

The Relationship between Writing Skills, Writing Self-Efficacy, and Writing Motivation of Gifted Students Enrolled in Science and Art Centers (SACs)¹

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Abstract

The aim of this study is to examine the relationship between the writing skills of gifted secondary school students and their writing self-efficacy and motivation. This quantitative research was designed according to the correlational survey method. The research group consists of 81 7th–8th grade students attending SACs in Trabzon. Data for the study were collected using the "Writing Self-Efficacy Scale," "Writing Motivation Scale," "Narrative Writing Assessment Form," and "Informative Text Writing Assessment Form." The SPSS 21.0 software package was used for data analysis. At the end of the study carried out to determine the relationship between writing self-efficacy, motivation, and skills of gifted students, it was found that class, parental education, and family income variables did not create statistically significant differences in the writing self-efficacy, motivation, and skills (narrative and informative texts) of gifted students. However, the gender variable showed a statistically significant difference in favor of girls only in informative text-writing skills. Furthermore, a relationship was identified between the writing self-efficacy and motivation of gifted students, but no relationship was found between their writing self-efficacy and skills. Additionally, although there was a relationship between the narrative text writing skills and informative text writing skills of gifted students, no relationship was observed between their writing skills and writing self-efficacy or motivation.

Keywords: Writing, writing motivation, writing self-efficacy, gifted students.

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Introduction

In a society, individuals used to be defined as specially gifted based on the benefits they provided to the community or the value they added in the past. However, in today's world, they are identified through intelligence tests that have been developed. In modern times, individuals who pass screening tests and then individual intelligence tests are identified as specially gifted individuals in the general aptitude field, or in the field of art such as painting or music, based on the results of talent assessments in painting or music. Students who have been diagnosed with special talents can receive additional support education at their regular schools, and they can also receive education and training at Science and Art Centers during the time they have available after school.

Gifted students identified in the domain of general aptitude who begin their education at Science and Art Centers (SACs) are offered a range of programs including adaptation, support education, individual gifted awareness, special gifted development, and project creation and management. Newly enrolled students at SACs go through an adaptation program designed to ensure their integration into the institution, acquaint them with its structure and programs, and help them become familiar with teachers and fellow students. After completing the adaptation program, gifted students proceed to the support education program, which aims to link the fundamental skills they need to develop with various fields/disciplines.

Subsequently, students identified as gifted in the domain of general aptitude complete the individual talent awareness program to help them recognize their unique abilities. Following this, they engage in the special talent development program, designed to enhance their identified special talents. Finally, students conclude their journey by participating in the project creation and management program, either individually or within a group, based on their interests, desires, and aptitudes within a specific field/discipline (Ministry of National Education [MoNE], 2015).

Gifted students in the domain of general aptitude who are studying at Science and Art Centers (SAC) utilize language skills such as speaking, listening, reading, and writing in various programs, regardless of whether they are specially talented in areas like mathematics, natural sciences, social studies, or Turkish. Throughout their education at SACs, and particularly when conducting research for projects they will produce during their educational journey, students acquire information through listening and reading skills. They then apply their speaking and writing skills to express their findings in written or oral form when presenting their projects. Consequently, it is crucial for gifted students to possess well-developed language skills across all these dimensions. In studies on reading and writing skills of gifted students, it was concluded that students tend to have reading habits and interest, have high motivation and attitudes towards reading, enjoy writing at a moderate level, increase in writing attitudes and decrease in anxiety when writing strategies are applied (Alevli, 2018; Aslan, Yılar & Karaman, 2022; Austin, 2011; Ley & Trentham, 1987; Okur & Özsoy, 2017; Sevim, Karabulut & Elkatmış, 2021; Yurtbakan, 2022a; Yurtbakan, 2022b). In this sense, gifted students may need to be supported in writing in order to develop positive feelings towards writing (Henshon, 2005).

