The Effect of the Four-Square Writing Method on 7th-Grade Middle School Students' Informative Text Writing Skills [*]

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Abstract
Many methods and techniques have been developed in line with the theories and practices put forward for the development of writing skills. The purpose of the current study is to determine whether the Four Square writing method has an effect on the success of 7th-grade middle school students in writing informative texts. The study is a quasi-experimental study with a pre-test and post-test design. The study group consists of 36 7th-grade students from the central district of Kütahya. The study lasted a total of 8 weeks including the administration of a pre-test and post-test and Four Square writing method activities. During the application period, in the writing lessons conducted with the experimental group students, the Four Square writing method was used. On the other hand, in the writing lessons conducted with the control group students, classical writing methods were used. At the end of the process, the experimental and control group students were asked to write an informative text as a post-test. The informative texts written in the pre-test and post-test were interpreted using the Informative Text Writing Achievement Scale. Then, the pre-test and post-test scores of the experimental and control groups were statistically analysed. Based on the data obtained, it was concluded that there was a significant difference in favour of the experimental group students in terms of writing informative texts.
Keywords: Informative text, four square writing method, writing skills

Dört Kare Yazma Yönteminin Ortaokul 7. Sınıf Öğrencilerinin Bilgilendirici Metin Yazma Becerilerine Etkisi

Öz
Yazma becerisinin geliştirilmesine yönelik ortaya konan kuram ve uygulamalar doğrultusunda çok sayıda yöntem ve teknik geliştirilmiştir. Bu çalışmanın amacı, bu tekniklerden biri olan Dört Kare Yazma Yönteminin ortaokul 7. Sınıf öğrencilerinin bilgilendirici metin yazma başarısına etkisini saptamaktır. Araştırma ön test- son test desenli yarı deneysel bir çalışmadır. Araştırmanın çalışma grubunu Kütahya Merkez ilçesinde öğrenim gören 36 7. sınıf öğrencisi oluşturmaktadır. Çalışma; ön test son test çalışmaları, Dört Kare Yazma Yöntemi uygulamaları ile birlikte toplam 8 hafta sürmüştür. Uygulama süresince deney grubuyla Dört Kare Yazma Yönteminin uygulandığı yazma dersleri yürütülürken kontrol grubunda ders kitaplarında yer alan yazma yöntemlerinin uygulandığı ders işleme süreci devam ettirilmiştir. Uygulama sonunda deney grubu ve kontrol grubu öğrencilerine bir bilgilendirici metin son test olarak yazdırılmıştır. Ön test ve son testte yazılan bilgilendirici metinler Bilgilendirici Metin Yazma Başarımı Ölçeği ile yorumlanmıştır. Ardından

deney ve kontrol gruplarının ön test-son test puanları analiz edilmiştir. Elde edilen verilerden hareketle araştırma sonucuna göre; Dört Kare Yazma Yöntemi uygulamaları yapılan deney grubunun bilgilendirici metin yazma başarısı ile ders kitabında yer alan yazma yöntemleri kullanılan kontrol grubu öğrencilerinin bilgilendirici metin yazma başarıları arasında deney grubu lehine anlamlı bir fark saptanmıştır.

Anahtar Kelimeler: Bilgilendirici metin, dört kare yazma yöntemi, yazma becerisi

Introduction

Writing is the process of transferring thoughts into a structured textual format (Güneş, 2007), serving as both a communication tool and a mechanism for preserving knowledge (Özdemir and Özbay, 2016). In academic and professional contexts, effective writing necessitates the ability to utilize language with precision (İpşiroğlu, 2006, p. 10). Göçer (2018, p. 27) conceptualizes writing as the articulation of emotions, thoughts, and experiences in a structured manner, while Yangın (2002, p.116) views it as the transmission of ideas through symbolic representations. Writing, therefore, is an intricate cognitive process requiring the organization of information within a coherent system (Covey, 2006, p. 153).

Three primary approaches to writing instruction exist: product-oriented, genre-oriented, and process-oriented. The product-oriented approach emphasizes grammar, coherence, and syntactic structuring (Pincas, 1982; as cited in Badger and White, 2000, p. 154), while the genre-oriented approach focuses on writing as a communicative act within a social context (Swales, 1990, p. 57). The widely accepted process-oriented approach, however, considers writing as an evolving mechanism shaped by iterative stages of idea development, drafting, and revision (Flower and Hayes, 1981).

The Four Square writing method is a structured instructional technique that utilizes graphic organizers to systematically guide students through the writing process (Karatay et al., 2018). By employing a four-section framework, students are able to effectively organize their ideas, ensuring coherence and logical progression in their compositions.

One of the process-oriented writing methods, the Four Square writing method, enables the production of a four-paragraph text using a graphic organizer formed by interlocking four squares. This method enables students to create a solid foundation for an effective text (Karatay et al., 2018). On this foundation, a text is created by developing a draft and going through multiple stages. Simply thinking and generating ideas are not enough to create a piece of writing. The ideas in the text must be connected to each other, and the words must be linked to sentences and paragraphs. A text is a whole. Achieving harmony within the whole is possible by bringing out, selecting and transforming the thoughts, ideas and emotions in the mind into a meaningful unity.

Text serves as the cornerstone of language education. Reading and listening skills are primarily receptive, enabling comprehension of texts, while speaking and writing are productive skills used for expression. Writing is an inseparable part of the concept of text. The concept of text refers to all written and oral products. According to Ülper (2008), the reason for the diversity in the definition of the concept of text is the differences in the phenomena involved in the process of structuring a text and the complex relationships between these differences. In the process of creating a text, grammatical, structural and content-related features take the leading role.

Günay (2011) states that when examining texts in terms of their genres, they can be categorized based on their functions. He suggests that the author's purpose may be to prove a point, criticize, explain or persuade. According to Beaugrande and Dressler (1981), who argue for the effectiveness of communicative elements in the emergence of text types, texts are divided into three categories: narrative, argumentative and descriptive. The fact that these writings are explanatory texts emphasizes the inclusiveness of this term. Tompkins (2000) uses the concepts of explanatory texts and informative texts simultaneously.

The main idea of an informative text is at the centre of the writing. The author's purpose in writing is to convey the message to the reader. The main idea serves as the focal point around which all words, sentences and paragraphs are organized. The main idea is presented by being reinforced

with supporting ideas that stem from it. Each paragraph formed by supporting ideas expands the main idea and the main idea maintains its existence as a synthesis of all the supporting ideas (Akyol, 1999).

