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# THE EFFECTS OF THE CLUSTERING PRE-WRITING STRATEGY ON TURKISH STUDENTS' WRITING ACHIEVEMENT AND THEIR WRITING ATTITUDES

**Abstract**

This study sought the effects of the clustering prewriting strategy for improving English narrative writing of Turkish speaking students and their attitudes towards writing. 47 first year university students in Turkey were involved in the research. A quasi-experimental research design was used. Data were obtained by means of, open-ended questions, compositions and the attitude scale. Diverse statistical tests were capitalized on, such as, mean, standard deviation, t-test and factor analysis to determine the construct validity. A descriptive analysis was used to analyse the students response to open ended questions. A significant difference between the two groups was found in favor of the experimental group; however, there were no gains in vocabulary. The findings may have implications for English learners, teachers, researchers and material developers.

**Keywords:** attitude, writing, Clustering

# CLUSTERİNG YAZMA ÖNCESİ STRATEJİSİNİN ÖĞRENCİLERİN YAZMA BECERİSİNE VE YAZMA TUTUMUNA ETKİSİ

**Özet**

Bu çalışma clustering yazma öncesi stratejisinin Türk öğrencilerin İngilizce anlatısal metin yazma becerilerine ve onların yazmaya yönelik tutumlarına olan etkisini araştırmaktadır. İngilizce okuyan 47 üniversite öğrencisi bu çalışmada yer almıştır. Yarı deneysel araştırma modeli kullanılanılmıştır. Veriler, öğrencilerin yazmaya ve clustering stratejisine yönelik görüşlerini almak üzere hazırlanan açık uçlu sorular, yazmaya yönelik tutum ölçeği ve yazdırılan kompozisyon kağıtlarından elde edilmiştir. Verilen ön ve son test deneme modeliyle toplanmıştır. Analizlerde t-test,ortalama, standart sapma ve factor analizi kullanılmıştır. Bulgular her iki grup arasında deney gurubu lehine

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farklılıklar ortaya koymuştur. Bu bulgular öğretmenler, öğrenciler, araştırmacılar ve material hazırlayanlara uygulama boyutunda önemli katkılar ortaya koymaktadır.

**Anahtar kelimeler:** attitude, writing, Clustering

**INTRODUCTION**

Writing improves through practicing and learning just like raw fruit as it ripens over time and is subject to certain conditions. Fruit ripens only when it gets enough sun, water and heat; accordingly, writing skills are improved only when there is enough practice and proper ways of learning. Likewise, Zheng & Dai (2012) write that a good piece of writing is "the fruits of a long, laborious, intensely personal process of thinking, and an interactive, socio-cognitive behaviour. Writing in second language (L2) no doubt has become of a great interest since the early 1980s, but by no means is it the most distressing challenge for L2 learners. The challenge of writing emerges from its nature as besides its conventions, it requires various language components, such as lexical and syntactical skills, cultural and semantic knowledge of the language. To Bereiter &Scardamalia (1987, cited in Wolfersberger 2003) **"**Writing in L2 is a challenging and complex process as L2 issues can overwhelm the writing process." Given that writing is one of the most difficult skills (Oxford 1994; Gunning 2013) and L2 learners have "blank page syndrome" (Ogawa 2009), various ways of how to start writing and how to reduce L2 learner's anxiety received more attention than how to produce perfect writing. Flower & Hayes (1980, p.40) described writing as a "strategic action where writers employ strategies to juggle with the constraints of composing and only composing strategies are decisions taken to cope with the problems". Flower &Hayes (ibid) proposed three stages of writing: planning what and how to say it; translating plans into written text; and reviewing to improve the text". Various prewriting strategies (PWS) are suggested at the planning stage. PWSs are believed to enhance writing process. Graves, 1983; Murray, 1984; Mogahed, 2013; Reichard &Norris, 1998) Oshima & Hogue (2000), Blanchard & Root (2003), Nadell & McMeniman & Langan (2003) believed that composing a piece of writing can be problematic and therefore PW stage should be included in the writing process. To Oxford (1994), "prewriting helps when one hits a snag or cannot think of what to write next" (Zhen & Dai, 2012). PW in this study is defined as a stage in which learners generate various words and ideas for the related topic and stimulating thinking at the beginning of writing.

