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Investigation of the Relationship Between Primary School Students' Creative Writing Skills and Metacognitive Awareness Levels

Investigación de la relación entre las habilidades de escritura creativa de los estudiantes de primaria y los niveles de conciencia metacognitiva

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Resumen

Esta investigación se llevó a cabo para determinar si existe una relación entre las habilidades de escritura creativa y la conciencia metacognitiva de estudiantes de primaria. La investigación se llevó a cabo utilizando el método de cribado relacional, uno de los tipos de investigación cuantitativa. La muestra de la investigación está conformada por 186 estudiantes que cursan tercer y cuarto grado en el semestre de otoño del año académico 2022-2023. Para recopilar los datos para la investigación, en primer lugar, se pidió a los estudiantes que escribieran textos sobre el tema "Amistad". Los textos escritos por los estudiantes fueron calificados con los Criterios de Evaluación para la Forma de Escritura Creativa desarrollados por Susar Kırmızı (2011). Para determinar la conciencia metacognitiva de los estudiantes, los maestros también completaron el Formulario del Maestro de la Escala de Conciencia Metacognitiva para Niños (Forma A) desarrollado por Esmer y Yorulmaz (2017). Los datos fueron sometidos a análisis de normalidad antes de ser analizados. Después de asegurar la normalidad de la varianza, se utilizaron análisis descriptivos, prueba t de grupos independientes, análisis de varianza de una vía, correlación producto-momento de Pearson y análisis de regresión lineal simple. Como resultado de los análisis, se determinó que existía una relación positiva débilmente significativa entre las habilidades de escritura creativa y la conciencia metacognitiva de los estudiantes de primaria. Además, se concluyó que las habilidades de escritura creativa de los estudiantes de primaria explicaron su conciencia metacognitiva en un 13%. La escritura creativa y la conciencia metacognitiva de las estudiantes fueron más altas que las de los estudiantes masculinos. Se hicieron sugerencias de acuerdo con los resultados de la investigación.

Palabras clave

Escritura, Escritura Creativa, Metacognitivo, Conciencia Metacognitiva, Correlación

Abstract

This research was conducted to determine whether there is a relationship between creative writing skills and metacognitive awareness of primary school students. The research was conducted using the relational screening method, one of the quantitative research types. The sample of the research consists of 186 students studying in third and fourth grades in the fall semester of the 2022-2023 Academic Year. To collect the data for the research, first of all, the students were asked to write texts on the subject of "Friendship". The texts written by the students were scored with the Evaluation Criteria for Creative Writing Form developed by Susar Kırmızı (2011). To determine the students' metacognitive awareness, the teachers also filled out the Metacognitive Awareness for Children Scale (A Form) Teacher Form developed by Esmer and Yorulmaz (2017). The data were subjected to normality analysis before being analyzed. After ensuring normality variance, descriptive analyses, independent groups t-test, one-way analysis of variance, Pearson Product-Moment Correlation and Simple Linear Regression Analysis were used. As a result of the analyses, it was determined that there was a positive weakly significant relationship between creative writing skills and metacognitive awareness of primary school students. In addition, it was concluded that primary school students' creative writing skills explained their metacognitive awareness by 13%. Female students' creative writing and metacognitive awareness were higher than male students. Suggestions were made in line with the results of the research.

Key Words

Writing, Creative Writing, Metacognitive, Metacognitive Awareness, Correlation

1. INTRODUCTION

In today's education system, it is becoming increasingly important for students to gain critical thinking, problem solving and creativity skills. While the view that traditional rote learning approaches are inadequate is widespread, students are expected to be able to manage their learning processes and use information effectively. In this context, students' written expression skills play a critical role not only in terms of language development but also in supporting their metacognitive awareness and creativity (Azız, Setyosari, Widiati, & Ulfa, 2024; Flavell, 1979; Schraw & Moshman, 1995). In this context, creative writing skills allow students to express their thoughts in a versatile and original way (Kellogg, 2008; Graham & Perin, 2007), while metacognitive awareness is related to the skills of individuals to plan, monitor and evaluate their thinking and learning processes (Flavell, 1979; Schraw & Dennison, 1994). Studies show that creative writing improves students' metacognitive strategies and that this process positively affects their writing skills and academic success (Negretti, 2012; Zimmerman & Risemberg, 1997). In a study conducted by Teng & Yue (2023), significant relationships were found between students' metacognitive writing strategies and their academic writing performance, indicating that metacognitive awareness supports writing achievement.

