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EFFECTS OF SYNECTICS MODEL ON LEARNERS' WRITING SKILLS IN TERTIARY LEVEL ENGLISH CLASS

DOCTORAL THESIS

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Republic of Turkey
Çanakkale Onsekiz Mart University
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English Language Teaching Programme

Effects of Synectics Model on Learners' Writing Skills in Tertiary Level English Class

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(Doctoral Thesis)

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Declaration

I hereby declare and confirm on my honour that the report entitled "Effects of Synectics Model on Learners' Writing Skills in Tertiary Level English Class", which I have presented as a doctoral thesis, was written by myself without resorting to any assistance contrary to ethical scientific conduct or values, and that all sources which I have used and cited are those contained in the References.

Date: 23 / 06 / 2016

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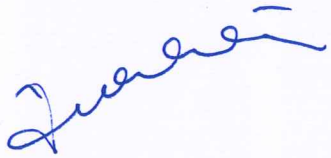

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Certification

We hereby certify that the report prepared by Nalan BAYRAKTAR BALKIR and presented to the committee in the thesis defence examination held on 23rd June 2016 was found to be satisfactory and has been accepted as a thesis for the degree of Doctor of Philosophy.

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Foreword

There are so many people who supported and encouraged me to be able to complete this thesis.

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Abstract

Effects of Synectics Model on Learners' Writing Skills in Tertiary Level English Class

This study aimed to explore the effects of synectics as a prewriting technique on learners' writing skills, vocabulary development, creative ideational level, and writer's block in a tertiary level English writing class. Additionally, the study investigated learners' opinions about their experience regarding the implementation of the synectics technique. To address these aims, this study adopted a mixed research design, combining quantitative and qualitative methods. Repeated measures design was employed to test learners' progress in writing skills and vocabulary while pretest-posttest single group design was adopted to explore differences in creative ideational level and writer's block. A descriptive qualitative research design was used to gain a deeper understanding of learners' experiences.

One intact group consisting of 20 preparatory year students studying at the School of Foreign Languages, Çanakkale Onsekiz Mart University participated in the study in the Spring Term of 2013-2014 Academic Year. A six-week program whereby synectics was applied as a prewriting technique was designed and learners' written texts, Runco Ideational Behaviour Scale (RIBS), Writer's Block Questionnaire (WBQ), and semi-structured interviews were used to collect data. The learner-written texts were analysed using VocabProfile (VP), online text analysis programme, in terms of fluency and lexical complexity, and type, family and word frequency levels. The data obtained from these procedures were analysed through descriptive statistics, Friedman Test for repeated measures, and Wilcoxon Signed Ranks Test on SPSS. The data gathered from RIBS and WBQ were analysed through Wilcoxon Signed Ranks Test. As for the analysis of the qualitative data, inductive content analysis technique was employed.

The findings indicated that learners' writing fluency increased significantly throughout the programme while their lexical complexity appeared to remain fairly the same. As for the vocabulary development, a significant growth was detected in almost all measures. Regarding the findings obtained from the RIBS, learners' creative ideational level rose significantly after the programme. However, the results related to WBQ showed that learners' writer's block did not decrease significantly. Finally, qualitative findings revealed that the participants had mostly positive opinions about their experience.

In the light of these findings, it could be concluded that synectics could be employed in second language writing courses as a prewriting technique as it appears to be effective in improving fluency, vocabulary, and creative ideational level.

Özet

Sinektik modelinin yüksek öğrenim düzeyindeki öğrencilerin İngilizce yazma becerilerine etkisi

Bu çalışma, bir yazma öncesi tekniği olarak sinektik modelinin yüksek öğrenim düzeyindeki İngilizce yazma dersi öğrencilerinin yazma becerileri, kelime haznesi gelişimi, yaratıcı düşünsel düzeyi ve yazma tutukluğu üzerine etkilerini araştırmayı amaçlamıştır. Buna ek olarak, çalışma, öğrencilerin sinektiks tekniğinin uygulanmasıyla ilgili deneyimleri hakkındaki görüşlerini araştırmıştır. Bu amaçlar doğrultusunda, bu çalışmada, nicel ve nitel metotların birleştirildiği karma bir araştırma deseni kullanılmıştır. Öğrencilerin yazma becerileri ve kelime haznesindeki gelişimleri ölçmek için tekrarlı ölçümler tasarımı, yaratıcı düşünsel düzey ve yazma tutukluğundaki farkları araştırmak için ise tek grup öntest-sontest deseni kullanılmıştır. Öğrencilerin uygulamayı nasıl deneyimlediklerini daha iyi kavrayabilmek için ise betimsel nitel araştırma deseni kullanılmıştır.

Bu çalışmaya, 2013-2014 Akademik Yılı Bahar Dönemi, Çanakkale Onsekiz Mart Üniversitesi, Yabancı Diller Yüksek Okulu'nda öğrenim gören 20 hazırlık sınıfı öğrencisi katılmıştır. Sinektiks modelinin bir yazma öncesi tekniği olarak uygulandığı altı haftalık bir program tasarlanmış ve öğrencilerin yazdığı metinler, Runco Düşünsel Davranış Ölçeği (RIBS), Yazma Tutukluğu Anketi (WBQ) ve yarı yapılandırılmış görüşmeler veri toplama araçları olarak kullanılmıştır. Öğrenciler tarafından yazılmış metinler, bir çevrimiçi metin analizi programı olan VocabProfile (VP) kullanılarak, akıcılık, kelime bilgisinin zorluk derecesi, kelime türü, ailesi ve kelime sıklığı seviyeleri açısından analiz edilmiştir. Bu işlemlerden elde edilen veriler, SPSS programındaki betimleyici istatistikler, tekrarlı ölçümler için Friedman Testi ve ikili karşılaştırmalar için Wilcoxon İşaretli Sıralar Testi kullanılarak

analiz edilmiştir. RIBS ve WBQ araçlarından elde edilen veriler Wilcoxon İşaretli Sıralar Testi uygulanarak analiz edilmiştir. Nitel veri için ise tümevarımsal içerik analizi yapılmıştır.

Bulgular, yazma akıcılığının program süresince anlamlı bir şekilde arttığını, kelime bilgisinin zorluk derecesinin ise aynı seviyede kaldığını göstermiştir. Kelime haznesi gelişimi açısından ise neredeyse tüm ölçümlerde önemli bir artış tespit edilmiştir. RIBS ölçeğinden elde edilen bulgular ise öğrencilerin yaratıcı düşünsel düzeylerinin program sonunda anlamlı bir şekilde yükseldiğini göstermiştir. Bununla birlikte, WBQ ile ilgili analizler neticesinde, öğrencilerin yazma tutukluğunda önemli bir düşüş olmadığı saptanmıştır. Son olarak, nitel bulgular, öğrencilerin bu deneyimleriyle ilgili çoğunlukla olumlu görüşlere sahip olduğunu ortaya çıkarmıştır.

Bu bulgular ışığında, sinektiks modelinin, akıcılık, kelime haznesi ve yaratıcı düşünsel düzey üzerinde etkili olduğu düşünüldüğünde, modelin, yabancı dil yazma derslerinde bir yazma öncesi tekniği olarak kullanılabileceği sonucuna varılabilir.

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Abbreviations

EAP: English for Academic Purposes

EFL: English as a Foreign Language

FLE: Foreign Language Education

SLW: Second Language Writing

SM: Synectics Model

SPSS: Statistical Package for the Social Sciences

Chapter I

Introduction

Introduction

This chapter begins with an introduction to the study described in this thesis and is followed by a statement of the problem under consideration. Then it presents the aims and significance of the study. The limitations, assumptions, and terminology related to the study are described in the subsequent sections.

Problem Statement

Being a competent and proficient user of at least one foreign language is doubtlessly one of the significant aims of individuals in the modern world. Although many people want to achieve proficiency in communicating in a foreign language by mastering their speaking skill, being able to write competently also deserves attention as it is considered to be one of the three equal components of communication along with speaking and signing (Silva & Matsuda, 2002). As a result, much more importance needs to be paid to the development of the writing skill in foreign language education (henceforth FLE).

As it could be observed from the current practices of FLE especially in the Turkish context, the teaching of the writing skill has not been given equal importance comparing to the teaching of the other language areas or skills. Moreover, the common SLW instruction generally reflects the features of controlled composition model whereby learners are directed to practise the grammatical patterns through guided writing activities rather than compose texts which are products of their complex cognitive processes. However, learners are in need of receiving instruction that could help them learn about the complicated nature of the writing process so that they could express themselves in a more fluent, authentic, and effective way through writing in a foreign language.

Creating a good piece of writing is a really very complicated and demanding skill as it involves a number of factors to consider. These factors involve audience, purpose, word choice, content and organisation, mechanics, and syntax and grammar (Raimes, 1983). In order to produce a written text in which ideas are communicated in a clear, fluent, and effective way, writers need to consider and master these factors. In addition, they should go through the stages of the writing process and employ certain strategies to maximize the effectiveness of their written texts. Therefore, SLW instruction should support learners to acquire skills and strategies to go through each of these stages successfully until they can master in producing effective written texts. In this respect, the first stage of the writing process, i.e. prewriting, seems vital in that it aims to support learners to generate ideas to be used in their texts, which is the very first step of composing a well-written text. There are a number of techniques or strategies that could be employed to activate learners' idea generation capacity. An overall search of the relevant literature reveals a range of techniques that could be used in the prewriting stage. Listing, brainstorming, clustering, drama, freewriting, video films, storytelling, discussions or readings about the topic under consideration are some of the common prewriting techniques.

The research conducted on the use of prewriting techniques reflects a number of gains in terms of achievement, attitudes, writing skills, motivation, etc. In one study, for example, the use of video films as a prewriting activity resulted in improved argumentative composition writing (Öncü, 1999). Another study revealed that the use of reading texts in the prewriting stage rendered an increase in participants' scores from a standard writing test (Özçelik, 1996). The use of storytelling in the first stage of writing also led to some gains in terms of learner motivation in narrative writing and discovery of their knowledge of self and the world. According to the researcher, it tapped both affective and cognitive domains of learning (Diaw, 2009). Yet, another study about the effects of creative drama as a prewriting strategy on the

content and the process of short story writing indicated that) the use of creative drama induced higher achievement, an improvement in some writing skills, and positive attitudes towards writing (Cormack, 1980).

It could be noticed from this brief overview of research that prewriting techniques do not only help learners come up with ideas for their writing tasks but also result in various learning gains as mentioned in the previous part. For this reason, it seems to be desirable to employ such techniques in second language writing (henceforth SLW) instruction. In this regard, the Synectics Model, originally a creative problem-solving technique, is worth being used as a prewriting strategy for idea generation as it lends itself to improving individuals' capacity for creativity so that it could help establish the base for composing authentic, fluent, and effective texts in the target language. For Gordon (1961), the creator of synectics, creativity is not a mysterious process, but it can be taught and improved. If writing creatively is a desirable objective in writing instruction, then it sounds rational to use any means to promote creativity. At this point, it is appropriate to extend on synectics, which is regarded an important vehicle to nurture creativity in the related literature.

The word 'synectics' is derived from Greek roots *syn* (bring together) and *ectics* (diverse elements), and its main principle is based on the premise that "by using the mind's remarkable capacity to connect seemingly irrelevant elements of thought, we can spark surprising new ideas that may later be developed into feasible solutions to problems" (Weaver & Prince, 1990, p. 378). The origin of synectics approach lies in the examination of the meetings where the groups of individuals employed metaphor in solving problems for developing new products for industry. This research led to the development of synectics process in 1955 by William Gordon and his associates (Estes, Gunter & Mintz, 2010). According to Gordon (1961, p. 6), synectics theory mainly suggests that i) creative efficiency in people can be markedly increased if they understand the psychological process by which

they operate; ii) in creative process the emotional component is more important than the intellectual, the irrational more important than the rational; iii) it is these emotional, irrational elements which can and must be understood in order to increase the probability of success in a problem-solving situation.

For Weaver & Prince (1990), at the heart of creative thinking and learning is connection making which helps generate new understandings. This connection making through the use of metaphor is the building block of synectics process. Three forms of metaphor are activated in the process. A direct analogy, known also as simile, is a direct comparison between two objects, ideas, or concepts. The second form of metaphor is personal analogy (personification) that encourages learners to become a part of the problem to be solved. The third form is symbolic analogy (oxymoron), or compressed conflict, which involves descriptions that appear to be contradictory but are actually creatively insightful (Estes et al., 2010, p. 147).

Synectics as a creative problem-solving technique has been employed in different areas from arts to education. The review of research on synectics in educational contexts indicates that the number of studies on synectics in science education and English art and literature courses appears to be higher than the studies conducted in the field of FLE. The research on the application of synectics in the field of science education reveals several gains in the quality and quantity of students' problem solving skills, developing original products, identifying problematic situations, and offering practical solutions to them (Ercan, 2010); creative thinking ability (Paltasingh, 2008; Pany, 2008); achievement in the science course (Paltasingh, 2008; Patil, 2012); and vocabulary improvement and class participation (Kleiner, 1991). Regarding the results of the studies on the use of synectics in English art and literature courses, some gains were detected with respect to student involvement in the lessons and their use of more metaphorical language in their brainstorming (Burks, 2005); teachers and

students developed positive attitudes towards synectics and metaphorical thinking strategies (Keyes, 2006); and most students used divergent thinking and developed a more positive attitude toward writing (Heavelin, 1982). Only two studies investigating the influence of synectics in the field of FLE could be reached by the researcher. The findings of the first study revealed that students' vocabulary learning performance improved significantly, and most of the students found the technique very interesting. However, no significant results were found in terms of attitudes and desire to learn English (Asmalı, Dilbaz & Yavuz, 2014). The second study found out that the implementation of synectics had a significant influence on the development of learners' creativity in foreign language class (Fatemipour & Kordnaeej, 2014).

Although the findings of research studies reviewed above on the use of synectics in different curricular areas point to the enhancement of creative thinking ability, increase in learner achievement, development of positive attitudes, and higher motivation in general, it is noticed that there is a scarcity of research about the use of the synectics technique within the field of FLE. Actually, only two studies could be reached by the researcher as mentioned above, none of those studies explored the effects of synectics on variables regarding writing skills. Therefore, this study was designed with the purpose of gaining a new perspective by applying the synectics model as a prewriting technique in SLW instruction.

Aim of the Study

The main aim of this research study is to investigate the effects of synectics as a prewriting technique on learners' writing skills in tertiary level English class. Furthermore, it aims to explore the effects of the technique on learners' vocabulary development, creative ideational level, and writer's block. Finally, this study aims at gaining insights into how the programme is experienced by the participants involved in the study.

In line with these objectives, the following research questions are sought to be answered:

1. Is there a significant change in learners' writing skills in terms of fluency and lexical complexity throughout the synectics programme?
2. Is there a significant change in learners' vocabulary development throughout the synectics programme?
3. Is there a significant difference in learners' creative ideational level before and after the programme?
4. Is there a significant difference in learners' writer's block before and after the programme?
5. How do the learners evaluate their experience of being involved in the programme?

Significance of the Study

The review of literature on prewriting stage of the writing process reveals that a variety of techniques have been investigated in a range of studies both abroad and in the Turkish context in the field of FLE (e.g. Cormack, 1980; Diaw, 2009; Öncü, 1999; Özçelik, 1996); however, none of these studies researched the application of synectics as a prewriting technique. Furthermore, most of these studies usually investigated the effects of prewriting techniques on psychological constructs such as attitudes and motivation, but few conducted enquiries into the improvement of writing skills. In this respect, this doctoral thesis holds considerable significance for being a pioneering investigation into the use of synectics as a prewriting technique in the field of SLW instruction in both Turkish and international research context.

The results of this enquiry might also shed light on learners' vocabulary development by investigating the effects of synectics implementation in the writing course from a different angle. Along with the exploration of language development, this study might also help investigate the effects of the technique on psychological constructs such as creative ideational level and writer's block.

This study also bears some significance for materials development. As mentioned before, there is a lack of focus on creative thinking element in SLW course books as the task designs are usually based on guided writing principles, and the focus is often on accuracy rather than flow of ideas fluently and creatively. Therefore, the results of this study can be inspiring for materials developers in expanding the scope and design of writing materials with the inclusion of the synectics technique both as a prewriting technique and an idea generation tool for different skills.

Furthermore, the implementation of the synectics technique in English language teaching in this study might guide other English teachers in attempting to develop their learners' writing skills, vocabulary performance, and creative thinking skills through incorporating the principles of synectics into their teaching practices.

In addition, the results obtained from the study might interest the curriculum developers of English Language Teaching Departments as the synectics technique might be included among prewriting techniques in training pre-service English teachers to teach writing skills.

Finally, the findings of the study could be of importance to the future researchers interested in the field of SLW. The future studies might put a new perspective on the implementation of synectics with different age groups, proficiency levels, and also in different courses such as speaking, reading, literature, etc. along with writing.

Limitations

Like any educational sciences study, this study also comprises several limitations which might, therefore, restrict the generalizability of the results.

First of all, the findings of this study are limited to the size of the sample group, which was composed of 20 students attending in the English preparatory class at the School of Foreign Languages at a university in Western Turkey during the Spring Term of 2013-2014 Academic Year. In addition, not all the students were present in each synectics session during the implementation of the programme, which means there were a few absentees who could not receive the instruction at some points of the synectics programme. Because of these two reasons related to the sample, the results of this study cannot be generalised for all population of learners and contexts where English is instructed as a foreign language.

Second, the data collection process and implementation of the programme covered a period of only six weeks, which might be regarded a short time. Therefore, it is questionable whether different results could be obtained if the length of the study was longer or shorter.

Third, the results of the study are limited to the instruments adapted and developed for data collection purposes. The data were collected using the following instruments: Three learner-written texts, the Background Questionnaire, Runco Ideational Behaviour Scale (RIBS), Writer's Block Questionnaire (WBQ), and Semi-structured Interview. If different data collection tools were used, it was possible to find out different results. Consequently, the results need to be evaluated in the light of the instruments used for collecting data in the present study.

Fourth, it would be wrong to claim that the findings with respect to vocabulary development were just based on the influence of the synectics programme because the technique experimented in this study was not isolated from the other courses in the preparatory programme. Doubtlessly, there are other learning gains from the other courses as

writing is just a part of a large preparatory programme, and actually on several levels the programme was running during the synectics implementation. For this reason, students were exposed to different learning sources, and surely all these different components of the other courses might have contributed to this expansion. Therefore, one needs to be cautious thinking that this improvement in participants' vocabulary only results from the synectics programme.

In sum, the points mentioned above as possible limitations of the study need to be taken into account when evaluating the results of the study.

Assumptions

This study is based on the following assumptions. First, it is assumed that all the participants took part in the study willingly, and they reflected their real beliefs and opinions while giving responses to the questions in data collection instruments and the interview. Second, as the data collection instruments went through a process of validity and reliability checks, they were thought to be both valid and reliable to collect data. Last but not least, there were not many intervening factors that might affect the results and mislead the researcher.

Terminology

Prewriting: The idea generation step whereby a variety of thinking strategies could be used to choose a topic and gather ideas to develop it.

Synectics: An instructional model aiming to stimulate learners' problem-solving and creative thinking skills by making sense of new information through specifically designed techniques.

Fluency: Access of more words and more structures in a limited time (Wolfe-Quintero, Inagaki & Kim, 1998, p. 14)

Lexical complexity: Availability and quick access of a wide variety of basic and sophisticated words (Wolfe-Quintero et al., 1998, p. 101)

Creative ideation: Actual behaviours (i.e. overt actions and activities) that clearly reflect an individual's use of, appreciation of, and skill with ideas (Runco et al. 2001, p.393)

Writer's block: An inability to begin or continue writing for reasons other than a lack of basic skills or commitment" and often results in often unproductive work characterized by feelings of anxiety, frustration, anger, or confusion (Rose, 1983, p.3)

Summary

This chapter started with an introduction to the study described in this thesis, and then a statement of the problem under consideration was presented. Next, it presented the aim and significance of the study. Finally, the limitations, assumptions, and terminology were described in the following sections.

Chapter Two

Literature Review

Introduction

This chapter presents a review of the related literature on Synectics Model, Second Language Writing, and creativity that establish the theoretical framework of the study. Each of these sections includes the definitions of the main terms and the discussions of essential concepts. Furthermore, a review of research on each section is presented.

The Synectics Model

Definition and Background of the Synectics Model

The word 'synectics' has been derived from Greek roots *syn* (bring together) and *ectics* (diverse elements), and it basically refers to a structured technique for problem-solving or idea-generation. To make the term's meaning clearer, several references from the related literature are presented. First of all, Gordon (1961, p. 3), the creator of the Synectics Model (henceforth SM) defines the term as "joining together of different and apparently irrelevant elements". Weaver & Prince (1990, p. 378) also define it as "a creative problem-solving process that carries participants from the analysis of problems to the generation and development of new ideas". It is also described by Estes et al. (2010, p. 146) as "a structured approach to creating understandings that are not merely novel but are unique to the participants", and it is "specifically designed to enhance creativity in problem solving by having students consciously develop analogies that allow for an emotional rather than rational approach to solutions". As these various definitions of the term imply, synectics is an

instructional model aiming to stimulate learners' problem-solving and creative thinking skills by 'making sense of new information' through specifically designed techniques.

The origin of synectics lies in the examination of the invention meetings where groups of individuals employed metaphor in solving problems for developing new industrial products. Through this examination, Gordon and his team were able to discover the psychological states of the creative process that promoted divergent and metaphorical thinking (Seligmann, 2007). Consequently, this research led to the development of the synectics process in 1955 by William Gordon and his associates, and then in 1960 it became official by the establishment of Synectics, Inc. in Cambridge, Massachusetts (Weaver & Prince, 1990). The founders developed synectics research as "an operational theory for the conscious use of preconscious psychological mechanisms present in man's creative activity" with the purpose of improving the effectiveness of 'problem-stating, problem-solving situations' and producing novelty especially in industry based environments where a group of selected personnel from various companies are trained through synectics mechanisms (Gordon, 1961, p. 3). The ultimate aim of this process for Gordon is reaching 'fundamental novelty' which implies the fact that the creative outcome should have a broad scope of application or use.

Gordon (1961, p. 6) states that synectics research is based on the following hypotheses:

1. creative efficiency in people can be markedly increased if they understand the psychological process by which they operate;
2. in creative process the emotional component is more important than the intellectual, the irrational more important than the rational;
3. it is these emotional, irrational elements which can and must be understood in order to increase the probability of success in a problem-solving situation.

These hypotheses actually reveal the views that creativity is a potential human capacity which could be developed through certain processes or techniques; emotions and irrationality are essential in promoting creativity; understanding the problem is as significant as solving the problem and producing a creative outcome. The SM, in this regard, seems to be designed in accordance with the above hypotheses so that it could be used as a means to support the promotion of creativity and problem-solving capacity.

Weaver & Prince (1990) focus on the connecting-making element which is central to the synectics process. According to the authors, the view that creativity is everyday thinking resulting in novelty requires a connection-making ability for generating new understandings or ideas as the basis of creativity.

In synectics process, this connection-making is achieved with the help of metaphor building. Metaphor which includes "all figures of speech (e.g. simile, personification, and oxymoron) that join together different and apparently irrelevant elements through the use of analogy" is the backbone of the synectics process since its use enhances learners' understanding and learning of new information by focusing on similarities and differences (Estes et al., 2010, p. 147).

Estes and his associates (2010) mention three forms of metaphor which are activated in the process. These forms are described in detail with respect to the use of synectics as an instructional model in educational settings. A direct analogy, known also as simile, is "a direct comparison between two objects, ideas or concepts." An example for this kind of metaphor could be the comparison between the veins in our bodies and a plumbing system. The second form of metaphor is personal analogy (personification) which "invites learners to become a part of the problem to be solved or the image being explored". The use of personal analogy "provokes the learner into projecting his or her consciousness into the particular object or idea so as to experience an emotional understanding that goes beyond the merely cognitive". For

example, the question “How does it feel to be a zipper?” lets learners to feel empathy with the object or idea in hand. The third form, “symbolic analogy (oxymoron), or compressed conflict, involves descriptions that appear to be contradictory but are actually creatively insightful”. In the authors’ words, it is like a fight among words. This metaphorical fight allows learners to adopt a new viewpoint about the idea which is being explored as a result of group interaction to reach “shared ideas and creations” (Estes et al., 2010, p. 147).

For Gordon (1961, p. 54), all these forms of metaphor or ‘mechanisms’ in his words are essential in the synectics process as they are operational “psychological tools at the conscious level”; however, the “abstractions such as intuition, deferment, empathy, play, use of irrelevance, involvement, detachment are almost impossible to teach because of their lack of concreteness; i.e., they are non-operational”.

What might be inferred from the review above is that synectics is a structured technique designed for generating ideas, solving problems, and producing novelty through activation of psychological, conscious, and systematic mechanisms. These mechanisms are stimulated by making connections between seemingly irrelevant elements using different forms of metaphor.