Nadell & McMeniman & Langan**, (**2003)" associated PWS with warm-ups done before going out to jog "They loosen you up, get you moving, and help you to develop a sense of well-being and confidence". Research studies have persuasively shown that writer's block and anxiety happen at the PW stage when the writer doesn't know how to start and that PWSs (Graham & Perin, 2007, cited in Basett 2012, Ma 1998) improve the overall quality of writing.

To Dujsi (2008), PWSs are conscious thoughts, actions, or behaviors used by writers when they plan before writing and have a potential to improve the quantity and quality of writing produced by L2L learners.

Schuyler (2006) examined the effect of PWS on middle school students' writing attitudes and their writing achievement. The participants were first assessed according to the North Carolina Writing Assessment. The most significant increase was found in the writing scores of students' with low scores from Writing Testing.

As stated earlier, writing requires a series of stages and to Kellogg (1990) pre-writing is the "paramount of these stages". In his study, Kellogg (ibid.) argued that preparing a written outline during prewriting improves the quality of the final document, both in terms of its style and content. Some studies, showed no effects of PWS on writing performance; for instance, Hayn (1991) conducted a study with 63 students to measure the effects of PWS. Half of the participants were university freshmen and the other half were high school students, consisting of control and experimental groups. The instruction program was carried out with two different teachers and the findings showed no effect on students' writing performance.

Malone (1994) used two strategies-drawing and free writing along with C in her study and recorded that students using these strategies generated more ideas, focused better.

Various PWSs were developed to facilitate writing, among them are free writing- a non-stop writing for 5-10 mns; brainstorming-activating mind to pick up words, tagmemics-idea is viewed as a particle, dynamic and the wave (change) creating a larger network of relationship by allowing the learner to ask questions to make a foundation for the writing; journalistic technique asking one WHO and five WH question words; listing and outlining which is arranging words or topics without punctuation/incomplete sentences; tree diagram visualizing the hierarchal status of ideas in a shape of a tree; nutshelling- laying out the crucial point of writing in a few sentences and clustering (C) circling the key word and draw lines to connect the sub-ideas to the main idea, are the most common ones. Since C visally shows how the ideas are linked to each other and most of the studies revealed its contribution to writing, it has been chosen for this study. Additionaly C is also associated with the Schema Hypotheses that information is stored in the brain in a form of networks as in C (Rico 1976) and that C is compatible with the brain functions. To Rico (2000:3) "clustering involves both hemispheres in learning and two heads are better than one especially when it comes to writing".

Kellogg (1990) "Clustering is a visual network of ideas and relations which writer constructs the relations between ideas and clustering, and concentrates only on invention". In C, the learner begins with a keyword which might be the most important word of the topic. The key word placed in the center guides the writer to create more clustering groups and open new paths for thinking like "beams from a star" (Volk, 2000, cited in Rico 2000). Rico (1976) described this as "Main ideas are connected to the central topic by drawing lines from the center. Working outward from the center in all directions, the learner produces a lot of key words and ideas. C is a generative, open-ended PWS that enhances learning".

Similar strategies to clustering named by others with different names such pattern notes, mind mapping, relational network, webbing concept, diagraming and idea mapping but they all carry the same notion.

**The Relation between Clustering and the Brain Function**

C is believed to activate the learner's "schematic knowledge' (Zheng & Dai 2012), namely, works parallel to the functions of both left and right hemispheres "when the two collect the pieces of information and add to a wide bunch of stored information to develop one's capacity and expand personal knowledge is similar when the learner collects thoughts and clusters them to make a big picture of his understanding to create a good piece of writing" (Zheng & Dai 2012).

