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An Alternative Way to Improve the Writing Skills of Secondary School Students: The Social Cognitive Model of Sequential Skill Acquisition (SCM Intervention)[*]

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Abstract
The aim of this study is to examine the effect of SCM-based self-regulation writing instruction on the expository writing and self-regulation skills of middle school 7th grade students. In the research, explanatory sequential mixed method, in which qualitative and quantitative research designs are used together, was used. In the quantitative dimension of the study, the quasi-experimental pre-test-post-test paired control group design was used, and in the qualitative dimension, the case study was used. The study group consists of 66 middle school students attending the 7th grade. It was used two quantitative data collection tools in the study. T-test and Covariance (ANCOVA) analysis were used for independent samples to compare the means of pre-test post-test scores. On the other hand, the qualitative data of the study were collected with a semi-structured interview form and analyzed through content analysis. As a result of the findings obtained from the post-test results in the study, it was observed that the expository writing and self-regulated writing skills of the experimental group students were significantly higher compared to the control group students. Qualitative data were grouped under four main themes: motivation, text production, use of strategy, and negativities.

Keywords: Self-Regulated Writing, The Social Cognitive Model of Sequential Skill Acquisition, Writing Instruction, Expository Texts

1. Introduction

Writing skill is a language skill that including knowledge of the process as well as requires accumulation of knowledge of the product. In fact, it has been understood that product based approach to teaching writing is not

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sufficient in the world especially in the last quarter of the twentieth century. Moreover, the prominence of cognitive processes in learning has also affected the teaching of writing, made the process of creating this product as important as the product presented in the writing process. In this direction, primarily, the first models of process-based writing (Britton, 1979; Graves, 1975; Rohman, 1965) have emerged. But these models have been criticized by Flower and Hayes (1981) in terms such as being linear, focusing more on the written product, neglecting the author's internal processes and these researchers presented a cognitive process model that included follow-up, the author's long-term memory, and task environment in the writing process. After this model, a great improvement was achieved in understanding the cognitive processes in the writing process (Garcia-Sanchez & Fidalgo-Redondo, 2006) and interest in writing has increased. With further studies, it was understood that writing is a demanding and complex skill that requires a high level of self-regulation, which is related to working memory and motivational structures as well as long-term memory (Graham & Harrris, 1997; Harris, Graham, Mason & Saddler, 2002; Hayes, 1996; McCutchen, 2000; Zimmerman & Risemberg, 1997).

It is very difficult to make a precise and comprehensible definition of the term self-regulation, which is at the center of writing; because self-regulation has a complex structure consisting of all high-level processes such as cognition, problem solving, decision making, metacognition, motivation, and self-control (Boekaerts & Corno, 2005). On the other hand, considering the Social Cognitive Learning Theory, which forms the basic theoretical basis of this study, according to the self-regulation capacity, the individual; evaluates and directs their own personal, behavioral and environmental processes through sub-functions such as self-judgment and self-reaction (Bandura, 1991). According to this theory, learning is the interaction of environmental, personal and behavioral processes (Bandura, 1977, 1986). From the point of view of Social Cognitive Learning Theory, writing includes self-regulation processes that are planned, initiated, maintained by the author (Zimmerman & Risemberg, 1997) and requires the author to constantly compare his / her goals with his / her performance (Zimmerman & Bandura, 1994). Accordingly, self-regulation in writing is that the author directs the writing process and supervises the personal (cognitive and affective), behavioral and environmental processes that interact during this process and related strategies (Zimmerman & Risemberg, 1997).

Zimmerman and Kitsantas (2007), who discuss writing in the context of Social Cognitive Learning Theory, developed a cyclical model of self-regulation for writing. According to this model self-regulation in writing consists of forethought, performance / volitional control and self-reflection stages. To summarize briefly, at the forethought stage, the writer sets goals for herself/himself by considering her/his environment and writing tasks and does strategic planning (Zimmerman & Kitsantas, 2007). In this direction, the author will set goals for both the text s/he will write (content of the text, structure, etc.) and the writing process (completing the article in three hours, etc.) and develops strategies for both. One of the key elements of the forethought phase is motivation. According to Zimmerman (2000), if the individual is not motivated enough to use self-regulated learning skills, these skills have no value for her/him. Motivational structures such as interests, self-efficacy belief, outcome expectations, task values, goal orientation are effective in determining goals and strategic planning (Zimmerman, 2002; Zimmerman & Schunk, 2008). This is also valid for the writing process.

Another stage of the cyclical model for writing is the stage of performance. Writer at the performance stage; uses strategies to help her/him effort by focusing on the task. Successful writers; effectively use personal (affective and cognitive), behavioral and environmental self-regulation strategies (Zimmerman & Kitsantas, 2007; Zimmerman & Risemberg, 1997). Cognitive strategies take place at the top of the self-regulation strategies in writing. These strategies include actions for editing, producing and transforming the text, such as planning, drafting, and revising the text specified by researchers who focus mainly on the cognitive aspect of writing skill (Albertson & Billingsley, 2001; Flower & Hayes, 1981; Zimmerman & Risemberg, 1997). In addition to these, successful authors also use personal, behavioral and environmental strategies such as goal setting, time planning and management, focusing attention and organizing the environment, social modeling of writing knowledge, self-recording and monitoring their own performance, self-rewarding or punishing, self-instruction, seeking social assistance (Graham & Harris, 2000; Graham, Harris & Troia, 1998; Zimmerman & Kitsantas, 2007; Zimmerman & Risemberg, 1997).

The last stage of the cyclical model for writing is the stage of self-reflection. At this stage, the author compares her/his performance with a certain standard and purpose, gives positive or negative reactions, and bases her/his results on the causes (Zimmerman & Kitsantas, 2002). Because, at this stage, the authors make inferences about how to improve their behavior in their following actions. In this direction, successful writers avoid defensive inferences such as escaping from the task, postponing the task, and make adaptive inferences such as setting hierarchical goals, choosing a more effective strategy (Zimmerman, 2000; Zimmerman & Kitsantas, 2007). With these aspects, the stage of self-reflection is extremely important for following writing tasks. The aspect that enables the model to be cyclical is the author's attitude, reaction and inferences in self-reflection.

According to the perspective of Social Cognitive Learning Theory, cyclic self-regulation processes can be taught through "a social cognitive model of sequential skill acquisition" (SCM) with four-stage (Schunk, 1999; Schunk & Zimmerman, 1997, 2007; Zimmerman, 2000, 2002). This model, which is generally valid for all skill acquisitions, can also be applied to writing skills and can be used for students to acquire cyclical processes of writing (Zimmerman & Kitsantas, 1999, 2002, 2007). According to SCM, observing master models gives students information about learning how to successfully develop successive actions (Schunk & Zimmerman, 2007). In compliance with SCM, learning starts through social resources (teacher, student, etc.) and is gradually transferred to the control and supervision of the individual (Schunk & Zimmerman, 2007). SCM basically consists of four phases: observation, emulation, self-control and self-regulation.