The Four-Square writing method involves a multi-step process that begins with brainstorming to select and discuss a topic. This is followed by an organizing stage where the brainstormed ideas are integrated with prior knowledge to construct a cognitive framework. Next, a draft is created by transferring the content from the four-square graphic organizer to paper. The draft then undergoes a revision stage to identify and correct any errors. Finally, the piece is refined through editing to improve its surface features and is shared with peers and teachers.

Figure 1. Four Square Writing Method Stages

The process, consisting of the Four-Square and six overlapping writing layers, forms the mechanics of this method with permeable squares, both internally and externally, that ensure the correct structuring of the writing. By providing a space for students to explore the essential elements of effective writing, this method empowers them to make informed choices about vocabulary and sentence structure, ultimately enabling them to craft compelling compositions for a variety of audiences and purposes. Through this system, the topic can be deepened within the squares.

The Four-Square writing method application begins with the topic sentence square. The square where the writing topic will be placed is at the centre of the method and is determined as the title or main idea of the text. The determination of the writing topic influences the supporting ideas squares that follow. It is recommended to emphasize the same topic with each new addition to the Four-Square graphic (Gould and Gould, 2004). This way, the addition of thoughts unrelated to the topic to the graphic is prevented.

In the next step, the process of developing the details in squares 2, 3 and 4 begins. In a sense, these squares will be independent "four squares". The structure of the Four-Square allows for the opportunity to rebuild writing structures within each square. These details will later be developed to form paragraphs. Using the Four-Square method ensures that details align with the main idea and that each body paragraph focuses on a specific topic sentence. At this stage, students are asked to create key words for the topic sentence they have written. After adding the topic sentence and key words to each square, a summary sentence should be created for square 4. In practice, this is called a concluding sentence because it wraps up the main ideas as if wrapping them in a gift box (Gould and Gould, 2004). Creating this sentence at each stage allows the summary section to expand while providing an

opportunity to review the summary of the writing that has been drafted so far. This sentence will stabilize the writing, help students maintain their focus and provide the seeds to expand both the introduction and conclusion sentences (Gould and Gould, 2004).
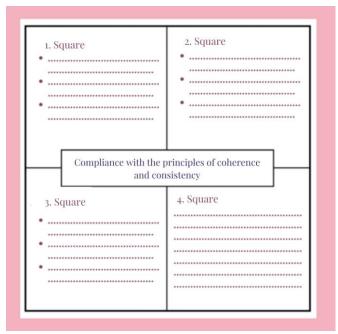

Figure 2. Four-Square Writing Method Application Template

The Four-Square writing method has several benefits, including helping students dedicate time to the writing process, encouraging effort and engagement in writing, allowing students to take responsibility for their writing and have a role in managing the learning process, making writing easier and more functional across all text types, setting a clear purpose for writing and creating texts in line with that purpose, enabling students to engage in a decision-making process while choosing what to write in the squares, encouraging them to use higher-level thinking skills by carefully placing the correct information and ideas in the right squares while organizing their knowledge, facilitating the creation of more connected and coherent texts without deviating from the main idea or topic, helping students review what they have written and ensuring that every idea they add keeps the text centred and teaching students the structural features of the type of text they will write while enabling them to use the effectiveness of language.

When the literature is reviewed, studies have been found that examine the impact of the Four-Square writing method on descriptive writing skills, narrative text writing skills and writing skills in teaching Turkish as a foreign language. Due to the fact that informative texts are created within specific rules, students have difficulty preparing writings in this text type. As a graphic organizer, the Four Square chart facilitates the categorization of ideas before starting to write, enabling individuals to organize their writing more effectively and proceed in a structured manner. The Four Square writing method is considered to be more effective and successful than traditional writing methods when writing informative texts. In this respect, the current study is important for writing education studies. Students have difficulty organizing their emotions and thoughts in a logical and context-appropriate manner in the informative texts they create. The Four Square writing method used in the study has steps that facilitate informative text writing and a system that allows details, information and ideas to interconnect, minimizing structural and content errors. These features may positively impact informative text writing skills. Therefore, the Four Square writing method can address these challenges and improve informative text writing skills. This study aims to demonstrate the impact of the Four Square writing method on informative text writing skills in teaching Turkish as a first language, in line with the studies conducted by Karatay (2018) in the field of teaching Turkish as a foreign language and the studies by Bağcı Ayrancı (2019) and Kurt (2019) in the field of teaching Turkish as a first language.

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Numerous methods and techniques have been developed in line with theories and practices aimed at improving writing skills. The implementation of these techniques and their contributions to the development of writing skills continue to be examined. The Four Square writing method is one of the process-oriented writing methods that can be considered in this context. Different teaching methods and techniques should be used carefully to achieve the learning objectives related to the core language skills in the curriculum (MEB, 2019). Graphic organizers (Kaldırım and Tavşanlı, 2020), which help in planning the topic to be written by facilitating the organization and structuring of writing and preventing the main outline of the topic from becoming too complex, are widely used abroad, but it seems that they are not sufficiently used in our country. The Four Square graphic organizer, as a graphic organizer, facilitates the categorization of ideas before starting to write by helping individuals organize their writing better and progress in a planned manner. The Four Square writing method is believed to be more effective and successful than traditional writing methods while writing informative texts. In this respect, the current study is important for writing education studies.

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The content of a text includes organization, vocabulary, language usage and formal features. Organization is the process of determining how the idea will be planned in the text. It is the roadmap for the unity and coherence of the text. Vocabulary is related to the selection of words used in the text. Language usage is related to the use of grammar in the text. Vocabulary and language usage are referred to as lexical grammar (Muth'im and Norhasanah, 2019). Therefore, at this stage, students are asked to create key words for the topic sentence they have written. After adding the topic sentence and key words to each square, a summary sentence should be created for square 4. In practice, this is called a concluding sentence because it wraps up the main ideas as if wrapping them in a gift box (Gould and Gould, 2004). Creating this sentence at each stage allows the summary section to expand while providing an opportunity to review the summary of the writing that has been drafted so far. This sentence will stabilize the writing, help students maintain their focus and provide the seeds to expand both the introduction and conclusion sentences (Gould and Gould, 2004).

The steps include how the relationships in the content of the text will be categorized and how the topic will be expanded and they consist of the following steps: constructing sentences, creating details, forming a summary text and adding transition words necessary for the coherence of the text (Muth'im and Norhasanah, 2019).