To Rico (1976) C is a discovery process for generating ideas and thoughts around the same stimulus to find a focus. It is a, non-linear visual strategy utilizing skills in both sides of the brain and a way of mapping a relation between the process of perception and thought", (Rico 1976). To Rico (1976, 1978; 2000), Bogen & Bogen 1973), Johnson (1981), Ornstein (1973), "knowing" has two modes: the propositional mode and the appositional mode. Rico called the propositional mode the "sign mind" referring to left-brain responsible from sequence of events and the casual relationships and having the capacity of ordering thought into communicable syntactic form". Rico called the appositional mode a "design mind" referring to right-brain dealing with complex issues and designing them.

Studies also associate clustering with metaphor (Cohen, 1968, 1969; Rico, 1976, 1993, 2000; Buzan, 1976; Moreira, 1979; Conner, 1990). It is well known that when we express ourselves we use both figurative and literal perceptions as our conceptual system works through these perceptions. Figurative one includes metaphor which is the "natural language of the emotions", (Rico 1976). Alston (1964) defines metaphor as "an extension of a term whose literal meaning we know and the extension enables us to elicit new meanings." "Metaphors are invitations to enter into a different kind of reality and to engage the subject in a new way", (Gass 1970:58). Richards (1936:94) states that "metaphor is an omnipresent principle of thought" and "clustering functions as metaphor in learning when the writer generates ideas, Rico (1976)" as it stimulates mind and open paths to creativity like an "archaeologist going on a dig", (Nadel & McMeniman& Langan, 2003).

**Literature Review**

The research study is apparently very limited on clustering. Some of them were conducted in colleges and high schools and a few are at the universities, especially only one study was found on Turkish ELT students, (Yıldırım 1998).

Hariani (2013) carried out a research with 8$^{th}$ grade Indonesian students. The quasi-experimental research based on experimental and control group design. The findings showed that the clustering technique had a positive effect on students' writing ability when they wrote a recount text but that it takes a long time to finish writing.

Kellogg (1990) employed two PWSs; outlining and C. The results showed that outlining significantly improved the overall quality of paper and the fluency of drafting the text whereas C increased the number of words and ideas generated during PW, but had no impact on the quality of compositions and hindered the fluency of writers compared with the no-prewriting and outlining conditions. His study also revealed a significant effect of PWS, and the interaction of PWS and task demands.

Putri (2011) investigated the effect of C on the writing achievement of the 78 eighth year Indonesian students with pre and post- test-design revealed a significant effect of using C.

Devi (2006) used checklists, field notes and writing tasks as instruments to see the effect of C on generating ideas in expository composition. Thirty Indonesian senior high school students took part in the study. The findings revealed that students' participation increased, and improvement was recorded in the students' performance in English writing in terms of content and organization. To Devi, in order to generate ideas by means of clustering, some preparation is required such as planning the design of the course; the instructional materials, the implementation stage-the teacher practices the genre and then C. However, there

are some findings that are in contradiction with the current study. For instance, Vinson (1980) employed two experimental and a control groups with pre and post-tests design on 179 ninth class students for two weeks. The experimental group received PWS instruction whereas the control group received only a traditional one. He used a descriptive text, a rise was found in mean scores of the experimental group but this was not considered significant.

Ogawa (2009)'s research revealed that C (Mind Mapping) helps Japanese students develop prewriting skills.

Pratiwi (2010) involved 7th grades Indonesian students studying English and a collaborative action research was conducted in two cycles consisting two meetings in each cycle. The findings of the research showed that C successfully improved the 7th grades' performance in descriptive text especially in terms of content, organization, and language use.

Lee (2013) examined the use of concept mapping strategy in Korean language classes with 120 U.S. college students from different proficiency level classes (beginning, intermediate, and advanced) and suggested that the concept mapping enhances students' communicative interaction. Data were collected during three writing sessions, pre-test of writing, individual and collaborative planning. The MANCOVA results on the five components of the composition score showed that the effect of collaborative concept mapping on L2 writing significantly differed across the three class levels**.**

Nahman &Nejadensari (2012) explored the efficacy of three PWSs, namely: clustering, reading relevant texts and negotiation with 23 advance level Iranian EFL students. The participants were randomly assigned as control and experimental groups which were treated to write five argumentative essays. The experimental group was treated alternatively to use the aforementioned three PWS. The findings revealed that students in experimental group wrote better compositions.