To summarize briefly, in the observation phase, the teacher becomes a writer and expresses the writing process, which passes until a qualified text is created, and his feelings and thoughts in this process through thinking aloud. Thus, is/he becomes a model for students (Garcia-Sanchez & Fidalgo-Redondo, 2006). In this process, the student observes the teacher and cognitively learns the observed skill and strategy (Schunk & Zimmerman, 2007). In the emulation phase, students learn to simulate the performance of an expert. The student does not copy the actions of the expert / teacher who is a model, but instead tries to emulate the general style of the expert / teacher (Schunk, 1999). The emulation phase provides some kind of feedback for aspiring writers to improve their self-regulation standards (Zimmerman & Kitsantas, 2002). To give an example, the student can start by asking questions to the text, similar to the teacher / expert, but does not copy the teacher's sentences. At the phase of self-control, students can use the skill or strategy independently while performing the task. At this phase, the skill or strategy is internalized by the student, but the performance of the expert / teacher is taken into account (Schunk, 1999). For example, the student has now learned that the text can be started by asking questions, if the student is at the phase of self-regulation, students can adapt and use skills and strategies according to the situation. At this level, students can make adjustments according to the characteristics of the task, set personal goals and implement plans for them, and maintain their motivation through a sense of self-efficacy to achieve their goals (Schunk & Zimmerman, 1997, 2007; Zimmerman & Kitsantas, 2002). When faced with a different writing task at this level, students can adapt the strategies they have acquired according to their own writing goals.

SCM, whose theoretical framework is presented, is similar to other models (e.g. the Self-Regulated Strategy Development Model, Cognitive Strategy Instruction in Writing Model, Strategy Content Learning Instruction,) that can be considered within the scope of self-regulated writing instruction interventions. All these models provide strong evidence for the effectiveness of self-regulated writing strategies in improving writing performance (Garcia-Sanchez & Raquel Fidalgo-Redondo, 2006). In this study, the effectiveness of SCM in writing instruction has been tested. The reasons and importance of discussing SCM in this study can be explained as follows.

When the studies in the literature are examined, it is seen that the Self-Regulated Strategy Development Model (SRSD) is predominantly applied in the intervention studies in the field of writing instruction based on self-regulation. Graham and Perin (2007), in their meta-analysis study on adolescents, determined that this model is very effective in developing the writing skills of different target audiences (students with learning disability, child with typical development etc.). Similarly, in studies supported by SRSD and SRSD applied in the dates after this meta-analysis study, it has been revealed that this model is also effective on different target groups (e.g., Festas et al. 2015; Ozdowska, Wyeth, Carrington, & Ashburner 2021; Palermo and Thomson 2018;

Rosário et al. 2019; Traga Philippakos, & MacArthur). However, the SRSD model is a strategy teaching model (Garcia-Sanchez & Raquel Fidalgo-Redondo, 2006; Uyar, 2015). SCM compared to SRSD, SCM includes the processes of modeling more than SRSD, in SCM, students can encounter different models (e.g. expert / teacher, novice / student) and SCM is more effective in improving students' self-efficacy perceptions (Garcia-Sanchez & Raquel Fidalgo-Redondo, 2006). The main reason for using SCM in this research is that SCM is more dominant in terms of modeling processes.

Secondly, research is important for the following reasons. This research has been implemented in Turkey. Intervention studies in the field of writing instruction based on self-regulation in Turkey are quite limited. Moreover, in these studies, similar to the general literature, the SRSD model was predominantly applied (e.g. Bi, 2020; Can & Güneş, 2017; Çağlayan Dilber, 2014; Güzel-Özmen, 2006; Öğülmüş & Melekoğlu, 2021; Uygun, 2012). It was seen that the SCM was applied together with SRSD in writing teaching studies, and only one study related to this was found (Müldür & Yalçın, 2019). A model that is quite similar in scope to the SCM has been applied only in the reading education, and studies in this direction are also very limited (Türkben, 2019; Uyar, 2015). For these reasons, investigating the effect of these reasons SCM of literacy education in Turkey has been remarkable.

Thirdly, the research is important in terms of dependent variables of the research. One of the dependent variables of this research is the expository writing. Referring to the situation in Turkey, students expository writing is weak (e.g. Duran & Özdil, 2020; Müldür & Çevik, 2019; Temel & Katrancı, 2019; Ülper, 2011). In addition, researches conducted within the scope of intervention in both national and international literature focus on students' narrative, persuasive and argumentative texts. Intervention studies on students' expository texts are very limited (e.g. Graham & Perin, 2007; Karatosun, 2014; Temizyürek & Çevik, 2017; Ülper, 2008; Müldür & Yalçın, 2019). In this study, expository texts in which students are weak are discussed. It is thought that the study will contribute to the literature in this respect. A second variable of this research is students' self-regulated writing skills. In the literature, mostly products are evaluated in the studies conducted within the scope of self-regulated intervention and there are a limited number of studies aiming to examine the effects of the model such as self-efficacy perception, metacognitive knowledge for writing, and self-regulation (e.g. Chen, 2020; Graham, Harris, MacArthur & Schwartz, 1991; Harris, Graham & Mason, 2006; Sawyer, Graham & Harris, 1992; Müldür & Yalçın, 2019; Zumbrunn, 2010). This research is thought to be important in terms of filling this gap in the literature.

In line with this justification and importance, the main purpose of this study is to determine whether there is a significant difference at expository writing and self-regulated writing skills between 7th grade secondary school students who are given writing instruction based on the SCM in line with the cyclical model of self-regulation and the Turkish Teaching Program. In this respect, the sub-problems of the research can be listed as follows:
Sub problems
1. Is there a significant difference between the students who are given writing instruction based on the SCM and Turkish Teaching Program in terms of expository writing?
2. Is there a significant difference between the students who are given writing instruction based on the SCM and Turkish Lesson Curriculum (TCC) in terms of self-regulated writing skills?
3. What are the experimental group students' opinions about the SCM?

2. Method

2.1. Research Design

In the study exploratory sequential mixed method was used. In the exploratory sequential mixed method, quantitative data are collected first, and then qualitative data are collected. In this pattern where the research problem is more quantitatively oriented, the researcher uses the qualitative stage to explain quantitative data in more detail (Creswell & Clark, 2017).

For the quantitative dimension of the study, quasi-experimental design with pretest-posttest control group was used. Quasi-experimental designs are an effective model that can be used in research in the field of education where it is not possible to control all variables (Cohen, Manion & Marrison, 2007). The qualitative research design in the research is a case study. In case of studies, one or more events, settings, social groups, programs or interconnected systems are examined in depth (McMillan, 2000). The case study represents a method by which a phenomenon is studied in its own reality (Yin, 1984). In this research, SCM is examined within its own context and reality.

2.2. Participants

Quantitative Study Group: The quantitative study group of the study consists of 66 middle school students studying in the 7th grade of a state school with a middle socioeconomic level, from a province located in the center of the Mediterranean region, in Turkey. In determining the study group, the unbiased assignment method was used, in which the subjects were assigned to the experimental or control group objectively (Eckhardt & Ermann, as cited in Büyüköztürk, 2011). In the school where the study was conducted, two classes were considered to be equal to each other in academic and socio-economic terms by the administrators and teachers. And one of these classes was assigned as the experimental group and the other as the control group.