In order for students to develop their writing skills, a positive writing environment must first be created in the classroom (Bruning & Horn, 2000). If a positive writing environment is not created, students may not be able to pay attention to their writing, they may not be able to establish a connection between the topic and supporting ideas, they may not find the motivation to carry out the writing activity diligently, and they may not pay attention to page layout, spelling and spelling rules while writing. For this reason, teachers may need to play pre-writing games, provide sample sentences on how to make narration effective in the classroom environment, and teach how to create texts with these examples (Saluk & Pilav, 2018). Additionally, writing instruction can be carried out in a planned and effective manner, focusing on pre-writing, drafting, revising, editing, and publishing stages (Allal, 2018; Graham & Sandmel, 2011). Teachers can employ methods that facilitate collaborative writing, such as creative drama, to enhance students' productivity during the writing process (Bayraktar & Okvuran, 2012; McDonough, 2004; Reid, 2009). In this process, giving students enough time to write and giving feedback on their writing can help students improve their writing skills (Tok, Rachim, & Kuş, 2014). Through the development of writing skills, students' writing self-efficacy can also improve (Arıcı & Dolek, 2020).

"Writing self-efficacy is defined as a personal perception towards creating a piece of text (Hidi & Boscolo, 2006). In other words, it can also be expressed as individuals' beliefs about whether they can write a piece of text or not. If students engage in consistent writing practices and receive positive or constructive feedback when sharing their writing within their close circles, their attempts at writing can increase. This, in turn, can lead them to feel successful in terms of writing. Enhancing students' writing achievements and fostering their perception of themselves as capable writers can be facilitated through writing self-efficacy (Pajares & Valiante, 1996). In a study conducted by Demir (2013), it was found that students who consistently engage in the act of writing, even if they make mistakes, and persistently write without getting tired or discouraged, tend to have high writing self-efficacy. To cultivate students' writing self-efficacy, opportunities can be provided for them to write about topics close to their lives. This way, students can more easily identify main and supporting ideas about the topic they are writing about and establish connections between them. Therefore, teachers can assign students to write stories based on events from their lives or their immediate surroundings. Because research has shown that students who write stories tend to have higher levels of writing self-efficacy (Arici & Dolek, 2020; Grenner, Johansson, van de Weijer ve Sahlén, 2021; Gulli & Kuşdemir, 2021; Taş & Balcı, 2019). Moreover, in classes, students can be encouraged to engage in creative drama exercises before assigning writing tasks on topics related to local events to help them establish connections between main and supporting ideas. Writing activities conducted using the creative drama technique contribute to enhancing students' writing self-efficacy (Özber, Akar & Balbağ, 2022). Furthermore, teachers should also engage in activities to enhance students' motivation for writing. This is essential because it is observed that individuals with low writing self-efficacy tend to lack sufficient motivation for writing (Pajares, 1996).

Writing motivation is considered one of the factors that encourages students to write with interest and enthusiasm throughout their lives (Deniz & Demir, 2020). However, it has been observed that students' motivation for writing is gradually diminishing, and students view writing as a laborious and monotonous process (Boscolo & Gelati, 2007). Moreover, individuals with low writing motivation, in fact, tend to have lower academic achievements in writing skills and experience anxiety towards writing (Pajares & Valiante, 1996; Türkben, 2021). Nonetheless, writing motivation plays a vital role in students' inclination towards writing and their success in academic domains (Özcan, 2014). As a result, teachers have significant roles to fulfill in this regard. First and foremost, teachers should create a classroom environment that fosters positive attitudes towards writing and motivates students to write. Subsequently, they should spark students' interest in writing, followed by igniting their enthusiasm for writing. Later on, teachers should develop realistic goals related to writing and design content that enables students to write. Ultimately, they should guide students to engage in plenty of writing exercises on topics aligned with their interests and provide feedback on their written work (Bruning & Horn, 2000; Canitezzer, 2014; Karatay, 2013).