Malone (1994) used two strategies (drawing and free writing) along with C and recorded that students using these strategies generated more ideas and focused better.

Schweiker et al. (2000) measured the efficacy of PWS on primary school students' attitudes and anxiety and found that C, free writing, story boarding and daybook strategies make a great contribution to writing performance but revealed no relationship between writing achievement and socio-economic level.

PWS is known to lessen writing anxiety, build the writer's confidence and develop good writing attitude (Rico 2000; Harrington 1994). Since attitude is accepted as an affective dimension and important part of learning, (Byrne 1979; Krashen 1985; Perrier & Nsengiyumva, 2003); it is worthwhile to explore the effect of C on Turkish ELT students' attitudes, if any. Surprisingly, although there is more research exploring the effect of C on learner's achievement, there are few studies (Ma, 1988; Diaz et al., 1995; Bleyaert, 2002; Harrington 1994, Schweiker et al., 2000) examining its effect on learners' attitudes. The studies found that C helps develop a positive attitude, high self-esteem and reduce writing anxiety.

Studies also showed that Turkish students are facing difficulties in writing like other L2 learners, (Yıldırım, 1998; Yılmaz, 2012; Ozyurek, 2009; Kırbaş, 2008;) and have writing anxiety (Tiryaki, 2012). According to Yılmaz (ibid.) while Turkish teachers focus especially on margins, eligibility of writing and punctuation they ignore the content of writing, (Ozyurek

2009; Yılmaz 2012). Ungan (2008) and Kırbaş (2008) explored the reasons why Turkish students cannot write good composition and found that the reason is not students but teaching methods. They believe that teaching the preliminary preparation in writing may help students' writing performance as this stage takes 70% of writing time (Yılmaz 2012). Yılmaz (ibid) suggested that good writing requires preliminary preparation but Turkish students don't know how to plan their writing at this stage. To Tağa & Unlu (2013) teachers are still in favour of conventional writing methods which don't require PW stage.

The interest and necessity of this paper emerged from the importance of writing in school setting in Turkey as the concern raised by the Turkish researchers and scholars like Gocer (2010), Kucuk (2006), Yılmaz (2012) and Ozyurek (2009) that schools in Turkey are not adequately preparing students in writing. Especially, the placement exams for high school and university in Turkey are structured as multiple choice test/exam. Since the priority is given to these exams this leads to inadequate writing education both in L1 and L2 in Turkey. Although there are studies raised this issue, the university students still cannot fully express their ideas in writing and the fundamental question of how to improve writing has remained unanswered. Therefore, the benefits of prewriting strategies on writing performance need further understanding which is the main aim of this study.

**The Significance of the study**

As an indispensable part of EFL, writing and especially PWS are not given enough attention by both learners and teachers in most schools and institutions in Turkey. The majority of the Turkish students learning English may not be aware of these strategies and their benefits and how to use them. In relation to this, PWSs can open paths to pave the way for a good writing and reduce the anxiety of L2 writer.

**Purpose of study**

The major purpose of this study was to examine the contribution of the CPWS on Turkish students' writing attitudes and their writing achievement.

**Study Questions**

The research question was divided into five sub-questions:

To what extent does the clustering prewriting strategy help to improve grammar in writing skill?

To what extent does clustering help to develop vocabulary in writing?

To what extent does clustering help to focus and improve fluency in writing?

To what extent does clustering help to improve margins and mechanics in writing?

To what extent does clustering improve composition design and paragraph development?

Does clustering affect students' attitudes toward writing?