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The problem statement of the study is "Does the four-square writing method have an effect on the informative writing skills of 7th-grade middle school students?" and the sub-problems are listed below.

- Is there a significant difference between the pre-test scores of the experimental group and the pre-test scores of the control group?
- Is there a significant difference between the post-test scores of the experimental group and the post-test scores of the control group?
- Is there a significant difference between the pre-test and post-test scores of the experimental group?
- Is there a significant difference between the pre-test and post-test scores of the control group?

Method

Research Model

The current study, which aims to investigate the effect of the Four Square writing method on the informative writing skills of 7th-grade middle school students, was designed using a pre-test, post-test control group quasi-experimental design. Experimental designs are studies that aim to identify the cause-and-effect relationships between variables in a study (Büyüköztürk, 2010; Fraenkel and Wallen, 2005). In experimental designs, the goal is to determine the effect of the application on the expected outcome (Creswell, 2014).

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Quasi-experimental design is used in situations where it is not possible to randomly select participants or groups for the study (Çepni, 2007). Quasi-experimental design is used in research with uncontrolled variables in many educational studies (Cohen, Manion & Marrison, 2007).

The pre-test post-test control group design provides great ease in interpreting the findings, as it allows for comparisons based on the pre-test measurements. In addition, pre-test measurements are necessary for calculating the development of each group within itself (Oral & Çoban, 2020).

In experimental research, the independent variable is defined as the variable that is intended to be investigated for variability (Büyüköztürk, 2010). Accordingly, the Four Square Writing Method, the teaching method applied, is the independent variable of this study. The dependent variable, which is stated to affect the outcome, is writing skill. Before the application, a pre-test is administered to both groups. During the study, the independent variable is used in the experimental group, while it is not used in the control group.

Study group

The current study has a study group of 36 7th-grade students from a middle school located in Kütahya province during the 2023-2024 school year. The reason for selecting this grade level for the implementation is the high frequency of informative text types in the curriculum at this level, the appropriateness of 7th-grade students for the application in terms of their abstract thinking skills and the increasing emphasis on informative text types in the Turkish Teaching Curriculum starting from the 7th-grade. It is believed that this could increase students' mastery of the informative text structure. Given that the study is quantitative and the data generated by the students contributing to the study will be analyzed in detail and depth, factors such as the small number of students, similar Turkish language achievement levels and willingness to engage in writing activities during the academic period were taken into account when determining the control and experimental groups.

Data Collection Tools

In the current study, where applications designed in compliance with the Four Square writing method were used as data collection tools, the activities prepared for these applications were prepared in line with the 7th-grade writing objectives of the 2019 Turkish Language Curriculum. In line with the learning objective "Applies writing strategies", students were expected to structure their writing using the Four-Square writing method. In line with the learning objective "Writes an informative text", students were expected to organize their knowledge and ideas to create a text draft, ensuring logical and semantic coherence by following a plan and schema, as well as developing their writing through information, research and observation. In line with the learning objective "Writes a process in steps", students were expected to structure the stages of informative texts in an orderly manner using the Four-Square Writing Method. At the same time, the prepared activities were designed to support imagination and foster intrinsic motivation and were carefully selected in alignment with the themes of the Turkish language course. According to Williams and Burden (1990), learning is accomplished when students truly want to learn something. The emergence of this desire depends on the teacher's knowledge about and use of motivating behaviours (as cited in Akbaba, 2005). The activities that students participate in with motivation are those they perceive as meeting their needs. Students find it valuable to participate in activities that will benefit them. In this context, the prepared activities in the current study were submitted to expert review.

After the completion of the implementation, the informative writing development of the students in the experimental and control groups was transformed into concrete data through the evaluation of their written texts. For the pre-test, the informative texts written by the experimental and control group students were evaluated using the "Informative Text Writing Performance Rubric" developed by Dölek and Hamzadayı (2022). Initially, a comprehensive literature review was conducted to develop the scale. Based on this review, five sub-dimensions and 22 evaluation items were created to assess informative writing products. The collected data were first presented to experts, and then nine subject matter experts and one measurement and evaluation expert were consulted to determine the content validity indices (CVI).

The students' pre-test and post-test results were evaluated according to a scale aimed at assessing informative texts in all aspects, which consists of the sub-dimensions: "grammar, content organization, vocabulary use, content creation and form". The scale assigns scores ranging from a minimum of twenty-two to a maximum of one hundred and ten points to each text.

Implementation / Data Collection

In the study, the Four-Square writing applications were planned to be conducted in an 8-week period including the administration of the pre-test and post-test. Before the implementation, the school where the implementation would be conducted was visited, and the experimental and control groups were observed. The purpose of this process was to inform the students about the upcoming implementation and to establish the classroom rules to be followed during the implementation. The roles of researcher and practitioner were defined and both groups conducted the writing activities simultaneously under the guidance of the teacher-practitioner.

The pre-test topics, post-test topics and implementation topics were structured in accordance with the text types, themes and objectives outlined in the curriculum. In the selection of the topics, expert opinion was sought. The activities to be conducted were evaluated through expert opinions. Before the study began, a pre-test writing exercise on the topic of "Technology" was administered to both the experimental and control groups. After the pre-test, the Four-Square writing method was introduced to the experimental group students. In this process, examples were provided to help students understand the method and an example application was conducted for students to explore the stages and geometric structure of the Four-Square writing method and to structure the writing. During the activities, students' questions were answered. A large number of example exercises were conducted on the determination of the topic sentence, selection of key words and creation of supporting sentences. By following the steps while transferring their ideas into writing, students had the impression that they were following a different writing approach in terms of content creation and organization compared to their usual method. After these activities, an increase in the students' writing motivation and interest was observed. In the lessons where the Four-Square Writing Method was introduced to the experimental group, no extra application was conducted for the control group students, and they continued with their lessons in accordance with the curriculum.