Understanding the relationship between creative writing skills and metacognitive awareness levels of primary school students is of great importance in planning teaching strategies to be developed at an early age (Harris et al., 2003; Taczak & Robertson, 2017). In this context, the study aims to reveal the relationship between creative writing skills and metacognitive awareness levels of primary school students.

Metacognitive awareness is defined as a skill that helps students consciously control, plan, and evaluate their learning processes (Flavell, 1979). Metacognition consists of two main components,

1. Metacognitive Knowledge: The awareness an individual has of his or her cognitive processes.
2. Metacognitive Regulation: The ability of an individual to plan, monitor, and evaluate the learning process (Schraw & Moshman, 1995).

These two components play a critical role especially in the creative writing process (Zimmerman & Bandura, 1994). Creative writing requires students to organize their thoughts, develop different perspectives, and produce original ideas. This process allows students to use their metacognitive awareness effectively (Graham & Harris, 2013).

Research has shown that creative writing contributes to more effective learning processes by improving the individual's self-regulation skills (Zimmerman & Risemberg, 1997). Creative writing is a process that allows students to produce original content using their imagination. In addition to developing students' language skills, this process also supports their problem-solving, critical thinking, and self-regulation skills (Kaufman & Beghetto, 2013). Creative writing activities allow students to think more deeply, interpret information, and express their thoughts (Batur et al., 2023; Bereiter & Scardamalia, 1987). Creative writing has a positive effect on academic success. A meta-analysis study conducted by Graham & Perin (2007) revealed that creative writing training improves students' academic writing skills and makes positive contributions to their learning processes.

Schraw and Moshman (1995) stated that metacognitive awareness is a critical factor in supporting creativity and writing skills. In this context, understanding the relationship between creative writing skills developed in the primary school period and metacognitive awareness is important for the effective design of teaching strategies. Studies show that individuals with high metacognitive awareness are more successful in the creative writing process. A study conducted by Negretti (2012) revealed that students who use metacognitive strategies in the text writing process produce more fluent and well-structured texts. Similarly, Veenman et al. (2006) state that individuals with high metacognitive awareness manage their creative writing processes more consciously and their writings are more original and creative. According to Tsatsou-Nikolouli (2024), students' use of metacognitive strategies in the creative writing process contributes to better structuring of their writings, increased fluency, and the development of language skills.

The importance of creative writing skills in developing individuals' innovative thinking and problem-solving abilities has been emphasized in the literature (Runco, 2004; Torrance, 1981). In addition, students' use of metacognitive strategies in the creative writing process can positively affect the structure and fluency of their writing (Bereiter & Scardamalia, 1987; Graham et al., 2013). Therefore, metacognitive awareness plays a critical role in the development of creative writing skills.

Many studies have shown that individuals with high levels of metacognitive awareness are more successful in written production and that these individuals are more competent in developing creative ideas (Veenman et al., 2006; White & Frederiksen, 1998). At the same time, it is known that metacognitive strategies support students' ability to plan, monitor, and evaluate their writing processes (Hacker et al., 1994; Zimmerman &

Bandura, 1994). These findings reveal the need to examine the relationship between creative writing skills and metacognitive awareness in more detail.

However, it is observed that the studies addressing the relationships between children's creative writing skills and metacognitive awareness levels are limited. Although various studies have been conducted on the usability of this area in teaching processes since Flavell's (1979) development of the concept of metacognition, the scarcity of studies addressing the bidirectional relationship between creative writing skills and metacognitive awareness is striking (Harris et al., 2006; Cordero-Ponce, 2000). Although studies addressing the relationship between creative writing and metacognitive awareness have increased in recent years, research conducted on primary school students is limited (Harris et al., 2006; Negretti, 2012). Most studies have been conducted at the high school and university levels, and studies addressing the interaction between creative writing skills and metacognitive awareness from an early age are lacking (Chen & McDunn, 2022).

This study provides an important contribution to the literature in this field by revealing the relationships between creative writing skills and metacognitive awareness levels of primary school students. In particular, examining the potential of creative writing skills to predict students' metacognitive awareness is of critical importance in terms of both developing educational programs and improving teaching strategies. In this context, it is thought that the findings of the study will guide teachers in planning creative writing activities and strategies to develop students' metacognitive awareness. In conclusion, this study emphasizes the importance of educational practices that support student development in terms of both creative writing skills and metacognitive awareness.