**METHODOLOGY**

A quasi-experimental research with control and experimental groups is used to collect the data. Besides instruction, four applications were conducted during the instruction: Pre and post-test applications of attitude scale- at the beginning and at the end of the study; the cycles of composition as pre-and post-tests writing,(for details see the procedure). The participants

were informed and asked to sign the consent form which included a request for their matriculation number and permission to obtain their OSS (central exam for university placement in Turkey) and writing scores in English from the registrar. OSS used to establish group equivalence when selecting the classes covers an upper-intermediate English language testing and students have to do nearly 65-70% of the questions in order to be able to get a place in the universities in Turkey to study English language as a major. For the analyses of the data, diverse statistical tests were capitalized on such as frequency and percentage calculations, the mean, standard deviation, t-test and factor analysis to determine the construct validity. Before the treatment, the groups made a decision on the topic to write. The worst and best day they had ever spent were two topics provided by the instructor, and they had to agree on one of them, as all of them were to write on the same topic. It was thought that this topic would be familiar to everyone and they would have no difficulty to write about a day in their life. They decided to write about their worst day. The allocated time for writing was (50+50 mns=100 mns) enough. The application was carried out during the first semester in the English writing class which was part of students' credit courses. The researcher met students for 1.5 hours per week, 10 weeks in total. The course organizer and lecturer was the researcher herself in both classes.

**Procedure**

Prior to the onset of the study, OSS results and writing scores of the participants were compared by t-test, and no significant difference was found between the groups in terms of general English language and writing achievement. Afterwards, before any treatments, the attitude scale was administered to both groups to reveal any significant difference in participants' attitudes at the beginning. Further, both groups were asked an open-ended question with the aim of finding out their opinions about writing composition. Afterwards, the papers were collected and evaluated by the raters. There was no word restriction for the composition.

Then, both groups were given the narrative composition (NC) instruction. First the instructor introduced the conventions and implementation of NC and what should be included in the narrative genre, such as how to set up the plot, develop the paragraphs, create characters, and how to end the composition in NC. Both groups practiced first at the paragraph level; thereafter, they wrote longer compositions and received feedback from the instructor. Since the students were majoring in English Language Teaching and the course was delivered in English the compositions were written in English.

Along with NC the experimental group received C instruction as well. First they learned how to cluster the essence of the topic by circling the key word placed in the centre of a blank page. Then, they learn how to put all associations down in 10 minutes and cluster every word, phrase or idea that the key word reminds them. They were encouraged to expand their clusters, connect the words that can be related to each other with a line until they think they come to the end of producing ideas or words. They were also advised not to avoid any ideas or words that come to their minds even if they sound bilge ideas as they are all the flow of their thoughts, and they should let their mind flow with any connections in their heads; however, they don't have to use all ideas. Then, they were asked to scan their clusters, and write 3-5 "focusing statements," to make their writing more specific. Students chose what they saw as the strongest statement that they could write the most about. Students re-clustered this

statement representing their unique focus and thinking. This helps them to produce more supporting ideas for stimulus. Then they wrote the paper as rapidly as possible, without worrying about "correctness" of sentences. The experimental group was asked to keep the clustering papers and not to write their compositions on the same papers. They were provided with another blank paper to write their full compositions. The groups wrote their second compositions on the same topic after the treatment. The goal was the same as before to see the difference between the first and second versions of writing. The control group received NGI without any preliminary preparation whereas experimental group received NGI but used C and plan their writing before they start writing. Compositions were evaluated and marked according to the rubric. (see appendix II)

Both groups again were administered the attitude scale as a post-test to see if the clustering strategy had changed their attitudes toward writing.

The experimental group was asked two open-ended questions again for two purposes; to determine their opinions on the CPWS, and to reexamine their general opinions on writing courses if there is any change at the end of the treatment. Both groups in the study were taught by the researcher herself.

**Instruments**

The writing attitude scale and the rubric to evaluate the narrative compositions were developed by the researcher. First, 40 items included in the scale then it was presented to both ELT teachers and the instructors from the curriculum and programming department to see if all the items were measuring the purpose. It was suggested that some of the items were not measuring writing attitude and the number of the items should also be reduced. Then 23 items were remained. The reliability coefficient is .94.40 which was found to be highly reliable (for the sample items see the appendix I).