Qualitative Study Group: Thirteen students in the experimental group constitute the qualitative study group of the study. The maximum variation sampling method was used in determining the qualitative study group. In the maximum variation sampling method, the researcher increases the possibility of reflecting on different perspectives and differences of the findings by selecting the participants that differ from each other (Creswell, 2013). In this study, the experimental group students were divided into three groups: those with low performance in terms of writing performance, those with moderate performance and those with high level of performance, considering the difference scores between pre-test and post-test scores. In this direction, five students were selected from each group and a semi-structured interview was conducted with fifteen students in total.

2.3. Intervention

In the research, before starting the experimental applications, pre-tests were applied. Following the pre-tests, writing instruction based on the SCM was applied to the students in the experimental group for sixteen lesson hours during eight weeks. Writing instruction was applied to the students in the control group in line with the activities in the textbooks prepared according to the Turkish Teaching Program. At the end of the process, final tests were conducted and qualitative data were collected after the quantitative data collection process.

In the first two sessions, which were applied to the experimental group students, the students' general knowledge of the writing process, text structures knowledge, and self-regulation processes were developed. For this purpose, teaching techniques such as brainstorming, group discussion, direct and explicit instruction, activating previous knowledge, and gamification were used. Since the third session, the SCM has been applied so that a different expository text structure is addressed each week. Accordingly, the sequence text structure in the third session, the description text structure in the fourth session, the cause and effect text structure in the fifth session, the problem and solution text structure in the sixth session, and the comparison text structure in the seventh session were discussed. Between the third and seventh sessions, the teacher initially modeled her students by using cognitive modeling and think aloud techniques in accordance with the SCM.). She applied self-regulation processes loudly in writing through cognitive modeling (forethought, performance and self-reflection) and self-regulated writing strategies (such as goal setting, clustering, graphic organizers, organizing and transforming, self-monitoring and self-evaluation, focusing attention and environmental structuring, seeking social assistance, self-instruction) in the classroom. Later, students collaborated with their peers and teachers and received feedback from them and prepared a text about the text structure of that day. In this process, they applied the cyclical writing process based on self-regulation. From the third to the end of the seventh session, the teacher gradually reduced the processes of modeling, observation processes and social support through thinking aloud. In the eighth session, students wrote a text by using the text structure they choose and by managing their own self-editing processes.

Applications in the control group were carried out in eight sessions as in the experimental group. In the control group, a writing training based on the Turkish Lesson Curriculum (2015) was applied and the students did the writing activities in their Turkish textbooks. Within the scope of the writing activities in the textbooks, the students were given the activities of creating a text by putting the displaced sentences in a logical order, completing the text, creating an expository text about a topic, and creating an expository text about a maxim. While implementing the activities instructions in the book were taken into account. In this direction, pre-writing preparatory work such as question-answer, sample text analysis was carried out in some activities. Students were asked to draft their articles, share their drafts with their desk mates, and rewrite their articles by taking into account their friends' evaluations. In some activities, students were asked to obey spelling and punctuation rules, plan their writings around a main idea, support the main ideas in their writings with supporting ideas, put the information in order, conclude their writings with impressive expressions, enrich them with idioms, and evaluate them in terms of spelling and punctuation. While the activities are being implemented, the course of nature has not been interfered with. In line with his / her field and professional knowledge, the teacher reminded the students in a number of issues such as limiting the topic, developing main ideas and supporting ideas, and ways of developing ideas, and gave examples. The process of being a model, starting with the cognitive modeling of the teacher and continuing to independent writing, applied in the experimental group, was not included in the control group. When the students in the control group requested help, they have not been refused, and the students received help from their teachers and friends whenever they wanted. The teacher mostly gave feedback to the students about the texts they produced when needed. Post-tests were applied after the intervention studies. Qualitative data were then collected.

2.4. Data Collection Tools

Expository Writing Evaluation Form: In the research, the Expository Writing Evaluation Form (EWEF) developed by Müldür and Yalçın (2019) was used to determine students' writing skills. The form consists of seven parts; main idea/focus, supporting details, organization and coherence, language and style, cohesion, spelling and punctuation, legibility. The criteria are scored 1-5 in the form, which is designed as a rubric. In the research process, for the reliability study of the rubric, the texts written by the students in both the pre-test and the post-test were scored separately by two experts and the correlation coefficient (Pearson correlation) between the scores was examined. By means of Pearson correlation analysis, the correlation coefficient between the two raters was 0.82 for the pre-test and 0.86 for the post-test. Since this result is above 0.80, it can be said that there is a high level of reliability between the scores given by 2 raters.

Self-Regulated Writing Scale: The Self-Regulated Writing Scale (SRWS) developed by Müldür and Yalçın (2019) was used to determine students' self-regulation writing skills. The scale developed in 5-point likert type was graded as "I never do: 1", "I rarely do: 2", "I occasionally do: 3", "I often do: 4" and "I always do: 5". According to the exploratory factor analysis, the scale consists of four factors with an eigenvalue greater than 1 and explaining 46.543% of the total variance. These sub-dimensions are effort, monitoring and managing the process, seeking assistance and text generation. The 21-item scale includes 6 items in the effort sub-dimension, 6 items in the monitoring and managing the process, 5 items in the seeking assistance sub-dimension, and 4 items in the text generation sub-dimension. As a result of the confirmatory factor analysis of the scale, fit indices were determined as RMSEA=0.044, GFI=0.916, AGFI=0.894, CFI=0.927 and NFI=0.827. The internal consistency coefficient of the scale was calculated as 0.85. The Cronbach Alpha internal consistency coefficient of the scale was calculated for the sample included in this study. For the pre-test Cronbach Alpha is 0.87 and for post-test Cronbach Alpha is 0.90. This result shows that the SRWS is reliable enough to be used within the scope of the research.

Semi-Structured Interview Form: In the research, semi-structured interview form was used to determine the opinions of the experimental group students on self-regulated writing instruction. A semi-structured interview form was used in this study, and while preparing the interview form, criteria such as the form being suitable for the purpose, being clear and understandable, and not containing directive expressions were considered (Creswell, 2013; Merriam, 2009; Patton, 2014). Form was applied after reviewing and editing by three experts.

2.5. Data Analysis

Analysis of Quantitative Data
Independent samples t-test and Covariance (ANCOVA) analysis were used to interpret the scores obtained through EWEF and SRWS in the pre-test and post-test stages of the experimental design. ANCOVA is a sensitive and useful method to examine the differences between groups in random control design when random assignment to groups is not possible (Tabachnick & Fidell, 2013). In order for both analyzes to be carried out, some assumptions must be provided. According to the assumptions of the independent samples t-test, the measurements of the dependent variable should exhibit normal distribution in both groups. The variances of the distributions of measurements in both groups should be equal. Samples whose averages are to be compared should be unrelated (Büyüköztürk, 2012). According to the assumptions of ANCOVA analysis, the intragroup regression slopes should be equal, there should be a linear relationship between the dependent variable and the covariate, the scores of the dependent variable should be normally distributed in each group, and the variances of the scores should be equal (Büyüköztürk, 2012). Before applying both analyzes, the assumptions for both dependent variables were examined and it was concluded that the assumptions were met. Further the intervention's effect size was interpreted using partial eta squared (η_p^2) with the traditional decision rules: .01–.059 = small, .06–.139 = medium, and $\geq$ .14 = large (Cohen, 1988).