1.1. Purpose of Research

The purpose of this study is to determine the relationship between primary school students' creative writing skills and their metacognitive awareness levels. For this purpose, the research sought answers to the following sub-problems.

1. What are the levels of creative writing skills and metacognitive awareness of primary school students?
2. Is there a significant relationship between primary school students' average creative writing skill scores and their average metacognitive awareness scores?
3. Do primary school students' creative writing skills predict their metacognitive awareness?
4. Do primary school students' mean scores for creative writing skills and metacognitive awareness differ according to grade level, gender, and academic status?

2. METHOD

This study, which was conducted to determine the relationship between primary school students' creative writing skills and metacognitive awareness, was carried out with the relational screening model, which is one of the quantitative research methods. Relational

screening models are studies that aim to reveal the existence and degree of co-variation between more than one variable (Karasar, 2017).

2.1. Study Group

The study group consisted of 186 students attending third and fourth grades of primary school in the fall semester of the 2022-2023 Academic Year. The demographic characteristics of the students participating in the study are given in Table 1.

Demographic Information		f	%
Gender	Girl	86	46,20
	Male	100	53,80
Class Level	Third grade	87	46,80
	Fourth grade	99	53,20
Academic Success	Failure	-	-
	Pass	10	5,40
	Middle	33	17,70
	Good	58	31,20
	Very Good	85	45,70

Table 1. Demographic Characteristics of the Study Group

When Table 1 is examined, 86 of the 186 primary school students who participated in the study were girls and 100 were boys. 87 of the students who participated in the study are in the third grade and 99 are in the fourth grade. When the academic success status of the students who participated in the study is examined, it is observed that 10 students are passing, 33 students are average, 58 students are good, and 85 students are very good. In addition, there were no students who were unsuccessful in academic status among the students who participated in the study.

2.2. Data Collection and Data Collection Tools

In collecting the data for the study, the Evaluation Criteria for Creative Writing Form (ECCW) developed by Susar Kırmızı (2011) and the Metacognitive Awareness for Children Scale (A Form) Teacher Form (MACSTF) developed by Esmer & Yorulmaz (2017) were used.

2.2.1. Evaluation Criteria for Creative Writing (ECCW)

In order to determine the creative writing levels of the students, the students were asked to write texts on the subject of "Friendship". Before the subject of friendship was selected, three teachers from the third and fourth grades came together. The teachers and the researchers discussed the subjects that the students could write about. It was thought that it would be right for the students to write about a subject that they knew about. For this reason, in the third grade Life Sciences course, the outcomes of "Realizes how the behaviors of their friends affect them" and "Comprehends the points that need to be considered in the friendship process" were included in the theme of "Life in Our School",

and in the fourth grade Social Sciences course, the outcomes of “Puts themselves in the shoes of other individuals with different characteristics” and “Respects the different characteristics of other individuals” were included in the theme of “Individual and Society”. The texts written by the students were scored with the Evaluation Criteria for Creative Writing (ECCW) developed by Susar Kırmızı (2011).

The form was developed by Susar Kırmızı (2011) to evaluate the texts written by students in terms of creativity. In line with expert opinions, the form was created with six criteria and a score of 100. These criteria and score values are as follows:

1. Criteria: The content of the article contains a major innovation or innovations that are out of the ordinary (20 points).
2. Criteria: Expressing a known element in the text in a new way (20 points).
3. Criteria: Including original similes/analogies in the text (15 points).
4. Criteria: Explanation of new ideas in the text in a clear manner (10 points).
5. Criteria: Expressing the feelings and ideas in the text effectively and fluently (20 points).
6. Criteria: Give an appropriate title to the article (15 points).

The texts written by the students on the subject of "Friendship" were scored by the researchers by the above criteria. To understand the consistency of the scores given, help was received from an expert classroom teacher. The consensus percentage of the scores given by the researchers and the expert classroom teacher was examined. The consistency values of the scores given to the students' texts were calculated as; first criteria ,76, second criteria ,79, third criteria ,75, fourth criteria ,80, fifth criteria ,78, and sixth criteria ,85.