Synectics in Education

Although synectics was originally developed for industry based environments, its use has been extending into a range of contexts including education. As an instructional model in the context of education, its theoretical underpinnings appear to be in accordance with the constructivist learning theory and reflective thinking (Seligmann, 2007; Walker, 2009). The view that learners construct their own reality or knowledge by making personal connections between what they know and what they are to learn rather than solely storing the knowledge transferred by a teacher is truly in line with the underlying principles of the SM. Actually, this

is achieved in the SM through the use of metaphor as it helps learners make personal connections between their existing knowledge and the new information so that they construct their own versions of reality. As Seligmann (2007, p. 6) rightfully points out, "through metaphor, Synectics empowers students to make meaningful connections between ideas, connections that take advantage of students' unique experiences and understandings".

Based on Seligmann's (2007) review of synectics, the model also borrows some characteristics from the principles of social-interactionism whereby learning is considered as a problem solving process taking place in interaction with other people. Similarly, the mechanisms of synectics process require participants work in a cooperative and collaborative manner when they are producing analogies to improve their understandings of new concepts. Actually, synectics is a technique that could be used individually as well as in groups. However, as Seligmann (2007, p. 12) suggests, "while students can benefit from using Synectics on their own, some of its educational value is lost when removed from the social environment. Working with other students who perceive situations differently helps students adapt to and understand alternative perspectives". In this regard, the SM as an educational practice is of great value in facilitating learners' personal growth through collaboration.

The SM also inherits several features that tend to support the principles of democracy education by letting learners listen to and appreciate each other's ideas respectfully, try to understand others' points of view, or vote for doing some selections as a class at different points of time during the synectics sessions through constructive peer interaction.

As for the final features underlying the SM, it lends itself to the accommodation of diverse thinkers and various learning styles as it has the tools of three kinds of metaphor to gap the bridge between the right and left brain hemisphere, thereby tapping all kinds of learners with different multiple intelligences and Mindstyles (see Seligmann, 2007, p. 16). In addition, the SM is a learner-centered technique in that the teacher acts as the facilitator of the

synectics session who organizes the proceeding of the steps of the technique. The learners, on the other hand, are required to engage actively and in collaboration throughout the process to solve problems, reach new understandings of the concepts, or produce novelty.

In conclusion, synectics appears to be an innovative instructional model that could be employed to enhance learners' creative thinking capacity and problem-solving skills by "having students consciously develop analogies that allow for an emotional rather than rational approach to solutions" (Estes et al. 2010, p. 147). It also provides the base for cooperative and collaborative learning. Furthermore, the use of synectics in education makes it possible to reach a variety of learners with different learning and thinking styles, and intelligences. Last but not least, it might be possible to obtain various educational gains by the implementation of synectics.

Versions of the Synectics Model

There are two main versions or operational synectics mechanisms of the SM as identified by Gordon (1961): Making the Familiar Strange (henceforth MFS) and Making the Strange Familiar (henceforth MSF). The first version is more like an analytical step because it first requires individuals to understand the problem. It should also be noted that this understanding is apt to change in the course of the process. This version "helps students to see new patterns and relationships from previously learned knowledge and understandings" (Estes et al., 2010, p. 150). In other words, it is a bridge between the known and unknown. MFS is described by Gordon as follows:

> To make the familiar strange is to distort, invert, or transpose the everyday ways of looking and responding which render the world a secure and familiar place... It is the conscious attempt to achieve a new look at the same old world, people, ideas, feelings,

> and things... Maintaining the familiar as strange is fundamental to disciplined creativity. (Gordon, 1961, pp. 34-36)

The second version, MSF, becomes the focus of the problem-stating, problem-solving process by "help(ing) make new knowledge more meaningful by bridging new and familiar information" (Estes et al., 2010, p. 150).

Gordon describes the MSF version in the following way:

> It is the function of the mind, when presented with a problem, to attempt to make the strange familiar by means of analysis... The mind compares the given strangeness with data previously known and in terms of these data converts the strangeness into familiarity... (Gordon, 1961, p. 34)

Both of these versions are essential in the synectics process as they lead individuals to involve in the psychological states basic to the creative process. In addition to these two SM versions, Estes et al. (2010) suggests a third SM version which is called 'The Synectics Excursion' which is going to be discussed in the following paragraphs.

Steps in Making the Familiar Strange (MFS). As described in detail in the previous part, MFS version of the synectics process is a kind of knowledge construction mechanism which facilitates students' learning by helping them see familiar information in a different, and usually unexpected way by means of systematically designed steps involving the use of all kinds of metaphor. In relation to MFS, Estes et al. (2010, p. 148) write that "the mind is unlocked from the narrow confines that prevent creative insights and solutions". The authors provide quite a practical and clear plan of a typical MFS lesson involving seven steps. The description of each step has been adopted from their work (2010, pp. 150-154):

Step 1 - Describe the topic: Begin by asking students to describe a topic with which they are familiar (e.g., a character of fiction, a concept, or an object), either in small-group

discussions or by individually writing a paragraph. Then ask them to share the words and phrases they have used to describe the topic. Next, write them on the board; and all student contributions are welcome.

Step 2 - Create direct analogies: Ask the students to form a direct analogy between the descriptive words on the board from step 1 and words from an apparently unrelated category such as machine, plant, or food. Next, tell them to describe how those words are like an item in the chosen category. Ask the students to explain the reasons for their choices. When the class is ready, make them vote on one particular analogy that they would like to pursue in the next step.

Step 3 - Describe personal analogies: Have the students select one of the direct analogies and create personal analogies. Ask the students to become the object and describe how it feels and works. Write down the words used by the students to describe their feelings.

Step 4 - Identify compressed conflicts: The authors state that this step is the most exciting and important step in this model. Direct the students in creating a series of compressed conflicts using the words from the previous step. Ask the class to pair words that seem to conflict or fight with each other and that seem charged with tension. The following pairs of words can be some examples for compressed conflicts: frightened and secure, helpless and powerful, armed and vulnerable, independent and imprisoned, etc. Finally, have the students vote on the best pair of compressed conflicts.

Step 5 - Create a new direct analogy: Using the compressed conflict chosen by the class, ask the students to create another direct analogy. For instance, if the combination chosen was independent and imprisoned, ask the students to describe an animal that is both independent and imprisoned. Some possible analogies would be ‘a tiger in a cage’, ‘a human being in a society’, ‘a powerful dog on a leash’, and so on.

Step 6 - Re-examine the original topic: Return to the last direct analogy chosen by the class and compare it to the original topic. For instance, if the last analogy chosen was a "dog on a leash" and you had begun the process with "a character in a novel," you would ask the class to describe the characteristics of the leashed animal and then to consider the character in terms of those descriptors.

No mention is made of the original subject until this step. The purpose is to get away from the original topic, step by step, and then to return with all the rich imagery that has been developed during the process. An important part of this step is that each student hears the thoughts and relationships expressed by the others. Asking the students to describe the original topic in writing again gives them the opportunity to use all the ideas produced during the whole process.

Step 7 - Evaluate: Discuss the experience with the class and develop techniques for determining both individual and group response to the process. If a number of students indicate boredom, frustration, or anger at this model, have a class discussion on the problem and ask a fellow teacher to observe the process and give feedback.

Keep samples of the students' writing before and after a synectics activity and observe their progress toward more powerful writing.

Steps in Making the Strange Familiar (MSF). Estes et al. (2010, p. 148) explain the function of MFS version as a facilitator of new learning in which "the mind connects that which is already known to the unknown". This version includes eight steps, each of which is explained clearly by the authors (Estes et al., 2010, pp. 154-156):

Step 1 - Provide information: The teacher provides the students with basic facts and information about the new subject to be explored.

Step 2 - Present the analogy: Have a prepared analogy involving the subject that will be familiar to the students, and list the similarities between the two. Then discuss these similarities with the class.

Step 3 - Use personal analogy to create compressed conflicts: Have students describe how it feels to become the subject; write these feelings on the board; then have them create compressed conflicts by pairing these words. One pair is selected for further exploration.

Step 4 - Compare the compressed conflict with the subject: Students select one compressed conflict and then compare it to the original subject. At this point, the teacher might ask the students to write about their feelings on each side of the conflict.

Step 5 - Identify differences: Students discuss the differences between the original subject and the compressed conflict.

Step 6 – Re-examine the original subject: At this point, the students are asked to write about or to discuss the original subject in their own words, using images and ideas presented in this activity.

Step 7 - Create new direct analogies: The students are encouraged to create their own analogies for the subject in hand. These analogies should be as far removed as possible from the subject.

Step 8 - Evaluate: Determine the effectiveness of the procedure on a class and individual basis. Keep the students' writing samples and look for effective analogies in their writing.

Steps in the Synectics Excursion. For Weaver and Prince, 'excursion' is an important version of the SM because this technique enables the participants to "see problems and solutions in new and unusual ways". The authors describe the three basic steps of this technique as follows:

> First, put the problem temporarily out of mind. This enables one to get distance from the problem he or she is working on. Second, deliberately focus on apparent irrelevancy. This can generate surprising or unusual connections. Third, force-fit the irrelevant material together with the problem and allow your mind to invent a way of connecting them. Being open to that pattern or line of thought will enable us to produce ideas that are both useful and original. (Weaver & Prince, 1990, p. 384)

The authors add that they aim to revive learners' inborn potential to make connections between seemingly irrelevant elements without any concern about testing their reality and practicability using this technique.

Although the above mentioned description of the Excursions version of SM is helpful in understanding the essentials of the technique, Estes et al. (2010, pp. 157-159) offer a more practical guideline for implementing it in the classroom. All forms of analogy and metaphor (direct, personal, symbolic, and fantasy) are used for problem-solving in this version. The authors list nine steps of this process adapted from mainly Gordon's work and also some other scholars':

Step 1 - Present the problem: Select an interesting and challenging problem and then it to the class.

Step 2 - Provide expert information: Provide the class with as much expert information as possible.

Step 3 - Question obvious solutions and purge: Lead the class in an exploration of the most obvious solutions and have the students purge those that are not feasible.

Step 4 - Generate individual problem statements: Have each student write a statement regarding the problem, giving his or her interpretation or focus.

Step 5 - Choose one problem statement for focus: The problem statements are read aloud and one is selected by the class for focus.

Step 6 - Question through the use of analogies: Present analogies to the class stated in the form of evocative questions.

Step 7 - Force analogies to fit the problem: Return to the original problem and ask the students to force the analogies to fit the problem.

Step 8 - Determine a solution from a new viewpoint: Ask students to determine a solution by looking at the problem from a new viewpoint.

Step 9 - Evaluate: Develop a process for determining if the techniques are becoming effective and habitual.

All these three types of the SM versions might serve educators as kinds of knowledge construction mechanisms to operate in instructing learners. Depending on the nature of the content to be taught or practised, different versions might be preferred. MFS version might be used if the aim is to support learners to understand the problem and see new connections from their previous knowledge. If new information is to be presented, MSF might be preferred to help learners make it more meaningful by connecting the new and previous knowledge. Finally, synectics excursion might be chosen to enable learners to perceive problems and solutions in new and unusual ways through the use of analogies and metaphor. In the current study, MFS version was used because it was intended to enable learners to see the familiar and ordinary notions in new and different ways so that they could come up with a wealth of ideas and creative insights to be used while extending on the topics of the writing tasks.

Research on the Synectics Model

To the author's knowledge, although there are plenty of resources explaining theoretical features of the concept of synectics and main steps involved in its implementation, the number of the research studies exploring the use of the model is comparatively limited. In

this section, there is going to be a brief review of research studies carried out related to the SM and creativity in the Turkish and international context.

Research studies conducted in the Turkish context. Regarding the research carried out on synectics in the Turkish context, only two studies could be attained by the researcher. The first one was implemented by Ercan (2010) as an action research study on the use of the SM in science and technology teaching adopting a MSF approach. He aimed to foster students' creative thinking ability and uncover their perspective on creativity employing the synectics technique. The results of the study pointed to a growth in the quality and quantity of students' problem solving skills and in their abilities to understand new features of the concepts they studied. The researcher concluded that the application of the technique provided some benefits in students' developing original products, identifying problematic situations, and offering practical solutions to them.

In the Turkish context, the second study implemented investigating the use of the synectics technique is by Asmalı et al. (2014). The researchers' purpose was to explore the effects of the SM on the students' vocabulary learning performance, attitudes, and desire to learn English adopting an experimental design. The instruments they used for data gathering were the Desire to Learn English Questionnaire, Attitude Questionnaire, and multiple choice vocabulary questions. The participants were B1 level 8^{th} graders in a senior secondary state school. The findings obtained from the post-tests revealed that there were no statistically significant differences between the students in two groups in terms of attitudes and desire to learn English; however, the students' vocabulary learning performance improved significantly in the experimental group. In addition, most of the students found the model very interesting.

As could be understood from the above review of research on synectics in the Turkish context, there seems to be a scarcity of research investigating the effects of the SM on

different variables. Although there are a few studies exploring the influence of synectics on creative thinking ability and problem solving skills in a science course, and vocabulary learning performance, attitudes, and motivation in an English as a foreign language course, there is not a study that investigated the use of synectics and its effects on writing skills in an English course. In this regard, the present study might contribute to bridging this gap in the literature by studying the effects of synectics with respect to writing skills and vocabulary development with a different age group, proficiency level, and a different course.

Research studies conducted abroad. In the international research sphere, the studies that could be attained by the researcher usually centre on the investigation of effects of the SM in English Art and science courses. First, there will be a brief review of the studies in the former group and then of the studies in the latter.

The first group of studies explored the use of the SM in writing and literature courses, specifically in English Language Arts classrooms. For example, Burks's narrative inquiry study (2005) investigated the use of synectics in terms of teacher attitudes towards the use of the SM and their experiences in the process of combining the model into their curriculum, and also students' metaphorical language and creative writing growth. The results of the study revealed that there were some gains with respect to student involvement in the synectics lessons and their use of more metaphorical language in their brainstorming. However, most of the students' formal essays did not often include that language. As for the teacher attitudes, the researcher reported that as the teachers' familiarity increased with the instruction of synectics, they were more able to fit their own curriculum needs. On the other hand, they reported some problems regarding 'time constraints, fears of criticism and rejection, and preconceived roles as curriculum implementers' (Burks, 2005, p. vi).

Another study was carried out by Keyes (2006), who aimed to explore the use of synectics for literature analysis and creative writing in secondary level English Language Art classrooms based on narrative inquiry study. In accordance with the aims of the study, the researcher displayed and analysed participant and researcher stories. One of the main results pointed to "the development of positive teacher and student attitudes towards Synectics and metaphorical thinking strategies as personally relevant educational practices, especially in secondary English" (Keyes, 2006, p. vi).

Synectics instruction was also carried out by Heavilin (1982) as an aid to invention in English composition class. The researcher aimed to develop participants' ability to think analogically and divergently and their attitude toward writing in a more positive way. With these reasons in mind, she made her students write a diagnostic theme, fill in questionnaires, take part in three synectics sessions, and write a final theme without a synectics session. The results of the study revealed that few students used divergent thinking on the final theme, but most students used divergent thinking on at least one theme and developed a more positive attitude toward writing.

Brown (1980) conducted a study with the purpose of determining whether the acquisition of Synectics Education Systems' (SES) connection making skills would improve learning achievement, particularly vocabulary and reading skills. Improvement was measured by pre and post-training administrations of the Peabody Picture Vocabulary Test, and the Analytical Reading Inventory, and two self-concept measures. The findings obtained from the study did not indicate any significant differences between groups. On the other hand, some evidence was tracked in terms of improvement in the areas of analytical reading comprehension and SES Associates' Test of Synectics Proficiency. The researcher concludes that significant differences could be attained if factors such as time limitations, logistics, student attitudes and conditions like physical surroundings and climate can be enhanced.

The review of studies above mostly investigated the implementation of synectics in secondary level English art and composition courses. They involved the study of variables such as teacher attitudes towards the use of synectics, learners' creative writing growth, analogical and divergent thinking ability, attitudes toward writing, and vocabulary and reading skills development. However, none of those studies investigated the improvement of writing skills to indicate some aspects of language development in an EFL setting and tertiary level upper-intermediate writing course. This study, therefore, might be a pioneering investigation to explore these variables.

The second group of studies reviewed by the researcher investigated the use of the SM in science teaching and its effects on different variables. Pany (2008), for instance, implemented such a study on the effectiveness of the SM in general science teaching in India. He aimed to find out the effectiveness of Making the Familiar Strange (MFS) approach in developing learners' creative thinking ability, academic achievement in the general science course, and achievement motivation. The experimental group was taught following the principles of MFS approach, and the control group was instructed through the traditional method. The results of the study indicated that MFS approach proved to be effective in developing learners' creative thinking ability whereas it did not lead to an increase in learners' achievement motivation or academic achievement. He suggests that this approach should be modified appropriately and applied in different curricular areas in order to develop learners' academic achievement and achievement motivation.

Another study was done about science teaching in India again by Patil (2012), who carried out an experimental study to find out the effectiveness of the SM in learners' achievement in the science course. Other objectives of the study were to design course notes on the SM, and to compare the SM and traditional teaching method. At the end of the study, a significant difference was found between the performance of the students from the control and

the experimental group in favour of the latter. The researcher recommends that models of teaching should be employed extensively in teaching at secondary level; and secondary school teachers should be made aware of the new techniques and models through in-service training programmes.

The third study was undertaken by Paltasingh (2008). With this experimental study, she aimed to investigate the effect of the SM in developing learners' creativity in life science course in which she compared teaching science through the synectics technique to teaching science through the traditional method. The results of the study produced considerable gains supporting the use of the SM in teaching. Firstly, a significant difference between effects of the SM and traditional method of teaching life science in development of creative thinking ability was found in favour of the SM. Another finding is that training in creativity by synectics instruction resulted in significantly higher achievement in science. Finally, in terms of scholastic achievement, the experimental group taught through the SM attained significantly higher post test scores than the control group.

Kleiner (1991) also carried out an experimental study with the purpose of measuring the impact of synectics training on students' creative thinking abilities and achievement in science. The author notes that although no statistically significant between-group differences for students in experimental and control group appeared, the observations made by the researcher during the classroom sessions pointed to increased vocabulary and increased class participation. He states that synectics could be used as an alternative instructional model.

As for the research on synectics in FLE context, only one study could be attained by the researcher. Fatemipour & Kordnaeej (2014) investigated the influence of synectics and journal writing techniques on a group of EFL students' creativity. A quasi-experimental design for the study was adopted. The sample consisted of 80 participants at intermediate level. There were two experimental groups but no control group in the study. Synectics

technique was implemented in one of the groups, and journal writing technique was used in the other group. The instruments were Oxford Place Test (OPT), and Abedi Creativity Test. The findings of the study revealed that both synectics and journal writing techniques had a significant effect on the promotion of creativity. On the other hand, the synectics group outperformed the journal group. In addition, participants had generally positive attitudes towards synectics technique. The journal group participants were content with their experience and had a perception that the journal writing technique had a positive effect on their writing skills.

Although the findings of research studies on the use of SM point to the enhancement of creative thinking and increase in learner achievement, there remains much to be investigated and accomplished in relation to its implementation in different curricular areas and with different objectives in this emerging field.

Second Language Writing

Approaches to Second Language Writing Instruction

A brief overview of literature on SLW instruction reveals several main approaches to writing in a historical fashion. The first approach is the traditional paradigm, namely the product approach, which emerged before the mid-1960s during the reign of audiolingual method (Raimes, 1991). It is in line with sentence level structuralist linguistics and bottom-up processing (Nunan, 1999). This tradition is also called 'controlled composition' model as "the teacher employs a controlled programme of systematic habit formation in an attempt to avoid errors and to reinforce appropriate second language behaviour" (Silva & Matsuda, 2002, p. 258). Similarly, Nunan (1999, p. 272) maintains that the focus of product-oriented approaches is "on the final product, the coherent, error-free text.... the tasks in which the learner imitates, copies, and transforms models provided by the teacher and/or the textbook". Aligned with the principles of the dominant method of SLW instruction at that time, the function of writing was to reinforce oral patterns of language, so it involved a variety of sentence drills like fill-ins, substitutions, transformations, etc. and controlled composition tasks (Raimes, 1991).

The second main approach that evolved in the 1970s (Raimes, 1991) was the process approach which originated from the experiential philosophy or learning by doing (Nunan, 1999). "The writer as language learner and the creator of text" rather than the form became the central focus in the writing process through this move (Raimes, 1991). Consequently, SLW instruction reflecting the underlying principles of the current learning theory of the time involved classroom applications such as idea generation, drafting, revising and editing, and a positive and collaborative environment for learners to go through the writing process with minimum interference was provided. Furthermore, formal accuracy was not a matter of

concern at least in the initial steps of the writing process (Nunan, 1999). In addition, process approach to writing instruction offered several pedagogical benefits like the following:

- Focus on the process of writing that leads to the final written product;
- Help student writers to understand their own composing process;
- Help them build repertoires of strategies for prewriting, drafting, and rewriting;
- Give students time to write and rewrite;
- Place central importance on the process of revision;
- Let students discover what they want to say as they write;
- Give students feedback throughout the composing process (not just on the final product) as they attempt to bring their expression closer and closer to intention;
- Encourage feedback from both the instructor and peers;
- Include individual conference between teacher and student during the process of composition. (Brown, 2001, p. 336)

Although the process approaches to writing evoked great enthusiasm on part of some practitioners and theorists, some found it as an ‘obsession’ that would prevent meeting the demands and expectations of the academic world. Subsequently, a new approach to writing instruction evolved in the mid-1980s (Raimes, 1991). The focus of this approach, namely the content-based approach, was on content rather the processes of the writer. In other words, the focus of this approach was on “the demands made on readers by the nature of academic subjects they were required the master” (Nunan, 1999, p. 271). In terms of classroom practices, “the main emphasis is on the instructor’s determination of what academic content is most appropriate, in order to build whole courses or modules of reading and writing tasks around that content” despite the use of some prewriting tasks and revision derived from the process approaches (Raimes, 1991, p. 411).

Along with the content-based approaches, the audience- or reader-dominated approach came into view with an emphasis on the expectations of academic readers. It derived from English for Academic Purposes (henceforth, EAP) movement. The instruction within this approach was theme-based, and language learning was viewed as a means for socialising with the academic community. For Raimes (1991), this appeared to be as a return to form-dominated approach with the distinction of the presentation of rhetorical modes rather than grammatical forms. The outside reader has such a powerful place within this approach that classroom applications were determined and operated as a result of the analysis of this reader's expectations or demands. As for the pedagogical practices, learners were involved in writing tasks reflecting academic discourse genres with the purpose of meeting the standards formulated by the target academic discourse community (Silva & Matsuda, 2002).

The more recent movements in relation to SLW pedagogy include genre-based approach, contrastive rhetoric, and critical pedagogy. Briefly speaking, genre-based approach to SLW has emerged as an influence of the realm of social constructivism in mainstream and second language education. According to Hedgcock, "social constructionism and genre analysis have demonstrated that texts and their forms are most meaningfully described with reference to the sociocultural contexts in which they emerge and evolve" (2005, p. 609). Basically, "student writers study texts in the genre they are going to be writing before they embark on their own writing (Harmer, 2001, p. 258). The strength of this approach for Nunan (1999) is its focus on the selection of the content since it is essentially a syllabus design matter. As for contrastive rhetoric, pioneered by Kaplan in 1966 and extending to the present time, it evolved from the examination of texts produced in different languages with the purpose of exploring the effects of L1 on L2 in terms of "rhetorical construction of textual frameworks" (Hedgcock, 2005, p. 599). In other words, it was based on the assumption that "certain culturally determined ways of thinking and communicating will transfer themselves

to second language texts" (Nunan, 1999, p. 296). However, it was subjected to criticism especially in the earlier work in contrastive rhetoric in terms of the lack of its immediate applicability to writing instruction (Leki, 1991cited in Nunan, 1999). Finally, affected mainly by the Freirean philosophy, the proponents of critical pedagogy suggested professionals and learners question the discourse and its power relationships; consequently, "issues of critical pedagogy such as critical needs analysis, critical writing about academic genres, the complexity of text appropriation and plagiarism, race and class issues, gender (in)equality, and identity" became the focus of SLW scholarship (Hedgcock, 2005, p. 602).

Although these approaches appear to have come into view in a chronological fashion, it does not necessarily mean that they are disconnected and sequential. Actually, an eclectic approach to SLW pedagogy could be adopted reflecting the diversity of "the L2 writer, the L2 writer's texts, the contexts for SLW, and the dynamic interaction among these components in authentic contexts for writing" from the viewpoint of socioculturally oriented approaches to second language literacy (Hedgcock, 2005, p. 598). Then what seems optimal for writing instructors is "to develop their own approach to the teaching of writing, enabling them to choose methodologies and materials which arise from principled decisions that they articulate to others" (Kroll, 2001, p. 221). To conclude, practitioners should develop an informed awareness of or a principled attitude to which approach or method to employ depending on their learners' needs, their goals, and the conditions of the instructional contexts they serve in and be conscious of the implications to be drawn from each specific approach to date.

Concerning the context of the current study, the main approach to SLW was process approach to writing with an EAP focus. Among the aims the writing course were to equip learners with academic writing skills and competence, and teach them rhetorical modes with respect to the issues such as content and organization, sentence structure, mechanics, and

format of academic writing. The curriculum pedagogy of the course was inductive and collaborative learning.