2.6. Analysis of Qualitative Data

In the research, the qualitative data collected through semi-structured interviews were analyzed with content analysis. In the content analysis, the stages of organizing the data obtained, creating codes based on the data, separating the codes into categories or themes, organizing and reviewing the material according to these categories and evaluating in the light of previous studies (Creswell, 2013) were followed.

In qualitative research, validity and reliability are considered differently from quantitative studies. Qualitative research requires criteria such as credibility, consistency, conformability and transferability rather than validity and reliability. Researchers in a qualitative research should meet these four criteria by using different strategies such as participant confirmation, expert opinion, purposeful sampling, and negative situation analysis (Creswell, 2013; Merriam, 2009; Patton, 2014). In this study, maximum variation sampling was used and students were classified as low (LP), medium (MP) and high (HP) performance students in terms of difference scores between pre-test and post-test. While giving quotations about student views, the performance qualities of the students are specified. Thus, the different perceptions and experiences of the participants with different qualities were tried to be presented as a whole. In addition, direct quotations on students' views were included. Adverse situation analysis was also used in the study. In the research, unexpected findings such as seeing some practices boring and negative were encountered and these were also reported. Finally, expert opinion was consulted, and qualitative data were analyzed by the researcher and another expert. After the analysis, the codes and themes were reviewed and rearranged by another expert. In this way, the credibility, transferability and consistency of the research were tried to be increased.

2.7. Ethic

Before the study, administrators and Turkish-language teachers of three schools in the city center where the application was conducted were interviewed, and administrators and teachers in one of the schools stated that they could participate in the study voluntarily. For the school to volunteer to participate in the study, official permission was obtained from the *Provincial Directorate of National Education.* In addition, the parents of the participants were informed about the content and duration of the application through *the Parent Consent Form*, and the parents were asked to sign the participation consent.

Confidentiality was adhered to during the research process. It was stated to the participants that their participation in the research was on a voluntary basis. It was stated that their names would not be used either in the experimental application process or in the interviews. For this, the participants were asked to identify a

pseudonym that would not reveal their identity. In this way, the confidence of the participants about the application was tried to be increased.

3. Results

3.1. Quantitative Results

The quantitative findings of the research are discussed under separate headings in terms of dependent variables and sub-problems of the research. In this direction, first the pre-test results, then the post-test results are reported.

3.1.1. Results Related to Expository Writing
Before the experimental procedure, independent sample t-test was applied to compare the pre-test scores of the students obtained from EWEF. The pre-test scores of the experiment and control groups obtained from EWEF were compared with the independent sample t-test. Analysis results are presented in Table 1.

Table 1: Independent Samples T -Test Results for the EWEF Pre-test Scores of the Groups

Variable	Group	N	$\overline{X}$	Sd	t	p	η2
Expository writing	Experimental	33	12.394	3.544	0.531	0.597	0.00
	Control	33	12.909	4.297			

Note: The highest score that can be obtained from the form consisting of 7 items is 35.

According to t-test results for independent samples given in Table 1, there was no significant difference between the pre-test scores of the experimental group ($\overline{x}$=12.091, Sd=3.565) and control group ($\overline{x}$=12.909, Sd=4.297) students obtained from EWEF [$t_{(64)=}$0.531 , η2=0.00, p=0.597>0.05]. According to the pre-test results, it was seen that the groups were similar in terms of expository writing.

Although there was no significant difference between the EWEF pre-test scores of the groups, the post-test scores were compared with one-way analysis of covariance (ANCOVA) in order to eliminate the effect of the pre-test scores. ANCOVA analysis results that reveal whether there is a significant difference between the posttest scores when the EWEF pre-test scores of the groups are taken under control are given in Table 2.

Table 2: ANCOVA Results for the EWEF Post-test Scores of the Groups

Source of variation	Sum of Squares	df	Mean Square	F	p	η2
Pre test	641.109	1	641.109	67.251	0.000	0.156
Group	337.886	1	337.886	35.443	0.000	0.360
Error	600.588	63	9.533			
Total	1521.939	65				

One-factor ANCOVA analysis was conducted to determine the effect of the experiment on the expository writing of middle school 7th grade students and the results are presented in Table 2. In the analysis, the type of education students received (writing instruction based on the SCM for the experimental group, writing instruction based on the TCC, for control group) were defined as the independent variable, the posttest EWEF scores were defined as the dependent variable, and the pretest EWEF scores were defined as the covariate.

Accordingly, when the pre-test scores of the students were under control a significant difference was found between the post-test scores of the control (corrected $\overline{x}$= 13.763) and experimental (corrected $\overline{x}$== 18.298) groups.

These results show that writing instruction prepared according to the SCM has a significant effect on students' expository writing. On the other hand, the effect size calculated for the difference of group averages is η2 = 0.360. This value shows that the intervention has a broad impact on expository writing.

3.1.2. Results Related to Self-regulated Writing Skills

Before the experimental procedure, independent sample t-test was applied to compare the pre-test scores of the students obtained from SRWS. The pre-test scores of the experimental and control groups obtained from SRWS were compared with the independent sample t-test. Analysis results are presented in Table 3.

Table 3: Independent Samples T - Test Results for the SRWS Pre-test Scores of the Groups

Variable	Group	N	$\overline{X}$	Sd	t	p	η2
self-regulated	Experimental	33	68.939	12.420	-1.267	0.210	0.00
writing skills	Control	33	64.667	14.867			

Note: The highest score that can be obtained from the form consisting of 21 items is 105.

According to t-test results for independent samples given in Table 3, there was no significant difference between the pre-test scores of the experimental group (x̄=68.939, Ss=12.420) and control group (x̄=64.667, Ss=14.867) students obtained from SRWS [$t_{(64)=}$-1.267, η2=0.00, p=0.210>0,05]. According to the pre-test results, it was seen that the groups were similar in terms of self-regulated writing skills.

Although there was no significant difference between the SRWS pre-test scores of the groups, the post-test scores were compared with one-way analysis of covariance (ANCOVA) in order to eliminate the effect of the pre-test scores. ANCOVA analysis results that reveal whether there is a significant difference between the posttest scores when the SRWS pre-test scores of the groups are taken under control are given in Table 4

Table 4: ANCOVA Results for the SRWS Post-test Scores of the Groups

Source of variation	Sum of Squares	df	Mean Square	F	p	η2
Pre test	6105.597	1	6105.597	75.885	0.000	0.546
Group	1517.934	1	1517.934	18.866	0.000	0.230
Error	5068.888	63	80.459			
Total	13859.955	65				

One-factor ANCOVA analysis was conducted to determine the effect of the experiment on the self-regulated writing skills and the results are presented in Table 4. In the analysis, the type of education students received (writing instruction based on the SCM for experimental group, writing instruction based on the TCC for control group) were defined as the independent variable, the post-test SRWS scores were defined as the dependent variable, and the pretest SRWS scores were defined as the covariate.

