY-NC 4.0 license). (http://creativecommons.org/licenses/by-nc/4.0).