The Nature of Second Language Writing

This section presents an articulate definition of SLW, its three primary aspects, its main characteristics that come to foreground, its common purposes, and the role of the teacher in the writing process.

Although there are some problematic issues in defining and conceptualizing writing, Silva & Matsuda provide a much clearer definition for it:

> (Writing is) one of the three modes of linguistic expression and communication – along with speaking and signing – rather than secondary or subservient to speech. It is a manifestation of, as well as the process of manifesting, sociolinguistic, strategic and grammatical competences mediated by the use of orthographic systems. (2002, p. 253)

What follows the above definition is that writing is one of three equal components of communication; and it is not only a product but also a process that is actualized by the use of orthography as an indication of communicative competence. The communicative aspect of writing in that definition was highlighted by Olshtain as an "interactive process which takes place between the reader and the writer via the text" from the communicative language teaching perspective (2001, p. 207). Thus, in the first place, writing has been characterized as a truly communicative act.

Another important feature of SLW is that it is a multidimensional construct; that is, it involves "text analytic, composing processes, and sociocontextual perspectives; components (i.e. texts, writers, and contexts); the participants (students, instructors, policy makers, etc.),

and basic educational functions (curriculum, instruction, and assessment) of L2 writing" (Cumming, 2001, p. 214).

Drawing on Silva & Matsuda (2002), writing involves three main aspects: relational, strategic, and textual. The relational aspect refers to the rhetorical situation explained by the authors as a complicated net of continuously changing relationships among the elements of writing: the relationships between the writer, the reader, the text, and reality. The strategic aspect is to do with the strategies, also known as 'heuristics', used by writers to address and respond to a rhetorical situation by writing a text. Some strategies might include having genre knowledge, identifying the aim of writing and the topic, developing the topic, drafting, revision, and editing. The authors describe the final aspect of writing as the "material realization of the other two aspects" in that "it is through the written text that the writer constructs, represents and negotiates his or her conceptions of the writer, the reader, the text and reality" (p. 257). In order for writers to achieve competence in writing, they should have the knowledge of how three different meanings (ideational, textual, and interpersonal) could be established following specific written discourse features such as typographical features, structural means, and discursive features. Having the knowledge of lexicon, syntax, and idiomatic language, and ensuring cohesion and coherence are also important factors in developing a text competently.

As for the purposes that a writing task might serve, a variety of them exist depending on the context. Grabe, for example, groups them into five broad levels with their outcomes (the ones in brackets) (2001, p. 50):

1. Writing to control the mechanical production aspect (motor coordination, minimal fluency).
2. Writing to list, fill-in, repeat, paraphrase (not composing, only stating knowledge).

3. Writing to understand, remember, and summarize simply, and extended notes to oneself (composing and recounting).
4. Writing to learn, problem solve, summarize complexly, synthesize (composing and transforming, composing from multiple sources).
5. Writing to critique, persuade, interpret (privileging perspectives and using evidence selectively but appropriately).
6. Writing to create, an aesthetic experience, to entertain (composing in new ways, figurative levels of composing, and violating composing norms in effective ways).

According to the author, this purpose list follows a hierarchical status; that is, each succeeding purpose is based on the preceding one regarding 'the normal range of difficulty' of skill that each task in the sequence necessitates.

In terms of its general characteristics, writing is considered to be a challenging skill because "producing a coherent, fluent, extended piece of writing is probably the most difficult thing to do in language" (Nunan, 1999, p. 271). In fact, creating a good piece of writing is really very complicated and demanding as it involves a number of factors to consider. Raimes (1983, p. 6) brings all these factors together as shown in the following figure.

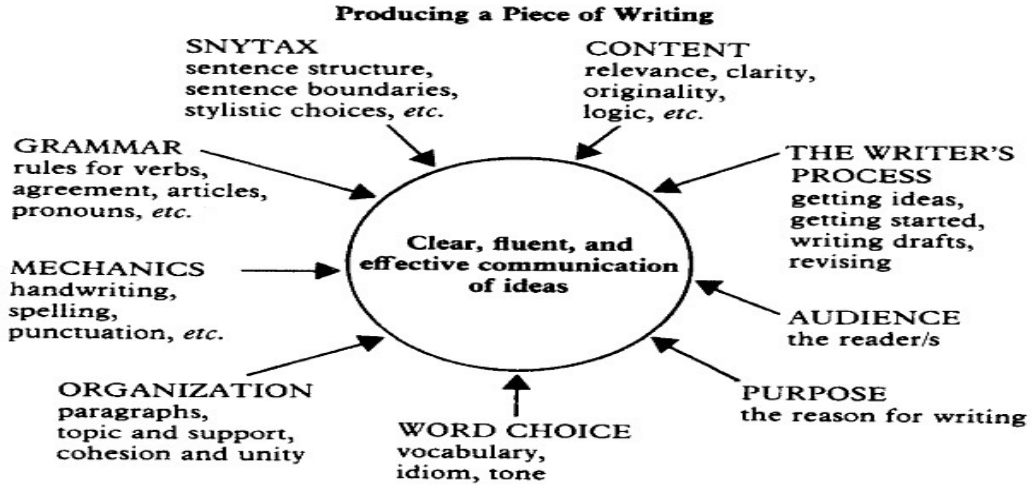

Figure 1. Factors involved in producing a written text (Raimes, 1983, p.6)

As could be inferred from Figure 1, in order to produce a written text in which ideas are communicated in a clear, fluent, and effective way, writers need to consider a variety of factors such audience, purpose, word choice, content and organization, mechanics, and syntax and grammar. In addition, they should go through recursive and non-linear stages of the writing process and employ certain strategies to maximize the effectiveness of their written text.

The writing skill has also been compared and contrasted with the speaking skill in the literature (e.g. Riddell, 2003; Ur, 1996). For example, Riddell highlighted its differences from speaking and pointed that all these differences between these two productive skills cause writing to be more challenging (2003, pp. 131-132):

- Accuracy is more emphasized in writing while fluency is the focus of speaking.
- Punctuation and spelling are two factors important in writing but absent from speaking.
- Written language is direct and efficient since there are no ‘hesitators’ as in speaking.
- Unlike in speaking, learners cannot make use of body language or gestures to enhance comprehension in writing.
- Speaking is naturally acquired especially in an English-speaking country, whereas writing is taught.
- Writing is a solitary skill since we write individually although we speak with other people.

There are also a number of factors listed by Ur (1996) that make writing a distinct skill from speaking. For example, the permanence, explicitness, density, detachment, organization, slowness of production, speed of reception, standard language, being a learnt skill, and sheer

amount and importance of the written discourse are its natural characteristics that make it different from the spoken discourse.

With respect to the role of the teacher within the writing instruction following the principles of Communicative Language Teaching with a focus on learner-centred, interactive, and strategies-based instruction, it should be one of facilitator, guide, consultant, and judge or evaluator (Brown, 2001, p. 341), and additionally, of motivator, resource, and feedback provider (Harmer, 2001). Consequently, the teacher is expected to stimulate learning, raise learners' consciousness of the use of strategies to build on writing skills, consult, give feedback on their studies, and do evaluation when necessary.

Finally, a common view about SLW is that it is an ignored productive skill in FLE. For instance, Riddell states that it is 'the forgotten skill', and much less time is spent on this skill except for exam or literacy classes (2003, p. 130). The reasons for this he suggests might be its unclear appropriateness to the real life, the gap in teachers' knowledge about how to teach it, and partly its boring nature for most students. However, as many scholars and practitioners would agree, it is not a skill to be forgotten or underestimated. Its importance increases for learners' own lives and jobs especially if they live in an English-speaking country or prepare for an exam of which one component is writing as the author mentions. After all, the view that writing is one vital component of communicative competence necessitates the attempt to nurture and empower learners' writing skills through principled approaches and practices to the teaching of SLW.

Stages of the Writing Process from a Process Approach Perspective

As the main approach adopted for the curriculum of the writing course and its mode of instruction regarding the present study was the process approach with an EAP focus, this

section will include a presentation of the stages of the academic writing process, and specific information will be given about the types of prewriting techniques for the aims of the study.

As stated before, process approach to writing requires learners to go through a number of stages and employ various strategies until they develop the 'final product'. For White and Arndt, for example, "writing is re-writing; that revision – seeing with new eyes – has a central role to play in the act of creating text' (1991, p. 5, cited in Harmer, 2001). They propose a model for the writing process that includes an interrelated set of recursive stages: drafting, structuring (ordering information, experimenting with arrangements, etc.), reviewing (checking context, connections, assessing impact, editing), focusing (that is making sure you are getting the message across you want to get across), generating ideas and evaluation (assessing the draft and/or subsequent drafts). Figure 2 illustrates their model:

Figure 2. White and Arndt's process writing model

The terms and number of stages differ in the attempt to describe the writing process in the relevant literature. This variation might be a reflection of the individual differences in all kinds of learning. After all, writing is such a complicated cognitive process that variations can occur in handling with it due to a number of factors such as teacher preferences or way of instruction, contextual differences like curriculum goals, learning preferences, styles, strategies, etc. However, some suggestions might enlighten learner writers in terms of getting familiar and experimenting with the composing process until they gain a satisfactory extent of

competence. In this overview, Oshima & Hogue's system (2007) of the writing process will be described as their coursebook for teaching academic writing was covered in the writing course of the research setting. Their system devised for actualizing the writing process includes roughly four stages: prewriting, organizing, writing, and polishing. Each stage of their model is described in detail in the following subsections.

Prewriting. It is the idea generation step whereby a variety of techniques could be used to choose a topic and gather ideas to develop it. Actually, it is the stage that students experience considerable difficulty in the writing process (Cormack, 1980) since many students feel frustrated or anxious at the beginning phase of writing. Therefore, prewriting appears to be an important stage as it prepares students to form the foundation of their writing. Some common techniques that could be applied in this stage are listing, brainstorming, freewriting, clustering, reading passages related to the topic, doing research, discussing the topic in pairs or groups, drama, etc.

Listing is a common and practical prewriting technique which could be mostly used individually. Writers simply write the topic on a piece of paper and below it make a list of words or phrases relating to the topic that they can think of. The aim is to write continuously without worrying if the ideas are fine or not until they have no more ideas to add to the list.

Brainstorming is also a commonly used technique which is practised usually in groups or as a whole class. It aims to bring different individuals' knowledge or ideas about a certain topic together so that they could make use of a variety of ideas to be used in their first drafts (Kroll, 2001).

Freewriting is another technique for helping students generate a wealth of ideas to utilize while writing their first drafts. Students freewrite about a particular topic for a specified amount of time without taking their pen off the paper. The goal is to help them flow

their ideas, so they are warned not to worry about the correctness of their sentences, punctuation, or spelling (Kroll, 2001; Oshima & Hogue, 2007).

As for clustering, students write the main topic in the centre of the paper in a big circle, and then they write associated ideas that come to their mind in smaller circles around the big circle. The ideas in smaller circles can even prompt further ideas which are written in much smaller circles. As a result, they have a list of ideas in a pattern which shows the connections between each emerged idea. An example illustration of this technique is presented below.

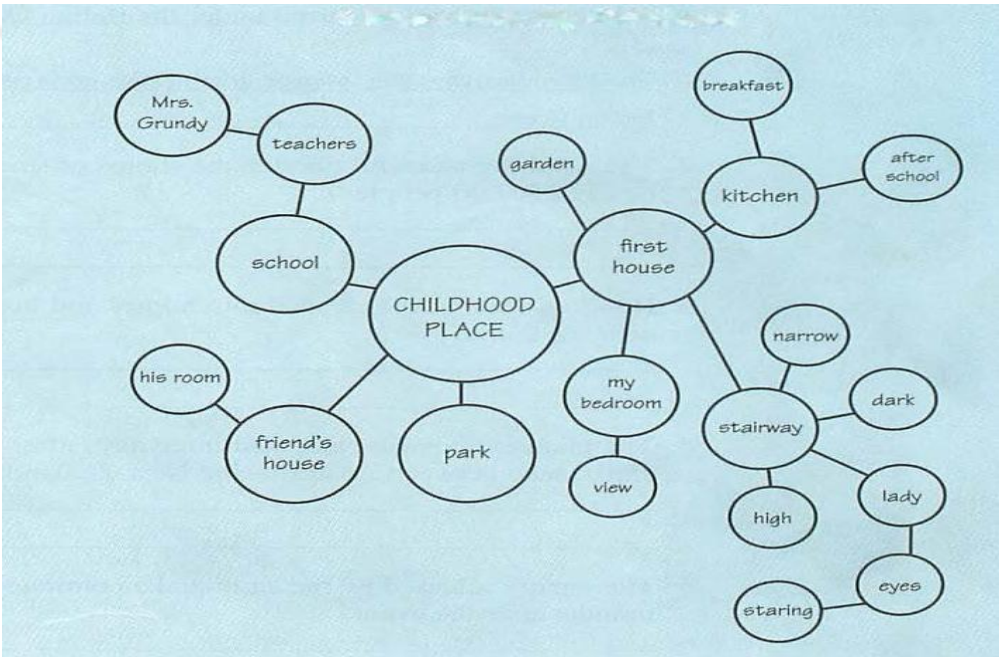

Figure 3. An example use of clustering technique (Oshima & Hogue, 2007, p. 72)

Drama also appears to be an effective prewriting activity as it "provides a way to bridge the gap between inner speech and written language, and thus ease the process of transmitting thought to paper" (Cormack, 1980, p. 30). Drama as a prewriting activity includes improvised activities which learners plan, organize, execute, and reflect on. The activities require students to collaboratively interact with one another.

Other prewriting techniques may include reading passages related to the topic, having a class discussion about the topic, searching about the topic using different resources outside the class and the like. The synectics technique which was implemented in the writing programme of the present study could also be used to generate interesting ideas or connections about the topic.

Organizing. In the second step, the ideas are organized through an outline. It can be a simple one including a topic sentence (i.e. the sentence that includes a topic and a controlling idea and indicates the subject of the paragraph) and main ideas to support the topic sentence. The outline can also be a detailed or a formal one. Its format depends on a set of conventions like letter and number use and indenting which might look like the following:

Topic sentence
- A. Supporting point
  1. Detail (example, etc.)
  2. Detail
  3. Detail
- B. Supporting point
  1. Detail (example, etc.)
  2. Detail
  3. Detail
- C. Supporting point
  1. Detail (example, etc.)
  2. Detail
  3. Detail

Concluding sentence

Figure 4. Formal outline (Oshima & Hogue, 2007, p. 54)

The formal outline looks like the skeleton of a paragraph or an essay (with a few differences in the format). Therefore, it is essential for building an effective, coherent, and well-developed piece of writing.

Writing. In the third stage, a rough draft is written using the outline as a guide. Learners are encouraged to get their ideas developed in the previous stages onto paper without worrying too much for grammar, spelling, or punctuation mistakes in the fastest way possible.

Polishing. The fourth step involves both revising and editing. Revising is to do with considering the bigger issues of content and organization. It is also about checking the written text in terms of appropriate use of discourse markers and rhetorical conventions. At this point, peer-editing works well especially if there is a guideline or a checklist for the peer to revise the paper. Most of the time, the writing coursebooks include such checklists for each writing task for peer-editing and self-editing, or the instructor could design them for classroom use. The next step in the polishing stage is editing. This time, the writer him/herself checks the paper in terms of the smaller issues of grammar, punctuation, and mechanics. As a result of editing, the writer is expected to find and correct the errors if any exists. At last, the final copy is written to be submitted to the instructor; and the instructor checks, evaluates, and gives feedback to the owner of each paper in turn.

As could be noticed from the description of the stages above, writing or the composing process is "a complex, cognitive process that requires sustained intellectual effort over a considerable period of time" and has a social, collaborative nature (Nunan, 1999, p.273). Additionally, it can be assumed that the SLW class is a "workshop for students to learn to produce academic essays" (Kroll, 2001, p.223) as a result of which they are expected to gain skills of self-revision and editing and become autonomous and competent writers in time.

Research on Prewriting Techniques and Creative Writing in Second Language Writing

When the literature on research regarding SLW is searched, a number of studies investigating the influence of various prewriting techniques and the effectiveness of creative writing programmes conducted both in Turkey and abroad could be found.

One exemplary study conducted in Turkey by Öncü (1999) explored the effects of video films as a prewriting activity in writing argumentative compositions. The sample of the study was 20 intermediate level students in tertiary education. The experimental group students watched video films as a prewriting activity whereas the control group students did not. The findings of the study obtained through statistical analysis from pre-tests and post-tests indicated that there was a significant improvement in writing argumentative composition in favour of the experimental group.

Another study about prewriting is by Özçelik (1996), who carried out an experimental study in order to investigate the influence of the use of reading texts as a prewriting activity in low level EFL students' writing. The experimental group students did prewriting activities through reading texts related to the topic while the students in the control group did not. The results of the statistical analysis showed that the prewriting technique through reading texts brought about a positive effect on students' writing in the experimental group, which was indicated by a significant increase in their ESL Composition Profile total score and ESL Composition Profile components (i.e. content, organization, vocabulary, and language use).

Diaw (2009) conducted a case study to examine the impact of storytelling as a prewriting activity in learners' narrative writing in a language arts classroom. With this purpose in mind, three groups of students were told a story in each of the six sessions by the researcher. Following each session, students were asked to write about a topic. Various means of data collection such as focus group interviews, writing samples, and questionnaires were used, and they were subjected to ground theory analysis. One of the three findings was that

participants took part in the study enjoyed storytelling. Second, they were motivated to involve in the constructivist writing process. Third, interactive storytelling allowed the learners to discover their knowledge of self and the world. The researcher concludes that storytelling is an effective prewriting technique in the writing process in the middle school language arts classroom tapping both affective and cognitive domains of learning.

Cormack (1980) explored the influence of creative drama as a prewriting strategy on the content and the process of short story writing. For a period of ten weeks, two groups of sixth and seventh grade students involved in the study. One group were given drama, and the other one received a lesson/discussion prewriting instruction. The analysis of the findings indicated that drama students got higher scores from the first story but significantly higher from the third story with respect to nine categories (i.e. ideas, detail, audience awareness, sentence structure, language style, plot, setting, character, and narration/dialogue). Another result was that students involved in drama instruction wrote longer stories, used more dialogue, and wrote more frequently in the first person. In terms of attitudes, drama students were generally positive about prewriting activities and evaluated their experience as being enjoyable.

As for the research on creative writing, Karakaş (2011), for example, conducted an experimental study with the purpose of investigating the effect of creative writing activities on learners' English writing skills. During the implementation period, the experimental group was instructed creative writing techniques such as writing a story along with music and photos, creating story characters, completing an unfinished story, writing scenarios, etc. Meanwhile, the control group students were instructed traditional writing activities. Data collection instruments were Writing Interest and Awareness Questionnaire and three writing tasks which were evaluated using the creative writing scale. The findings obtained from the analysis revealed that experimental group outnumbered the control group in terms of

originality, fluency, and flexibility of ideas, choice of words, sentence structure, organization, style of writing, and grammar. In addition, a significant increase was found in experiment groups' interest in and awareness of writing.

Another study about creative writing is by Özbek (2006), who implemented an experimental research study to find out the effect of a creative thinking programme on EFL students' attitudes towards their own creativity. The students in the experimental group were involved in the creative thinking programme. However, control group students did not take part in the same programme. The findings obtained from the pre-tests and post-tests from statistical analysis pointed to a significant increase in experimental group students' attitudes towards their own creativity in writing courses.

As this review shows, most of the studies given above focused on learner related factors such as motivation, attitudes, interest, awareness, enjoyment, self-discovery, etc. (e.g. Cormack, 1980; Diaw, 2009; Karakaş, 2011; Özbek, 2006) while very few of them explored the effects of using prewriting techniques on writing skills or improvement in writing rhetorical modes (Karakaş, 2011; Öncü, 1999; Özçelik, 1996). In this respect, there appears to be a lack of research investigating the effects of a prewriting technique on writing skills in terms of developmental measures like fluency and lexical complexity, and vocabulary development. Therefore, the current study is mostly going to focus on these variables in an attempt to contribute to bridge the gap in the research literature on SLW.

Creativity

Defining and Describing Creativity

The literature on creativity abounds with definitions of the construct, none of which has been universally accepted. One major reason for this is the fact that creativity is a highly complex and multifaceted phenomenon (Treffinger, Grover, Selby, & Shepardson, 2002). Another reason is that the concept is used and investigated in a range of domains from industry to education; therefore, various definitions or descriptions of the term have evolved in relevance to the specific discipline (Reid & Petocz, 2004). Furthermore, there are two common associations made with creativity, i.e. high creativity and ordinary creativity, which result in various understandings of the concept (Craft, 2001). In addition, creativity could be defined and described in terms of several themes such as process, person, products, and environment (Karpova, Marcketti & Barker, 2011). In order to exemplify this multiplicity of the definitions and different understandings of the concept in relation to the aforementioned reasons, various definitions from the related literature will be presented in the following part.

The fact that some writers have reviewed more than a hundred definitions of creativity (e.g. Nassif & Quevillon, 2008; Treffinger, 1996) proves how complex and multifaceted the nature of the creativity is. Despite the variations in defining the term, the following definition seems to reflect the essentials of creativity: Creativity is "a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results" (Torrance, 1974 cited in Treffinger et al. 2002). Nassif (2004, cited in Nassif & Quevillon, 2008, p. 13) has also compiled various definitions of the term as “the quality of an individual that allows for original or associative thought and/or the potential of generating useful combinations of previously disparate or

unlikely elements". In this definition, creativity is viewed as a personal capacity or characteristic.

As for the variation in creativity definitions across disciplines, Reid & Petocz (2004, p. 45) point out that "creativity is viewed in different ways in different disciplines: in education it is called 'innovation', in business it is 'entrepreneurship', in mathematics it is often equated with 'problem solving', and in music it is 'performance' or 'composition'." In the context of education, Ferrari, Cachia & Punie (2009, p. 30) suggest that a democratic, 'little c' or ordinary definition of creativity is of more relevance "as it acknowledges the possibility for everyone to develop their creative potential". They also maintain that the 'process' dimension of creativity should be emphasised in education. All these differences in the meaning of creativity across different disciplines should be taken into consideration in understanding, investigating, and the efforts for developing the construct.

In terms of the distinction between high and ordinary creativity, Craft (2001, pp. 13-14) reviewed some definitions offered by various scholars. High creativity, to start with, is defined as "a person's capacity to produce new or original ideas, insights, restructurings, inventions or artistic objects, which are accepted by experts as being of scientific, aesthetic, social, or psychological value" (Vernon, 1984, cited in Craft, 2001, p. 94). High creativity is also termed as 'exceptional' creativity or 'Big-C' creativity in various contexts (e.g. Sternberg, 2012). For Craft (2001), this type of creativity is only valid for people with extreme talent but not much related to creativity in education. She suggests that the type of creativity which is of more relevance to the education of the learners is ordinary, 'democratic', or 'little-c' creativity. Apparently, the latter type of creativity implies that everyone can possess different degrees of creativity, and individuals' creative potential can be enhanced through training.

As for the different themes that the creativity definitions centre around, Karpova et al. (2011, p. 53) mentions four of them: a) concepts of the creative *process* or the mental routines that are operative in creating ideas, b) the creative *person* when he or she demonstrates certain creative characteristics in personality, traits, attitudes, or behaviours, c) the creative *product* or tangible object, and d) the creative *environment* that fosters the creative person. For the 'process' theme, to illustrate, Torrance (2002, p. 42) defines the concept as "the process of forming ideas or hypotheses, testing them, and communicating the results". For the 'person' theme, Khatena & Torrance (1973, p. 28) suggest that creativity is "the power of the imagination to break away from perceptual set so as to restructure or structure anew ideas, thoughts, and feelings into novel and associate bonds". Gardner (1993, p. 35) defines creativity in terms of 'product' theme as "the creative individual is a person who regularly solves problems, fashions products, or defines new questions in a domain in a way that is initially considered novel but that ultimately becomes accepted in a particular cultural setting". Similarly, Weaver & Prince (1990, p. 379) define creative thinking as "everyday thinking that results in something new, either to the person doing the thinking or to the world". Finally, the theme 'environment' is emphasized by Rhodes (1961, p. 306) in that "creativity cannot be explained alone in terms of any other single component, no matter how vital the component may be". As evident in these definitions, creativity is a multidimensional construct which represents different concepts across different disciplines and contexts.

In conclusion, the definitions of creativity are numerous, and none of them appears to be universal. Furthermore, it is assumed that people refer to different constructs when using the term creativity, and one's definition of the term reflects the varying nature or the characteristics of creativity (Treffinger et al., 2002). In this regard, the definition of creativity will be shaped according to domain-, time- and place-specific criteria (Csikszentmihalyi, 1990, cited in Cumming, 2011, p. 14) and multifaceted and multidimensional nature of the

construct (Barbot et al., 2011). Consequently, assessment, measurement, teaching and learning policies, contexts and processes related to creativity need to be congruent with all these considerations (Cumming, 2011). In the context of the present research, the process dimension of creativity seems to be in line with the purposes of the study. As mentioned before, the process theme considers creativity as "the process of forming ideas or hypotheses, testing them, and communicating the results" (Torrance, 2002, p. 42). In addition, 'little c', 'democratic' or ordinary definition of creativity is of more relevance in this context as it assumes the probability of developing the creative potential in everyone through training.