Accordingly, when the pre-test scores of the students were under control a significant difference was found between the post-test scores of the control (corrected x̄= 69.554) and experimental (corrected x̄= 79.265) groups. These results show that writing instruction prepared according to the SCM has a significant effect on students' self-regulated writing skills. On the other hand, the effect size calculated for the difference of group averages is η2 = 0.230. This value shows that the intervention has a broad impact on expository writing (Cohen, 1988; Gay & Airasian, 2000).

3.2. Qualitative Results

The qualitative findings obtained from the semi-structured interviews conducted with the experimental group were collected under four main themes (categories): motivation, text production, use of strategy and negativities. These are presented as subheadings.

3.2.1. Results Related to Theme of Motivation

Sub-themes and codes under the motivation theme are presented in Table 5.

Table 5: Motivation

Sub-themes	Codes	f
Self-efficacy	More confidence in writing	14
	To be able to easily share texts with others	2
	Ability to write on any topic	2
	Ability to send articles to the journal, to write a book	1
	Being able to help others	1
	Being able to write without the support of someone else	1
	Total	21
Attitude	Love to write more	13
	To love Turkish lesson more	8
	Total	21
Percieved value	To put more emphasis on writing	8
	Believing that one can always use it in life	7
	To give more importance to Turkish lessons	5
	Total	20
Goal Orientation	Writing better and more effectively	8
	To impress one's readers	3
	Improve oneself	2
	Total	13
Total		75

Students in the qualitative study group stated that their self-efficacy perceptions and positive attitudes towards writing increased after the SCM. Some of the students also stated that their goal orientation had changed. Students who had performance goal orientation such as getting rid of, wanting to finish, writing for writing, writing texts better than the ones of their friends before the application, had a goal-goal orientation such as being able to write more beautiful texts, impress readers, and improve themselves. It has been observed that, students value writing and Turkish lesson more after the instruction and find writing useful throughout their lives. Some of the students' statements regarding their motivations are as follows:

"I used to think that I would never write. Now I can even send my article to a children's magazine. I can easily participate in composition competitions. "(Student 4, MP).

"I think the activities were great, I wouldn't have written beforehand. I wouldn't want to write. But thanks to the activities, my enthusiasm for writing increased… So I like to write more. "(Student 8, LP).

 "… I used to write so that I could get rid of it in 10 minutes, in 5 minutes. Now I do not think like that. I'm trying to write better. "(Student 13, MP).

3.2.2. Results Related to Theme of Text Production
Sub-themes and codes under the text production theme are presented in Table 6.

Table 6: Text Production

Sub-themes	Codes	f
Focus	Limit the subject	14
	Determining the main idea	8
	Total	22
Supporting details	Include a different idea in each paragraph	13
	Generating ideas more easily	6
	Ability to develop ideas	2
	Total	21
Organization	Getting started with text effectively	5
	Ending text effectively	4
	Finding the right title	4
	Total	13
Language and style	Using expressive expressions	4
	Using words in their proper meaning	2
	Total	6
Length	Lengthening of the text	3
	Total	3
Toplam		65

The students stated that they found a focus by limiting the subject and determining the main idea in their text during the instructions and did not pay attention to these issues before the intervention. The students stated that they were more successful in producing ideas, and stated this with expressions such as generating ideas more easily, being able to develop ideas, and including a different idea in each paragraph. Some of the students stated that they had difficulties in starting and ending the text effectively, finding an effective title for the text before the instruction; they stated that they started to be more successful in these subjects with the intervention. Four of the students pointed out that their expressions changed by taking into account the issues such as using impressive expressions, using words correct and in accordance with their meaning. Three of the students stated that their texts were lengthened. One of the students' views on the subject is as follows:

"I did not know that I had to address different supporting ideas in each paragraph. I used to write whatever comes to my mind. I was not limiting the subject. Now I started to pay more attention in the lessons. … Before starting this activity, I did not know what to do at the introduction. I did not know how to develop ideas… Later, I used ways to improve my ideas, for example. … Now I see if the ideas are compatible, the title is compatible." (Student 2, HP).

3.2.3. Results Related to Theme of Use of Strategy
Sub-themes and codes under the use of strategy theme are presented in Table 7.

Table 7: Use of Strategy

Sub-themes	Codes	f
Seeking Help from Teachers and Friends	Have the text read in order to have it checked	6
	When having difficulty generating ideas	5
	When having difficulty starting text	5
	When having difficulty in the writing process	5
	To increase motivation	1
	Total	22
Planning	Using the clustering	8
	Using graphic organizers	8
	Total	16
Self-motivation	Increase motivation by talking by oneself	5
	Reward oneself	2
	Prepare motivation cards	1
	Try to make writing fun	1
	Total	9
Text Review	Control text paragraph by paragraph	6
	Reading after finishing text	3
	Total	9
Modeling the Teacher	Modeling the teacher's writing process	7
	Model the teacher's text	2
	Total	9
Organizing the Environment	Noise reduction	3
	Prepare to arrange your stuff	3
	Sit next to a friend where one can get help	1
	Total	7
Total		72

Students in the qualitative study group stated that they did not use most of the strategies specified in Table 7 before applying the SCM. They stated that they used the strategies specified in the relevant table together with SCM. Two of the students expressed their views as follows:

"… we sometimes argued with friends about how to write. In particular, I was having difficulty at introduction and asked for your help. I got help from my friends. I thought about how I could write a paragraph on this subject, I asked him. I also wouldn't have done it before, but now I say myself you can do it, if you write you can do this…. " (Student 1, LP).

"In this tutorial, the clustering and graphic organizer worked best for me. It was helpful in limiting the subject, generating ideas, and drafting. In the past, I could not produce ideas; I would list whatever I had in mind. I empty the ideas in my brain with the clustering. I choose the ones I like. I put it in my graphic editor." (Student 3, HP).

3.2.4. Results Related to Theme of Negativities
Sub-themes and codes under the negativities theme are presented in Table 8.

Table 8. Negativities

Sub-themes	Codes	f
Noise	Due to the crowded class	5
	The noise generated during the teacher support process	2
	Students, who do not like to write, do not focus on the activity	2
	Total	9
Individual problems	Dislike to write	2
	Lack of time	1
	Having no idea	2
	Dislike expository text	1
	Total	6
Total		15

The experimental group students stated that they were disturbed by the crowd of the class, the students, who do not like to write, not wanting to write, and the noise generated during the teacher support process, and that this interrupted the writing processes. Some students stated that they did not like to write, they had difficulty in generating ideas, they wanted to write simpler texts such as stories instead of expository texts, and that they could not use time efficiently.