The rubric was prepared by the researcher to evaluate the writing mainly in five areas: focus and fluency, vocabulary (variety and appropriate use of words), grammar (complexity of sentences, usage of linking verbs, and correct use of grammar), mechanics and margins, organization and development. Three writing teachers and two ELT practitioners examined it for content validity. Taking their comments into consideration, the researcher deleted and changed some statements in the rubric and then decided which were to be used. The compositions were evaluated and marked by two outside raters (ELT practitioners) and the researcher. Each rater marked the compositions, which were all blinded for testing time, independently from one another and the average of the three raters was taken as a final mark.

**Participants**

Forty -seven first year students studying at Department of English Language Teaching, Dokuz Eylul University involved in the study. Of these 47 students, 20 participants were taken as the control group whereas 27 participants were taken as the experimental group. This study was carried out during the first semester. 15 females and 5 males were in the control group; 21 females and 6 males were in the experimental group. The groups remained in their natural classes. At the beginning of the study, the number of participants was 55 but some of the students dropped for various reasons and 47 responses were studied.

**Data Analysis**

T -test was used to identify the mean scores between the groups in relation to their OSS and writing scores and pretest scores of the groups were found to be not significantly

The scores of the pre- and -post compositions were calculated and the average of the compositions was considered as a basic score. Each area in the rubric was scored differently. The scoring for rubric is shown in Table C.

**Table C. language areas and scoring**

| **language areas** | **score** |
|---|---|
| Grammar | 20 |
| Vocabulary | 20 |
| Focus and Fluency | 30 |
| Mechanics and Margins | 10 |
| Organization and Development | 20 |
| Total Score | 100 |

**FINDINGS**

**First sub-question:** Mean differences of pre-and post- grammar test results were identified through t-test and are displayed in the Table 1 and 2.

**Table1. Pre-test results of grammar**

| **Group** | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 12,44 | 1,76 | .484 | .631 |
| control | 20 | 12,15 | 2,41 | | |

Tabl

**Table2. Post-test of control and experimental groups' grammar means**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 15,33 | 1,92 | 2.611 | .012* |
| control | 20 | 13,50 | 2,89 | | |

* significant at p<0.05 level

**Second sub-question**: t-test was utilized to identify the differences between the control and experimental groups in the vocabulary area. Pre-and post- t-test of vocabulary is displayed in Table 3 and 4.

**Table 3. Pre-test of vocabulary**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 13,29 | 2,18 | -1.029 | .309 |
| control | 20 | 13,95 | 2,11 | | |

**Table 4. Post-test results of vocabulary**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 15,03 | 2,40 | .672 | .505 |
| control | 20 | 14,55 | 2,52 | | |

**Third sub-question** t- test was employed to identify the differences of focus and fluency between the groups. The mean differences between the groups are shown in Table 5 and 6.

**Table 5. Pre-test of focus and fluency**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 19,18 | 3,45 | 1,258 | .215 |
| control | 20 | 17,80 | 4,08 | | |

**Table 6. Post-tests of focus and fluency**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| Experimental | 27 | 24,62 | 3,45 | 3.896 | .000* |
| Control | 20 | 19,90 | 4,87 | | |

significant at .000 p<0,05

**Fourth sub-question:** The means of mechanics and margins were identified through t-test at the beginning of the study. The results are displayed in Table 7 and 8.

**Table 7. Pre-tests of mechanics and margins**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 8,37 | 1,33 | -.735 | .466 |
| control | 20 | 8,65 | 1,22 | | |

**Table 8. Post-tests of mechanics and margins**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 9,48 | .84 | 3.242 | .002* |
| control | 20 | 8,40 | 1.42 | | |

significant at *p<0,05 level

**The fifth sub-question:** Differences between the groups are analysed through t-test and mean differences displayed in Table 9 and 10.