For the first application, an informative text writing (biography) exercise on the topic of "Aziz Sancar" was conducted with the experimental group students using the Four-Square writing method. A brainstorming session was held to create a topic sentence that would present Aziz Sancar's biography and the sentences expressing the topic were written in the topic sentence section. The topic sentence can be given by the teacher or created by students. It was observed that the writing was better structured when it was chosen by students. Therefore, the first step of the writing process was completed by transferring the ideas obtained through brainstorming into the topic sentence square. The ideas related to the topic sentence were written on the board, and one of them was selected. After the selection of the topic sentence, the process moved on to writing the supporting sentences for the 1st, 2nd and 3rd squares of the Four-Square writing graphic. At this stage, it was observed that students had difficulty creating supporting sentences and were unable to write them within the desired time frame. At this point, the students were reminded that they could exchange ideas with each other and benefit from research and inquiry while writing an informative text. After the supporting sentences were consolidated in the summary section, each supporting sentence was expanded with three key words. At this stage, each square was considered separately and the internal order of the squares was emphasized. Care was taken to avoid repeating words. The summary section was enhanced by adding the key words to the square. In the step of transforming the key words written in the squares into sentences, students created sentences that included supporting details, adjectives, examples and descriptive elements to expand on the words. Since biographies contain details about the subject's personality, the expression was enriched at this step and the supporting ideas of the text began to become more prominent. Details should be presented using numerical data and by establishing cause-and-effect relationships to enhance the informativeness of the text. Care was taken to ensure that not only are the individual squares harmonious but also that they form a cohesive whole. The summary

was developed in line with the new elements added to the squares. Then, the students were asked to add one supporting sentence containing key words to the 1st, 2nd and 3rd squares. While creating these sentences, the brainstorming initiated during the topic selection phase was continued, and students made use of the sentences they had written on the board. In this section, where the core of the supporting ideas was formed, methods for developing the ideas were utilized. The teacher emphasized that, due to the inclusion of historical information and the portrayal of a real-life story, the progression should follow a chronological order. In the final stage, the supporting sentences written in the three squares were combined, and summary sentences expressing the situation, thought, feeling or judgment were written in the 4th square. The teacher assisted students by providing support for remembering chronological events and incorporating enriching details into their writing. In this section of the implementation, students dedicated a significant amount of time to the summary section of the Four-Square graphic. They enhanced the summary section by adding their personal opinions and experiences. Then, the students were asked to transfer their writings prepared in the Four-Square graphic onto a clean sheet of paper. The goal of this step was to transfer the writing from the Four-Square graphic onto paper. At this point, students discovered that each of the squares they had written represented a paragraph in their text. Students transformed the words and sentences in the squares into paragraphs by eliminating semantic errors and making additions, deletions and changes. During the writing phase, while creating the introduction paragraph, students added quotations and definitions. In the development section, students used the sentences from the three squares, paying attention to coherence and consistency. In the conclusion paragraph, the focus was placed on the summary section of the graphic, and a main idea and message that would encapsulate the entire text were included. The sentence chosen as the topic sentence in the Four-Square graphic, which was placed at the centre of the graphic, played a significant role in the selection of the title. Students who selected a title for their text completed the stage of transferring the graphic onto paper. At this stage, students focused on the physical aspects of their writing, making corrections to spelling, punctuation and layout. Errors in form and content identified in the Four-Square graphic organizer were corrected as students transferred their ideas onto paper. The first application was concluded with the review and sharing of students' writings.

In the second application, an informative text (letter) writing activity was conducted with the experimental group students using the Four-Square writing method on the topic "The Fantastic Flying Books of Mr. Morris Lessmore". After the monitoring task given to the students, a topic sentence was determined that indicated the characteristics of the character and the event. The topic sentence was obtained as a result of the students' brainstorming. Then, the supporting sentences for the letter to be written to Mr. Lessmore were transferred to the graphic. These sentences were conveyed as sentences that describe what the students were curious about Mr. Lessmore, what they saw and wanted to ask about in the animation and the connection they established with books. Key words were added to the supporting sentences to strengthen them, and the revised sentences were incorporated into the graphic as supporting ideas. Each addition was reflected in the summary square, and progress was made within all the four squares. The words and sentences to be added were transformed into supporting sentences, following the storyline and staying consistent with the flow of the animation. The ideas and thoughts to be directed to Mr. Lessmore were transferred to the squares in parallel with and in the appropriate order to the events he experienced in the animation. The volume of the summary square of the graphic was increased by supporting it with personal opinions. The rules of the letter type were taken into account when transferring the graphic to the text. The formal elements such as date and addressing were taken into account. It was observed that students created more comprehensive introductions and conclusions by expanding the greeting and closing sections of their letters when transferring them from the Four Square graphic to paper.

In the 3rd application, an essay writing activity on the topic "On the Wings of the Dove" was carried out using the Four Square writing method with the experimental group students. By examining the relevant visuals, students were asked to interpret scenes from children's lives in times of war and peace. Meanwhile, a topic sentence was determined using the question-and-answer method. After determining the topic sentence, students created drafts of their writing using the Four Square graphic.

Students addressed their feelings and thoughts about the visuals in the context of problems and solutions. They expressed the definition of the current situation, the problems and their views on achieving peace by presenting the issues, establishing cause-and-effect relationships and providing evidence and statistical data to suggest solutions. Students' observations about similarities and differences in the photograph were summarized in a square using their own words and phrases. While conveying their thoughts, the ideas were grouped in a way that would form the introduction, problem and solution structure. In the context of the main topic, supporting ideas were correctly grouped under the appropriate categories. The graphic was transferred to a clean sheet of paper, and after the necessary adjustments were made, the task was completed.

In the 4th application, a news article writing activity on the topic "Two Thousand Twenty-Three" was carried out using the Four Square writing method with the experimental group students. The key events that took place in our country during the 100th year of our Republic were listed together with the students. A topic sentence was determined for the news article to be created about developments in fields such as industry, sports, space, etc., in our country. It was interpreted that students grasped the impact of the topic sentence on the title of the text at this stage of the activity, as the topic sentence suggestions were determined as slogan-like titles. Students presented the events in chronological order, from the past to the present, and conveyed them in a way that reflected their importance to them. Writing the news in a way that answers the questions "Who?, Where?, How?, When?, What?, Why?" determined the qualities of the words students would choose. In addition to abstract words expressing national feelings, mechanical words for technological developments and appropriate words for topics such as sports, art, space and science were selected. Students created drafts of their writing using the Four Square graphic, and after making the necessary revisions, the graphic was transferred to the draft.