"I did not try hard with these events. … I did not want to participate. I don't like to write anyway. I did not feel like it. I did not want to write either. I'm already tired of studying. Frankly, I don't want to write. " (Student 14, LP)

"Sometimes some of our friends in the classroom started talking while you were helping us." (Student 7, MP).

4. Discussion, Conclusion and Suggestions

Within the scope of the research, firstly, the effect of the intervention on the seventh grade students' expository writing was examined. The findings revealed that the SCM has a wide effect on students' expository writing. Qualitative findings, especially in the theme of text production, revealed that the students in the experimental group have showed improvement in determining the focus of the text, planning the text, generating supplementary ideas, expressions and length of the texts compared to the pre-experimental application. This result shows that the SCM is effective in improving expository writing. Researches in the literature show that SCM and SCM-like models are effective on writing skills (Garcia-Sanchez & Fidalgo-Rodendo, 2006; Müldür & Yalçın, 2019; Zimmerman & Kitsantas, 1999, 2002) and reading skills (Türkben, 2019, Uyar, 2015). In addition, previous studies on strategy training models using cognitive modeling processes also support the findings (e.g. Adams, 2020; Englert, Raphael & Anderson, 1992; Festas vd., 2015; Mason, Snyder, Sukhram & Kedem, 2006; Palermo & Thomson, 2018; Rodríguez-Málaga, Cueli, & Rodríguez, 2020; Rosário et al. 2019; Saddler, Asaro-Saddler, Moeyaert, & Cuccio-Slichko 2019; Uygun, 2012).

Secondly, the effect of the intervention on seventh grade students' self-regulated writing skills was examined. The findings obtained from the research revealed that the SCM has a wide effect on students' self-regulated writing skills. The motivation and use of strategy findings of the qualitative results support the quantitative data. In the qualitative findings, seventh grade students in the experimental group stated that their self-efficacy perceptions, positive attitudes and positive perceived values increased after the intervention. Moreover, students who had performance-goal orientation before the intervention showed goal-goal orientation after the intervention. Students' use of self-regulation strategies for writing also increased. Some previous studies also support these findings (e.g. Adams, 2020; Can & Güneş, 2017; Englert et al., 1992; Güzel Özmen, 2006; Harris et al.2006; Müldür & Yalçın, 2019; Sawyer et al., 1992; Uygun, 2012, Zimmerman & Kitsantas, 1999; 2002;

Zumbrunn, 2010). However, Akhmedjanova (2020) has found that the implementation of strategy does not affect self-regulation skills. The researcher associated this result with the inadequacy of the measurement tool.

All results reveal that the SCM is more effective than writing education based on Turkish Education Program and SCM is applicable in Turkey. It is thought that the reasons why SCM is effective are as follows. The cyclical model of self-regulation is a cognitive, social and affective model, includes cognitive writing strategies such as goal setting, planning, reviewing, drafting, and different processes and strategy training such as self-teaching, self-assessment, organizing the environment (Zimmerman & Bandura, 1994; Bandura, Zimmerman & Kitsantas, 2007; Zimmerman & Risemberg, 1997). Writing in the experimental group was handled within this framework, and not only the cognitive but also the social and motivational structure of writing was emphasized. In the observation phase of the SCM, the teacher benefited from cognitive modeling, and produced sample texts as models for students not only on cognitive strategies in writing, but also on different strategies such as affective and environmental. In the experimental group, teacher and peers also supported each other in the writing process during the emulation and self-control stages. Students also applied the cyclical writing model in the writing process. Modeling processes were not used in the control group and a collaborative learning environment was not created. In the control group, students did the activities in the textbooks.

It is thought that the aforementioned intervention in the experimental group facilitated the writing process by guiding students, improved their texts, and developed self-regulation writing strategies. In this context, it can be said that peer and teacher support is effective in the experimental group considering that students model their peers who are similar to them in terms of their characteristics such as especially age, gender, achievement, interest, etc. (Schunk, 1987) and classroom dialogues is an impressive element improve students' writing skills (Englert et al., 1992). But, the experimental group students stated in their opinions that the noise that emerged during peer and teacher support made the writing process difficult. In environments with crowded classes like in the Turkey, the implementation of SCM can complicate the process of writing. It can be said that one of the most important factors affecting the development of the writing skills of the students in the experimental group is the steps that students put into practice what they have taken as a model. Self-regulated learners effectively construct their own paths, goals, methods based on the information in their own minds and the information in the external environment (Pintrich, 2000). In the current study, modeling has been reduced over time, allowing students to use strategies independently. As can be seen in the qualitative findings, in their writing process students made use of techniques such as clustering, graphic organizers, idea generation and drafting, idea generation and editing, and strategies such as teacher modeling, help-seeking, planning the process, self-instruction, reviewing the text, organizing the environment independently. It can be said that students' use of these strategies has an effect on all sub-problems of the research. However, in line with the qualitative findings, it is seen that the SCM may not be effective on students who do not like to write at all. The result in the control group can be explained by not including cognitive modeling and peer support. On the other hand, the result in the control group is thought to be related to the writing approach adopted in the textbooks. Müldür and Çevik (2020), in their research examining the writing activities in Turkish textbooks, revealed that the activities in the textbooks are weak in terms of process-oriented. The result in the control group is thought to be related to not adopting a writing and genre-based writing approach in the textbooks.

In line with the findings and limitations of the study, the following suggestions can be made for future studies: This research was conducted with middle school seventh grade students. Similar studies can be conducted at different grade levels. In this study, the effect of SCM on expository writing and self-regulation writing skills was examined. The effects of the model on variables such as self-efficacy perception and metacognitive awareness can also be examined. In this study, a retention test was not applied. A retention test can also be applied in similar studies to test whether the development of students' writing skills is permanent or not. In this study, in accordance with the exploratory sequential mixed method, quantitative data were collected and the qualitative data were limited to the interviews made with the experimental group students after the experiment. In order to investigate and examine the effectiveness of this instruction in depth, qualitative data can be collected by using different ways such as observation besides interview. In addition, these can be applied to cover the pre-experiment, the post-experiment and the experimental process. Since it shows the effectiveness of SCM in the

research, self-regulated writing instruction can be included in Turkish teaching programs, and programs and textbooks can be prepared accordingly.

References

Adams, S. E. (2020). *The impact of self-regulated strategy development on the expository writing performance of high school students at-risk for emotional and behavioral disorders*. (Doctoral dissertation). Available from ProQuest Dissertation & Theses: Full Text (27836222).

Akhmedjanova, D. (2020). *The effects of a self-regulated writing ıntervention on English learners' academic writing skills*. (Doctoral dissertation). Available from ProQuest Dissertation & Theses: Full Text (27836830).

Albertson, L. R., & Billingsley, F. F. (2001). Using strategy instruction and self-regulation to improve gifted students' creative writing. *Prufrock Journal*, *12*(2), 90-101. http://dx.doi.org/ 10.4219/jsge-2000-648.

Bandura, A. (1977). *The exercise of control*. New York: Freeman.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. New York: Prentice-Hall.