While it is observed that the emotional and psychological characteristics of students create differences in writing skills, there is curiosity about to what extent giftedness affect their writing skills. For this reason, it is seen that a limited number of studies have been conducted in the literature to examine the creative writing skills of gifted students, to improve their creative writing skills, to compare their writing attitudes with not diagnosed as gifted students, and to examine the relationship between creative writing and writing attitude (Kara & Ünal, 2021; Özcan, Konaş & Polat, 2020; Saluk & Pilav, 2018; Sevim, Karabulut & Elkatmış, 2021; Yurtbakan, 2022). In addition, the effect of the Scratch coding program with technological content on the writing anxieties, tendencies, and attitudes of gifted students who are in the age of technology and who grow up intertwined with technological tools has also been tried to be determined (Yurtbakan, 2022b). In this context, it is thought that the writing motivation of the students may be effective in writing success. In addition, the results obtained in the study are important for the evaluation of SACs curricula. Moreover, it is believed that the study will contribute to efforts aimed at enhancing students' writing motivation. Therefore, in this study, the relationship between gifted middle school students' writing skills, self-efficacy, and motivation will be examined. For this purpose:

1. Do demographic factors (gender, mother's-father's education, grade, family income) create significant differences in gifted students' writing self-efficacy?

2. Do demographic factors (gender, mother's-father's education, grade, family income) create significant differences in gifted students' writing motivation?
3. Do demographic factors (gender, mother's-father's education, grade, family income) create significant differences in gifted students' writing skills?
4. Is there a significant relationship between gifted students' writing self-efficacy, writing skills (narrative and informative texts), and writing motivation?

Method

Research Design

In this study which aims to examine the relationship between writing skills, self-efficacy, and motivation of gifted secondary school students, a correlational survey design was utilized. The correlational survey model is a research design used to reveal the existing state of change among more than one variable or the level of change between variables (Karasar, 2013). The study also aims to determine the levels of writing skills, self-efficacy, and motivation of gifted students in terms of variables such as gender, parental educational level, and family income.

Study Group

The study was conducted with 81 gifted secondary school students who are studying at Trabzon Faruk Başaran Science and Art Center located in the city center of Trabzon. The selection of these gifted students was carried out via criterion sampling. The criterion for selecting gifted students was based on their enrollment in 7th and 8th grades of secondary school. Demographic information related to these gifted students is presented in Table 1.

Table 1.

Demographic Information of Students

Demographic Information	Variables	f	%
Gender	Female	36	44,4
	Male	45	55,5
Grade	7th Grade	63	84,0
	8th Grade	18	16,0
Mother Education	Primary and Secondary	24	29,6
	University	57	70,4
Father Education	Primary and Secondary	21	25,9
	University	60	74,1
Family income	Low and Medium	71	87,7
	High	10	12,3

More than half of the students participating in the study are male. More than three-quarters of the gifted students are enrolled in the 7th grade. Nearly three-quarters of the gifted students' mothers and fathers are graduated from university. Over one-fifth of the parents of gifted students belong to the low to moderate income bracket.

Data Collection Tool

The data in the study were collected with the "Writing Self-Efficacy Scale," "Writing Motivation Scale," "Narrative Writing Assessment Form," and "Expository Text Writing Assessment Form."

Personal Information Form

This form, prepared by the researcher, consists of six questions aimed at determining the gender, grade, parental education level, socio-economic status perceptions, and the areas in which gifted students live.

Narrative Writing Assessment Form

The form, developed by Can and Topçuoğlu Ünal, (2018), includes eleven criteria: page layout, title, characters, setting, time, plot, coherence, sentence coherence, writing plan, spelling, and punctuation. A draft of the form was presented to three different Turkish language teachers to gather their opinions. Based on expert opinions, the "Sentence Coherence" criterion was removed from the draft form, as it

was deemed to have similar content to "Coherence." As a result of expert opinions, NADF consists of ten criteria.

Informative Text Writing Assessment Form

The form, developed by Müldür (2017), comprises seven items: main idea/focus, supporting ideas and development, organization and consistency, language and style, coherence, spelling, and punctuation (Appendix 3). The criteria in the form, prepared in the form of a graded scoring key, were scored between 1 and 5. According to this form, the minimum score a student can get is 5, and the maximum score is 35.