The Nature of Creativity

Although the definitions of creativity exhibit considerable variety, there is a widespread agreement upon its characteristics or nature. For example, it is a widely accepted fact that creative abilities, whether exceptional or ordinary levels, are universal, and exist in each individual in varying degrees (Barbot et al., 2011; Gordon, 1961; Guilford, 1987; Torrance, 2002). What is more, creative thinking is not a mysterious process; it can be taught and improved by training or instruction (Barbot et al., 2011; Gordon, 1961; Treffinger et al., 2002). Similarly, Karpova et al. (2011, p. 55) observes that "human creative potential is a virtually limitless resource that defies racial, social, economic, and gender categorization" and as it is "a natural, human trait, it may be cultivated and developed". Livingstone (2010, p. 60) also holds that "although it is a normal form of human behaviour, creativity is also a technique, a skill that can be developed and refined over time".

Treffinger et al. (2002:11) summarize the nature of creativity as follows:

- Characteristics include cognitive abilities, personality traits, and past experiences.
- Characteristics vary among people and across disciplines.
- No one person possesses all the characteristics or displays them all the time.

- Characteristics are derived mostly from research about creative adults and may still be developing in K-12 students.
- Characteristics can sometimes be manifested in negative ways.
- Characteristics sometimes involve the integration of opposites.

The points listed above reflect some key features of creativity. First of all, creativity characteristics can be considered a sum of one's cognitive abilities, personality traits, and past experiences. In addition, these characteristics show variation among individuals and in different disciplines or domains. Another important issue about the nature of creativity is that not all its characteristics are possessed by one individual or all the time. What is more, learners' creativity potential could be developed.

A different feature of creativity has been emphasized by Cumming (2011). For him, creativity is not restricted to problem-solving and thinking skills but also essential for self-fulfilment and continuation of motivated and meaningful life-long learning. What is implied in this view is that creativity is also a significant condition for one's self-actualization process.

Although the literature on creativity is too extensive to review every minor detail, a final point is worth being mentioned. Intelligence and its relation to creativity have been a matter of debate in many texts. Guilford (1987, p. 44), for example, asserts that creativity is not apart from intelligence but a part of it. This idea is more elaborate in his own words: "Many believe that creative talent is to be accounted for in terms of high intelligence or IQ. This conception is not only inadequate but has been largely responsible for the lack of progress in the understanding of creative people". The idea that underpins this argument is that creativity being a distinct construct deserves to be investigated, assessed, and developed in its own right.

In conclusion, although describing the nature of creativity is as challenging as discovering a universally accepted definition of the concept, it would not be inappropriate to suggest the following points as a summary. One of these points is that particularly ordinary or little-c creativity is possessed by everybody in varying degrees and times. It is this type of creativity which is of relevance to educational settings with the implication that it could be developed through training and instruction. Furthermore, creativity should be viewed as an integration of one's cognitive abilities, personality traits, and past experiences. In addition, it is important to remember that creativity involves both divergent (creative thinking skills) and convergent (critical thinking skills) thinking. Last but not least, creativity is significant for one's self-actualization.

The Importance of Creativity and its Development

In today's world, the importance creativity and creativity education have gained is attention grabbing. Indeed, creativity was declared as an innovative educational approach and a significant component of the learning process in World Conference on Higher Education (UNESCO 1998) (Reid & Petozc, 2004). Barbot et al. (2011, p. 58) rightfully put it that "in our contemporary society in which individuals have to adjust constantly to new problems and find original solutions, creativity is indeed a feature that has become increasingly important". The reasons behind the growing significance of creativity and creativity education are various.

Firstly, many scholars have emphasized its importance in terms of its contribution to the personal and professional growth. Cumming (2011, p. 1), for example, states that "we live increasingly within knowledge-based economies. Hence, the capacity to think critically, learn creatively and to generate solutions and creative ideas is not only highly prized but a necessity for life and employment, including within the teaching profession." Similarly, Karpova et al. (2011, p. 53) point to its contribution to the personal and professional growth: "Creativity

becomes the focus when preparing current students and future students to deal with uncertainty and to adapt to continuous change both personally and professionally". Actually, creativity is one of the most important skills that employers are seeking in candidates. Torrance (2002) also stresses the fact that it is essential for educators to get an insight into their students' creative abilities and attempt to develop their creativity so as to contribute to their personality development, professional success, and mental health.

Secondly, it has frequently been emphasized that creativity education leads to promotion of learning. More particularly, creative thinking supports high intelligence, talent, and technical skills in acquiring and retaining information. In other words, it enhances learning. It is also Torrance (1981) who notes that creative teaching improves learning as it has been observed that better motivation, alertness, curiosity, concentration, and achievement is reported in the existence of creative learning (cited in Fasko, 2000-2001, pp. 320).

Furthermore, developing creative abilities contributes to social welfare in a society, especially by the emphasis given to the role of cooperation and collaboration inherent in its nature. Guilford, for instance, highlights its importance in that "creativity is the key to education in its fullest sense and to the solution of mankind's most serious problems" (1967, cited in Fasko 2000-2001, p. 326).Creativity is also essential in higher education for achieving its aim of "using its natural resources in ways that develop content knowledge and skills in a culture infused at new levels by investigation, cooperation, connection, integration, and synthesis" (Livingston, 2010, p. 59).

All of those points mentioned above have been aptly summarized in Craft's words in that fostering learner creativity induces various gains including "personal development, e.g. helping pupils establish a frame for their own lives and increasing motivation; social development, e.g. promoting collaborative practices and team work; cultural development,

e.g. helping pupils recognise that they can change their own culture; and economic development, e.g. encouraging an entrepreneurial culture" (2001, p. 28).

Developing Learner Creativity

Despite the increasing importance of creativity and creativity education in the contemporary world, creativity has come across various blocks that inhibit its development. One of these is the belief that current educational practices overemphasize accuracy over diversity or originality of ideas, which is reflected in the following quotations. Guilford (1987, p. 37) believes that "under present-day mass-education methods, the development of creativity is seriously discouraged. The child is under pressure to conform for the sake of economy and for the sake of satisfying prescribed standards". Likewise Guilford, Sternberg (2012, p. 4) points out that educational practices, particularly "conventional standardised tests", i.e. multiple-choice tests with one correct answer and many wrong answers, appear to be blocks to the development of creativity. The reason for this is that knowledge is regarded superior to creativity in most learning environments. However, the author also puts it that knowledge is not unimportant but "knowledge is a necessary, but in no sufficient, condition for creativity". Similarly, Barbot et al. (2011) maintain that although creativity and innovation have gained increasing importance, there is a scarcity of attempts to develop learners' creative potential at schools. Furthermore, teacher education programmes in general do not include creativity teaching and assessment topics into their curriculum.

Other factors suppressing the development of creativity are overemphasis on sex roles in terms of creative abilities, and on prevention of failure or frustration, and fear and timidity in the case of presentation of unusual or atypical ideas by the students (Torrance, 2002, p. 46). What's more, emphasis on verbal skills, isolation and estrangement from peers and teachers, unrealistic career choices, divergent values and attitudes, and so on are among the factors

which are considered to be detrimental to the development of creative thinking abilities. In order to build up a conducive environment for the development of creativity, it is essential that educators' approach to creativity and the practices they undertake be in line with the principles of creativity learning.

In terms of a principled and deliberate plan or programme to foster creativity learning, there are various suggestions made by different experts in the field of creativity. Craft (2001, p. 19), for example, offers a helpful summary of approaches to developing learner creativity. One of these is 'creative cycle' approaches which are based on the processes of creativity. Four stages have been suggested comprising the processes of creativity by several scholars: preparation, incubation, inspiration or illumination, and verification:

- Preparation: the gathering of skills, principles and data, a time of discipline and focus
- Incubation: doing of nothing, 'letting go', a fallow period of receptivity and openness
- Inspiration or illumination: comes directly out of the incubation space
- Verification: the refining of the outcome

The writers propose that the following abilities should be developed in learners and teachers (Craft 2001, p. 19): be open to possibility, the unknown and the unexpected; bridge differences – make connections between apparently unconnected ideas and integrate different ways of knowing; hold the paradox of form and freedom; hold the tension between safety and risk; be willing to give and receive criticism, and be aware of the individual.

The second approach to the development of creativity is 'single-strategy' approaches, one example of which is 'six hats' method designed to promote the ability to view a particular issue from a number of different perspectives. Craft (2001, pp. 19-20) describes this method as "wearing any one of six possible fictional coloured hats imbued with certain qualities, the

thinker emphasises certain approaches to thinking". Another method within the single-strategy approach is 'possibility thinking' developed by Craft in 2000. The main principle of this method is to enable learners to act with a 'what if?' attitude or a 'questioning approach' within the whole learning process so that they could gain creative and critical thinking skills (Craft, 2001).

Another approach to the development of creativity reviewed by Craft (2001) is 'multi-strategy' approaches which underpin the features of a conducive atmosphere for stimulating creativity in a learning environment. These features are identified by Shallcross (1981) as follows (cited in Craft, 2001, p. 20):

- Allowing adequate space and time for developing a creative response to any given situation;
- Providing an overt 'mental climate' which includes fostering self-esteem and self-worth and the valuing of achievability;
- Enabling each child to grow in security and personal confidence without constant scrutiny;
- Allowing (pupils) to grow at their own rate, retain the privacy of their work until they are ready to share it, and prize their possible differences.

The last approach to the fostering of creativity in Craft's review is 'system' approaches for which she provides the example of 'Reggio Emilia' approach implemented in the Italian pre-school. It includes a set of pedagogical strategies related to the appropriate use of time, space, rich resource materials, climate, and occasions. Another example for system approaches is Sternberg and Lubart's 'investment theory' of creativity which appears to be appropriate both for children and adults in international creativity discourse. It includes

teaching learners to use six resources, i.e. intelligence, knowledge, intellectual style, personality, motivation, and environmental context (cited in Craft, 2001, p. 21).

This approach has been described more thoroughly by its developer himself. For Sternberg (2012), educational institutions 'suppress' creativity through their accuracy focused practices such as tests including items with only one correct answer. One way to foster creativity through education is applying 'investment theory of creativity' which reflects the idea that creative people buy low but sell high. It might be possible via designing tasks for learners to assess their creative thinking. The tasks might elicit their creativity in various modes: create, invent, discover, imagine if..., suppose that, or predict. The following tasks are given as examples for these instructional or assessment activities (Sternberg, 2012, p. 9):

1. Create an alternative ending to the short story you just read that represents a different way things might have gone for the main characters in the story. (Literature)
2. Invent a dialogue between an American tourist in Paris and a French man he encounters on the street from whom he is asking directions on how to get to the Rue Pigalle. (French)
3. Discover the fundamental physical principle that underlies all of the following problems, each of which differs from the others in the "surface structure" of the problem but not in its "deep structure...." (Physics)
4. Imagine if the government of China keeps evolving over the course of the next 20 years in much the same way it has been evolving. What do you believe the government of China will be like in 20 years? (Geography/Political Science)
5. Suppose that you were to design one additional instrument to be played in a symphony orchestra for future compositions. What might that instrument be like, and why? (Music)

6. Predict changes that are likely to occur in the vocabulary or grammar of spoken Spanish in the border areas of the Rio Grande over the next 100 years as a result of continuous interactions between Spanish and English speakers. (Linguistics)

Fasko (2000-2001) is another scholar who reports on several issues for encouraging creativity development. The first of these is cognitive domain which includes knowledge, reasoning skills, technical skills, and special talents. The second one is affective domain which includes aesthetic concerns, one's feelings and emotions and the like. The author emphasizes that these two domains are equally important in creativity development programs. Another issue in such programs is the 'creative abilities' which could be fostered through creative thinking exercises such as brainstorming.

At this point, it is well worth mentioning that the synectics technique could be used to promote creativity. Synectics, the main component of the current study, is a structured technique designed for generating ideas, solving problems, and producing novelty through activation of certain psychological, conscious, and systematic mechanisms. The review of literature reveals that there is a positive relationship between synectics and creativity or creative thinking. As discussed in the first section of this chapter, almost all the studies investigating the effects of the technique on creativity have shown that the use of synectics contributed to learners' creativity growth (see Burk, 2005; Ercan, 2010; Fatemipour and Kordnaeej, 2014; Paltasingh, 2008; Pany, 2008). For this reason, the use of synectics in this study is thought to have an effect on the promotion of learners' creative thinking potential.

With respect to creativity in FLE, it certainly constitutes an important place in the instruction of each of the four skills. Writing is doubtlessly one of the skills that the need for creativity is of utmost significance. As mentioned before, there is a lack of focus on creative thinking element in SLW instruction and course books as the task designs are usually based on guided writing principles, and the focus is often on accuracy rather than flow of ideas

fluently and creatively. From this situation, the necessity arises for including the creativity element into the design of writing materials and instruction. At this point, synectics, again, could be thought to be carried out as a prewriting activity and idea generation tool that lends itself to the development of creativity in SLW.

To summarize, at the heart of the attempts to develop creativity is the necessity for educators to adopt an approach which favours and welcomes diverse and original ideas, and design and implement activities and assessment tools in line with the principles of creative teaching appropriate to a particular domain. The ability to discover problems as well as the ability to solve them should be valued and encouraged in the learning process. Furthermore, educators should be a model for learners in approaching creativity as an attitude to life in the process of self-actualization. Finally, developing creativity in SLW appears to be an essential goal in FLE. For this reason, the use of synectics as an alternative instructional model could be investigated to contribute to this goal.

Assessing Creativity

There are a variety of tools for measuring and assessing creativity used for education and research. However, there is a common criticism on creativity assessment tools in that creativity tests in general measure creative potential rather than creativity as they have low predictive validity because their tasks do not represent real-life creative behaviour (Cropley, 2000). They also exhibit some technical shortcomings. Cropley (2000) reviewed some of these tools in terms of what they measure and their consistency with them. He categorises the contents into three creativity-related concepts as ‘creative products’, ‘creative processes’, and ‘creative person’.

An exemplary instrument to measure the creativity of products is ‘Creative Product Inventory’ developed by Taylor in 1975 (Cropley 2000, p. 72). It is used to rate the

dimensions of Generation, Reformulation, Originality, Relevancy, Hedonics, Complexity, and Consideration.

A well-known and most frequently administered creativity test in the category of 'creative processes' is Torrance Tests of Creative Thinking (TTCT), which was published by Torrance in 1966 and edited in 1974 (Cropley, 2000; Sternberg, 2006). The test, which is based on the rating of divergent thinking, and an example of psychometric testing, consists of a verbal section "Thinking Creatively with Words" and a figural section "Thinking Creatively with Pictures". It measures several dimensions of creativity or mental characteristics (Fluency, Originality, Elaboration, Abstractness of Titles, and Resistance to Premature Closure) and 13 creative strengths (emotional expressiveness, storytelling articulateness, movement or action, expressiveness of titles, synthesis of incomplete figures, synthesis of lines or circles, unusual visualization, internal visualization, extending or breaking boundaries, humour, richness of imagery, colourfulness of imagery, and fantasy). The test has been found to be effective in distinguishing between creative participants and noncreative participants. Kim (2006) also notes that the TTCT works well with the identification and education of talented individuals and also finding out and promoting ordinary creativity.

As for the 'creative person' category, Cropley (2000) mentions two kinds of instruments: biographical inventories, and special personal properties. One exemplary instrument for the former one is 'Life Experience Inventory (LEI)' developed by Michael and Colson in 1979 (cited in Cropley, 2000, p.74). The inventory includes factual information to be obtained from the participants (e.g. number of changes of address in the childhood, composition of the family, education, hobbies, and recreation). The authors came up with four areas that the instrument covers: self-striving or self-improvement, parental striving, social participation and social experience, and independence training. As for the second type of 'creative person' category, Cropley (2000) reviewed several inventories, one of which is

called ‘Creativity Styles Questionnaire’ (CSQ) developed by Kumar, Kemmler and Holman in 1997. It measures seven dimensions: Belief in Unconscious Processes; Use of Techniques; Use of Other People; Final Product Orientation, Environmental Control; Superstition; Use of Senses. It includes 76 items on which participants rate themselves through a 5-point scale.

In this study, Runco Ideational Behaviour Scale (RIBS) created by Runco, Plucker & Lim (2000-2001) was used with the purpose of investigating the effects of the synectics programme on participants’ creative ideational level. The formation of the scale is associated with the belief that “ideas can be treated as the products of original, divergent, and creative thinking” (p. 393). As a result, its development is based on the product approach to creativity assessment with an intention to understand everyday creativity (ibid.). Actually, it was created with the purpose of assessing self-reported creative ideation (Batey, Chamorro-Premuzic & Furnham, 2010). The scale is composed of 23 items, describing “actual behaviours (i.e. overt actions and activities) that clearly reflect an individual’s use of, appreciation of, and skill with ideas” (Runco et al., 2000-2001). It includes 23 items built on a design of 5-point Likert scale. (see Appendix 3).

In the context of creativity evaluation, Cumming (2011) suggests that assessment criteria be in line with creative learning principles; i.e. assessment methods should not only focus on end products but also the creativity and learning processes, which implies the inclusion of formative assessment methods such as enquiry, group tasks/projects, problem-based learning, group role-play, and the like.

Given all these points, some of the key issues to consider in creativity assessment are as follows: Since creativity is a complex construct that is expressed differently in different contexts and for different people, utmost attention should be paid while selecting or using techniques for its assessment and evaluation. First of all, the assessment tools should be in line with assessor’s understanding of what creativity is or what it entails. Next, different tools

could be used to assess multiple components of creativity. Furthermore, advantages and disadvantages, and other significant information about the assessment tool should be taken into consideration. Finally, the selected tool should also be addressing the age and profile of the group to be assessed.

Research on Creativity

Like many other authors, Craft (2001, p. 6) notes that the era of creativity research was initiated by Guilford in 1950 with his "examination of the limitations of intelligence tests and his investigation of divergent thinking". This was followed by an increase in the amount of creativity investigation which resulted in three main strands of development: personality, cognition, and ways to stimulate creativity (ibid.).

Studies on personality tried discover the common characteristics of creative individuals by examining the personalities of eminent creative persons. As the author states, this line of research has attracted a great deal of criticism, mainly because of the domain-specific and multidimensional nature of creativity, which makes it problematic to compare one criteria of 'creative characteristics' with another. However, it has also been suggested that the results of these studies have been in line in time. Some of the typical creative characteristics are self-control, sustained hard work, determination, and perseverance (Dacey & Lennon, 2000 cited in Craft, 2001).

As for the second line of creativity research, cognition, a variety of branches of study have appeared which are summarised by Craft as follows (2001):

- Creativity as an aspect of intelligence
- Creativity as a mainly unconscious process
- Creativity as a problem-solving capacity
- Creativity as an associative process

The third strand of creativity research, ways to stimulate creativity, is concerned with the efforts to foster creativity or creative thinking. This implies the idea that creativity can be developed. The studies in this line have been criticised in that they lack 'systematic, controlled evaluations' and "the methods and criteria for evaluating these are underpinned by differing theories of creativity" (Craft, 2001, p. 9). A weakness has also been observed in transferring the applications into new contexts.

Craft (2001) points out that these earlier developments were followed by a social psychological framework as the basis of creativity research which emphasises the significance of social systems in stimulating creativity in the 1980s and 1990s. This disposition has been regarded as the fourth line of research and called 'creativity and social systems'. In line with this new development, researchers began to investigate 'ordinary' or 'democratic' creativity in education. In addition, that period also witnessed a shift from positivist, large-scale investigations to ethnographic, qualitative research (Craft, 2011).

With respect to creativity research in FLE, although the number of studies conducted is not really high, it is possible to realize that most of those studies could be said to be reflecting the nature of the third strand of creativity research mentioned above. More specifically, they were conducted to search ways to promote creativity or creative thinking. One such study was carried out by Fatemipour & Kordnaeej (2014) with the purpose of finding out the influence of synectics and journal creative writing techniques on a group of EFL students' creativity. A quasi-experimental design for the study was adopted. The sample consisted of 80 participants at intermediate level. There were two experimental groups but no control group in the study. The synectics technique was implemented in one of the groups, and journal creative writing technique was used in the other group. The instruments were Oxford Place Test (OPT), and Abedi Creativity Test. The findings of the study revealed that both synectics and journal writing techniques had a significant effect on the promotion of

creativity. On the other hand, the synectics group outperformed the journal group. In addition, participants had generally positive attitudes towards the synectics technique. Journal group participants were content with their experience and had a perception that the journal writing technique had a positive effect on their writing skills.

Another study on creativity in the context of FLE was carried out by Karakaş (2011) in order to explore the influence of creative writing activities on learners' English writing skills. During the implementation period, the experimental group was instructed creative writing techniques. Meanwhile, the control group students were instructed traditional writing activities. The results showed that experimental group students were superior to the control group students in terms of originality, fluency, and flexibility of ideas, choice of words, sentence structure, organization, style of writing, and grammar. Furthermore, a significant increase was found in experiment groups' interest in and awareness of writing.

In the FLE context, Özbek (2006) also carried out an experimental study to find out the effects of a creative thinking programme on EFL students' attitudes towards their own creativity. The students in the experimental group were involved in the creative thinking programme. However, control group students did not take part in the same programme. The findings obtained through analysis indicated a meaningful increase in experimental group students' attitudes towards their own creativity in writing courses.

As the review of studies on creativity in FLE context reveals, there is an attempt to experiment different techniques and programmes in order to develop learners' creativity (Fatemipour & Kordnaeej, 2014), English writing skills (Karakaş, 2011), and attitudes towards their own creativity (Özbek, 2006). In this regard, this study appears to hold significance as it could be said to be a pioneering study investigating the effects of synectics as a prewriting technique on learners' creative ideation in the Turkish context.

Summary

This chapter presented a review of the related literature on Synectics Model, Second Language Writing, and creativity that establish the theoretical framework of the study. The main terms were defined, and important concepts were discussed in relation to each main part. Finally, a brief overview of research on each part mentioned above was presented.

Chapter 3

Methodology

Introduction

This chapter presents a detailed description of the methodology employed in the present study. First of all, the objectives and research questions of the study are introduced. Next, the design of the study is explained in relation to the approaches to the educational research that it derives from. Furthermore, related information about participants and setting, instruments, and procedures for data collection and analysis is presented. Finally, an in-depth description of the implementation of the programme is provided.

Objectives and Research Questions of the Study

The primary objective of this study is to explore the effects of synectics as a pre-writing technique on learners' writing skills in an English writing course at the tertiary level. Based on this objective, the following research questions are addressed:

RQ 1: Is there a significant change in learners' writing skills in terms of fluency and lexical complexity throughout the programme?

RQ 2: Is there a significant change in learners' vocabulary development throughout the programme?

RQ 3: Is there a significant difference in learners' creative ideational level before and after the programme?

RQ 4: Is there a significant difference in learners' writer's block before and after the programme?

RQ 5: How do the learners evaluate their experience of being involved in the programme?

Design of the Study

The present study adopts a mixed research study design that combines both quantitative and qualitative approaches during the data collection and analysis phases. In terms of the philosophical underpinnings of the study design, the quantitative part of the study relates to positivism that requires an inquiry to explain, predict, and control. The qualitative part, on the other hand, derives from constructivism that necessitates an investigation to realise "the subjective meaning of the individual in its various constructions and reconstructions" (Allison & Pomeroy, 2000, p. 94). More specifically, this study intends to both examine the causal relationships between the variables determined at the planning stage of the study and gain an understanding of how the participants perceive their experience of being involved in the study. The details of the research design are as follows.

A widely used method in the quantitative approach is the experimental model which is employed in order to find out causal relationships between variables that are carefully manipulated by the researcher in a controlled environment in the framework of research objectives with the purpose of collecting relevant data to explain those relationships (Karasar, 2005). In this case, the causal relationships between synectics as a prewriting technique and the dependent variables like learners' writing skills, vocabulary development, writer's block, and creative thinking level were explored.

The specific design of the quantitative part of the study is twofold. Repeated measures design was employed to test learners' progress in writing skills and vocabulary development over time while pretest-posttest single group design was adopted to explore differences in creative ideational level and writer's block.

As for the rationale for combining quantitative research methodology with the descriptive qualitative one, it could be stated that this research study also intends to discover the participants' perspectives about the new experience they went through and to be able to

interpret the results from a different angle. Another reason for adding a qualitative side to the research design is that quantitative measurement tools should "be supplemented with measures of 'perceived importance' of the programme goals by the students and teachers" (Lynch, 1996, p. 75). It could also be added that the use of different research methodologies lends itself to triangulation, which is to do with "the attempt to understand some aspect of human behaviour by studying it from more than one standpoint, often making use of both quantitative and qualitative data in doing so" (Brown and Rodgers, 2004, p. 243). In this respect, qualitative data were collected from the participants as the main programme shareholders. In terms of qualitative data collection techniques, semi-structured interviews were carried out with a group of participants.