**Table 9. Pre-tests of composition design and paragraph development.**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 13,25 | 1,93 | 1,124 | .267 |
| control | 20 | 12,60 | 2,06 | | |

**Table 10. Post-tests of composition design and paragraph development.**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 15,62 | 2,07 | 3.238 | .002* |
| control | 20 | 13,55 | 2,30 | | |

significant at *p<0,05 level

**Table11. General total pre-test of the groups (from all areas)**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 66,51 | 8,50 | .780 | .439 |
| control | 20 | 64,40 | 10,08 | | |

**Table 12. General total post-test of the groups (from all areas)**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 80,11 | 8,65 | 3.348 | .002* |
| control | 20 | 69,70 | 12,67 | | |

significant at *p<0,05 level

**Comparison of pre-attitude test scores**

T-test was capitalized on to identify the difference between the groups at the beginning of the study. The pre-and post- tests results of attitude are displayed in the table 13.

**Table13. Pre-test scores of attitude**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 122,40 | 22,59 | -,824 | .415 |
| control | 20 | 128,10 | 24,01 | | |

**Table 14. Post-test results of attitude**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 137,11 | 26,71 | .714 | .479 |
| control | 20 | 131,70 | 24,17 | | |

**Table15. Attitudes means of experimental group as pre and post-tests**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| experimental | 27 | 122,40 | 24,01 | -2,127 | .038* |
| | | 137,11 | 26,71 | | |

significant at *p<0,05 level

**Table16. Pre - post-tests attitude results of control group**

| Group | N | $\overline{X}$ | Ss | T | P |
|---|---|---|---|---|---|
| control | 20 | 128,10 | 24,01 | ,468 | .629 |
| | | 131,70 | 24,17 | | |

**Students' opinions of composition before the instruction**

Both groups were asked two open-ended questions at the onset of the study to explain their beliefs and opinions about writing. Additionally, the experimental group wrote their opinions about C. The most frequently words occurred in their answers were picked up to reflect their opinions and they were described in the discussion part.

**DISCUSSION**

This study tries to reveal the effects of the CPWS on students' writing and their writing attitude. The grammar means of both groups showed no any effects at the onset of the study. (see Table 1) However, when the post means of the two groups were compared, it was noticed that the means of the experimental group who practiced clustering strategy is higher than that of the control group. This finding overlapped with the study of Winson (1980), Ma (1988), Schweiker et al. (2000) but contradicts with that of Hayn (1991) who asserted that PWS and C don't have any effect on students' writing ability. Hayn (ibid.) employed C along with other PWSs with different instructors in control and experimental groups. Vinson (1980) used descriptive text in his study obtained the same results with Hayn. Different results of both studies might emanate from using different text types, students' age, language level, and cultural differences of the countries. The employment of different instructors and using different writing genre in these studies might have affected their results. Therefore it is suggested that at one research setting a single writing genre be used and the instructor teaches to both groups to rule out any Hawthorn effects in the study.

The second sub-question related to the vocabulary achievement failed to reach the expected results. Although there is 0.48 rise in the means of experimental group, this rise was not considered significant. This wasn't expected as the studies revealed that students using CPWS produced more and various vocabulary. This finding is in contradiction with the studies (Shi 1998; Rico 2000) that when clustering is used the learners produce more words and this improves vocabulary. The results and students' responses to open-ended questions overlapped as the students stated that they had difficulty in producing and using rich English vocabulary and that this hinders them from writing a good composition. More empirical studies are needed in order to come to a clear conclusion about the contribution of C in producing words in writing.

A significant difference was found between the groups in favor of the experimental group in the post test of focus and fluency (Table 6). This is consistent with the studies of Malone (1994) and Bleyaert (2002) who found that clustering contribute to find a focus in writing.

The pre-test of mechanics and margins shows no significant difference (Table 7) however the post test of experimental group went from 8.37 to 9.48 (Table 8) and statistically this is found significant.

The findings of pre-test in composition design and paragraph development indicate that there wasn't any difference between the groups but post-test was employed through t-test and it was recorded that the arithmetic means of the experimental group was higher than that of the control group. Based on the findings in Table10, writing with CPWS seems more effective than the one without preliminary preparation in composition design and paragraph development area in narrative composition.