Writing Self-Efficacy Scale

The scale, developed by Yılmaz-Soylu and Akkoyunlu (2019), consists of 13 items and have three dimensions, similar to the original scale. The KMO value was 0.937, and Bartlett's sphericity test was found as $p=0.00$. The internal consistency (Cronbach's Alpha) coefficients for the subscales were calculated. The internal consistency was found to be 82 for the transfer dimension, 87 for the idea generation sub-dimension, and 84 for the self-regulation dimension. The Cronbach Alpha value of the study (α) was found to be 0.87, α idea generation = 0.70, α transfer = 0.81, and α self-regulation = 0.82).

Writing Motivation Scale

The scale, developed by Deniz and Demir (2020), is considered highly reliable due to Cronbach's Alpha values being above 0.85. The internal consistency coefficient obtained from the test-retest process was 0.85, indicating good consistency of the scale. The exploratory factor analysis confirmed a one-dimensional scale structure consisting of 13 items with a total variance value of 42.52%. Confirmatory factor analysis also validated the one-dimensional structure of the scale ($\chi^2=83.05$, $sd=61$, $RMSEA=0.038$, $NNFI=0.99$, $NFI=0.97$, $GFI=0.95$, $CFI=0.99$, $SRMR=0.039$, $AGFI=0.93$). The calculated structure reliability of the scale was 0.89, indicating sufficient reliability of the scale. The research resulted in a valid and reliable measurement tool consisting of 13 items in one dimension. The Cronbach Alpha value for the study is 0.85.

Data Collection and Analysis

In order to collect the data, necessary permissions were obtained from relevant instructors for the scales to be used in the study. After obtaining the permissions, the required applications for the Ethical Committee Approval Report were made. After getting the permissions, the researcher conducted necessary interviews with the students attending Science and Art Centers (SACs) and requested the voluntary students' parents to fill out the Consent Form. After the consent forms were completed, the data were collected in December of the 2022-2023 academic year. Gifted students were given two consecutive weeks to work on writing topics. The writing topics were determined by a Turkish language teacher working at SACs and they consist of 5 subjects in each genre (informative and narrative texts). These designated topics were presented to 10 Turkish language teachers from different schools, and the teachers separately scored each topic. After the scoring process, three topics with the highest scores were selected for each genre (informative and narrative texts). Then, the students took the Writing Motivation and Writing Self-Efficacy Scale during a class hour. During the application of the scales, the researchers provided necessary explanations to the students when needed.

The writing works of the students (both informative and narrative texts) were evaluated by the researcher and three Turkish language teachers with 15-20 years of teaching experience using assessment forms for informative and narrative writing. The consistency between the three evaluators who assessed the writing skills of gifted students in both narrative and informative texts was calculated using the Kendall W concordance coefficient with the help of SPSS 21.0 software. According to the calculations, the Kendall W score for narrative texts was 0.951, with $p = 0.00$, and for informative texts, it was 0.906, with $p = 0.00$. Hence, there is a statistically significant agreement among the three evaluators in the assessment of both narrative and informative texts written by gifted students.

The collected data were then transferred and analyzed using the SPSS package program. Before the analysis, the normal distribution and homogeneity of the scores obtained from the Writing Self-Efficacy, Writing Motivation, and Informative and Narrative Writing Evaluation forms of the gifted

students were examined. To conduct parametric tests, the scores needed to have a normal distribution, and each group should have more than 30 students (Can, 2017). According to George and Mallery (2010), the scores should be within the ± 2 range for normal distribution. The results of the analyses will then be presented in tables and interpreted. While the Writing Self-Efficacy, Motivation, and Skills (both narrative and informative texts) scores of gifted students showed normal distribution, due to one of the two-variable groups (class level, mother and father's education level, family income level) having fewer than 30 students, Mann Whitney U test was applied. However, for the variable of gender, the number of students in each group was more than 30, so an independent t-test was used. The relationship between the Writing Self-Efficacy, Skills, and Motivation of gifted students was examined through correlation analysis. As the data showed normal distribution, Pearson correlation analysis was used.