The design of the study in relation to the methodology and analysis corresponding to each research question is illustrated in Figure 5:

Research questions	**Methodology**	**Analysis**
RQ 1: Is there a significant change in learners' writing skills in terms of fluency and lexical complexity throughout the programme?	Quantitative Writing tasks	Text analysis and statistical analysis
RQ 2: Is there a significant change in learners' vocabulary development throughout the programme?	Quantitative Writing tasks	Text analysis and statistical analysis
RQ 3: Is there a significant difference in learners' creative ideational level before and after the programme?	Quantitative Runco Ideational Behaviour Scale (RIBS)	Statistical analysis
RQ 4: Is there a significant difference in learners' writer's block before and after the programme?	Quantitative Writer's Block Questionnaire (WBQ)	Statistical analysis
RQ 5: How do the learners evaluate their experience of being involved in the programme?	Qualitative Semi-structured interviews	Inductive content analysis

Figure 5. Design of the study

Setting and Participants

The research site of the study is the School of Foreign Languages (YDYO) at Çanakkale Onsekiz Mart University in Çanakkale, Turkey. The School of Foreign Languages comprises three departments: 1) Department of Foreign Languages Preparatory Education, 2) Department of Modern Languages, 3) Department of Translation and Interpreting. Department of Foreign Languages Preparatory Education prepares students during an academic term or year for English-medium academic study in the faculties, schools, and vocational schools of the university.

The present study was carried out in the English Language Teaching and English Language Literature sub-programme of Department of Foreign Languages Preparatory Education. This sub-programme serves students instruction in English for one academic term or year. The students enrolled in this programme are expected to reach a level of C1 by the end of the programme. The programme aims to equip the students with skills and competence to meet the academic English requirements in their future studies and also to use the language effectively in professional and social spheres. It offers four courses (i.e. Listening and Speaking, Reading, Writing, and Basic English) to the students so that they can improve themselves in four skill areas and grammar. The total number of weekly course hours is 28, and the size of the programme is around 80 students.

There are several reasons for the implementation of the study in this setting. The main reason was its convenience to the researcher because she was working as an English instructor in the same institution at the time of the research. Therefore, arranging the appropriate time and conditions for the implementation of the study was more straightforward. Another reason for the choice of this setting was that it appeared more appropriate and feasible to carry out the intervention programme of the study with students with a higher level of English. The intervention programme included the use of synectics as a prewriting technique whereby the

students were required to generate ideas through group interaction so that they could come up with a wealth of ideas that could be made use of in the target writing task. It was considered that the proceeding of the activity would be much quicker in a limited time since the students in this programme have relatively larger vocabulary than the students whose level is between A2-B1 in the other sub-programme of the department. The final reason for this choice is that this sub-programme offers a separate writing course to its students whereas the other programme offers an integrated reading and writing course in which writing skills are not given as much focus as in a separate course. Because of all these reasons mentioned above, this setting which provides the researcher with all the appropriate conditions for the study to be carried was selected.

As the present study aims to investigate the effects of synectics as a prewriting activity on different variables, the writing course was thought to be suitable for programme implementation. The main aim of the writing course is to equip learners with academic writing skills and competence. Another aim is to teach them rhetorical modes with respect to the issues such as content and organization, sentence structure, mechanics, and format of academic writing. The curriculum pedagogy of the course is inductive and collaborative learning. The learners are required to discover the conventions of a specific rhetorical mode like definition paragraphs through examining a model paragraph. They are also expected to study a piece of writing and understand rules about sentence structure and grammar, mechanics, and content and organization. The learners need to work individually, in pairs, or in groups in writing tasks and evaluation of their tasks. Figure 6 presents the description of the writing course which was prepared by the teacher/researcher adapting information from the coursebook introduction and purposes of the course.

Coursebook	Oshima, A. and Hogue, A. (2007). Introduction to Academic Writing. New York: Pearson Longman.
Proficiency level	B2 (Upper-intermediate)
Curriculum pedagogy	Process-based approach, inductive and collaborative learning
Assessment procedures	Writing portfolio and formal assessment (3 quizzes and 2 midterms per term)
Hours per week	4
Content of instruction	Paragraph and essay structure Rhetorical modes (narrative, descriptive, classification, process, comparison/contrast, definition, and opinion) Stages of process writing Content and organization Sentence structure Mechanics
Course goals and objectives	Upon successful completion of this course, the students should be able to: • Understand and master the standard organizational patterns of the paragraph and essay, • Identify and apply rhetorical modes in academic writing (i.e. narrative, descriptive, classification, process, comparison/contrast, definition, and opinion), • Employ writing strategies involved in different stages of writing process (e.g. pre-writing strategies for generating ideas, outlining, revising and editing, etc.), • Identify and use elements of effective writing in terms of content and organization of a piece of writing (e.g. unity, coherence, cohesion, etc.) • Recognize common errors in sentence structure and grammar in writing and learn how to fix them, • Identify and employ the rules of format and mechanics of academic writing (i.e. punctuation, spelling, and capitalization), • Compose an effective piece of academic writing meeting the requirements covered during the course.

Figure 6. Description of the writing course

The course adopts process approach to writing with an EAP focus whereby learners follow a series of steps until they write the final versions of their tasks. The first step is prewriting in which they need to generate ideas about a specific topic for a writing task. They can use various prewriting techniques such as listing, brainstorming, clustering, and so on. In the second step, they plan their essay or paragraph usually through making an outline. Next, they write their first drafts. In the following step, they revise their friends' texts using peer-editing checklists. In the fourth step, they make necessary changes in their texts in the light of peer-editors' comments, and next they write their second draft. Later on, they edit their own drafts using a self-editing checklist. After they make the necessary alterations on their second

draft, they write the final version, which they submit to the instructor for evaluation. The instructor evaluates each paper and returns it to its owner. Finally, the learners need to rewrite their paper taking the instructor's comments into consideration, and put all the drafts and final version in their portfolios which are also a part of the evaluation process (see Appendix I for the Writing Curriculum).

In terms of demographic information concerning participants, the implementation of this study was realized with one intact group involved in this sub-programme. It consisted of 20 students. 18 of them were female, and 2 were male. Their age ranged from 18 to 21. All of them were native speakers of Turkish. Their consent was obtained prior to the implementation of the programme (see Table 1).

Table 1

Distribution of the Participants in the Study

Gender	*f*	%
Female	18	90
Male	2	10
Total	20	100

In terms of characteristics regarding the participants' academic achievement, they had a moderate level of achievement in writing and Basic English courses. More specifically, they had a mean of 67.5 for the writing course and a mean of 71.3 for the Basic English course by the end of the fall term (see Table 2).

Table 2

Participants' Academic Achievement

	Course	*f*	*M*	*SD*
End-of-the-fall term grade averages	Basic English	20	67.5	4.7
	Writing	20	71.3	5.3

As for the aspects regarding writing, the students did not have considerable L2 writing instruction experiences in their previous education, namely in high school. More specifically, 7 students reported that they partly had writing instruction in high school, and 13 students reported that they did not receive any writing instruction at all. Furthermore, they had a moderate level of anxiety in writing in English (2.8). Finally, they had a fairly high level of comfort in self-expression in writing in English (3.4) (see Table 3).

Table 3

Aspects regarding Writing

		f	*M*	*SD*
Anxiety in writing in English		20	2.8	.85
Comfort in self-expression in writing in English		20	3.4	.68
		f	%	
Previous writing instruction experience	Yes	0	0	
	Partly	7	35	
	No	13	65	

In terms of the participants involved in the semi-structured interviews by the end of the study, 9 students out of 20 were selected to be interviewed on the basis of their voluntariness. In order to preserve the anonymity of the interviewees, they were given codes while reporting the findings. All the students were female. Their age ranged between 18 and 21, and their grade point averages (GPA) were between 63 and 87 (see Table 4).

Table 4

Information about the Interviewees' Age and GPA

Interviewee	Age	GPA
S1	20	74
S2	19	87
S3	19	75
S4	18	63
S5	19	67
S6	19	64
S7	21	65
S8	18	74
S9	18	65

Instruments

In accordance with the mixed design of the study, the data collection instruments were of two main types to collect both quantitative and qualitative data. Each instrument was subjected to a thorough examination in the selection and adaptation stages in order to ensure their validity and reliability to gather data. With this reason in mind, two of the quantitative data collection instruments, Writer's Block Questionnaire (WBS), and Runco Ideational Behaviour Scale (RIBS) were piloted before the implementation of the main study was launched. The main purpose of the piloting of the scales was to carry out statistical procedures in order to find out the values about the reliability of the instruments to be used as pre-tests and post-tests in the main study. Another reason was to test the validity of the instruments through examining any possible problems about the wording, layout, and comprehension of the items during the administration of the scales. In terms of the qualitative data collection instruments, the questions, wording, and format of the semi-structured interview were prepared by the researcher. After several revisions by the supervisor, the instruments took their final forms to be used in the main study. In the following sub- sections, the formation of each instrument is explained in detail.

Background questionnaire. With the purpose of collecting background information about the participants, a background questionnaire was designed by the researcher. It consisted of both close-ended and open-ended questions to elicit information from the participants in relation to their gender, Basic English and Writing course end-of-the-fall-term average grades, whether they had taken a writing course beforehand, the order of preference in using different prewriting activities, what they think about the importance of such activities, whether they feel that they experience anxiety in writing in English and what the possible causes of it might me, and finally the level of comfort they experience in expressing themselves while carrying out a writing task.

The questions mentioned above derived from the objectives of the study. They were written in collaboration with the supervisor, and necessary alterations were made taking her suggestions into consideration until the questionnaire took its final form (see Appendix A).

Writing tasks. Referring back to the objectives of the study, the primary goal of this research was to explore the effects of synectics as a prewriting technique on participants' writing skills in terms of fluency and lexical complexity. Another important objective was to investigate the influence of the programme on learners' vocabulary development. In order to be able to seek these effects if any, the participants were required to write paragraphs about a specific topic at three points of time during the course of the study: one before the implementation of the programme, one in the midst of the programme, and one after the programme ends.

The topics of the writing tasks were determined by the participants during the synectics sessions. In these sessions, the participants were given a right to choose a topic of interest from a list of topics so that they could participate in the activity and do the writing task more willingly. In order to determine the topic of the session, they voted on a topic they

liked, and the topic preferred by most of the participants was chosen to be dealt with in that particular session. As a result, the writing topics were determined to be ‘falling in love’, ‘dreams’, and ‘justice’.

The participants were instructed to write the paragraphs in line with paragraph writing rules covered in the writing course during the academic year. As for the other details concerning the writing tasks, the participants were asked to write a paragraph of 150-200 words. They were given approximately 40 minutes to complete each task. In addition, they were taken to the computer lab to type their texts and e-mail them to the researcher at the end of the same session so that she could collect all the texts and put them in a digital file for data analysis. Finally, the participants were informed that each writing task would be counted as a quiz grade with the intention of increasing their motivation for carrying out the tasks (see Appendix D).

Runco Ideational Behaviour Scale (RIBS). With the purpose of investigating the effects of the synectics programme on participants’ creative ideational level, Runco Ideational Behaviour Scale (RIBS), created by Runco et al. (2000-2001), was used as another pre-test and post-test instrument of the study. The formation of the scale is associated with the belief that “ideas can be treated as the products of original, divergent, and creative thinking” (Runco et al, p. 393). The scale is composed of 23 items, describing “actual behaviours (i.e. overt actions and activities) that clearly reflect an individual’s use of, appreciation of, and skill with ideas” (ibid.). The results of statistical analyses indicated that the internal consistency of the scale is highly reliable as the Cronbach alpha value was found to be .91. Correlational analyses also revealed that the measure has discriminant validity (ranging from .30 to .72). However, in terms of construct validity, the scale did not reveal clear evidence. Although the factor analysis showed that the scale appeared to include two factors, the lack of theory made

it difficult to make a distinction between them. Therefore, the authors decided on one-factor solution to be referred to during the interpretation of the findings.

In the first place, permission was received from Mark Runco through e-mail to use RIBS in the present study. Before the piloting of RIBS in the research site, it went through a translation process. First of all, the items of RIBS were translated into Turkish by three instructors from the School of Foreign Languages of the same university. Then the researcher formed the second version by compiling the items from the three different versions of the translated scale. After the final form was given to the scale, it was examined by the supervisor in terms of clarity, grammatical structure, and wording of the items. Taking the supervisor's recommendations into account, necessary changes were made in the scale. Later, the final versions of the items were typed based on a design of 5-point Likert scale. The response categories included the following: never-1, rarely-2, sometimes-3, often-4, almost always-5.

After the translation process, the Turkish version of RIBS was piloted. 146 students attending the Department of Foreign Languages Preparatory Programme were administered the scale. 65 of the students were from the intermediate group, and 81 of them were from the pre-intermediate group in the programme. The data from the scales were typed into an SPSS (Version 20) document, and reliability analysis was run to determine whether the instrument had internal consistency. The result indicated that RIBS Turkish version was a reliable instrument as the Cronbach-alpha value was found to be .85, which indicates a high level of reliability (Büyüköztürk, 2004).

As for the interpretation of the findings obtained from the scale, it could be stated that the participants who gain a high score from RIBS have a high creative ideational level, while the participants who gain a low score have a low creative ideational level. That is to say, a low mean indicates a low level of creative ideation, while a high mean indicates a high level of creative ideation (see Appendix C).

Writer's Block Questionnaire (WBQ). In order to find out the effects of synectics sessions on participants' writer's block, Writer's Block Questionnaire (WBQ) was administered to the participants before and after the intervention. The WBQ was designed by Mike Rose with the purpose of identifying students with the writer's block, which refers to "an inability to begin or continue writing for reasons other than a lack of basic skills or commitment" and often results in often unproductive work characterized by feelings of anxiety, frustration, anger, or confusion (Rose, 1983, p. 3). It is an attitude questionnaire consisting of 24 items categorized into five subscales: blocking, lateness, premature ending, strategies for complexity, and attitudes.

It is a five-point Likert type scale with response categories ranging from 'almost always' to 'almost never'. The developer of the scale suggests that it is a valid and reliable measure. As for the validity, stimulated recall investigation interviews were carried out with a sub-sample, and the participants' comments and behaviours were consistent with their earlier responses for the most part. In addition, the reliability coefficient of the original scale was found to be .84 (Rose, 1981, p. 2).

The current study made use of a Turkish version of the scale developed by Zorbaz (2010, pp. 41-43). It consists of 10 items measuring writer's block. After a meticulous translation process, the questionnaire was piloted with 164 students in the seventh grade by Zorbaz. The data gathered from the piloting of the measure were subjected to several statistical tests in order to ensure validity and reliability issues. When the factor analysis was run, factor loadings indicated that the questionnaire comprises of one dimension. In terms of the reliability measure of the questionnaire, the Cronbach-alpha value was found to be .84, which indicates that the instrument is highly reliable.

After permission was obtained from Zorbaz through e-mail to use the Turkish version of WBQ in the study, a further piloting of the scale was carried out in the same research

setting of the present study with 74 students enrolled in the Department of Foreign Languages Preparatory Education before the intervention was launched. The result of the reliability analysis revealed that the Cronbach alpha value of the measure was .87, which points to a high reliability (Büyüköztürk, 2004).

As for the interpretation of the results obtained through WBQ, five response categories were given the points 'never-1, rarely-2, sometimes-3, often-4, almost always-5' for statistical analysis. In this case, a participant's points are added up for each item and the total measure. The participants who gain a high score in the WBQ have a high level of writer's block while the ones who gain a low score have a low level of writer's block. In other words, a low mean points to a low level of writer's block, whereas a high mean indicates a high level of writer's block (see Appendix B).

Semi-structured interviews. In order to obtain qualitative data with respect to the participants' evaluation of their experience of being a part of the programme, semi-structure interviews were conducted with a sub-sample. With this reason in mind, a set of interview questions were prepared in line with the objectives of the study. After the questions were written by the researcher, they were examined and evaluated by the supervisor in terms of face and content validity, wording, clarity, and whether they were in line with the objectives of the study. Subsequently, required alterations were made on the questions in the light of the supervisor's suggestions and comments. The questions followed a sequence from general to specific issues concerning the nature of the intervention programme composed of a series of synectics sessions. Some questions about the interviewees' age, general point average, and writing grade were also included so as to collect background information about each of them (see Appendix E).

Procedures for Data Collection

In order to carry out the intervention programme, official permission was demanded from the Head of Department of Foreign Languages Preparatory Education at School of Foreign Languages prior to the beginning of the study during the spring term of the 2013-2014 Academic Year. Subsequently, the required permission was notified through an official document on 31st March 2014 (see Appendix K).

Afterwards, the participants were informed about the purpose, content, duration, and procedures of the study. Consequently, their consent was required to fill in the questionnaires and participate in the intervention programme. After their consent was obtained, they were given detailed explanation about how to complete the questionnaires and also warned not to skip any items without responding. Furthermore, they were reminded that the data gathered from the questionnaires and tests would be used only for the objectives of the study and kept anonymous and confidential. Later, the background questionnaire attached together with WBQ and RIBS as the pre-test instruments of the study were administered to the participants on 17th April 2014. The completion of the questionnaires took nearly 25 minutes.

After collecting data from the participants in the pre-test phase, the implementation of the intervention programme began on 18th April. The programme ended on the 30th May covering a period of seven weeks. During the programme, six synectics sessions were held with the participants. On the last day of the programme, the participants were handed out the post-test pack involving the Background Questionnaire, WBQ, and RIBS. They were reminded of the instructions concerning the completion of the questionnaires. After they completed them, the researcher thanked and appreciated them for having been participated in the study. Finally, semi-structured interviews were hold with a group of voluntary participants on the same day. The outline of the study is illustrated in Figure 7:

Pre-intervention	**INTERVENTION (The use of synectics technique in the prewriting stage)**							**Post-intervention**
	1st session	2nd session	3rd session		4th session	5th session	6th session	
1.Writing task 1 **2.** RIBS **3.** WBQ	Topic: Falling in love	Topic: Racism	Topic: Freedom	Writing task 2	Topic: Dreams	Topic: Responsibility	Topic: Justice	**1.**Writing task 3 **2.** RIBS **3.** WBQ **4.** Interview

Figure 7. Outline of the study

Intervention. The intervention programme including six sessions of synectics used as a prewriting technique began with the introduction of the technique to the participants. First, the researcher explained the features and steps of the technique to the group several days before the first session. Then she demonstrated an exemplary lesson that she had piloted with another group of students about a particular topic beforehand. She emphasised the sequence of the steps and the outcomes derived from each step.

After the participants were made familiar with the new technique, they were told to form groups to work together during each session. There were totally five groups with four students in each. This number sometimes decreased due to some absentees. Nevertheless, the students remained in their determined groups throughout the programme. In this way, it was aimed to save time for doing the synectics activity which actually took a long time. A typical synectics session included 7 main steps (see Appendix G for the details).

A synectics session began with greeting and establishing rapport and proceeded with lead-in and main activities. Giving the participants a right to determine the topic of the writing task and also the categories for direct analogies was one of the aims of the study so that they could have a sense of ownership of the task and involve in the activity more willingly. In addition, it was aimed to contribute to the promotion of the principles of democracy education. For this reason, in the lead-in stage, the participants were shown a list of topics reflected onto the board through the projector. They were asked to vote on one of those topics

they liked to deal with in that particular synectics session. Then the topic was chosen to be studied. Later, two categories were chosen by the students again to be used for making direct analogies from the list of categories. Some examples for those categories were plants, food, animals, sports, nature, occupations, space, etc.

The main activity was composed of seven main steps. The details of each step were explained below along with the examples from a synectics session. In this specific session, 'freedom' was selected to be studied through class vote, and the two categories for making analogies were determined as 'nature' and 'animals' (see Appendix J for the whole session).

Step 1-Describing the topic: The students described the chosen topic 'freedom' through brainstorming it in their groups. Then their descriptive words were typed into a word document by the teacher/ researcher using the graphic organizer and projected onto the board so that everybody in the class could see the others' suggestions. To exemplify, some of their descriptive words/phrases about freedom were infinity, freedom of thought, Statue of Liberty, War of Freedom, sky, life without chains, independence, prison, republic, Atatürk, flag, etc.

Step 2-Creating direct analogies: The students were asked to create a direct analogy between the descriptive words on the board and an unrelated category chosen at the beginning of the activity. In this session, the first category for creating direct analogies was nature. Next, they were required to describe how those words resembled or associated with an item in the nature category, and also explain the reasons for their choices. When the class was ready, they voted on one specific analogy that they would like to study on in the next step. Some of the direct analogies suggested in this session were desert, water, the wings of a pigeon, and rain. The students selected the rain analogy which was explained as 'freedom is like rain because it can drop whenever it wants without any restriction.'

Step 3-Describing personal analogies: After the students chose one of the direct analogies, they created personal analogies. The researcher asked the students to become the

object and describe how it felt, and then she wrote down the words used by the students to describe their feelings. In this case, that object was rain, and the students created the following personal analogies:

- I feel like under captivity because its route depends on the wind.
- I feel transparent, clear, confident, noble, and fair as I own and touch everything.
- I feel miraculous, universal, and shiny as I can reach every part of the world.

Step 4-Identifying compressed conflicts: The students were told to match the words from the previous step that seem to conflict or fight with each other. In other words, they were required to create a series of compressed conflicts and explain why they think the paired words seem to be conflicting. Subsequently, the students voted on the best pair of compressed conflicts. Some of the compressed conflict pairs from the session on freedom were under captivity-miraculous and transparent-under captivity, and the latter example was selected as the best pair.

Step 5-Creating a new direct analogy: After the students selected their favourite compressed conflict, transparent and under captivity, through voting, they created another direct analogy using the second category ‘animals’. After their suggestions were typed into the graphic organizer, the students chose the following direct analogy: A white pigeon in a cage is pure and clear, but the cage restricts its freedom.

Step 6-Evaluating and re-examining the original topic: Finally, the students re-examined the original topic by returning to the last direct analogy chosen by the class and compared it to the original topic. Since the last direct analogy is a white pigeon, the students discussed the connections and associations between a white pigeon and the original topic freedom.

Step 7- Writing a paragraph about the original topic: Then they wrote a paragraph to describe the original topic, freedom, by making use of the ideas and analogies produced

during the activity. An original exemplary paragraph written by one of the participants is presented below:

Freedom

Freedom is fair like a child's thoughts and emotions. It also resembles the moment when releasing a pigeon into the rain drops and watching it flapping its wings and when the pure rain drops its white wings. If I were a rain drop, probably I would want to drop on an African child's fingers, his naked little toes and his lips which are full of love and smile with hope. This could be a unique feeling, being a raindrop over African skies, and giving life to these lands, I would probably feel noble, and I would wish to be endless to make these people happier. I would feel both transparent and under captivity. Transparent, as I cannot be seen, but I will be there. Under captivity, as I know that I will have end, and I will not be able to touch these faces again, and I will not be able to make them happier. Because rain has an end, just like freedom does, it is beautiful. To sum up, both freedom and rain are beautiful because they are fair and have an end.

In order to simplify the complicated nature of the activity for the students, a graphic organizer was used by the researcher (see Appendix H). This graphic organizer displays each stage of the activity in different columns, and each stage is represented with a simpler term such as definition, similar, feels like, opposite, similar, and synthesis. In this way, the students could follow the stages more comfortably, and became much more confident with the use of the technique. This also made the researcher's job more straightforward in giving the instructions for each successive stage.

As for the interview part of the study, 9 voluntary participants were invited to the researcher's office in turn on 30th May. Each student was informed about the purpose, duration, and conditions of the interview. Besides, their permission was obtained for recording the interview. They were made sure that the recordings would be kept confidential and used only for the purposes of the study. Each interview lasted approximately 10-15 minutes and was recorded using the recording function of a mobile phone. The researcher

tried to elicit information from the participants by posing questions so that they could reflect on the topic and share their insights with her. The semi-structure interview questions were used as a guide and made alterations or additions to them as the talk flew naturally. The interviewer asked questions from general to specific and paraphrased them for clarification and more supportive feedback when necessary. The students were required to explain, exemplify, or expand on their answers for the purpose of eliciting more in-depth data. Finally, the researcher thanked the interviewees for their participation in the interview.