2.2.2. Metacognitive Awareness for Children Scale (A Form) Teacher Form (MACSTF)

The form was developed by Esmer & Yorulmaz (2017) to determine the metacognitive awareness of students. The form is a three-point Likert type to be filled by teachers. It consists of 12 items under a single factor. Esmer & Yorulmaz (2017) determined the total Cronbach Alpha value of the form as ,940. As a result of the analysis conducted for this study, the internal consistency reliability coefficient of the form was calculated as ,937. At the end of the calculation, it was observed that the study was reliable.

2.3. Analysis of Data

SPSS 21 package program was used in the analysis of the study data. Descriptive statistics and predictive statistics were used in the analysis of the data. The creative writing levels and metacognitive awareness levels of the study group were revealed with descriptive statistics. The relationships between the groups were tried to be revealed with predictive statistics.

Before analyzing the data in the study, it was checked whether normality variance was provided. The skewness and kurtosis values obtained from the "Evaluation Criteria for Creative Writing" to evaluate the creative writing levels of primary school students and the "Metacognitive Awareness for Children Scale (A Form) Teacher Form " to reveal their metacognitive awareness are given in Table 2.

	Skewness Values		Kurtosis Values	
	Statistics	Standard Error	Statistics	Standard Error
ECCW	,958	,178	,099	,355
MACSTF	-,746	,178	-,262	,355

Table 2. Kurtosis and skewness values of the Evaluation Criteria for Creative Writing and the Metacognitive Awareness for Children Scale (A Form) Teacher Form

According to Table 2, it was determined that the skewness and kurtosis values of the Evaluation Criteria for Creative Writing and the Metacognitive Awareness for Children Scale (A Form) Teacher Form were between -1.500 and +1.500 (Tabachnick & Fidell, 2013), and the distribution was normal. In line with this result, parametric analyses were applied to the purpose and sub-purposes of the research.

Pearson Product Moment Correlation Analysis was applied to determine whether there is a relationship between primary school students' creative writing scores and metacognitive awareness scores and, if there is a relationship, to determine the direction of this relationship. In the correlation analysis, if the correlation coefficient is below ,20, it indicates a low relationship, ,20-,39 weak, ,40-,59 moderate, ,60-,79 high, and ,80-1,00 very high (Al-Fahham, 2018; Cohen, 1992). After a linear relationship was determined, Simple Linear Regression Analysis was performed to determine whether primary school students' creative writing skills were a significant predictor of students' metacognitive awareness.

The creative writing and metacognitive awareness score averages of primary school students were performed with independent groups t-test analysis for gender and grade variables, and with multi-way analysis of variance (One Way ANOVA) test analyses for academic achievement variable. Dunnett-C multiple analysis was used to determine the source of the difference in the ANOVA analysis. The results were interpreted at a significant level of ,05.

3. RESULTS

Information on the mean, standard deviation, minimum value, and maximum values of primary school students' creative writing and metacognitive awareness is given in Table 3.

Forms	N	$\overline{X}$	ss	Min. Value	Max. Value
ECCW	186	9,162	3,426	4,00	16,67
MACSTF	186	2,559	,429	1,33	3,00

Table 3. Descriptive Statistics for the Evaluation Criteria for Creative Writing of Primary School Students and the Metacognitive Awareness for Children Scale (A Form) Teacher Form

When Table 3 is examined, descriptive statistics obtained from the Evaluation Criteria for Creative Writing Form and the Metacognitive Awareness for Children Scale (A Form) Teacher Form of primary school students are given. The average creative writing score of the 186 primary school students who participated in the study was found to be ($\overline{X}$ = 9,162) and the average metacognitive awareness score was found to be ($\overline{X}$ = 2,559).

The results of the Pearson Product Moment Correlation analysis conducted to determine whether there is a relationship between primary school students' average creative writing scores and their average metacognitive awareness scores are presented in Table 4.

	ECCW	MACSTF
ECCW	1	,371 **
MACSTF	,371 **	1

**< ,01; *< ,05

Table 4. Correlation Analysis Results between the Evaluation Criteria for Creative Writing of Primary School Students and the Teacher Form of Metacognitive Awareness for Children Scale (A Form) Teacher Form

In Table 4, it was determined that there was a positive, linear, and significant relationship between the creative writing skills and metacognitive awareness of the 186 primary school students who participated in the study (r = ,371; p< ,01). This positive relationship between creative writing skills and metacognitive awareness is at a weak level.

Following the linear relationship between primary school students' creative writing skills and metacognitive awareness, a simple linear regression analysis was conducted. The results of the analysis on whether primary school students' creative writing skills predict their metacognitive awareness are given in Table 5.