In the 5th application, a travel writing activity on the topic "Little Tahir Yaman" was carried out using the Four Square writing method with the experimental group students. Students examined tourist maps that include the historical and cultural landmarks of this city. Answers were provided to the questions: "Where is it? How can I get there? Why would I want to go there? What should I see and visit? What special places should travellers definitely visit? Are there any souvenirs that could attract the interest of visitors? What can I learn or experience by going there?" Then, students were asked to create a travel article for Little Tahir Yaman, who wants to visit Kütahya. The first square of the Four Square graphic was designated as "see", the second as "taste" and the third as "feel". In the first square, where the must-see places in city were written, students described and introduced the historical and tourist sites while also providing information about their locations. In the second square, where the things to taste in city were written, students included recipes, where the dishes could be eaten and why they are important for the city. In the third square, where the feelings of a tourist in city were described, students shared their thoughts on how being in city, along with its natural and spiritual elements, would evoke certain emotions in visitors. Students expanded their ideas and sentences with appropriate words, using the Four Square graphic according to the designated senses. It was observed that students created the summary square in a recommendatory style. After the revisions and improvements to the draft, the application was completed.

In the last week of the application, both the experimental and control group students were asked to write an informative text on the topic of "Technology". The majority of the students grouped the Four Square graphic into sections on the history, benefits and harms of technology. The ideas and opinions generated were transferred outside the graphic. The resulting writings formed the final test of the implementation. The implementation was concluded with this step.

Data Analysis

Before moving on to the implementation phase of the study, an informative text on the topic of "Technology" was written by both the experimental and control group students. The texts created in the first week of the implementation served as the pre-tests of the study, while the texts created in the last week of the implementation formed the post-tests of the implementation. The pre-test and

post-test data were evaluated by the researcher and a Turkish language teacher using the Informative Text Writing Achievement Rubric (Hamzadayı and Dölek, 2022).

In order to determine whether there was a significant difference between the written expression achievement scores of the experimental and control groups, the distribution characteristics of the data were examined using the SPSS 21 package program. Depending on the group sample size, the Shapiro-Wilks test is recommended for samples of 50 or less and the Kolmogorov-Smirnov test is recommended for samples over 50 to test the normality assumption (Büyüköztürk, 2010). In this direction, Shapiro-Wilks test was applied to the data set used in the study and according to the results obtained, it was determined that all variables showed normal distribution ($p > .05$). In line with these findings that the normality assumption was met, it was decided to use parametric tests in statistical analyses.

The obtained results were analyzed using appropriate methods in the SPSS program. Descriptive statistics such as frequency (f), standard deviation (sd), percentage (%) and arithmetic mean (X) were used to analyze the data collected with the Informative Text Writing Achievement Rubric.

An independent samples t-test was conducted to determine whether there was a significant difference between the pre-test and post-test results of the experimental and control groups, to identify the differences in the pre-test and post-test scores between the groups and to examine whether there were valid differences in the subscale scores of the measurement tool between the experimental and control groups. A dependent samples t-test was conducted to determine whether there was a significant difference between the pre-test and post-test scores within the experimental and control groups. Statistical procedures were repeated for all the subscales of the applied scale.

Validity and Reliability

The pre-test and post-test data evaluated using the Informative Text Writing Achievement Rubric (Hamzadayı & Dölek, 2022) were also assessed by a Turkish language teacher, in addition to the researcher. In order to ensure the validity and reliability of the study, inter-rater agreement was calculated based on the scoring among the evaluators. Codes were compared to determine agreement and disagreement. The reliability was calculated according to Miles and Huberman's (1994) reliability formula. The reliability rate of this study was found to be 89%. A reliability rate of over 70% proves that the study is reliable (Miles & Huberman, 1994). Thus, the current study was found to be reliable.

Research and Publication Ethics

In the current study, all the rules specified in the "Regulation on Scientific Research and Publication Ethics for Higher Education Institutions" were followed. None of the actions listed under the second section of the regulation, titled "Actions Contrary to Scientific Research and Publication Ethics" were carried out.

Ethics Committee Approval

Committee name= Kütahya Dumlupınar University Social and Humanities Scientific Research and Publication Ethics Committee

Decision date= 02.04.2024

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Findings

Findings on the Pre-Test Scores of the Experimental and Control Group Students' Informative Text Writing Achievement

The informative text writing achievement scores based on the results of the pre-test administered to the experimental and control groups were statistically analyzed.

Table 1.

Results of the Independent Samples t-test for the Pre-Test Scores of the Experimental and Control Groups

Group	N	X̄	Ss	Sd	t	p
Experimental Pre-test	18	73.44	12.67	34	-.952	.348
Control Pre-test	18	76.94	9.10			

The results of the independent samples t-test conducted to compare the pre-test mean scores of the experimental and control group students are presented in Table 1.1. According to these results, there is no statistically significant difference between the pre-test mean score of the experimental group ($\bar{X}$ = 73.44) and that of the pre-test mean score of the control group ($\bar{X}$ = 76.94) regarding informative text writing achievement ($t_{(34)}$ = -0.952; p > 0.05). Based on this, it can be said that the experimental and control groups were at an equal level before the applications.

Findings on the Post-Test Scores of the Experimental and Control Group Students' Informative Text Writing Achievement

The informative text writing achievement scores of the experimental group students instructed with the Four Square writing method, and the control group students instructed with traditional writing methods were statistically analyzed based on the post-test results.

Table 2

Results of the Independent Samples t-test for the Post-Test Scores of the Experimental and Control Groups

Group	N	X̄	Ss	Sd	t	p
Experimental Post-test	18	83.00	12.54	34	2.200	.035*
Control Post-test	18	75.11	8.61			

* p<.05

The results of the independent samples t-test conducted to compare the post-test mean scores of the experimental and control group students are presented in Table 2.1. According to these results, there is a statistically significant difference between the post-test scores of the experimental group students ($\bar{X}$ = 83.00) and the control group students ($\bar{X}$ = 75.11) in terms of informative text writing achievement ($t_{(34)}$= 2.200; p < .05). These findings indicate that the informative text writing achievement of students in the experimental group, where the Four Square Writing Method was applied, is statistically significantly higher than that of students in the control group, who were taught using traditional methods.

Findings on the Informative Text Writing Achievement Pre-Test and Post-Test Scores of the Experimental Group Students

Table 3.
Results of the Dependent Samples t-Test for the Pre-Test and Post-Test Scores of the Experimental Group

Group	N	X̄	Ss	Sd	t	p
Experimental Pre-test	18	73.44	12.67	17	-7.563	.000*
Experimental Post-test	18	83.00	12.54			

*p<.05

The results of the dependent samples t-test conducted to compare the pre-test and post-test mean scores of the experimental group students are presented in Table 3.1. According to these results, there is a statistically significant difference ($t_{(17)}$= -7,553, p<.05) between the informative text writing achievement pre-test mean score (X̄ = 73.44) and post-test mean score (X̄ = 83.00) of the experimental group students. These findings indicate that the informative text writing achievement of the students in the experimental group increased after the implementation of the Four Square Writing Method.