The skewness, kurtosis values, and homogeneity of the scores obtained from the Writing Skills, Motivation, and Self-Efficacy scales of gifted students are given in the table below.

Table 2.
Normality and Homogeneity

Scales	N	Kurtosis	Skewness
Self-Efficacy	81	,219	-,757
Motivation	81	,975	-,510
Narrative	81	,006	,052
Informative	81	,019	-,363

According to Kılıç (2014), when the significance is greater than 0.8, the effect size is considered highly effective; between 0.2 and 0.8, it is considered moderately effective; and when smaller than 0.2, it is considered weakly effective.

Findings

In this part of the study, the results of the analyses obtained about gifted students' writing self-efficacy, motivation and skills (narrative and informative text) are presented. The results of the descriptive analyses about gifted students' writing self-efficacy, motivation and skills are shown in Table 3.

Table 3.
Results of Descriptive Analysis

Situation	Variable	Self-Efficacy		Motivation		Narrative		Informative	
		x	s.s.	x	s.s.	x	s.s.	x	s.s.
Gender	Female	85,34	9,32	3,30	,57	2,68	,44	3,02	,62
	Male	81,05	11,80	3,09	,70	2,42	,63	2,42	,95
Grade	7th Grade	82,76	10,41	3,11	,62	2,50	,56	2,63	,88
	8th Grade	83,95	13,68	3,05	,76	2,71	,59	3,00	,77
Mother Education	Primary and Secondary	83,13	11,1	3,02	,69	2,56	,47	2,84	,78
	University	82,88	10,92	3,14	,62	2,53	,60	2,62	,91
Baba Eğitim	Primary and Secondary	81,04	12,05	3,06	,68	2,54	,62	2,78	,87
	University	83,62	10,3	3,12	,63	2,54	,55	2,66	,88
Family Income	Low and Medium	83,41	10,4	3,11	,58	2,56	,56	2,71	,85
	High	79,69	14,3	3,08	1,00	2,35	,57	2,50	1,01

It was found that the mean scores of writing self-efficacy, writing motivation and writing skills (narrative and informative text) of gifted female students were higher and the standard deviation scores were lower than those of male students. Although the mean scores of writing self-efficacy and skills (narrative and informative text) of gifted 7th grade students were lower than 8th grade students, it was found that the mean scores of writing motivation were higher. It was determined that the average scores of writing self-efficacy and narrative text writing of gifted students whose mothers were university graduates were lower than those of students whose mothers were primary and

secondary education graduates, while the average scores of writing motivation and informative text writing were higher.

It was found that the average scores of writing self-efficacy and writing motivation of gifted students whose fathers were university graduates were higher than those of students whose fathers were primary and secondary education graduates, the average scores of writing informative texts were lower, and the average scores of writing narrative texts were equal.

It was determined that the mean scores of writing self-efficacy, writing skills (narrative and informative text), and writing motivation of gifted students with low family income were higher than those of students with high family income.

Findings Related to the First Sub Problem

The results of the Mann Whitney U test conducted to examine the effect of gender, grade level, family income level, and mother-father education level on the writing self-efficacy of gifted students are shown in Table 4.

Table 4.

The Effect of Demographic Characteristics on Writing Self-Efficacy

Situation	Variable	n	Rank Mean	Rank Sum	U	z	p
Grade	7th Grade	63	40,00	2720,00	374,00	-,88	,38
	8th Grade	18	46,23	601,00			
Mother Education	Primary and Secondary	24	41,85	1004,50	663,50	-,21	,83
	University	57	40,64	2316,50			
Father Education	Primary and Secondary	21	38,48	808,00	577,00	-,57	,57
	University	60	41,88	2513,00			
Family Income	Low and Medium	71	41,58	2952,00	314,00	-,59	,56
	High	10	36,90	369,00			

It was revealed that the variables of class, parental education and family income status did not create any statistical significance in the writing self-efficacy of gifted students ($p > .05$).