Variable	B	Standard Error	β	t	p	R2	F
Still	2,133	,084	-	25,461	,000	,133	29,423
Creative Writing Skills	,046	,009	,371	5,424	,000		

R = ,371; R 2 = ,133; F (1-184) = 29,423; p = ,000

Table 5. Regression Analysis Results Regarding the Prediction of Primary School Students' Creative Writing Skills on Students' Metacognitive Awareness

When Table 5 is examined, according to the results of the regression analysis in which the creative writing skills of primary school students are used as the independent variable (predictive variable) and the metacognitive awareness of primary school students are used as the dependent variable (predicted variable), the explanation level of the dependent variable is statistically significant [R = ,371; R2 = ,133; F (1-184) = 29,423; p < ,05]. The creative writing skills of primary school students explain 13% of the total variance regarding the metacognitive awareness of primary school students. The significance test of the coefficient of the predictor variable (B = ,046) underlying the regression equation also shows that creative writing skills are a significant predictor (p < ,01). According to the results of the regression analysis, the regression equation predicting the metacognitive awareness of primary school students is as follows:

Metacognitive Awareness = (,046 x Creative Writing) + 2,133

The results of the independent group's t-test analysis conducted to examine whether the average scores of primary school students from the Creative Writing Evaluation Criteria Form and the Metacognitive Awareness for Children Scale (A Form) Teacher Form differ according to the grade level variable are given in Table 6.

	Class Level	N	$\overline{X}$	Sd	df	t	p
ECCW	3rd Grade	87	8,841	3,270	184	-1,200	,232
	4th Grade	99	9,444	3,550			
MACSTF	3rd Grade	87	2,590	,450	184	,921	,358
	4th Grade	99	2,532	,410			

Table 6. Results of Primary School Students' Creative Writing Skill Average Scores and Metacognitive Awareness Average Scores According to Class Level Variable

In Table 6, the mean scores of primary school students from the Evaluation Criteria for Creative Writing and the Metacognitive Awareness for Children Scale (A Form) Teacher Form were examined according to the grade level variable. Independent groups t-test analysis was conducted according to the grade level variable. As a result of the analysis, no significant difference was found in both forms according to the grade level variable. It was observed that there was no significant relationship between the mean score of third graders ($\overline{X}$ = 8,841) and the mean score of fourth graders ($\overline{X}$ = 9,444) in the grade level variable in the Evaluation Criteria for Creative Writing of primary school students [$t_{(184)}$ = -1,200; p = ,232]. Although there was no significant relationship, the mean score of fourth graders in creative writing skills was higher than that of third graders. It was concluded that there was no significant difference between the mean score of third-grade students ($\overline{X}$ = 2,590) and the mean score of fourth-grade students ($\overline{X}$ = 2,532) in the class level variable in the Metacognitive Awareness for Children Scale (A Form) Teacher Form of primary school students [$t_{(184)}$ = ,921; p = ,358]. However, even if there was no significant difference, it was observed that the mean metacognitive awareness scores of third graders were higher than those of fourth graders.

The results of the independent group's t-test analysis conducted to examine whether the average scores of primary school students from the Evaluation Criteria for Creative Writing and the Metacognitive Awareness for Children Scale (A Form) Teacher Form differed according to the gender variable are given in Table 7.

	Gender	N	$\overline{X}$	Sd	df	t	p
ECCW	Girl	86	10,182	3,793	184	3,908	,000
	Male	100	8,285	2,812			
MACSTF	Girl	86	2,626	,429	184	1,986	,048
	Male	100	2,502	,423			

Table 7. Results of Primary School Students' Creative Writing Skill Average Scores and Metacognitive Awareness Average Scores According to Gender Variable

In Table 7, the mean scores of primary school students from the Creative Writing Evaluation Criteria Form and the Metacognitive Awareness for Children Scale (A Form) Teacher Form are analyzed according to the gender variable. Independent groups t-test analysis was applied according to the gender variable. As a result of the analyses, it was observed that there was a significant difference in the gender variable in both forms. In the Evaluation Criteria for Creative Writing of primary school students, the mean score of female students was found as ($\overline{X}$ = 10,182) and the mean score of male students was found as ($\overline{X}$ = 8,285) and it was concluded that the significant difference was in favor of

female students [$t_{(184)} = 3,908$; $p = ,000$]. The effect size was calculated using Cohen's d and was found to be ,57, indicating that gender has a medium effect on ECCW scores. In the Metacognitive Awareness for Children Scale (A Form) Teacher Form of primary school students, the mean score of female students was found as ($\overline{X} = 2,626$) and the mean score of male students was found as ($\overline{X} = 2,502$) and it was determined that there was a significant relationship between in favor of female students [$t_{(184)} = 1,986$; $p = ,048$]. The calculated Cohen's d value was ,29, indicating that this difference represents a small effect size.