Findings on the Informative Text Writing Achievement Pre-Test and Post-Test Scores of the Control Group Students

Table 4.
Results of the Dependent Samples t-Test for the Pre-Test and Post-Test Scores of the Control Group

Group	N	X̄	Ss	Sd	t	p
Control Pre-test	18	76.94	9.10	17	1.568	.135
Control Post-test	18	75.11	8.61			

The results of the dependent samples t-test conducted to compare the pre-test and post-test mean scores of the control group students are presented in Table 4.1. According to these results, there is no statistically significant difference ($t_{(17)}$= 1.568; p>.05) between the informative text writing pre-test mean score (X̄ = 76.94) and post-test mean score (X̄ = 75.11) of the control group.

Discussion and Results

According to the pre-test score analysis conducted before the applications, the writing achievements of the experimental and control groups were found to be similar. The results obtained before the intervention are important in terms of revealing the effectiveness of the study. After the applications, a significant difference was found between the informative text writing achievement scores of the experimental group students, who wrote informative texts using the Four Square Writing Method, and the control group students, who wrote informative texts using traditional writing methods. Based on the analyses conducted, this significant difference was found to be in favour of the experimental group. The results suggest that the Four-Square writing method is effective in improving students' informative writing skills. The results of the current study, which found a significant difference in favour of the experimental group between the post-test scores of the experimental group taught using the Four Square writing method and the control group, reveal the effectiveness of the method on the development of writing skills.

There are studies reporting similar results in the literature. The study by Kurt (2019) found a significant difference between the pre-test and post-test scores of the experimental group taught using the four-square writing method and the control group using traditional writing methods in terms of informative and persuasive writing achievement. The study by Juitania (2016) found a significant

difference in favour of the experimental group between the post-test scores of the experimental group taught using the Four Square writing method and the control group using the mind mapping method. The study by Handini and Saragih (2013) found a significant difference in the post-test scores between the experimental group taught using the four-square writing method and the control group using the free writing technique. The results of these studies demonstrate that the four-square writing method improves the descriptive writing skills of middle school students.

According to the results obtained by comparing the pre-test and post-test mean scores of the experimental group students taken from the content creation subscale, there is a statistically significant difference between the pre-test and post-test mean scores of the experimental group students taken from the content creation subscale of informative text writing achievement. These findings indicate that the students in the experimental group showed improvement in the content creation subscale of informative text writing achievement after the implementation of the Four Square writing method. When this result is interpreted within the scope of the content creation subscale items, it can be associated with the increase in students' scores for creating topic sentences that align with the content and forming appropriate headings, which were developed in each session using the Four Square Writing Method, the increase in scores for supporting the main idea with supporting ideas developed in the 1st, 2nd and 3rd squares and the increase in scores for the summary sentence developed in the 4th square, which improved the conclusion paragraph of the written text.

When similar studies are examined, it has been found that the Four Square Writing Method improves students' ability to generate ideas and find content, as well as their selection of words (Nursyifa and Asrori, 2014), helps them write more systematically, organize and elaborate on their ideas (Handini and Saragih, 2013), facilitates finding their thoughts before starting to write (Lestari, Pudjobroto and Wahyuni, 2013), improves task, structure, language, word choice and collaboration more effectively than the control group (Darmawan, 2011), allows them to make correct word choices and use words in the right order within sentences (Wijiastuti, 2010), results in improvement in organization, vocabulary, language use and writing mechanics (Mahfudhotin, 2014) and results in improved original titling, transitions between paragraphs, development of textual criteria, reduced repetition of words, ideas and events, appropriate use of transitions and connection phrases, presentation of main ideas with supporting thoughts and enhancement of language structure in informative texts (Kurt, 2019).

Suggestions

In line with the findings and results obtained as a result of this research, which aims to improve informative text writing skills with the four-square writing method, the following suggestions can be made in order to contribute to future studies and researchers:

Suggestions for researchers:

- The research was prepared to reveal the effect of the four-square writing method on informative text writing skills. The four-square graphic has a suitable structure for narrative text writing studies. The effect of the four-square writing method on narrative text writing skills can be investigated.
- The effect of the four-square writing method on students' writing skill attitudes, anxiety and motivation can be investigated.
- The effect of the four frame writing method on informative text writing skills can be investigated at other secondary school grade levels and high school level by considering the text types in the curriculum and the language development levels of the students.
- In this study, the four-square writing method was used to improve informative text writing skills. The effect of other writing methods and techniques on informative text writing skills can be investigated.
- The effect of the four-square writing method on writing skills can also be examined in writing studies to be carried out in the field of teaching Turkish to foreigners.

- The four-square writing method used in the study can be used in the strategies of other language skills in order to organize students' ideas.

Research and Publication Ethics

In the current study, all the rules specified in the "Regulation on Scientific Research and Publication Ethics for Higher Education Institutions" were followed. None of the actions listed under the second section of the regulation, titled "Actions Contrary to Scientific Research and Publication Ethics" were carried out.

Ethics Committee Approval

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Authors' Contribution

The authors contributed equally to the study.

Conflict of Interest

There are no situations or relationships that may constitute a conflict of interest in this study.

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Geniş Özet

Giriş

Yazma, beyinde oluşturulmuş fikirsel parçaları yazıya aktarma (Güneş, 2007), hem günlük yaşamda hem de iş hayatında bilgi aktarımı sağlama (Özdemir ve Özbay, 2016), kalıcılaştırma, zengin ve asil bir anlatım yöntemi, yazarın kendini ortaya koyabildiği anlamlı bir sözsel aktarımdır. Yazma eyleminin anlaşılması, tarihten bugüne yazma eğitimiyle anlaşılmaya ve öğretilmeye çalışılmıştır.