Procedures for Data Analysis

The data obtained for answering each research question were analysed using a different data analysis technique. Figure 8 displays the details of procedures for data analysis:

Research questions	**Data collection instrument**	**Data analysis technique**
RQ 1: Is there a significant change in learners' writing skills in terms of fluency and lexical complexity throughout the programme?	Writing tasks	*Text analysis:* Vocabprofile *Statistical analysis:* Friedman-Wilcoxon Signed Ranks Test
RQ 2: Is there a significant change in learners' vocabulary development throughout the programme?	Writing tasks	*Text analysis:* Vocabprofile *Statistical analysis:* Friedman-Wilcoxon Signed Ranks Test
RQ 3: Is there a significant difference in learners' creative ideational level before and after the programme?	Runco Ideational Behaviour Scale (RIBS)	*Statistical analysis:* Wilcoxon Signed Ranks Test
RQ 4: Is there a significant difference in learners' writer's block before and after the programme?	Writer's Block Questionnaire (WBQ)	*Statistical analysis:* Wilcoxon Signed Ranks Test
RQ 5: How do the learners evaluate their experience of being involved in the programme?	Semi-structured interviews	Inductive content analysis

Figure 8. Procedures for data analysis

In order to analyse the data obtained from the writing tasks for answering the first and the second research questions, an online text analysis programme was used. The programme is called Vocabprofile (VP), which was based on Laufer and Nation's Lexical Proficiency Profile (1994), and it serves research and teaching purposes regarding vocabulary

development (http://www.lextutor.ca/vp/comp/). For the analysis of the texts from this study, VP-Compleat (Classic) version was preferred. This version analyses the texts through parameters such as tokens (words in text), types (different words), type-token ratio, word families, etc. In this study, the number of tokens was considered to account for fluency, and type-token ratio was for lexical complexity to answer the first question. To address the second research question regarding the vocabulary development, VP-Compleat-Classic version was used again. This version also analyses the words in texts into four based on the frequency levels that they belong to: 1) 1-1000 most common word families, 2) 1001-2000 most common word families, 3) 570 academic words, 4) Offlist-low frequency words that do not appear in any of the first three levels. In addition, the texts were analysed in terms of word types and word families to explore vocabulary development. The data obtained from the analysis of the texts were subjected to non-parametric Friedman Test for repeated measures and Wilcoxon Signed Ranks Test for pairwise comparison on SPSS 20.

In order to answer the third and the fourth research questions, the data gathered from RIBS and WBQ were analysed through non-parametric Wilcoxon Signed Ranks Test.

As for the qualitative data, inductive content analysis technique was employed to analyse the content of the interviews. As explained in the methodology part, semi-structured interviews were conducted with nine voluntary participants in order to find out about the participants' opinions about their involvement in the synectics programme. After the interviews were recorded, they were all transcribed by the researcher. In order to ensure the interrater reliability of the analysis, nearly 30 % of the transcribed interviews were analysed in a verbatim fashion by the researcher and an outside rater independently to find out recurring themes and categories. Then the parallelism between the two sets of analyses was found to be 93 %, which pointed to a high level of consistency between the raters. Then the researcher

continued to analyse the entire data. Finally, a table was formed to display the categories and themes, and quotations from the transcripts were also included while presenting the findings.

Summary

This chapter described the methodology employed in the study in detail. Then the objectives and research questions of the study were introduced. In addition, the design of the study was explained in relation to the approaches to the educational research that it derives from. Furthermore, related information about the participants and setting, instruments, and procedures for data collection and analysis was presented. Finally, an in-depth description of the implementation of the programme was provided.

Chapter 6

Findings

Introduction

This chapter presents the findings obtained through both quantitative and qualitative data analysis procedures. The findings are reported and interpreted in relation to the each research question of the study.

Findings of the Study

The primary objective of this study is to explore the effects of synectics as a prewriting technique on learners' writing skills in an English writing course at tertiary level. In addition, it aims to seek the influence of the technique on learners' vocabulary development. Another objective of the study is to investigate the differences in participants' creative ideational level and writer's block following the programme. Furthermore, it is intended to find out how learners evaluate their experience related to the implementation of the synectics technique. Based on these objectives, the following research questions are addressed:

RQ 1: Is there a significant change in learners' writing skills in terms of fluency and lexical complexity throughout the programme?

RQ 2: Is there a significant change in learners' vocabulary development throughout the programme?

RQ 3: Is there a significant difference in learners' creative ideational level before and after the programme?

RQ 4: Is there a significant difference in learners' writer's block before and after the programme?

RQ 5: How do the learners evaluate their experience of being involved in the programme?

RQ 1: Is there an improvement in learners' writing skills in terms of fluency and lexical complexity after the programme?

The main objective of the present study was to investigate the effects of the synectics technique on participants' writing skills in terms of fluency and lexical complexity. With this reason in mind, their texts, written at three intervals, were subjected to the analysis through Vocabprofile (VP), online text analysis programme. The number of tokens used by each participant in the texts was considered to be fluency measure, and the type-token ratio was accepted as the lexical complexity measure as explained in the methodology section. The data obtained from these procedures were analysed through several statistical tests like descriptive statistics, Friedman Test for repeated measures and Wilcoxon Signed Ranks Test for pairwise comparisons on SPSS 20. First of all, descriptive statistics was performed in order to find out the mean values of fluency and lexical complexity measures from the texts written at three intervals. Table 5 illustrates the results.

Table 5

Pre, Mid, and Post-test Scores for Writing Fluency and Lexical Complexity

Category	Pre		Mid		Post	
	M	*SD*	*M*	*SD*	*M*	*SD*
Fluency	118.55	35.91	136.30	45.23	151.95	28,83
Lexical complexity	.58	.07	.59	.08	.57	.06

The findings in Table 5 indicate that the mean values of pre, mid, and post-test fluency measures appear to have increased, but the mean values of pre, mid, and post-test lexical complexity remained fairly the same. In order to see whether these changes point to a

statistically significant difference, a non-parametric Friedman Test of differences among repeated measures of writing fluency and lexical complexity was run. Table 6 displays the findings from the test.

Table 6

Differences among Pre, Mid, and Post-tests for Writing Fluency and Lexical Complexity

Category	Time	*N*	*M*	*SD*	*df*	X^2	*p*
Fluency	Pre	20	118.55	35.91	2	9.700	**.008**
	Mid	20	136.30	45.23			
	Post	20	151.95	28.83			
Lexical complexity	Pre	20	.58	.06887	2	.228	.892
	Mid	20	.59	.07867			
	Post	20	.57	.06221			

According to Table 6, there was not a significant difference among the three measures of lexical complexity ($X^2_{(2)}$= .228, p= .892). In contrast, a significant difference among the three measures of writing fluency ($X^2_{(2)}$= 9.700, p= .008) was detected. In order to pinpoint which measures of fluency in particular differ from each other, a Wilcoxon Signed Ranks Test for pairwise comparisons was run as post hoc, and a Bonferroni adjustment on the results from the test was used (see Table 7).

Table 7

Pairwise Comparisons of Pre, Mid, and Post-test for Writing Fluency

Fluency test Pairs		*N*	*Mean Rank*	*Sum of Ranks*	z	*p*
Pre and Post	*Negative Ranks*	4[a]	4.50	18.00	-3.248[a]	**.001**
	Positive Ranks	16[b]	12.00	192.00		
	Ties	0[c]				
Pre and Mid	*Negative Ranks*	5[a]	9.80	49.00	-2.091[a]	.037
	Positive Ranks	15[b]	10.73	161.00		
	Ties	0[c]				
Mid and Post	*Negative Ranks*	8[a]	7.56	60.50	-1.661[a]	.097
	Positive Ranks	12[b]	12.46	149.50		
	Ties	0[c]				

The results of the analysis, as shown in Table 7, indicate that there was a significant difference only between fluency pre-test and post-test, and also the effect size for this analysis was found to indicate a medium to large effect size which shows that the result has a practical significance. (z= -2.091, p= .001, r= -0.51).

However, the differences between fluency pre-test and mid-test (z= -2.0091, p= .037), and mid-test and post-test (z= -1.661, p= .097) were not statistically significant. These findings show that although there did not appear to be a significant increase in participants' writing fluency in shorter periods of time, it increased significantly in the long term.

To summarize the findings in relation to the first research question, the participants' writing skills in terms of fluency increased significantly at the end of the programme. However, their skills with respect to lexical complexity remained the same during the study.

RQ 2: Is there a significant difference in learners' vocabulary development throughout the programme?

The second objective of the current study was to investigate the effects of synectics programme on participants' vocabulary development. For this reason, three types of measures were accepted to be the indicators of vocabulary development in this study: word types, word families, and word frequency levels. The participants' texts written at three intervals during the study were analysed through Vocabprofile (VP), online text analysis programme. The data obtained from the analysis of the texts were subjected to descriptive statistics, a non-parametric Friedman Test for repeated measures and a Wilcoxon Signed Ranks Test for pairwise comparisons on SPSS for each of the three indicators of vocabulary development.

First of all, mean values of pre, mid, and post-test word type, family, and word frequency levels were calculated through descriptive statistics (see Table 8).

Table 8

Pre, Mid, and Post-test Scores for Type, Family, and Word Frequency Levels

Category	Pre		Mid		Post	
	M	*SD*	*M*	*SD*	*M*	*SD*
Type	67.90	16.57	78	17.46	86	12.64
Family	58.45	14.84	64.20	15.47	73.25	9.67
1000 word level	108.85	33.99	124.20	41.99	132.10	24.33
2000 word level	4.95	2.67	5.30	2.98	9.30	4.37
AWL level	2.00	1.52	2.65	2.08	5.80	3.43
Offlist level	2.75	1.94	4.15	2.11	4.75	3.09

As the mean values of type and family pre, mid, and post-tests in Table 8 reveal, there was a gradual rise in both word type and family. A continuous increase in all word frequency levels was also detected. To be able to realize whether this increase is statistically significant,

a non-parametric Friedman Test of differences among repeated measures of word type, family, and word frequency levels was carried out (see Table 9).

Table 9

Differences among Pre, Mid, and Post-tests for Type, Family and Word Frequency Levels

Category	Time	*N*	*M*	*SD*	*df*	X^2	*p*
	Pre	20	67.90	16.57			
Type	Mid	20	78	15.47	2	14.769	**.001**
	Post	20	86	12.64			
	Pre	20	58.45	14.84			
Family	Mid	20	64.20	15.47	2	11.100	**.004**
	Post	20	73.25	9.67			
	Pre	20	108.85	33.99			
1000 word level	Mid	20	124.20	41.99	2	7.600	**.022**
	Post	20	132.10	24.33			
	Pre	20	4.95	2.67			
2000 word level	Mid	20	5.30	2.98	2	17.342	**.000**
	Post	20	9.30	4.37			
	Pre	20	2.00	1.52			
AWL level	Mid	20	2.65	2.08	2	21.072	**.000**
	Post	20	5.80	3.43			
	Pre	20	2.75	1.94			
Offlist level	Mid	20	4.15	2.11	2	4.592	.101
	Post	20	4.75	3.09			

As Table 9 displays, there was a significant difference among almost all indicators of participants' vocabulary development (type-$X^2_{(2)}$= 14.769, *p*= .001; family-$X^2_{(2)}$=11.100, *p*= .004; 1000 word level-$X^2_{(2)}$= 7.600, *p*= .022; 2000 word level-$X^2_{(2)}$= 17.342, *p*= .000; AWL, $X^2_{(2)}$= 21.072, *p*= .000). There was also a gradual increase in the offlist level, yet it was not statistically significant (X^2= 4.592, *p*= .101). In order to identify which measures of type and family, 1000 word level, 2000 word level, and AWL level in particular differ from each other,

a Wilcoxon Signed Ranks Test for pairwise comparisons was carried out as post hoc, and a Bonferroni adjustment on the results from the test was used (see Table 10 and Table 11).

Table 10

Pairwise Comparisons of Pre, Mid, and Post-test for Type and Family

Category	Pair		*N*	*Mean Rank*	*Sum of Ranks*	z	*p*
Type	Pre and Mid	*Negative Ranks*	6[a]	7.75	46.50	-2.187[a]	**.029**
		Positive Ranks	14[b]	11.68	163.50		
		Ties	0[c]				
	Pre and Post	*Negative Ranks*	2[a]	2.50	5.00	-3.736[a]	**.000**
		Positive Ranks	18[b]	11.39	205.00		
		Ties	0[c]				
	Mid and Post	*Negative Ranks*	5[a]	5.80	29.00	-2.463[a]	**.014**
		Positive Ranks	13[b]	10.92	142.00		
		Ties	2[c]				
Family	Pre and Mid	*Negative Ranks*	7[a]	8.86	62.00	-1.606	.108
		Positive Ranks	13[b]	11.38	148.00		
		Ties	0[c]				
	Pre and Post	*Negative Ranks*	3[a]	3.83	11.50	-3.492[a]	**.000**
		Positive Ranks	17[b]	11.68	198.50		
		Ties	0[c]				
	Mid and Post	*Negative Ranks*	6[a]	5.08	30.50	-2.782[a]	**.005**
		Positive Ranks	14[b]	12.82	179.50		
		Ties	0[c]				

Table 11

Pairwise Comparisons of Pre, Mid, and Post-test for Word Frequency Levels

Category	Pair		*N*	*Mean Rank*	*Sum of Ranks*	*z*	*p*
1000 word level	Pre and Mid	*Negative Ranks*	5[a]	9.70	48.50	-2.110[a]	**.035**
		Positive Ranks	15[b]	10.77	161.50		
		Ties	0[c]				
	Pre and Post	*Negative Ranks*	5[a]	6.40	32.00	-2.726	**.006**
		Positive Ranks	15[b]	11.87	178.00		
		Ties	0[c]				
	Mid and Post	*Negative Ranks*	9[a]	8.78	79.00	-.971	.332
		Positive Ranks	11[b]	11.91	131.00		
		Ties	2[c]				
2000 word level	Pre and Mid	*Negative Ranks*	6[a]	7.42	44.50	-.507[a]	.612
		Positive Ranks	8[b]	7.56	60.50		
		Ties	6[c]				
	Pre and Post	*Negative Ranks*	3[a]	3.50	10.50	-3.547[a]	**.000**
		Positive Ranks	17[b]	11.74	199.50		
		Ties	0[c]				
	Mid and Post	*Negative Ranks*	2[a]	8.50	17.00	-3.149[a]	**.002**
		Positive Ranks	17[b]	10.18	173.00		
		Ties	1[c]				
AWL level	Pre and Mid	*Negative Ranks*	7[a]	7.43	52.00	-.838[a]	.402
		Positive Ranks	9[b]	9.33	84.00		
		Ties	4[c]				
	Pre and Post	*Negative Ranks*	1[a]	1.50	1.50	-3.666[a]	**.000**
		Positive Ranks	17[b]	9.97	169.50		
		Ties	2[c]				
	Mid and Post	*Negative Ranks*	1[a]	10.00	10.00	-3.158[a]	**.002**
		Positive Ranks	16[b]	8.94	143.00		
		Ties	3[c]				

The results of the analysis, as displayed in Table 10, reveal that there was a significant difference between each pair of tests of type (pre-mid, z= -2.187[a], p= .029; pre-post, z= -3.736[a], p= .000; mid-post, z= -2.463[a], p= .014). This shows that participants performed a gradual increase regarding word types in their written texts. As for the values concerning family, there was a significant difference between pre and post-tests (z= -3.492[a], p= .000), and mid and post-tests (z= -2.782[a], p= .005), but a significant difference was not found between pre and mid-tests of family (z= -1.606, p= .108).

With respect to the results of word frequency levels in Table 11, the findings for 1000 word level indicate that there was a significant difference between pre and mid (z= -2.110[a], p= .035), and pre and post-tests (z= -2.726[a], p= .006). However, the difference between mid and post-tests was not statistically significant (z= -.971[a], p= .332). As for the findings in relation to 2000 word level, the difference between pre and post (z= -3.547[a], p= .000), and mid and post-tests (z= -3.149[a], p= .002) was found significant, yet there was not a significant difference between pre and mid-tests (z= -.507[a], p= .612). The values in Table 11 also indicate that although there was not a significant difference between pre and mid-tests of AWL level (z= -.838[a], p= .402), there was a meaningful difference between the pairs of pre and post (z= -.3.666[a], p= .000), and mid and post-tests (z= -3.158[a], p= .002).

To sum up, all these findings reveal that a considerable improvement in participants' vocabulary development was seen as there was a significant increase in at least two pairs of tests for each indicator of development (i.e. type, family, and word frequency levels).

RQ 3: Is there a significant difference in learners' creative ideational level before and after the programme?

Regarding the effects of the synectics programme on learners' creative ideational level, the data obtained through RIBS (Runco Ideational Behaviour Scale) were analysed on

SPSS. First of all, mean values were found before the programme was launched and after it finished (see Table 12).

Table 12

Pre-test and Post-test Scores for Creative Ideational Level (CIL)

Creative Ideational Level (CIL)	*N*	*M*	*SD*
Pre-test	20	3.16	.61
Post-test	20	3.37	.61

The findings in Table 12 indicate that there was an increase in students' creative ideational level before and after the programme. To see whether this difference is a significant one, a Wilcoxon Signed Ranks Test was run (see Table 13).

Table 13

Comparisons of Pre-test and Post-test Creative Ideational Level (CIL)

CIL Pre-test and Post-test	*N*	*Mean Rank*	*Sum of Ranks*	*z*	*p*
Negative Ranks	5[a]	7,80	39,00		
Positive Ranks	14[b]	10,79	151,00	-2.256[a]	**.024**
Ties	1[c]				

The results in Table 13 reveal that the increase in students' creative ideational level was found statistically significant (z= -2.256[a], p= .024). As a result, it could be concluded that the programme had a considerable effect on participants' creative ideational level. In other words, their creative thinking level increased significantly after the programme. This finding was also supported by the qualitative analyses from the interviews.

RQ 4: Is there a significant difference in learners' writer's block before and after the programme?

In order to discover the differences in learners' writer's block before and after the synectics programme, the data collected through WBQ (Writer's Block Questionnaire) were analysed employing descriptive statistics on SPSS, and mean values were found before and after the programme (see Table 14).

Table 14

Pre-test and Post-test scores for Writer's Block (WB)

Writer's Block (WB)	*N*	*M*	*SD*
WB pre-test	20	2.47	.67
WB post-test	20	2.41	.68

The results show that mean value for writer's block of the group was 2.47 before the programme, and it was 2.41 after the programme. This finding reveals that there was a decrease in participants' writer's block after the programme. In order to find out whether this decrease is a statistically significant one and to see the effects of the synectics programme in relation to the writer's block, a Wilcoxon Signed Ranks Test was performed (see Table 15).

Table 15

Comparisons of Pre-test and Post-test for Writer's Block

WB Pre-test and Post-test	*N*	*Mean Rank*	*Sum of Ranks*	*z*	*p*
Negative Ranks	11[a]	9,05	99,5		
Positive Ranks	7[b]	10,21	71,5	-.611[a]	.541
Ties	2[c]				

When the results regarding the changes in pre-test and post-test writer's block are examined in Table 15, it is noticed that there was not a significant difference between learners' writer's block before and after the implementation of the program (z= -.611[a], p= .541). In other words, learners' writer's block did not decrease significantly; hence, it could be suggested that synectics implementation did not lead to a noticeable decrease in learners' writer's block with regard to statistical analysis.

RQ 5: How do the learners evaluate their experience of being involved in the programme?

The categories that came out as a result of the inductive content analysis were divided into two according to whether they reflect positive or negative issues. 11 categories that were drawn from positive issues were displayed with their themes in Table 16.

Table 16

Positive Issues related to Synectics as a Prewriting Technique

Categories	Themes	Participant Codes
1. Creative thinking (15 responses)	Being able to think more creatively	S2-S5-S6-S7-S8
	Wealth of ideas	S1-S2-S3-S4-S5-S6-S9
2. The value of synectics (15 responses)	Being useful	S1-S2-S3
	Being fun	S1-S2-S4-S5-S8
	Being different	S2-S5-S6
3. Vocabulary learning (11 responses)	Learning new vocabulary items	S2-S3-S4-S5-S6-S7-S9
	Retention of new vocabulary items	S1-S3
4. Improvement of writing skills (10 responses)	Contribution to paragraph writing	S1-S3-S4-S6-S9
	Comfort in writing	S3-S4-S6-S7
5. Increase in lesson quality (9 responses)	Active students	S2-S4-S8
	Smooth running of the lesson	S1-S2
6. Interaction with the peers (8 responses)	Effectiveness of group work	S3-S5-S6-S8-S9
	Rapport with the peers	S2-S4-S5-S8
7. Attitudes to writing/the writing course (6 responses)	Positive attitude to writing	S1-S2-S4-S6-S8
	Higher motivation	S4-S5
8. Strengths of synectics as a prewriting technique (6 responses)	Synectics as a more useful prewriting technique	S4-S6-S7-S9
9. Synectics and curriculum (6 responses)	Frequency of synectics sessions	S2-S5-S8-S9
	The use of synectics in other curricular areas	S8
10. Expansion of perspective (4 responses)	Broadening one's horizon	S1-S4
	Being able to think from different angles	S5
11. Writer's block and writing anxiety (3 responses)	Decrease in writer's block	S5-S7
	Decrease in writing anxiety	S5-S6

The first of the positive issues that were highlighted by the interviewees most frequently is the creative thinking category. All of the students pointed out the synectics sessions contributed to their creative thinking skills, which elicited 15 responses. Actually, this finding is in line with the results of quantitative data analysis since a significant increase in the participants' creative ideational level was found following the synectics programme. Therefore, it could be concluded that the implementation of synectics as a prewriting technique influenced learners' creative thinking skills positively.

Two themes belonging to this category are being able think more creatively and wealth of ideas. The first of these themes was reflected by S2 with the following words:

"I think synectics sessions have contributed a lot to me in terms of idea generation because it was a process that necessitated creativity. We continuously produced ideas... It was a study that activated one's power of imagination. That's why I liked it."

Similarly, S7 reported that:

"I normally used to have difficulty while writing, but with synectics, more creative ideas come to my mind about the writing topic."

The second theme within the same category is the wealth of ideas. The students stated that the synectics technique helped them to come up with lots of ideas that could be used while writing their paragraphs. For example, S3 made the following point about this theme:

"(First of all all), I believe that this technique has been very useful regarding idea generation because we don't have too much chance with other prewriting techniques like listing or clustering in producing ideas, but with this technique many ideas are put forward in group study mode. In this case, the writing process becomes much easier for me."

S2 made a similar comment to S3's:

"The other prewriting techniques are usually carried out individually. However, as the synectics technique is based on group and whole-class work, you can exchange more

opinions, and even if you write about the same topic, you can write in a much different way."

Some students also reported that the synectics technique helped them form diverse ideas during the course of the activity. S1, for example, stated that:

"(As I said before, while we are carrying out this technique), lots of diverse ideas come out; and thanks to this, we can appreciate the others' ideas."

As these quotations from the interviewees' responses imply, participants have the perception that the use of synectics technique contributed to their creative thinking and idea generation skills in writing. Actually, both the qualitative and quantitative findings seem to fulfil one of the objectives of the study which was related to the question whether there was a significant difference in participants' creative ideational level before and after the programme.

The second most frequent issue that was raised by the interviewees is the value of the synectics technique. This issue was reflected by the use of several descriptive adjectives by 7 students who gave 15 responses about this category. The students described the technique as being useful, fun, and different.

S3, for example, evaluated her experience of being involved in the programme as useful:

"Synectics has been very useful for me in terms of generating ideas."

S4 said that she found the synectics technique fun:

"When compared to other techniques, I had much more fun with this technique."

S2 described the technique as enjoyable:

"Synectics is a very enjoyable technique because we try to turn back to the first category from two unrelated categories, and this takes very long, and I have great fun while I'm doing this."

The synectics technique was also described as being different by S5:

"It was different from the ones that we did in the first term. Maybe it was a bit difficult, but nevertheless I liked it. It wasn't something boring."

The high frequency of the responses in relation to the synectics being 'useful, fun, and different' implies that most of the participants attributed positive values to their experience of being involved in the programme and to the technique. As it is clear in S2's comment, the design of the technique, which basically involves connection-making through metaphor, appears to be what makes it useful, enjoyable, and different for the students.

The third category among the positive issues was vocabulary learning about which 8 students made 11 remarks. The first theme in this category was learning new vocabulary items. 8 interviewees out of 9 stated that the synectics technique offered them an opportunity to learn more new vocabulary items. This issue is evident in the following quotations:

S6's comment, for example, pointed to the contribution of dictionaries and other groups' ideas in learning new words.

"In the preparation (initial) stage of the activity, we learn new words from the dictionary and the other groups."

Similarly, S7's response in relation to this theme implies the usefulness of group work in vocabulary learning.

"We learned new words. When the others shared different words that we didn't know, we learned what they knew. We also learned from you."

The above quotations signal the importance of being individually active through the use of dictionaries and other sources, and also the power of interaction with the group members or classmates in vocabulary learning while attempting to produce ideas for each stage of the activity. As a result, it is possible to state that the synectics technique is conducive to vocabulary learning as it inherently necessitates being both individually and collectively active in each stage of the activity.

The second theme within vocabulary learning category is the retention of new vocabulary items. The following quotations are related to this issue:

"(S9) I believe there is an improvement in my vocabulary because when we write, we need words, and as we use them we retain them more."

"(S3) Everybody utters different adjectives that I don't know. When this happens, I learn new words. Most of these words become permanent as we use them while writing."

It is apparent from these comments that students do not only learn new vocabulary items during the synectics activity, but also retain them because they use most of these words in their texts. Another factor that helps them remember most of the words emerged during the activity might be the fact that those words are repeated throughout the activity as the teacher tries to summarise the groups' suggested ideas and the students vote for the best ideas. Moreover, all the ideas and vocabulary items are projected onto the board so that the students have also a visual reference to them throughout the session (see Appendix J).

Improvement of writing skills is the fourth category revealed from the grouping of the related data, which elicited 10 responses from 6 students. Some of these students reported that the synectics technique contributed to their paragraph writing; and some of them said they gained comfort in writing. The following quotations reflect these two themes:

"(S3) Since we work in groups, more ideas come out; in this case, writing becomes much easier for me... I normally have difficulty in writing the introduction and the ending of a text. However, this becomes easier for me when we use the synectics technique. I know how to start and end it because I get inspired from the ideas that came out during the activity"

"(S4) I don't spend time thinking how to begin the sentence; I start to write comfortably."