Bandura, A. (1991). Social cognitibe theory of self-regulation. *Organizational Behaviour and Human Decision Processes*, *50*(2), 248-287. https://doi.org/10.1016/0749-5978(91)90022-L

Bi, B. (2020). *Öz düzenleyici strateji gelişimi modelinin özel yetenekli öğrencilerin yazma becerilerine etkisi. [The effect of self-regulated strategy development model on improving gifted students' story writing skills]* (Master's thesis). Available from Yükseköğretim Kurulu Ulusal Tez Merkezi: Full Text (618620).

Boekaerts, M., & Corno, L. (2005). Self-regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology*, *54*(2), 199-231. http://dx.doi.org/10.1111/j.1464-0597.2005.00205.x

Britton, J. (1979). *Language and thought.* Harmondsworth: Penguin.

Büyüköztürk, Ş. (2011). *Deneysel desenler: Öntest-sontest kontrol grubu desen ve veri analizi [Experimental designs: Pretest-posttest control group pattern and data analysis]*. Ankara: Pegem Akademi.

Büyüköztürk, Ş. (2012). *Sosyal bilimler için veri analizi el kitabı [*Manual of data analysis for social sciences]. Ankara: Pegem Akademi.

Can, B., & Güneş, F. (2017). *The effect of education model based on self-regulated strategy development on improving story writing skills. International Journal of Language Academy*,15, 98-115. http://dx.doi.org/10.18033/ijla.3542

Chen, J. (2020). *Effects of SRSD on students' metacognitive knowledge, self-efficacy, text revision, and text quality in L2 writing* [Doctoral dissertation, The University of Auckland]. https://researchspace.auckland.ac.nz/handle/2292/52469

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education.* New York: Taylor and Francis.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.

Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage.

Çağlayan-Dilber, N. (2014). *Öz düzenlemeli strateji gelişimi öğretim modelinin ortaokul öğrencilerinin ürettikleri tartışmacı metinlere etkisi [The effect of self regulated strategy development model on secondary school students' argumentative texts]* (Doctoral dissertation). Available from Yükseköğretim Kurulu Ulusal Tez Merkezi: Full Text (383425).

Duran, E., & Özdil, Ş. (2020). Determining the informative text writing skill levels of fourth grade primary school students. *Research in Reading & Writing Instruction, 8*(1), 21-31. https://doi.org/10.35233/oyea.696288

Englert, C. S., Raphael, T. E., & Anderson, L. M. (1992). Socially mediated instruction: Improving students' knowledge and talk about writing. *The Elementary School Journal*, *92*(4), 411-449. http://dx.doi.org/10.1086/461700

Festas, I., Oliveira, A. L., Rebelo, J. A., Damião, M. H., Harris, K., & Graham, S. (2015). Professional development in self-regulated strategy development: Effects on the writing performance of eighth grade Portuguese students. *Contemporary Educational Psychology*, 40, 17–27. https://doi.org/10.1016/j.cedpsych.2014.05.004

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

Garcia-Sanchez, J. N., & Fidalgo-Redondo, R. (2006). Effects of two types of self-regulatory instruction programs on students with learning disabilities in writing products, processes, and self-efficacy. *Learning Disability Quarterly, 29*(3), 181-211. https://doi.org/10.2307/30035506

Graham, S., & Harris, K. R. (2000). The role of self-regulation and transcription skills in writing and writing development. *Educational Psychologist, 35*(1), 3-12. https://doi.org/10.1207/S15326985EP3501_2

Graham, S., & Harris, K. R. (1997). Self-regulation and Writing: Where do we go from here?. *Contemporary Educational Psychology, 22*(1), 102-114. http://dx.doi.org/10.1006/ceps.1997.0920

Graham, S., & Perin, D. (2007). *Writing next: Effective strategies to improve writing of adolescent middle and high school- A report to Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.

Graham, S., Harris, K. R., & Troia, G. (1998). Writing and self-regulation: Cases from the self-regulated strategy development model. In D. Schunk & B. Zimmerman (Eds.), *Self-regulated learning: From teaching to self-reflective practice* (pp. 20–41). New York: Guilford.

Graham, S., Harris, K. R., MacArthur, C. A., & Schwartz, S. (1991). Writing and writing instruction for students with learning disabilities: Review of a research program. *Learning Disability Quarterly*, 14(2), 89-114. http://dx.doi.org/10.2307/1510517

Graves, D. H. (1975). An examination of the writing processes of seven year old children. *Research in the Teaching of English*, *9*(3), 227-241. Retrieved from https://www.jstor.org/stable/40170631

Güzel-Özmen, R. (2006). The effectiveness of modified cognitive strategy instruction in writing with mildly mentally retarded Turkish students. *Exceptional Children, 72*(3), 281-297. https://doi.org/10.1177/001440290607200302

Harris, K. R., Graham, S., & Mason, L. H. (2006). Improving the writing, knowledge, and motivation of struggling young writers: Effects of self-regulated strategy development with and without peer support. *American Educational Research Journal*, *43*(2), 295-340. http://dx.doi.org/10.3102/00028312043002295

Harris, K. R., Graham, S., Mason, L. H., & Saddler, B. (2002). Developing self-regulated writers. *Theory into Practice*, *41*(2), 110-115. http://dx.doi.org/10.1207/s1543021tip4102_7

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

Karatosun, S. (2014). *Planlı yazma ve değerlendirme modelinin ilköğretim 5. sınıf öğrencilerinin kompozisyon yazma becerilerini geliştirmeye etkisi*. [*The effect of planned writing and evaluation model on enhancing 5th grade students' composition writing skills]* (Master's thesis). Available from Yükseköğretim Kurulu Ulusal Tez Merkezi: Full Text (388934).

Mason, L. H., Snyder, H. K., Sukhram, D. P., & Kedem, Y. (2006). Self-regulated strategy development for expository reading comprehension and informative writing: Effects for nine 4th-grade students who struggle with learning. *Exceptional Children*, 73, 69-89. http://dx.doi.org/ 10.1177/001440290607300104

McCutchen, D. (2000). Knowledge, processing, and working memory: Implications for a theory of writing. *Educational Psychologist*, 35(1), 13-23. http://dx.doi.org/ 10.1207/S15326985EP3501_3

McMillan, J. H. (2000). *Educational Research: Fundamentals For Consumer*. New York: Longman.

TCC (2015). *Turkish lesson curriculum primary and secondary school 1-8. Classes*. Ankara: National Education.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Müldür, M., & Çevik, A. (2019). The analysis of secondary school students' informative writing skills. *Journal of Social Sciences of Mus Alparslan University, 7*(5), 141-149. https://doi.org/10.18506/anemon.520992

Müldür, M., & Yalçın, A. (2019). The effect of self-regulated writing ınstruction on middle school students' ınformative writing skills, self-regulated writing skills, and self-efficacy perception. *Elementary Education Online, 18*(4), 1779-1804. https://doi.org/10.17051/ilkonline.2019.639323

Ozdowska, A., Wyeth, P., Carrington, S., & Ashburner, J. (2021). Using assistive technology with SRSD to support students on the autism spectrum with persuasive writing. *British Journal of Educational Technology*, *52*(2), 934-959. https://doi.org/10.1111/bjet.13063

Öğülmüş, K., & Melekoğlu, M. A. (2021). The impact of POW + C-SPACE strategy on story writing skills of Turkish students with specific learning disabilities. *Educational Policy Analysis and Strategic Research, 16*(1) 287-305. https://doi.org/10.29329/epasr.2020.334.16

Palermo, C., & Thomson, M. M. (2018). Teacher implementation of self-regulated strategy development with an automated writing evaluation system: Effects on the argumentative writing performance of middle school students. *Contemporary Educational Psychology*, 54, 255–270. https://doi.org/10.1016/j. cedpsych.2018.07.002.