Süreç temelli yazma yaklaşımı yazının oluşturulmasının süreçler sonucunda gerçekleştiğini ve bu süreçlerin seçimlerle yapılandırıldığı savunan ve günümüzde büyük oranda kabul edilen bir yaklaşımdır. Yazma için belirtilen bu 'süreç' ifadesinin açıklanmasında iki noktaya dikkat çekilmektedir: yazarın seçimlerini belirleyen faktörler ve seçimlerini nelerin belirlediği (Flower ve Hayes, 1981). Süreç odaklı yazma yöntemlerinden biri olan Dört Kare yazma yöntemi, dört karenin iç içe geçmesiyle oluşturulan bir grafik örgütleyici kullanılarak dört paragraflık bir metin üretilmesini sağlar. Bu yöntemle öğrencilerin etkin bir metin için zemin hazırlaması sağlanır (Karatay vd., 2018).

Taylor ve Beach (1984), ilgiyle oluşturulan, görüşleri birbiriyle uyumlu ve düzenli şekilde aktarmayı amaçlayan bilgilendirici metin türünün öğretiminin yazma becerisine olumlu katkı sağladığını ortaya koymuştur. Yazma becerisini olumlu etkileyen grafik örgütleyicilerden biri olan ve Dört kareden oluşan bu geometrik grafikle öğrencilerin zihninde karmaşık halde bulunan fikirler, hayaller, duygu ve düşünceler, kelime ve kavramlar karelerin içine yansıtılarak bir metin oluşturulur. Dört Kare yazma yöntemi kullanılarak yazma çalışmalarının temel kavramlarının bölümler halinde aşamalı şekilde ortaya konması, anlam bütünlüğü olan metinleri başarılı şekilde yapılandırmaya yardımcı olacağından analitik yazma sürecini de sunar.

Dört Kare yazma ile yazma süreci konu seçiminin yapılıp üzerine tartışıldığı beyin fırtınası basamağı, beyin fırtınası ile öğrenme ortamına getirilen bilgilerle ön öğrenmelerin organize edildiği ve bilişsel yapılandırıldığı örgütleme basamağı, dört kare grafiğinde oluşturulan metnin kâğıda geçirildiği taslak hazırlama basamağı, taslağın üzerinde tespit edilen problemlerin düzeltildiği gözden geçirme basamağı, metnin yüzeysel özelliklerinin düzenlendiği düzeltme basamağı ve yazının akranlara ve öğretmene sunulduğu paylaşma aşamalarından oluşmaktadır.

Dört Kare yazma yöntemi uygulamasına konu cümlesi karesiyle başlanır. Sonraki adımda 2, 3 ve 4 karelerdeki ayrıntıların geliştirilmesi işlemine başlanır. Her bir kareye düşünce cümlesi ve anahtar kelimenin eklenmesinin akabinde 4. Kareye bir özet cümle oluşturulmalıdır. Buna toparlayıcı cümle denir çünkü ana fikirler bir hediye kutusuyla sarar gibi hazırlanır(Gould ve Gould, 2004).

Bu çalışmayla Dört Kare yazma yönteminin Türkçenin ana dili olarak öğretimi alanında bilgilendirici metin yazma becerisine etkisinin ortaya konması amaçlanmıştır.

Yöntem

Amacı Dört Kare yazma yönteminin ortaokul 7. Sınıf öğrencilerinin bilgilendirici metin yazma becerisine etkisini incelemek olan bu araştırma ön test- son test kontrol gruplu yarı deneysel desen kullanılarak oluşturulmuştur.

Deneysel desenler bir araştırmada değişkenler arasındaki sebep-sonuç ilişkilerini bulmayı hedefleyen çalışmalardır (Büyüköztürk, 2010; Fraenkel ve Wallen, 2005). Deneysel desenlerde hedef uygulamanın ulaşılması beklenen sonuca etkisini belirlemektir (Creswell, 2014).

Yarı deneysel desen, araştırmaya dahil olacak kişi veya grupların rastgele seçilmesinin mümkün olmadığı durumlarda kullanılır (Çepni, 2007). Çok sayıda eğitim araştırmasında kontrol altına alınamayan değişkenlerin bulunduğu araştırmalarda yarı deneysel desen kullanılmaktadır (Cohen, Manion ve Marrison, 2007).

Ön test son test kontrol gruplu desen ön-test ölçümlerine göre karşılaştırma yapılabilmesi için elde edilen bulguların yorumlanması açısından büyük bir kolaylık sağlar. Bunun yanında ön test

ölçümleri her grubun kendi içinde gelişimini gösteren bir hesaplama için de gereklidir (Oral ve Çoban, 2020).

Deneysel araştırmalarda bağımsız değişken değişkenliği araştırılmak istenen değişken olarak tanımlanır(Büyüköztürk, 2010). Buna göre Dört Kare yazma yöntemi yapılan öğretim yöntemi bu araştırmanın bağımlı değişkenidir. Sonuca etki eden değişken olarak belirtilen bağımsız değişken ise yazma becerisidir.

Araştırmada Dört Kare yazma uygulamaları, ön test ve son testle birlikte toplamda 8 haftalık bir ders işleme süreci olarak planlanmıştır. Uygulamanın ön test ve son testi için deney ve kontrol grubu öğrencilerinden 'Teknoloji' konulu bilgilendirici metin yazmaları istenmiştir. *1. uygulama için d*eney grubu öğrencileriyle Dört Kare yazma yöntemi kullanılarak *'Aziz Sancar'* konulu bilgilendirici metin yazma (biyografi) çalışması yapılmıştır. *2. uygulamada* deney Grubu öğrencileriyle Dört Kare Yazma Yöntemi kullanılarak *'Bay Morris Les More'un Uçan Fantastik Kitapları'* konulu bilgilendirici metin (mektup) yazma çalışması yapılmıştır. *3. uygulamada d*eney Grubu öğrencileriyle Dört Kare Yazma Yöntemi kullanılarak *'Güvercinin Kanatlarında'* konulu deneme yazma çalışması yapılmıştır. *4. uygulamada* deney grubu öğrencileriyle Dört Kare yazma yöntemi kullanılarak *'İki Bin Yirmi Üç'* konulu haber metni yazma çalışması yapılmıştır. *5. uygulamada* deney grubu öğrencileriyle Dört Kare yazma yöntemi kullanılarak *'Küçük Tahir Yaman'* konulu (gezi yazısı) çalışması yapılmıştır. Elde edilen sonuçlar SPSS programında uygun analizler kullanılarak incelenmiştir.