"(S6) Using the data that emerged from the synectics group work makes our writing easier... It's a complicated technique, but it makes my individual writing easier."

"(S9) I can write better paragraphs by using the synectics technique."

These findings could be interpreted with regard to the importance of the prewriting stage of the writing process. As discussed previously, prewriting appears to be an important stage since it prepares students to form the foundation of their writing through using certain techniques or activities to generate ideas. In this respect, it could be suggested that the synectics technique as a prewriting activity implemented in this study seems to have fulfilled this function in that students appeared to have gained comfort and a sense of improvement in writing in English.

The fifth category that revealed from the responses of 4 students is the increase in lesson quality. This category is further divided into two themes: active students and smooth running of the lesson. The following quotations from the students' responses are about these two themes:

"(S2) It continuously keeps the class active... Everybody is in the mode of exchanging ideas... Since the rate of idea exchanging is high, there happens a more active lesson atmosphere... With synectics, lessons become student-centred."

"(S4) Synectics is fun in the class. Everybody participates in the session. Therefore, so many diverse ideas emerge. In this case, I want to join in more."

"(S8) When I think of the usual writing course, students are generally passive, but here (with synectics), everybody becomes active."

The participants' comments with regard to a more active lesson atmosphere implies that the synectics sessions made a difference in the writing course quality especially in comparison to general writing course described in the methodology part. There is also an implication that synectics is inherently a learned-centred technique as discussed previously in that the learners are required to engage actively and in collaboration throughout the process to solve problems, reach new understandings of the concepts, or produce novelty.

The sixth category, which elicited 8 responses from 7 students, is the interaction with the peers. The themes in this category are effectiveness of group work and rapport with the peers. Below are some related quotations from the students' responses:

"(S2) Frankly, I got to know my group friends better with this study."

"(S4) We voted for the best idea for our group decision. When somebody didn't like the idea, we asked her if she had another idea. We worked in harmony as a group. Everybody had a contribution."

"(S5) A person can't produce much by herself. When you work with a partner or more people, you can look at an issue from different perspectives."

"(S8) I had lots of fun from the group work. For me, employing the synectics technique with the group was great."

Actually, these students' comments reveal some of the underlying features of the Synectics Model as described previously. One of these features is related to the fact the mechanisms of synectics process require participants to work in a cooperative and collaborative manner when they are producing analogies to improve their understandings of new concepts, and synectics produces educationally valuable results especially when implemented in a social environment. Another feature of the Synectics Model is to do with its support of the principles of democracy education by letting learners listen to and appreciate each other's ideas respectfully, try to understand others' points of view, or vote for doing some selections as a class at different points of time during the synectics sessions through constructive peer interaction. These two features of the model are apparently reflected in S4 and S5's responses presented above.

The seventh category, attitudes to writing/the writing course, was another positive issue about the use of the synectics technique as mentioned by 6 students. Positive attitude to

writing and higher motivation are the themes under this category. Some of the corresponding excerpts from the transcripts are presented below:

"(S1) When we have a synectics activity, I participate in the lesson more eagerly. In a way, I have a more positive attitude to the course."

"(S5) I have a rather positive attitude to writing. In fact, I started to like writing more with synectics."

"(S6) I had a negative attitude to writing at the beginning of the academic year. I couldn't write at that time, but now I can write. I can say my attitude turned into a bit more positive. I can produce more ideas thanks to this technique."

It could be drawn from these responses that the implementation of the synectics technique in this study had a positive effect on participants' attitude to writing and the writing course, and motivation to write.

The eighth category emerged from the analysis of positive issues is the comparison of synectics to other prewriting techniques. 4 students gave 6 responses about this issue. They told that they found synectics as a more enjoyable and useful prewriting technique comparing to others.

S4, for example, reported that synectics was more enjoyable in the classroom atmosphere in comparison to other techniques.

S9 stated that she found synectics more useful than the other prewriting techniques. S7 had a similar opinion about the issue:

"Listing sounded boring to me. I couldn't produce anything when I was alone. I used to sit for hours. Clustering was fine, but I used to confuse what to choose in that. However, since we voted for the best ideas as a class, synectics became more useful."

These students' opinions imply that the synectics technique might produce more pleasing results in terms of idea generation especially because of the fact that it is based on

the group and whole-class work. Therefore, they might have found the technique more useful and enjoyable comparing to other prewriting techniques.

The ninth category is named synectics and curriculum, which drew 6 responses from 4 students. The two themes determined in relation to this category are about the frequency of synectics sessions and the use of synectics in other curricular areas. Some excerpts from the interviewees' responses are presented below:

"(S2) I think synectics sessions should be carried out every week because they keep the students dynamic."

"(S5&S9) I would like to use this technique in the future again."

"(S8) For me, synectics should be a part of school curriculum... It can be used for every level of students. In fact, it is based on imagination and aims to develop students. It can also be implemented with English Language Teaching Department students. We're going to educate our students in the future. Therefore, I believe it's going to be useful for us."

These exemplary responses above might come to mean that the synectics technique lends itself to being used with every level of students. As S8 points out, it could be a part of school curriculum in general and even a part of English Language Teaching Departments' curriculum.

The tenth category among the positive issues is the expansion of perspective. 3 students gave 4 responses in relation to this category. S4 and S5, for example, made the following points about this issue:

"(S4) I thought we were able to bring ideas together faster, and we were able to generate a lot of ideas. In a way, we broadened our horizon."

"(S5) I've learned to think more about an issue and have a look at it from different perspectives."

These students' comments are valuable from the researcher's point of view as one of the underlying aims of the study appears to have contributed to the development of an important principle of democracy education which is to do with being able to appreciate and respect others' viewpoints or ideas.

The eleventh and final category emerged from the analysis of the positive issues is the writer's block and writing anxiety. 3 students pointed out that there was a decrease in their writer's block and writing anxiety. Some quotations from two of these students could be seen below:

"(S5) I think I overcame this (writing) anxiety with synectics. I can come up with lots of ideas; and this helped me to decrease my anxiety. I also think that I don't experience (writer's) block any more."

"(S6) When I work individually, I can feel stucked, and I can't proceed any more, but there's an interactive atmosphere during the group work, so we can generate a lot of ideas. In this case, my anxiety decreased a little."

In contrast to the results of quantitative analysis which did not reveal a statistically significant decrease in writer's block, these participants seem to have a perception that their writer's block and also writing anxiety decreased after they were involved in the programme.

After having presented and discussed the findings related to the positive issues emerged from the content analysis, the categories and themes regarding the negative issues are displayed in Table 17, and then the discussions along with the quotations from the interview transcripts are presented.

Table 17

Negative Issues related to Synectics as a Prewriting Technique

Categories	*Themes*	*Participant Codes*
1. Length of the synectics session (6 responses)	Time-taking	S1-S2-S3-S6-S7
2. Disagreement (5 responses)	Difficulty in deciding at ideas in group	S1-S9
	Dominance of some peers' ideas	S4-S9
3. The value of synectics (3 responses)	Being boring	S3-S6-S7
4. Effort (2 responses)	Tiring	S2-S5

Comparing to the positive issues revealed from the content analysis, negative issues seem to be less in frequency, and only four categories were found through analysis. The most frequently elicited response as shown in Table 17 is related to the length of the synectics sessions. 5 students made 6 comments in relation the time-taking nature of the synectics activity. This point is reflected in the following quotations from the students' responses.

"(S2) Since the classroom environment was too crowded, it was very time-taking for me. Our friends had difficulty in finding ideas, so we had to wait for them."

"(S3) Sometimes it can take very long. For example, I think I can put forward more ideas when I'm faster. When it takes long, more similar ideas come out because everybody thinks in more detail."

"(S6) Maybe it should be shorter since students may get bored."

As the quotations above indicate, the synectics activity tends to be very time-taking as a prewriting activity. Therefore, some adaptations regarding the timing could be made in order to overcome this drawback.

Although much more positive responses were elicited about the advantages and effectiveness of group work, 3 students pointed to a drawback of group work in terms of the

disagreement in trying to reach a common decision during the activity. 5 responses given by the students point to two themes: difficulty they experience in deciding at ideas with their group mates and dominance of some peers' ideas. These themes are reflected in the following quotations:

"(S1) The only negative thing I can say about synectics is that my ideas are not selected... More ideas can be put forward during the group work, but when someone is in favour of an idea, the other one may not favour it. In this case, an argument can break out."

"(S9) The negative side of the activity is the absence of a common decision of the class because sometimes a grouping occurs in the class, and somehow everybody wants to reflect their own idea."

These responses might be interpreted with regard to lack of teacher monitoring or absence of rules for idea selection during in-group idea generation processes in different stages of the activity. The implications arising from this finding need to be carefully assessed in further practices of the technique.

The third category with respect to the negative issues is the value of synectics. 3 students described synectics as boring. This point is reflected in the following comments:

"(S3) When the activity takes too long, it may be boring."

"(S7) In the course of the activity, it sounded a little boring to me because it took too long."

This description of the activity as being boring probably stems from the time-taking nature of the activity. The implications in relation to this point are similar to the first category, which is about the length of the session. As a result, this point could also be tackled by making some timing adaptations.

The final category is about the effort that the students think they put in the activity. Only 2 students think that it was tiring. S5, for example, reported that it had been a little bit tiring because it had been carried out one after another during six weeks.

The negative comments about the participants' synectics experience appear to derive from the fact that it includes 7 steps, and each step requires quite a long time to be completed by the students and to elicit each group's ideas one by one. Another factor is likely to be the implementation of the technique every week during a 6-week-period. This might have created fatigue and boredom on the part of the participants. Therefore, students might have such negative perceptions stemming from the time-taking nature of the technique and its frequent implementation. These findings also carry some important educational implications which are going to be discussed in the next chapter.

Summary

This chapter presented the findings gathered from both quantitative and qualitative data analysis procedures. The findings were displayed, reported, and interpreted in relation to the each research question of the study.

Chapter 7

Discussions, Conclusions, and Implications

Introduction

This chapter presents the discussions in relation to the findings of each research question. Furthermore, the conclusions and implications with respect to each research question are presented.

Discussions

The main purpose of this study is to find out the effects of Synectics Model as a prewriting technique on learners' writing skills in tertiary level English class. In addition, it aims to seek the influence of the technique on learners' vocabulary development. Another objective of the study is to investigate the differences in participants' creative ideational level and writer's block following the programme. Furthermore, it intends to discover how learners evaluate their experience related to the implementation of the synectics technique. Based on these objectives, the research questions of the study are posed, and in the following parts, the findings of the analyses will be discussed.

Discussion of findings from RQ 1. The results of the findings with regard to the first research question indicate that the participants' writing skills in terms of fluency increased significantly. The measurements carried out at three intervals showed a continuous rise. However, only pre-test post-test difference found to be statistically significant. The finding in relation to the increase in learners' writing fluency was also reflected in the qualitative analyses. As for the findings related to lexical complexity, no significant growth was found

throughout the study. As a result, it could be concluded that the synectics technique had a positive effect on the improvement of writing fluency, the number of words in a text. This might show that synectics activates learners' idea generation capacity, which results in acceleration in the number of words. On the other hand, the findings revealed that the synectics programme did not lead to a statistically meaningful increase in lexical complexity in the present investigation. As explained in Chapter 3, lexical complexity measure was considered to be type-token ratio in this study. In other words, it refers to the variation of the words used in a written text. Although the learners came up with a wealth of vocabulary items found through certain strategies peculiar to the synectics technique, they did not seem to have used the new or distinct ones came out during the sessions. This might show that learners might have preferred to use the items from their active vocabulary instead of the ones produced during the activity.

To the author's knowledge, no other study is available that investigated the effects of synectics as a prewriting technique on learners' writing skills in terms of fluency and lexical complexity. However, the results of several studies implementing various prewriting techniques have also indicated some educational gains. For example, Öncü (1999) found out that the use of video films led to an improvement in writing argumentative compositions. Furthermore, Özçelik's (1996) study pointed that the use of reading texts resulted in a significant increase in learners' scores regarding content, organization, vocabulary, and language use. Similarly, Karakaş's (2006) study revealed that the implementation of creative writing activities led to an improvement in learners' various English writing skills.

As for the studies investigating writing skills in terms of fluency and lexical complexity, only one study could be reached by the author. Fellner and Apple (2006) studied the effects of online student blogs on participants' writing fluency and lexical complexity. In that study, fluency measure was regarded as the number of words in a text, and lexical

complexity measure was considered to be word frequency levels. The results showed that the participants' fluency and word frequency levels increased significantly at the end of the program.

In conclusion, despite the limitation of the group size, the results of this study appear to prove that synectics might be effective in improving writing fluency in the long term; and it is estimated that taking a couple of instructional moves might also induce the development of lexical complexity as understood from this particular experience. Therefore, it might be concluded that synectics could be applied in the writing process as an alternative prewriting technique.

Discussion of findings from RQ 2. The second objective of the present study was to explore the effects of synectics on participants' vocabulary development. With this reason in mind, the texts that the participants wrote at the beginning, in the midst, and at the end of the programme were subjected to statistical analysis in terms of word type and family, and word frequency level measures. The results revealed that there was a significant difference between each pair of tests of type. In terms of findings regarding family measure, it was found that there was a meaningful difference between pre and post, and mid and post-tests. There was also an increase in pre and mid-tests of family, but it was not significant. As for the word frequency levels, the difference between at least two pairs of tests out of three came out to be significant in 1000, 2000, and AWL word levels. There was also an increase in offlist level, yet it was not statistically significant. These results are also supported by the findings from the qualitative analysis which revealed that most of the participants attributed their learning new vocabulary items to the synectics technique.

The finding that a significant growth in learners' vocabulary development was detected might stem from the usual practices during the synectics sessions. More specifically,

they did not only use the vocabulary items from their active vocabulary but also the new ones to generate ideas through metaphor building. With this purpose, they needed to use some sources of reference such as monolingual and bilingual dictionaries, learning the translation of some vocabulary items from the peers and the teacher, recalling the items learnt in other courses, using the online sources, etc. In other words, throughout a synectics session, they were all busy with using and finding new vocabulary items to be able to express their ideas.

When the related research is reviewed, no similar studies are available for comparing the results of the current study with respect to the effects of synectics on vocabulary development in terms of word type and family, and word frequency levels. On the other hand, the study conducted by Asmalı et al. (2014) yielded a relatively similar result as they investigated the effects of synectics on learners' vocabulary performance. In their study, the use of synectics led to an increase in participants' vocabulary learning performance which was measured by multiple choice vocabulary questions designed by the researchers. When the results of these two studies are considered, it could be concluded that synectics seems to be an effective technique in improving learners' vocabulary development.

As for the research on word frequency levels, Fellner and Apple's (2006) study indicated that the use of online blogs resulted in a substantial increase in all word frequency levels. In this regard, the use of synectics technique as well as online blogs in L2 writing instruction is likely to contribute to learners' vocabulary development. This might be an indication of a similarity between synectics and online blogs since both practices allow students to use the language creatively without being restricted to rules or boundaries in foreign language learning. By this means, students are encouraged to use and learn new vocabulary items through the use of dictionaries, learning from the others, or the internet sources.

Discussion of findings from RQ 3. The finding regarding the third research question signified that there was a significant increase in participants' creative ideational level at the end of the programme. This result was also supported by the qualitative analyses as most of the interviewees reported that the use of synectics in the writing course contributed to their creative thinking abilities.

The result that synectics had a positive effect on the development of creativity and/or creative thinking ability has also been obtained by a number of studies in different areas. To exemplify, the implementation of synectics had a significant influence on the development of learners' creativity in foreign language class (Fatemipour and Kordnaeej, 2014), in English art course (Burk, 2002; Heavilin, 1982; Keyes, 2006), and science related courses (Ercan, 2010; Paltasingh, 2012; Pany, 2008). However, Kleiner's (1991) study did not indicate a significant difference between control and experimental group students' creative thinking abilities in science course. As this brief review on synectics and creativity research reflects, synectics seems to have contributed to participants' creativity/creative thinking development almost in all studies. Similarly, in this study, the use of synectics has proved to have improved the creative thinking abilities of participants of a different age group and proficiency level, in a different setting, and with the use of a different creativity measurement tool.

Discussion of findings from RQ 4. In relation to the findings of the fourth research question, the quantitative analysis revealed a slight decrease in participants' writer's block at the end of the programme, but it was not a significant one. On the other hand, the results of qualitative analysis point to a decline as some of the participants reported that their writer's block and also writing anxiety decreased after they were involved in the programme, which was attributed to the comfort in idea generation and the power of group interaction resulting from the nature of the synectics activity.

No other research study investigating the influence of synectics on writer's block could be attained by the researcher for comparison. Actually, there seems to be scarcity of research on writer's block in the relevant literature. However, two studies investigating writer's block could be attained by the researcher. The first study, conducted by Akpınar (2007), researched the effects of process-oriented writing instruction on learners' writer's block; and no significant difference occurred on the construct under investigation. In the second study, it was found out that free reading helped decrease writer's block in foreign or second language (in Leki, Cumming, and Silva, 2008). These contradictory results imply that more studies investigating writer's block should be conducted to shed light on the issue. Moreover, the present study is the only investigation that explores the effects of the synectics technique on writer's block. As a result, further studies need to be implemented in order to obtain results indicating a significant decrease in writer's block.

Discussion of findings from RQ 5. The qualitative data gathered from the semi-structured interviews were subjected to the inductive content analysis, and the findings were grouped into two as positive issues and negative issues revealed from the analysis. Positive issues were related to the categories such as creative thinking, the value of synectics, vocabulary learning, improvement of writing skills, increase in lesson quality, interaction with the peers, attitudes to writing/the writing course, strengths of synectics as a prewriting technique, synectics and curriculum, expansion of perspective, and writer's block and writing anxiety. These results signify that most of the participants had a perception that their experience with synectics contributed to the improvement of their creative thinking skills, which is in line with the statistical findings. They also evaluated their experience, namely the synectics programme, quite positively. Actually, they found the technique quite useful, enjoyable, and different. Another positive issue was related to the vocabulary learning. Most

of the participants stated that the technique helped them learn and retain more vocabulary items. This result is also supported by the statistical findings. They also emphasized that their writing skills improved considerably, which was actually the most important objective of the study. In contrast to the results of the quantitative analysis, which did not reveal a statistically significant decrease in writer's block, the participants seem to have a perception that their writer's block and also writing anxiety decreased after they were involved in the programme. Another important point that was reflected by the participants was the democratic aspect of the synectics technique that was mentioned in Chapter 2. It was appreciated by the students as the progression of each step of the technique was based on voting, and also they had the opportunity to listen to and appreciate others' ideas throughout the sessions. To sum up, the participants' opinions regarding their experience with the synectics technique were generally positive in terms of both linguistic and writing skills development, and psychological constructs such as creative thinking, attitudes, motivation, writer's block and writing anxiety. Although no other study has investigated participants' perception with regard to synectics technique elaborately, the study conducted by Asmalı et al. (2007) showed that the participants found the technique interesting.

With regard to the negative issues reflected in the qualitative analysis, the most articulated point by the interviewers was the length of the synectics sessions; they thought it was a time-taking activity, which could be a reason for why few of them found the technique tiring. Some of the participants were also not content with the difficulty in reaching an agreement while trying to decide at ideas in groups. Finally, few of them evaluated their experience as being boring. In sum, the participants had much less negative opinions about their experience comparing to the positive issues. When the relevant literature on synectics research is reviewed, it could be seen that other studies investigating learner perceptions of synectics experience are not available for comparison. Therefore, this enquiry also stands out

in terms of exploring participants' insights into the experience of being involved in a synectics programme.

The finding that the participants had few negative opinions about their experience might be stemming from the nature of the SM. As stated before, the implementation of the model is based on a series of steps involving connection making through creating metaphors, which might render the model inherently more interesting and novel than the other models or techniques for participants. On the other hand, a great deal of time is needed to accomplish each successive stage of metaphor building to complete the whole task. Actually, this might lead to fatigue and boredom on the part of participants, which might be a reason for the source of their negative perceptions in relation to the programme.

Conclusions

The primary objective of this study was to explore the effects of synectics on learners' writing fluency and lexical complexity. The results signified that learners' writing fluency increased significantly between pre-test and post-test measures, which comes to mean that synectics seems to provide more positive effects in the long term. The finding that learners' fluency increased could be attributed to the fact that the synectics technique involves primarily a vocabulary activation and expansion activity. In this respect, the finding in relation to the increase in learners' writing fluency, the number of tokens in a text, might be regarded as an expected outcome as the technique appears to present learners a large repertoire of vocabulary items to use while composing their texts. In other words, since the nature of the technique lends itself to generating numerous ideas throughout its implementation, it is not surprising that there was a significant growth in learners' writing fluency. In contrast, learners' lexical complexity came out to remain fairly the same throughout the programme. This result could be explained by the fact that although the

vocabulary items that were produced by the learners in the sessions showed great variation, they might have used the items from their active vocabulary instead of the new or distinct ones suggested during the activity while composing their texts.

The findings of the second research question indicated that there was a significant increase in all pairs of tests of type, and at least in two pairs of family and word frequency level measures, namely 1000 word level, 2000 word level, and AWL. There was also a rise in the offlist level, yet it was not statistically significant. The result that there was a meaningful rise in learners' vocabulary development not between short periods but in the long term could signify several points. In the first place, the SM appears to bring about some difficulties in terms of time required and difficulty in its implementation. Its application in the classroom environment requires a great deal of time as it involves 7 different phases of metaphor building. Also, its implementation sounds complicated comparing to other prewriting techniques; consequently students find it difficult to understand and get accustomed to it. In this respect, the finding that there was an increase in the amount of word types and families used by the participants at the beginning and end of a six-week long programme might be a sign of that synectics is a model that needs to extend over a period of time. In other words, the model should be applied for longer periods so that learning gains in terms of vocabulary development could be bigger. In the second place, the model that was experimented in this study was not isolated from the other courses in the preparatory programme. Doubtlessly, there were other learning gains from the other courses because writing was just a part of a large preparatory programme, and actually on several levels the programme was running during the synectics implementation. For this reason, students were exposed to different learning sources, and surely all these different components of the other courses might have contributed to this expansion. Therefore, one needs to be cautious thinking that this improvement in participants' vocabulary only results from the synectics programme.

As for the findings of the third research question, synectics as a prewriting activity led to an increase in participants' creative ideational level. Actually, when the relevant literature is reviewed, it could be seen that studies exploring the effects of synectics on creativity or creative thinking skills have usually come up with similar results. In other words, there is a seemingly positive relationship between synectics and creativity. However, several aspects of this study make it distinct from the other studies investigating the same variables. Firstly, the studies exploring the effects of synectics on creativity have usually been conducted with groups attending secondary level education. Conversely, the participants in this study were upper-intermediate tertiary level English preparatory students who were actually the candidates of English Language Teaching and English Language and Literature Departments. Secondly, other studies explored the effects of the model mostly in science education and English art courses. On the other hand, this study is only one of the few enquiries that investigated the effects of the model on creativity in FLE. As a result, this study appears to be unique in the existing literature in terms of participants' age, educational level, and course type.

The finding regarding the fourth research question revealed that there was not a statistically significant decrease in participants' writer's block. This might be due to the fact that the length of the synectics programme was not adequate to get a significant difference in such a psychological construct. Additionally, the study group did not already have a very high level of writer's block at the beginning of the study. Therefore, this result is not really unexpected. However, in the qualitative analysis, it was seen that some of the participants had a perception related to a decline in their writer's block and writing anxiety. This could be an explanation for the minor decrease in writer's block.

From the participants' point of view and researcher's informal observation, some conclusions worthy of consideration related to the findings of the fifth research question could

also be drawn. As explained in the previous chapter, the participants tended to have mostly positive opinions regarding their experience of being involved in the synectics programme. This is actually an expected result as the features inherent in the SM make it appealing to learners. First of all, the design of the technique, which basically involves connection-making through metaphor, appears to be what makes it useful, enjoyable, and different for the students. In addition, the mechanisms of synectics process require participants to work in a cooperative and collaborative manner when they are producing analogies to improve their understandings of new concepts, and this is likely to produce educationally valuable results. Furthermore, the SM contributes to democracy education by letting learners listen to and appreciate each other's ideas respectfully, try to understand others' points of view, or vote for doing some selections as a class or group through constructive peer interaction, which has actually been reflected in some participants' comments. Moreover, as discussed in Chapter 2, the SM appears to tap all kinds of learners with different multiple intelligences, various learning styles, and diverse thinkers as it has the tools of three kinds of metaphor to gap the bridge between the right and left brain hemisphere. It also helps build a more learner-centred classroom atmosphere whereby learners actively engage in learning action.

Another conclusion drawn from the qualitative findings is about the suitability of the model to be applied to all age groups. Some participants pointed out that the synectics technique could be used with different age groups, level of students, or in different courses.