The results of one-way analysis of variance (One Way ANOVA) conducted to examine whether there is a difference in the average scores of primary school students from the Evaluation Criteria for Creative Writing and the Metacognitive Awareness for Children Scale (A Form) Teacher Form according to the academic achievement variable are shown in Table 8.

	Source of Variance	Sum of Squares	df	Mean of Squares	F	p	Source of Difference
ECCW	Intergroup	403,777	3	134,592	13,855	,000	B<D, B<E, C<E, D<E
	Within groups	1767,970	182	9,714			
	Total	2171,746	185				
MACSTF	Intergroup	24,990	3	8,330	167,701	,000	B<D, B<E, C<D, C<E, D<E,
	Within groups	9,040	182	,050			
	Total	34,030	185				

Table 8. Results of Primary School Students' Creative Writing Skill Average Scores and Metacognitive Awareness Average Scores According to Academic Success Variable
A: Failure, B: Pass, C: Middle, D: Good, E: Very Good

In Table 8, the mean scores of primary school students from the Evaluation Criteria for Creative Writing and the Metacognitive Awareness for Children Scale (A Form) Teacher Form were evaluated according to the academic success variable. One-way analysis of variance (One Way ANOVA) test was applied according to the academic success variable. As a result of the applied analysis, a significant difference was found between the groups in both forms. In order to determine which groups caused the significant difference between the groups, Dunnett-C multiple comparison analysis was performed as a complementary analysis.

When the academic success variable of primary school students in the Evaluation Criteria for Creative Writing Form was examined, it was observed that there were differences between the groups, and Dunnett-C multiple comparison analysis was performed. It was found that there was a significant difference between the pass success level mean score ($\overline{X} = 5,600$) and the good success level mean score ($\overline{X} = 8,675$) in favor of the good success level; between the passing success level mean score ($\overline{X} = 5,600$) and the very good success level mean score ($\overline{X} = 10,571$) in favor of the very good success level; between the middle success level mean score ($\overline{X} = 7,470$) and the very good success level mean score ($\overline{X} = 10,571$) in favor of the very good success level; between the good success level mean score ($\overline{X} = 8.675$) and the very good success level mean score ($\overline{X} = 10,571$) in favor of the very good success level [$F_{(3 - 182)} = 13,855$; $p = ,000$]. The effect size, as measured by eta squared (η^2), was ,19, indicating a large effect. This result

suggests that group membership accounted for approximately 19% of the total variance in ECCW scores.

As a result of the one-way analysis of variance performed for the academic success variable in the Metacognitive Awareness for Children Scale (A Form) Teacher Form of primary school students, a difference was found, and Dunnett-C multiple comparison analysis was applied to determine the difference between the groups. Between the pass success level mean score ($\overline{X}$ = 1,758) and the good success level mean score ($\overline{X}$ = 2,420) in favor of the good success level; between the pass success level mean score ($\overline{X}$ = 1,758) and the very good success level mean score ($\overline{X}$ = 2,920) in favor of the very good success level; between the middle success level mean score ($\overline{X}$ = 2,119) and the good success level mean score ($\overline{X}$ = 2,420) in favor of the good success level; between the middle success level mean score ($\overline{X}$ = 2,119) and the very good success level mean score ($\overline{X}$ = 2,920) in favor of the very good success level; It was found that there was a significant difference between the good success level mean score ($\overline{X}$ = 2,420) and the very good success level mean score ($\overline{X}$ = 2,920) in favor of the very good success level [$F_{(3 - 182)}$ = 167,701; p = ,000]. The calculated eta squared value was ,73, representing a very large effect size and indicating that group differences explained approximately 73% of the total variance in MACSTF scores.