The general total of pre- and post-tests scores of both groups in five areas was identified by t-test. The obtained findings were evaluated between and within the groups themselves. There wasn't any difference significantly in the pre-test, (see Table 11) however, in the general total of the post-test, the experimental group obtained higher means than the control group, (see Table 12)

The means of students' attitudes when compared between groups in pre-test showed no significant difference and the groups statistically were equal (Table 13). However, No significant difference was found between the means of both groups in the general pre (Table 13) and post- tests (Table 14) however when the groups are compared within each other, the post-test results showed a significant difference in favor of the experimental group (Table 15).Table 16 illustrates that there is no significant difference between the pre and post results attitudes of the control group. Boersma Dye, Hartman, Herbert & Walsh (1997, cited in Schweiker & Marra 2000) recorded that when PWS was employed in primary school, students' attitudes improved more than for adults; however, the current study revealed that CPWS also worked well with adults. Keeping this in mind, the teachers need to reduce the anxiety in L2 writing and C can help students cope with this. This study supports the previous studies (Rico, 1976, 1994, 2000) to encourage the writer to use C in L2 writing as writing can be difficult and frustrating for L2 learners in generating ideas and organizing thoughts.

**Description of students' answers to open-ended questions a) Groups' opinions regarding writing composition in English.**

The most frequently occurred words were chosen to reflect their opinions. 18 students stated that writing in English is very difficult due to their restricted lexical repertoire and their use of ordinary (high frequency) words, 28 of the 47 students expressed that they are not confident while writing, In their answers they compared L1 and L2 writing and stated that writing in mother tongue is easy than writing in L1 as they have a large vocabulary repertoire and they know idioms and expressions, metaphors better in L1 than in L2. Four students use the word *fear*, not knowing idioms and phrases were seen another problem in writing. They believe that such expressions make writing good.

**b) Opinions of experimental group on Clustering after the treatment**

All the 20 students in the experimental group defined the non-prewriting way as difficult to start writing whereas 18 of them found the C strategy easier to start. Most of the responses for C focused on the following statements: Clustering is visual and this visuality helps to group the words and link the ideas generated. It facilitates, and helps to expand the subject, gain confidence, it is remindful, gives idea, develops creativity helps to focus, easy to choose a topic and it is enjoyable. One student stated that since he could not organize his ideas and therefore he did not enjoy C. Another student mentioned that he didn't like clustering as he wasn't able to finish writing in a given time and clustering is a waste of time.

**Suggestions**

Based on the findings, the following suggestions can be put forward: Individual thinking, imagining and intuition skills should be the priority of the curriculum. Researchers and teachers should examine PWSs and especially C at the PW stage. C should be implemented on different age groups at all levels of schooling in Turkey. To help students learn intuitively and let the flow of their thoughts guide them in writing, A creative and motivating atmosphere

should be created in writing classes, and Clustering can contribute to create this. Teachers can benefit from C in writing courses as it paves a way of collecting and organizing thoughts before starting writing.

Students taking writing courses cannot find any occasion to use writing knowledge beyond school, therefore, as in America and many European countries; writing should be required in Turkey for applying for a job in public or private institutions. The course book should be prepared and enriched with creative PW activities. This study used narrative genre along with C but other text types may also be effective. The relation between achievement and attitude of L2 learners in writing composition was examined in the present study, however, other affective parameters such as motivation and anxiety, may be examined in line with clustering strategy. PWSs can also be employed in Turkish language classes. This will help to understand the relation between clustering and L1 writing process. The relation of prewriting strategies and learning styles may bring out interesting indications.

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*UN:unknown date

**APPENDIX**

Sample items from the attitude scale

I found writing class fun.
I believe that writing is an important skill.
I feel self-confident in writing classes.
I don’t like writing.
I find writing class boring.
I believe that writing will improve my foreign language.
I believe I express myself fully in writing.
I feel myself nervous in writing classes.
I prefer writing classes instead of other school subjects.
I enjoy reading books written on how to write composition.
While writing I feel tired.,