Table 5.

Gender Effect on Writing Self-Efficacy

Gender	N	\bar{X}	s.d	Levene Test		t	p
				F	p		
Female	36	85,34	9,32	2,10	,15	1,78	,08
Male	45	81,05	11,80				

It was determined that the gender variable did not create any statistical significance in the writing self-efficacy of gifted students ($p > .05$).

Findings Related to the Second Sub Problem

The results of the Mann Whitney U test conducted to examine the impact of gender, grade levels, parental education levels, and family income statuses on the writing motivation of gifted students are presented in Table 6.

Table 6.

The Influence of Demographic Characteristics on Writing Motivation

Situation	Variable	n	Rank Mean	Rank Sum	U	z	p
Grade	7th Grade	63	40,71	2768,00	422,00	-,26	,80
	8th Grade	18	42,54	553,00			
Mother Education	Primary and Secondary	24	39,15	939,50	639,50	-,46	,65
	University	57	41,78	2381,50			

Table 6 continuing

Father Education	Primary and Secondary	21	39,64	832,50	601,50	-,31	,76
	University	60	41,48	2488,50			
Family Income	Low and Medium	71	41,33	2934,50	331,50	-,34	,74
	High	10	38,65	386,50			

It has been found that class, parental education, and family income variables do not statistically signify any significance in the writing motivation of gifted students ($p > .05$).

Table 7.

Gender Effect on Writing Self-Efficacy

Gender	N	\bar{X}	s.d	Levene Test		t	p
				F	p		
Female	36	85,34	9,32	2,10	,15	1,78	,08
Male	45	81,05	11,80				

It has been determined that the gender variable does not statistically determine any significance in the writing motivation of gifted students ($p > .05$).

Findings Related to the Third Sub Problem

The results of the Mann Whitney U test conducted to examine the impact of gender, grade levels, parents' education status, and family income status on the writing skills (narrative and informative texts) of gifted students are shown in Table 8.

Table 8.

The Impact of Demographic Characteristics on Writing Skills (Narrative and Informative Texts).

Text	Situation	Variable	n	Rank Mean	Sum of Ranks	U	z	p
Narrative	Grade	7th Grade	63	39,87	2711,00	365,00	-,99	,32
		8th Grade	18	46,92	610,00			
	Mother Education	Primary and Secondary	24	42,60	1022,50	645,50	-,40	,69
		University	57	40,32	2298,50			
	Father Education	Primary and Secondary	21	41,86	879,00	612,00	-,20	,85
		University	60	40,70	2442,00			
	Family Income	Low and Medium	71	41,76	2965,00	301,00	-,78	,44
		High	10	35,60	356,00			
	Informative	Grade	7th Grade	63	39,84	2709,00	363,00	-1,02
8th Grade			18	47,08	612,00			
Mother Education		Primary and Secondary	24	45,44	1090,50	577,50	-1,11	,27
		University	57	39,13	2230,50			
Father Education		Primary and Secondary	21	44,98	944,50	546,50	-,90	,37
		University	60	39,61	2376,50			
Family Income		Low and Medium	71	41,57	2951,50	314,50	-,58	,56
		High	10	36,95	369,50			

It has been determined statistically that the grade level of students, parental education, and family income do not create any significance in the writing skills (narrative and informative texts) of academically gifted students ($p > .05$).

Table 9.
The Effect of Gender on Writing Skills

Texts	Gender	N	\bar{X}	s.d	Levene test		t	p	d
					F	p			
Narrative	Female	36	2,68	,44	,034	,85	-1,75	,08	-
	Male	45	2,42	,63					
Informative	Female	36	3,02	,62	7,41	,01	2,18	,03*	,48
	Male	45	2,42	,95					

While there was no statistically significant difference in the narrative text writing skills of gifted students based on gender ($p > .05$), it has been revealed that there is a statistically significant difference in informative text writing skills ($p < .05$). The medium effect size ($d = .48$) in informative text writing skills indicates that girls have an advantage ($X = 3.02$).