4. DISCUSSION AND CONCLUSION

4.1. Discussion

The main findings of this study revealed that there is a positive relationship between primary school students' creative writing skills and metacognitive awareness, and that creative writing skills explain metacognitive awareness by 13%. This finding supports previous studies that reveal the relationship between writing skills and the concept of metacognition (Flavell, 1979; Zimmerman & Risemberg, 1997). Kellogg (2008) suggests that the writing process is not only a linguistic activity but also a process that requires the coordination of metacognitive skills. Creative writing activates students' metacognitive processes such as self-monitoring, planning, and evaluation, but teaching environments need to be structured consciously for these processes to be used effectively.

The findings obtained in the study show that the creative writing process can improve students' metacognitive awareness levels, but this effect is shaped by individual differences, the learning environment, and educational methods. A study conducted by Alshreif & Nicholes (2017) revealed that the creative writing process activates different metacognitive components and enables students to gain more awareness of their own writing processes. Similarly, Urban & Urban (2024) state that metacognitive awareness plays an important role in the creative problem-solving process and that the skills of structuring knowledge, managing the process, and self-evaluation are directly related to metacognitive processes.

However, the low level of the relationship found in the study shows that metacognitive awareness supports creative writing, but this relationship is not always linear. Veenman et al. (2006) revealed that the relationship between metacognitive awareness and academic performance is more pronounced in students who use deeper learning strategies than superficial information processing.

In the study, it was determined that the creative writing skills and metacognitive awareness of primary school students did not show a significant difference according to the grade level. While there was no statistically significant difference between the creative writing skills of third and fourth-grade students, it was observed that the writing skills of the students gradually increased as they got older. This result supports the views in the literature that writing skills can be developed with age and experience (Torrance, 1981; Runco, 2004). Graham & Perin (2007) suggested that writing skills develop individuals' thinking abilities and stated that this process supports cognitive self-regulation skills. However, it can be said that more writing activities should be given place in the educational environment in order for the effect of the age factor to become more apparent.

Research findings show that female students have higher scores than male students in both creative writing skills and metacognitive awareness levels. This finding is consistent with the view put forward by Zimmerman & Bandura (1994) that female students are more successful in self-regulation and self-awareness skills. Similarly, Veenman et al. (2006) support the results of this research regarding the relationship between individuals' self-awareness and creativity.

Kaufman & Beghetto (2013) state that for creative cognition to be effective, it is critical for students to know when to be creative and when to follow existing rules. This finding shows the necessity of using metacognitive awareness as a tool that not only supports the creative writing process but also guides this process as needed.

In the study, a significant relationship was found between the level of academic achievement and creative writing and metacognitive awareness. It was observed that as academic success levels increased, these two skills also improved. It was determined that students with excellent academic success produced more creative texts and had higher metacognitive awareness compared to students with other academic success levels. This result is parallel to studies that reveal positive relationships between academic success and cognitive strategies (Hacker et al., 1994; White & Frederiksen, 1998). At the same time, Zhang (2022) showed in his study that student-centered writing assessment strategies strengthen students' metacognitive awareness and increase their writing performance.

4.2. Conclusion

It has been observed that there is a positive relationship between primary school students' creative writing skills and metacognitive awareness. In addition, creative writing skills significantly predict students' metacognitive awareness.

The average creative writing skills of primary school students do not show a significant change depending on whether they are in the third or fourth grade. Although creative writing skills do not change according to grade level, they change according to gender. The average creative writing scores of female students are higher than male students. Female students write more creative texts than male students. When the creative writing skills of primary school students are examined according to their academic success scores, it is concluded that students with excellent success levels write more creative texts than students with other success levels. It is possible to say that students' academic success scores have an effect on creative text writing.

The metacognitive awareness of primary school students does not change depending on whether they are in the third or fourth grade. There is no effect of grade level on metacognitive awareness scores. In terms of metacognitive awareness, female students have higher mean scores according to gender. Female students have higher metacognitive awareness than male students. When metacognitive awareness is examined according to students' academic status, it is observed that the metacognitive awareness of students with excellent success levels differs and is higher than other success levels. As academic success increases, students' metacognitive awareness also increases.

Some suggestions were made based on the results of the research.

- Creative writing activities significantly predict metacognitive awareness. Creative writing activities can be included in lessons to increase students' metacognitive awareness.
- As students' academic levels increase, their creative writing and metacognitive awareness increase. Activities can be carried out to increase students' academic success.
- More time can be allocated to creative writing activities in Turkish lessons.
- Creative writing examples can be included in programs to develop metacognitive awareness.

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