In terms of the negative issues arising from the qualitative findings, the length of the synectics sessions was the most criticised aspect of their experience. This result might have derived from the fact that the technique includes seven steps, and each step requires quite a long time to be completed by the students and to elicit each group's ideas one by one. Another factor is likely to be the implementation of the technique every week during a 6-week-period. This might have created fatigue and boredom on the part of the participants. Therefore,

students might have such negative perceptions stemming from the time-taking nature of the technique and its frequent implementation.

Implications

This research study investigated the influence of synectics on variables such as writing skills, vocabulary, creative thinking, and writer's block. Additionally, although it was not articulated elsewhere in this thesis, an underlying aim of the study was to find out whether synectics could be applied as a prewriting strategy in foreign language writing instruction. Based on the findings from the analyses and researcher's experience, it was realized that synectics could be used as a prewriting technique despite a couple of drawbacks or points to be cautious about. In the following parts, implications arising from the results of the study for educators and researchers will be discussed, and several suggestions will be made in the light of the findings.

Implications for educators. An important educational implication arises from the result regarding the lexical complexity. It has been seen that lexical complexity is not a trait in the language production of learners that can develop automatically. Therefore, it seems essential for foreign language educators employing the synectics technique to take a couple of instructional moves to help learners improve this trait. One way to ensure this could be through distributing students the vocabulary lists produced during each session and directing and motivating them to use especially the distinct vocabulary items from the lists in their texts so that those words could become a part of their active vocabulary. In addition, students could be given a minimum number of those items to use in their texts. Another way to make learners to use those words is to project the word lists onto the board throughout the activity, so when the writing action starts, they can have a continuous visual reference to the lists and

use the words actively in their texts. Alternatively, those lists could be shared with the students through photocopying or downloading them into an online sharing programme. In other words, teachers need to make it sure that the students generated lists from the synectics sessions are actively used.

Another significant educational implication arising from the qualitative results is about the timing of a synectics session. As each session tends to last long, students might show signs of fatigue and boredom. With the purpose of overcoming this problem, some adaptations could be made by foreign language educators. For example, the time allocated for brainstorming and idea generation in each step of the technique, teachers should set time limits for groups so that the planned lesson time should not be exceeded. Alternatively, the groups could be kept fixed for a determined period of time in order not to lose time for arranging groups in each session.

The informal observation of the researcher supports the fact that some of the participants had an immense inclination or enjoyment in using this technique. This might show that certain learning styles or learning personalities might favour this instructional model more than the other ones; and they benefit from this more. In this regard, students should be guided to gain the habit of employing the technique also in self-study writing activities. Educators could also be advised to maintain variation in employing prewriting techniques to tailor different learning and thinking styles, and learner needs when taking individual gains into consideration.

It could also be suggested that the SM be implemented in various educational contexts, with different age groups and proficiency levels, and also in different courses such as speaking, vocabulary, reading, etc. In addition, the results obtained from the study might interest the curriculum developers of English Language Teaching Departments as the

synectics technique might be included among prewriting techniques in training pre-service English teachers to teach writing skills.

Another implication arises from the participants' opinions and researcher's informal observation. One problem regarding the application of the model resulted from the difficulty that the participants experienced for idea selection in groups. In this regard, it could be suggested that teacher monitoring be required and a set of rules for choosing ideas to offer to class during in-group idea generation processes be established.

The findings obtained from this study could also inspire materials developers. As discussed before, there is a lack of focus on creative thinking element in writing course books as the task designs are usually based on guided writing principles, and the focus is often just on accuracy. For this reason, the results of this study can be inspiring for materials developers in expanding the scope and design of writing materials with the creativity element. More specifically, the synectics technique could be incorporated into course materials both as a prewriting technique and an idea generation tool for different skills.

Furthermore, foreign language teachers could be informed and trained about the use of the synectics technique in FLE through in-service teacher training courses.

Implication for researchers. As mentioned before, the finding regarding participants' vocabulary expansion might also be attributed to the effect of other learning environments which were a part of the large preparatory programme running at the time of research. This calls for an important implication for future research. Such an instructional model could be experimented with a group of participants who are enrolled in a single course on which other courses or learning environments might not have an effect. For example, it might be conducted in a non-formal and non-assessed setting such as a private language course so that the effect of other external factors could be minimized. In addition, in order to draw more

confident conclusions regarding the effects of the SM, true experimental design with a control group could be employed in future research.

In terms of writer's block, two implications arise from the results. First, the length of the study could be increased so that more confident conclusions might be reached. Second, this study could be replicated with an experimental study design which includes a group with a high level of writer's block in order to see whether the model has a significant influence on this construct.

The most important contribution of the current study to the existing literature is while all different studies have investigated the effects of the SM on variables such as creativity, motivation, attitudes, etc., this study actually very first time focused on components such as writing fluency and lexical complexity, vocabulary development, writer's block, and learner perceptions.

Summary

This chapter presented the discussions in relation to the findings of each research question. Furthermore, the conclusions and implications with respect to each research question were presented.

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Appendices

Appendix A: Background Questionnaire

Sevgili öğrenciler,

Bu anket, 'İngilizce yazma becerileri' üzerine yürütülmekte olan doktora tez çalışmasının bir parçası olarak hazırlanmıştır. Bu uygulamanın neticesinde elde edilecek bilgiler bilimsel bir araştırmanın önemli bir bölümünü oluşturacaktır.

Bu anket üç bölümden oluşmaktadır. **A** bölümündeki sorulara, her soru için yapılan açıklamalar doğrultusunda cevap veriniz.

B ve **C** bölümünde ise her satırda okumanız gereken bir ifade ve bu ifadede sunulan durumun sizin için sıklığını soran 5 (beş) seçenek bulunmaktadır. Her seçeneğe rakamsal bir değer verilmiştir. Sizden istenen her bir ifadeyi dikkatle okuyup size en uygun gelen seçeneği işaretlemenizdir. Bu ankette doğru ya da yanlış cevap yoktur. Bu nedenle soruları sadece kendi düşünceleriniz doğrultusunda cevaplamanız, anketin sağlıklı sonuçlar verebilmesi için çok önemlidir.

İlgi ve yardımınız için şimdiden teşekkürler.

Nalan BAYRAKTAR BALKIR
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A Bölümü:

Lütfen aşağıdaki soruları yapılan açıklamalar doğrultusunda cevaplayınız.

1) Cinsiyetinizi, ilgili kutucuğu (X) ile işaretleyerek belirtiniz: **K** **E**

2) 2013-2014 Akademik Yılı Güz Dönemi'ne ait Writing dersi not ortalamanız: _____

3) 2013-2014 Akademik Yılı Güz Dönemi'ne ait Basic English dersi not ortalamanız: _____

4) Writing 1 ve 2 dersi içeriğini göz önüne alarak, daha önceki öğrenim yaşantısında, standartları benzer seviyelerde olan Writing dersi/dersleri aldınız mı? Lütfen size uygun cevabı yuvarlak içine alınız: **Evet - Kısmen - Hayır**

5) Yanıtınız 'evet' ya da 'kısmen' ise bu dersin/derslerin yazma beceriniz üzerindeki etkisini değerlendiriniz. Lütfen size uygun cevaba denk gelen rakamı yuvarlak içine alınız:

Çok etkili ---------- **Hiç etkili değil**
(5) (4) (3) (2) (1)

6) Writing 1 ve 2 dersinde kullandığınız, yazma öncesi (pre-writing) tekniklerinden hangilerini kullanmayı tercih ediyorsunuz? Aşağıda listelenen teknikleri kullanma sıklığınıza göre çoktan aza doğru sıralayarak kutucukların içine yazınız.

1-listing **2-**freewriting **3-**clustering **4-**brainstorming

Çok					**Az**

7) Yukarıda belirtilen yazma öncesi tekniklerini kullanmanın önemli olduğunu düşünüyorsunuz? Lütfen size uygun cevabı yuvarlak içine alınız:

Evet - Kısmen - Hayır

8) Yanıtınız ‘evet’ ya da ‘kısmen’ ise, yazma öncesi tekniklerini kullanmanın neden önemli olduğunu açıklayınız.

……
……
……
……
……

9) Writing 1 ve 2 dersinde, şu ana kadar göstermiş olduğunuz performansı göz önüne aldığınızda, bu beceriye ilişkin endişe durumunuzu değerlendiriniz. Lütfen size uygun cevaba denk gelen rakamı yuvarlak içine alınız:

Çok endişeliyim ---------- Hiç endişeli değilim
(5) (4) (3) (2) (1)

10) Yukarıda belirtmiş olduğunuz İngilizcede yazma becerinize ilişkin (endişeli olma-olmama) durumunuzu nasıl değerlendirirsiniz? Endişeli olma ya da olmama durumunuzu nasıl açıklıyorsunuz? Bu durumunuzun kaynakları nelerdir? (Örneğin, fikir üretme becerisi, daha önce almış olduğunuz dersler, Türkçede yazma beceriniz, yazı organizasyonu gibi açılardan değerlendirme yapabilirsiniz)

……
……
……
……
……
……
……
……
……

11) Bir konu hakkında, İngilizce yazma çalışması yaparken, düşüncelerinizi ne derece ifade edebildiğinizi düşünüyorsunuz? Lütfen size uygun cevaba denk gelen rakamı yuvarlak içine alın:

Çok kolay ---------- Çok zor
(5) (4) (3) (2) (1)

Appendix B: Writer's Block Scale

B Bölümü:

Lütfen her ifadeyi dikkatle okuyup, her ifadede sunulan durumun sizin için sıklığını soran seçeneklerden size en uygun olanını (X) ile işaretleyerek belirtiniz.

İfade no		Hiçbir zaman	Nadiren	Bazen	Sık sık	Hemen her zaman
1	Yazma ödevlerimi teslim etmekte geç kalıyorum çünkü kelimeleri kâğıda dökmekte zorlanıyorum.	**1**	**2**	**3**	**4**	**5**
2	Masamda saatler boyunca oturup hiçbir şey yazamadığım zamanlar oluyor.	**1**	**2**	**3**	**4**	**5**
3	Bir yazma ödevini yazarken uzun süre takılıp kaldığım yerler oluyor.	**1**	**2**	**3**	**4**	**5**
4	Yazımın ilk bölümünü yazmak çok fazla zamanımı alıyor.	**1**	**2**	**3**	**4**	**5**
5	Yazma ödevimi yazarken takıldığım için son teslim gününe yetiştiremiyorum.	**1**	**2**	**3**	**4**	**5**
6	Kendimi bir cümleyi yazıp sonra onu silip yerine başka bir cümleyi denedikten sonra onun da üstünü çizerken buluyorum.	**1**	**2**	**3**	**4**	**5**
7	Bir yazıya başlamak benim için müthiş derecede zor oluyor.	**1**	**2**	**3**	**4**	**5**
8	Anlatmak istediklerimi yazmakta zorlandığım zamanlar oluyor.	**1**	**2**	**3**	**4**	**5**
9	Bazı insanlar, ne kadar uğraşırlarsa uğraşsınlar çok az – o da mümkün olabilirse – yazı üretebilirler. Eğer bu dönem oldukça uzun bir zaman alırsa bu insanlarda yazma tutukluğu olduğunu düşünürüz. Bu anlamda ne sıklıkla yazma tutukluğu yaşadığınızı tahmin ediniz.	**1**	**2**	**3**	**4**	**5**
10	Yazı yazarken uzun süre takılıp kaldığım yerler oluyor.	**1**	**2**	**3**	**4**	**5**

Appendix C: Runco Ideational Behaviour Scale

C Bölümü:

Lütfen her ifadeyi dikkatle okuyup, her ifadede sunulan durumun sizin için sıklığını soran seçeneklerden size en uygun olanını (X) ile işaretleyerek belirtiniz.

İfade no		Hiçbir zaman	Nadiren	Bazen	Sık sık	Hemen her zaman
1	Pek çok çılgın fikrim var.	1	2	3	4	5
2	Birçok insana göre fikirler üzerine daha çok odaklanırım.	1	2	3	4	5
3	Yeni fikirlerim beni sık sık heyecanlandırır.	1	2	3	4	5
4	Problemlerle ilgili çok sayıda fikir üretebilir ya da çözüm bulabilirim.	1	2	3	4	5
5	Diğer insanların aklına asla gelmeyen fikir ya da çözümler üretebilirim.	1	2	3	4	5
6	Fikirlerle oynamayı bir tür eğlence olarak görürüm.	1	2	3	4	5
7	Sıradışı ve çılgın olasılıklar düşünebilmek önemlidir.	1	2	3	4	5
8	Fikir üretebilme konusunda kendimi oldukça başarılı bulurum.	1	2	3	4	5
9	Her zaman aktif bir düşünen olmuşumdur-çok sayıda fikrim var.	1	2	3	4	5
10	Yaptığım işlere yeterli zamanı ayırabilmek ve düşüncelerimi toparlamak için kendime ait bir yere sahip olabilmek hoşuma gider.	1	2	3	4	5
11	Fikirlerim çoğunlukla "uygulanamaz", hatta "çılgınca" olarak nitelendirilir.	1	2	3	4	5
12	Üniversitede, teması orijinal fikirler olan bir ders almak isterdim.	1	2	3	4	5
13	Bazı şeyler üzerinde yoğunlaşıp saatler boyunca düşünebilirim.	1	2	3	4	5
14	Bazen yeni bir fikirle o kadar çok ilgilenirim ki, yapmam gereken diğer şeyleri unuturum.	1	2	3	4	5
15	Geceleri uyumakta sık sık sorun yaşarım çünkü aklım sürekli çeşitli fikirlerle meşguldür.	1	2	3	4	5
16	Bir şeyler yazarken ya da insanlarla konuşurken çoğunlukla tek bir konuya bağlı kalmakta sorun yaşarım çünkü yazacak ve söyleyecek çok şeyim olur.	1	2	3	4	5
17	Çoğunlukla fikirlerimden bir tanesinin beni bir diğerine, onun ise başka fikirlere yönlendirdiğini fark ederim ve sonunda temelde nereden geldiğini bilmediğim tek bir fikre ulaşırım.	1	2	3	4	5
18	Birçok farklı şeyi aynı anda düşündüğüm için insanlar benim kafası dağınık ya da dalgın biri olduğumu düşünebilirler.	1	2	3	4	5
19	Bazı şeyleri detaylı biçimde düşünerek zihin jimnastiği yapmaya çalışırım.	1	2	3	4	5
20	Henüz tanımlanmamış sorunlar için çözüm üretebilirim.	1	2	3	4	5
21	Diğer insanların denemediği yöntemler kullanarak fikirleri bir araya getirmek konusunda başarılıyım.	1	2	3	4	5
22	Arkadaşlarım fikir üretme ve çözüm bulma konusunda benden yardım isterler.	1	2	3	4	5
23	Yeni icatlar konusunda ya da var olan icatların geliştirilmesi konusunda birtakım fikirlerim var.	1	2	3	4	5

Appendix D: Topics and Instructions for Writing Tasks

Writing Task 1

Write a **paragraph** about '***falling in love'***. The length of your paragraph should be between 150 and 200 words. Your paragraph is going to be evaluated according to the following criteria:

Criteria for writing task	**Points**
Content and organization	40
Grammar and sentence structure	35
Punctuation, capitalization, and spelling	15
Format	10
Total	100

Writing Task 2

Write a **paragraph** about '***dreams'***. The length of your paragraph should be between 150 and 200 words. Your paragraph is going to be evaluated according to the following criteria:

Criteria for writing task	**Points**
Content and organization	40
Grammar and sentence structure	35
Punctuation, capitalization, and spelling	15
Format	10
Total	100

Writing Task 3

Write a **paragraph** about ***'justice'***. The length of your paragraph should be between 150 and 200 words. Your paragraph is going to be evaluated according to the following criteria:

Criteria for writing task	**Points**
Content and organization	40
Grammar and sentence structure	35
Punctuation, capitalization, and spelling	15
Format	10
Total	100

Appendix E: Semi-structured Interview Questions

Yaş: _____

Cinsiyet: _____

Genel not ortalaması: _____

Writing not ortalaması: _____

1. Sizinle beraber synectics yazma öncesi tekniğini kullandığımız bazı uygulamalar yaptık. Bu uygulamaları düşündüğünüzde, yaşadığın bu deneyimi nasıl değerlendiriyorsun?

2. Biliyorsun bu tekniği uygularken bazı basamakları takip ettik. Tekniği nasıl kullandığımızı hatırlıyor musun? Bu tekniğin işlenişi ile ilgili ne düşünüyorsun?
   a. Olumlu bulduğun yönler?

   b. Olumsuz bulduğun yönler? Bu olumsuzlukları aşmak için önerilerin?

3. Bu tekniğin içeriği ile ilgili ne düşünüyorsun?
   a. Olumlu bulduğun yönler?

   b. Olumsuz bulduğun yönler? Bu olumsuzlukları aşmak için önerilerin?

4. Bu tekniği kişisel olarak deneyimledin. Kişisel olarak nasıl bir değerlendirme yaparsın? Sana katkısı oldu mu? Hangi açılardan?
   a. yazma becerin açısından,
   b. fikir üretme becerin açısından,
   c. kelime haznen açısından,
   d. genel olarak İngilizce yazmaya ilişkin tutumun açısından.

5. Bu tekniği diğer yazma öncesi teknikleriyle kıyasladığında nasıl değerlendirirsin?

6. Eklemek istediğin başka noktalar var mı? Nelerdir?

Appendix F: End-of-the-lesson reflection form

How would you describe this activity on the following scale? For each pair of adjectives, put a cross (x) at the point between them which reflects the extent to which you believe the adjectives describe the activity.

Exciting	___	___	___	___	___	Boring
Challenging	___	___	___	___	___	Easy
Practical	___	___	___	___	___	Impractical
Pleasing	___	___	___	___	___	Annoying
Useful	___	___	___	___	___	Useless

Other(s) (please specify): ....……....

Name: .....

Appendix G: Synectics Lesson Plan

Topic	Justice
Aims	Students generate ideas for the writing task through using different types of metaphor in group interaction
Date	29th March 2014
Duration	60 minutes
Place	B-234
Number of Ss	20
Materials	Computer, projector, dictionaries, and student reflection forms (Appendix F)
Activities	1. Describing the topic 2. Creating direct analogies 3. Describing personal analogies 4. Identifying compressed conflicts 5. Creating a new direct analogy 6. Evaluating 7. Re-examining the original topic and writing a paragraph about it
Procedures	1. Greeting and establishing rapport: The teacher and the students greet each other. 2. Lead-in: a) The students are shown a list of topics for writing tasks. b) Then they vote on the topic they like, and the topic voted by the most of the students is chosen as the topic of the session. 3. Main-activity: a) The teacher asks the students to *describe the topic* chosen in the previous stage. They work in pairs or small groups and write words or phrases to describe the topic. Next, all of the descriptive words or phrases are written on a word document and projected on the board. b) The students are asked to *create a direct analogy* between the descriptive words on the board and the an unrelated category such as machine, plant, or food. Next, they are asked to describe how those words are like an item in the chosen category, and also explain the reasons for their choices. When the class is ready, they vote on one specific analogy that they would like to study on in the next step. c) The students choose one of the direct analogies and *create personal analogies*. The teacher asks the students to become the object and describe how it feels and works and writes down the words used by the students to describe their feelings. d) The students are told to match the words from the previous step that seem to conflict or fight with each other. In other words, they *create a series of compressed conflicts* and explain why they think the paired words seem to be compressed conflicts. Finally, the students vote on the best pair of compressed conflicts. e) The students *create another direct analogy* using the compressed conflict chosen by the class. f) The students *re-examine the original topic* by returning to the last direct analogy chosen by the class and compare it to the original topic. Then they start to describe the original topic in writing making use of the list of analogies produced during the exercise. 4. Reflection: The students react to the process by completing a reflection form that asks them to indicate how the activity makes them feel. The teacher might interview the individual students for further student evaluation when necessary. 5. Wrap-up: The teacher and the students discuss some of the interesting or unusual ideas generated during the activity.

Appendix H: Graphic Organizer for Synectics Sessions

Definition	Similar	Feels like	Opposite	Similar	Synthesis

Appendix I: 2013-2014 Academic Year/Spring Term

ÇOMU YADYO ELT/ELL Prep Programme

Writing Curriculum

Curriculum Pedagogy: Inductive and collaborative learning

Materials and tools: Student's Book (Introduction to Academic Writing), extra materials adapted from various sources, board, projector

Evaluation process: Peer-evaluation, self-evaluation, teacher-evaluation

Week	Date	Chapter	Paragraph/ Essay type	Organization/ Sentence Structure/ Skill sharpeners	Exemplary Topics for writing assignment
1	10-14 February	6	Process paragraphs	▪ Time Order ▪ Time order signals ▪ Clauses ▪ Complex sentences ▪ Subordinators ▪ Comma	How to..... ▪ Get the job of your dreams ▪ Prepare for a job interview ▪ Live on a tight budget ▪ Make a popular dish in your culture
2	17-21 February				
3	24-28 February	7	Comparison/ Contrast Paragraphs	▪ Block organization ▪ Point-by-point organization ▪ Comparison/ contrast signals	Compare and contrast two cultures on these topics: ▪ Educational system ▪ Meals and meal times ▪ Driving habits ▪ Parents' roles ▪ Greetings
4	3-7 March	***1st Quiz***			
5	10-14 March	8	Definition paragraphs	Appositives Adjective clauses *Subject pronouns: who, which, and that *Object pronouns: whom, which, that, and Θ	▪ Choose a word, custom, or holiday from your culture that is probably unfamiliar to an outsider. Write a paragraph to describe it and explain its meaning and/or significance.
6	17-21 March				
7	24-28 March	9	Essay Organisation	▪ Three parts of an essay *The introductory Paragraph Thesis statement *Body paragraphs Supporting details *The concluding	▪ Kinds of customers/shoppers/ drivers/teachers ▪ Clothing styles/hair styles/shoe styles Television programmes worth watching/not worth watching ▪ Jobs I would be good at ▪ Interesting places to visit in my city/country
8	31 March-4 April				

				paragraph ▪ Transitions between paragraphs ▪ Essay outlining	▪ Modern technological devices
9	7-11 April	***1st Midterm Exam***			
10	14-18 April	10	Opinion essays	▪ The introductory paragraph ▪ Body paragraphs ▪ The concluding paragraph ▪ Developing supporting details *Quotations *Statistics	▪ Arranged marriages ▪ Antismoking laws ▪ Required homework/attendance in university classes ▪ Grades in university classes ▪ Genetically engineered food
11	21-25 April				
12	28 April-2 May	2nd Quiz			
13	5-9 May	Additional writing activities			
14	12-16 May	***2nd Midterm Exam***			
15	19-23 May	General review and practice			
16	26-30 May	3rd Quiz	General review and practice		
5 June		***Final Exam***			

Appendix J: An Exemplary Synectics Session

Synectics: Session 3

Date: May 7, 2014

Topic: Freedom

Categories: Nature-animals

Description	**Similar**	**Feels like**	**Opposite**	**Similar**	**Synthesis**
Turks Infinity Statue of Liberty War for freedom Independence Sky	Freedom is like a desert because it is unlimited, but it's hard to adapt to its circumstances.	I feel vital because everybody looks forward to me.	Under captivity and fair	A white pigeon in a cage …	as it is pure and clear, but the cage restricts its freedom.
Life without chains Prison Republic Flag Atatürk Freedom of thought	Freedom is like water as everybody thinks that it won't run out. Actually, it has an end, which is similar to the fact that a person's freedom is over when the other person's freedom starts.	I feel like under captivity because my way depends on the wind.	Under captivity and miraculous	Whales...	as they are under captivity. If they come ashore, they die.
Universe Children Restriction Art Flying Wolf	Freedom is like rain because it can drop whenever it wants without any restriction. *	I feel transparent, clear, confident, noble, and fair as I own and touch everything.	Under captivity and Transparent	A child's brain…	as it is under captivity of its environment, but it can think transparently inside.
Love Blue Nature Trip Crying Breathing To annihilate	Freedom is similar to ocean as it is endless and whatever kind of creatures she has ownership of all of them.	I feel miraculous, universal, and shiny as I can reach every part of the world.	Vital and under captivity	A silkworm…	as it is pure and clear but under pressure for working.
Rights Justice Flying like a pigeon Soil Language	Freedom resembles the wings of a pigeon in the sky because it flies after its own heart.	I feel like purifying because both them clean everywhere.		A fish in a lamp glass…	as the freedom of a fish is in the water.

** The highlighted parts were selected by the class vote.*

Appendix K: Official Permission from the Head of Foreign Languages Preparatory Education for the Implementation of the Study

T.C.
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ
YABANCI DİLLER YÜKSEKOKULU
HAZIRLIK EĞİTİMİ BÖLÜM BAŞKANLIĞI

Sayı : 12164519 - 80
Konu : Doktora Çalışması

ÇANAKKALE
31.03.2014

Sayın; Okt. Nalan BAYRAKTAR BALKIR

Dilekçeniz incelenmiş olup Doktora Teziniz kapsamında Bölümümüz Hazırlık Sınıfı öğrencilerimiz ile çalışma talebiniz uygun görülmüştür.

Bilgilerinizi rica ederim.

Okt. Sedat BECEREN
Hazırlık Eğitimi Bölüm Başkanı