Bulgular

Deney ve kontrol grubu öğrencilerinin ön test puan ortalamalarını karşılaştırmak amacıyla yapılan bağımsız örnekler t-testi sonuçlara göre, deney grubunun ön test puan ortalaması ($\bar{X}$ = 73,44) ile kontrol grubunun ön test puan ortalaması ($\bar{X}$ = 76,94) arasında bilgilendirici metin yazma başarısı açısından istatistiksel olarak anlamlı bir fark bulunmamaktadır (t(34) = -0,952; p > 0,05). Buna dayanarak, uygulamalar öncesinde deney ve kontrol gruplarının eşit düzeyde olduğu söylenebilir.

Deney ve kontrol grubu öğrencilerinin son test puan ortalamalarını karşılaştırmak amacıyla yapılan bağımsız örnekler t-testi sonuçlara göre, deney grubu öğrencileri ($\bar{X}$ = 83,00) ile kontrol grubu öğrencilerinin ($\bar{X}$ = 75,11) bilgilendirici metin yazma başarısı açısından son test puanları arasında istatistiksel olarak anlamlı bir fark bulunmaktadır (t(34)= 2,200; p < ,05). Bu bulgular, Dört kare yazma yönteminin uygulandığı deney grubundaki öğrencilerin bilgilendirici metin yazma başarılarının, geleneksel yöntemlerle öğretim yapılan kontrol grubundaki öğrencilere göre istatistiksel olarak anlamlı düzeyde daha yüksek olduğunu göstermektedir.

Deney grubu öğrencilerinin ön test ve son test puan ortalamalarını karşılaştırmak amacıyla yapılan bağımlı örnekler t-testi sonuçlarına göre, deney grubu öğrencilerinin bilgilendirici metin yazma başarısı ön test puan ortalaması ($\bar{X}$ = 73,44) ile son test puan ortalaması ($\bar{X}$ = 83,00) arasında istatistiksel olarak anlamlı bir fark vardır (t(17)= -7,553, p<.05). Bu bulgular, Dört Kare Yazma Yöntemi uygulandıktan sonra deney grubundaki öğrencilerin bilgilendirici metin yazma başarılarının arttığını göstermektedir.

Kontrol grubu öğrencilerinin ön test ve son test puan ortalamalarını karşılaştırmak amacıyla yapılan bağımlı örnekler t-testi sonuçlara göre, kontrol grubunun bilgilendirici metin yazma ön test puan ortalaması ($\bar{X}$ = 76,94) ile son test puan ortalaması ($\bar{X}$ = 75,11) arasında istatistiksel olarak anlamlı bir fark bulunmamaktadır (t(17)= 1,568; p>.05).

Sonuç ve Tartışma

Uygulamalar sonrasında Dört Kare Yazma yöntemi ile bilgilendirici metin yazan deney grubu öğrencileri ve programa dayalı bilgilendirici metin yazan kontrol grubu bilgilendirici metin yazma başarı puanları arasında anlamlı bir farklılık saptanmıştır. Yapılan analizlerden hareketle elde edilen bu sonuç deney grubu lehinedir. Bu sonuca göre Dört Kare Yazma Yönteminin bilgilendirici metin yazma başarısı üzerinde olumlu etkisi olduğunu sonucuna ulaşılır. Bu araştırma sonucunda edinilen bulgular Dört Kare Yazma Yönteminin bilgilendirici metin yazma başarısını pozitif yönde etkilediğini ortaya koymuştur.

Bu çalışmaya benzer sonuçlara ulaşan Dört Kare Yazma Yöntemi ile öğretim yapılan deney grubu ve kontrol grubu bilgilendirici ve ikna edici yazma başarı puanları ön test ve son test puanları

arasında anlamlı bir fark bulunan (Kurt, 2019), Dört Kare Yazma Yöntemi uygulanan deney grubu ile zihin haritaları yöntemi uygulanan kontrol grubunun son test puanları arasında deney grubu lehine anlamlı bir fark bulunan (Juitania, 2016) ve Dört Kare Yazma Yöntemi ile öğretim yapılan deney grubu ile serbest yazma tekniğini kullanan kontrol grubu arasında son test puanları arasında anlamlı bir fark bulunan (Handini ve Saragih, 2013) çalışmaların sonuçları Dört Kare Yazma Yönteminin ortaokul öğrencilerinin betimleyici yazma becerilerini geliştirdiğini göstermektedir.

Öğrencilerin son uygulamadaki bilgilendirici metin yazılarında bilgilendirici metin yapısına uygun biçimde araştırma inceleme sonucunda elde edilmiş bilimsel kavramlar kullandıkları, nesnel bir üslup ve anlatımı tercih ettikleri, deneyim ve gözlemlerini somut olarak ifade edebildikleri tespit edilmiştir. Dört Kare Yazma Yönteminin öğrencilerin bilgilendirici metin yazma becerisi üzerinde etkisinin ortaya konduğu çalışmada deney grubu öğrencilerinin Dört Kare grafiğini kullanarak yazılarının içeriklerini geliştirdikleri, duygu ve düşüncelerini organize etmede geliştikleri, sözcük kullanımı bağlamında geliştikleri görülmüştür.

Benzer araştırmalar incelendiğinde Dört Kare Yazma Yönteminin öğrencilerin düşünce ve muhteva bulma, kelimelerin doğru seçimi gibi yönlerden geliştirdiği (Nursyifa ve Asrori, 2014); daha sistematik yazdığı, fikirlerini örgütledikleri ve detaylandırdıkları (Handini ve Saragih, 2013); yazılarını oluşturmadan önce başlamadan önce düşüncelerini bulmalarını kolaylaştırdığı (Lestari, Pudjobroto ve Wahyuni, 2013); görev, iş birliği, yapılandırma, dil ve anlatım kelime seçimlerini iyileştirilmesini kontrol grubundan daha iyi yapılandırdığı (Darmawan, 2011); yazı içindeki sözcük tercihlerini, tümce içinde sözcükleri doğru sırada kullanabildiği(Wijiastuti, S. F. 2010); organizasyon, kelime bilgisi, dil kullanımı ve yazı mekaniği açısından geliştiği (Mahfudhotin, 2014); özgün başlıklandırma, paragraflar arası geçiş, metinsellik ölçütlerinin gelişimi, kelime, düşünce, olay tekrarının azalışı; uygun geçişler ve bağlantı ifadelerinin kullanımı, ana düşünce ve bu düşünceyi tamamlayan destekleyici düşüncelerin ortaya konması, bilgi verici metinlere dil yapısının iyileşmesi (Kurt, 2019) sonuçlarına ulaşılmıştır. Bu sonuçlar ilgili araştırmanın sonuçlarıyla paralellik göstermektedir.