Patton, M. Q. (2014). *Qualitative evaluation and research methods: Integrating theory and practice*. Thousand Oaks, CA: Sage.

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451-502). San Diego, CA: Academic. http://dx.doi.org/10.1016/B978-012109890-2/50048-2

Rodríguez-Málaga, L., Cueli, M., & Rodríguez, C. (2020). Exploring the effects of strategy-focused instruction in writing skills of 4th grade students. *Metacognition and Learning*, 1-27. https://doi.org/10.1007/s11409-020-09247-3

Rohman, D. G. (1965). Prewriting the stage of discovery in the writing process. *College Composition an Communication, 16*(2), 106-112. https://doi.org/10.2307/354885

Rosário, P., Högemann, J., Núñez, J. C., Vallejo, G., Cunha, J., Rodríguez, C., & Fuentes, S. (2019). The impact of three types of writing intervention on students' writing quality. *PLoS One, 14*(7), e0218099. https://doi.org/10.1371/journal.pone.0218099.

Saddler, B., Asaro-Saddler, K., Moeyaert, M., & Cuccio-Slichko, J. (2019). Teaching summary writing to students with learning disabilities via strategy instruction. *Reading & Writing Quarterly, 35*(6), 572–586. https://doi.org/10.1080/10573569.2019.1600085

Sawyer, R. J., Graham, S., & Haris, K.R. (1992). Direct teaching, strategy instruction, and strategy instruction with explicit self-regulation: Effects on the composition skills and self-efficacy of students with learning disabilities. *Journal of Educational Psychology*, 84, 340-352. http://dx.doi.org/10.1037/0022-0663.84.3.340

Schunk, D. H. (1987). Peer models and children's behavioral change. *Review of Educational Research*, *57*(2), 149-174. https://doi.org/10.3102%2F00346543057002149

Schunk, D. H. (1999). Social-self interaction and achievement behavior. *Educational Psychologist, 34*(4), 219-227. https://doi.org/10.1207/s15326985ep3404_3

Schunk, D. H., & Zimmerman, B. J. (1997). Social origins of self-regulatory competence. *Educational Psychologist, 32*(4), 195-208. https://doi.org/10.1207/s15326985ep3204_1

Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modeling. *Reading & Writing Quarterly*, 23(1), 7-25. http://dx.doi.org/10.1080/10573560600837578

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics.* Pearson.

TCC (2015). *Turkish lesson curriculum (1-8. Classes).* Ankara: National Education.

Temel, S., & Katrancı, M. (2019). The relationshıp between written expression skills, attitudes towards writing and writing anxiety of primary school students. *International Journal of Euroasian Researches, 7*(17), 322-356. https://doi.org/10.33692/avrasyad.590688

Temizyürek, F., & Çevik, A. (2017). Skill of using writing model based on mental design in forming text process. *Bartın University Journal of Faculty of Education, 6*(1), 114-138. https://doi.org/10.14686/buefad.281379

Traga Philippakos, Z. A., & MacArthur, C. A. (2021). Examination of genre-based strategy ınstruction in middle school english language arts and science. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 1-7. https://doi.org/10.1080/00098655.2021.1894082

Türkben, T. (2019). The effect of self-regulation based strategic reading education on comprehension, motivation, and self-regulation skills. *International Journal of Progressive Education, 15*(4), 27-46. https://doi.org/10.29329/ijpe.2019.203.3

Uyar, Y. (2015). *Öz düzenlemeye dayalı okuma becerisinin geliştirilmesi ve anlamaya etkisi [Development of self regulated reading skills and its impact on comprehension] (Doctoral dissertation).* Available from Yükseköğretim Kurulu Ulusal Tez Merkezi: Full Text (378256).

Uygun, M. (2012). *Öz düzenleme stratejisi gelişimi öğretiminin yazılı anlatıma, yazmaya yönelik öz düzenleme becerisine, kalıcılığa ve tutuma etkisi. [The effects of self regulated strategy development on writing expression, self regulation of writing, retention and writing attitude] (Doctoral dissertation).* Available from Yükseköğretim Kurulu Ulusal Tez Merkezi: Full Text (317793).

Ülper, H. (2008). *Bilişsel süreç modeline göre hazırlanan yazma öğretimi programının öğrenci başarısına etkisi [The effects of teaching writing programme prepared in accordance with cognitive process model on student achievement] (Doctoral dissertation).* Available from Yükseköğretim Kurulu Ulusal Tez Merkezi: Full Text (228342).

Ülper, H. (2011). An evaluation of student texts in the context of coherence. *Turkish Studies*, *6*(4), 849-863. http://dx.doi.org/10.7827/TurkishStudies.2703

Yin, R. K. (1984). *Case study research: Design and methods.* Beverly Hills, CA: Sage Publications.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). USA: Academic. http://dx.doi.org/10.1016/B978-012109890-2/50048-2

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-70. http://dx.doi.org/10.1207/s15430421tip4102_2

Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal*, *31*(4), 845-862. http://dx.doi.org/10.3102/00028312031004845

Zimmerman, B. J., & Kitsantas, A. (1999). Acquiring writing revision skill: Shifting from process to outcome self-regulatory goals. *Journal of Educational Psychology*, *91*(2), 241. http://dx.doi.org/10.1037/0022-0663.91.2.241

Zimmerman, B. J., & Kitsantas, A. (2002). Acquiring writing revision and self-regulatory skill through observation and emulation. *Journal of Educational Psychology*, *94*(4), 660. http://dx.doi.org/10.1037//0022-0663.94.4.660

Zimmerman, B. J., & Kitsantas, A. (2007). A writer's discipline: The development of self-regulatory skill. P. Boscolo & S. Hidi (Eds.), *Writing and motivation* (pp. 51-69), Oxford: Elsevier.

Zimmerman, B. J., & Risemberg, R. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology*, *22*(1), 73-101. http://dx.doi.org/10.1006/ceps.1997.0919

Zimmerman, B. J., & Schunk, D. H. (2008). Motivation: An essential dimension of self-regulated learning. In D. H. Schunk & B. J. Zimmerman (Ed.). *Motivation and sel-regulated learning: Theory, research, and application*. (p. 1–30). New York, NY: Lawrence Erlbaum.

Zumbrunn S. K. (2010). *Nurturing young students' writing knowledge, selfregulation, attitudes, and self-efficacy: The effects of self-regulated strategy development*. Doctoral dissertation). Available from ProQuest Dissertation & Theses: Full Text (3412004).