Findings Related to the Fourth Sub Problem

In this section of the study, the results of the Pearson correlation analysis conducted to determine the relationship between gifted students' writing self-efficacy, skills (narrative and informative texts), and motivation are presented.

Table 10.
Pearson Correlation Analysis

Writing	Values	Self-Efficacy	Motivation	Narrative	Informative
Self-Efficacy	r	1	,47*	-,05	-,06
	p	-	,00	,67	,59
	N	81	81	81	81
Motivation	r	,47*	1	,04	,08
	p	,00	-	,74	,51
	N	81	81	81	81
Narrative Text	r	-,05	,04	1	,79*
	p	,67	,74	-	,00
	N	81	81	81	81
Informative Text	r	-,06	,08	,79*	1
	p	,59	,51	,00	-
	N	81	81	81	81

$p < .05^*$

According to Pearson correlation analysis; there is a moderately relationship between the self-efficacy in writing and writing motivation of gifted students ($p < .05$), but there is no relationship between writing skills and self-efficacy ($p > .05$). Although there is a moderately relationship between the narrative writing skill and informative writing skill of gifted students ($p < .05$), it is observed that the writing skills are not related to writing self-efficacy and motivation ($p > .05$).

Discussion, Conclusion, and Suggestions

At the end of the study carried out to determine the relationship between writing self-efficacy, writing motivation, and writing skills of gifted students, it was found that grade, parental education, and family income variables did not create statistically significant differences in the writing self-efficacy, motivation, and skills (narrative and informative texts) of gifted students. However, the gender variable showed a statistically significant difference in favor of girls only in informative text writing skills. Furthermore, a relationship was identified between the writing self-efficacy and motivation of gifted students, but no relationship was found between their writing self-efficacy and skills. Additionally, although there was a relationship between the narrative text writing skills and informative text writing skills of gifted students, no relationship was observed between their writing skills and self-efficacy or motivation.

In the study, it was found that the variables of grade, parental education, and family income did not create statistically significant differences in the self-efficacy, motivation, and writing skills (narrative

and informative text) of gifted students. It is seen that gifted female students are better than male students in writing self-efficacy, which plays an important role in writing motivation (Frank-Webb, Vandiver ve Jeung, 2016; Pajares, Valiante & Cheong, 2006). In addition, the gender variable has been found to create statistically significant differences only in informative text writing skills in favor of girls. If writing activities with writing techniques are carried out with gifted students, it is seen that students' writing skills, self-efficacy and motivation improve (DeMent, 2008; Ginn, Keel & Fredrick, 2002; Kabadayı, Çocuk & Yanpar-Yelken, 2022; Radachy, 2015; Sevim, Karabulut & Elkatmış, 2021). Walker (2003) concluded that the development of writing self-efficacy of gifted students depends on the fact that they choose the genre they will write and are actively involved in writing activities. However, making gifted students do continuous writing activities that tire their hands, not motivating them to write, not making them write on subjects that will attract their interest, not giving them the opportunity to see the relationship between learning processes and results, and encountering negative reactions from their families and teachers in cases where the student fails in writing reduce students' writing skills and motivation (Brown-Anfelouss, 2012; Yurtbakan, 2022b). In addition, extrinsic motivators such as teachers and family play an important role in the writing skills of gifted students, but intrinsic motivators affect the writing skills of gifted students the most (Garrett & Moltzen, 2011). Besides, it is observed that students who read many books daily have higher levels of writing motivation than those who read a little or not at all (Bozgün & Akın-Kösterelioğlu, 2022). The fact that gifted students are more interested in mathematics and science (Johnsen, 2004; Kalayci & Coşkun, 2020), and the fact that Turkish is not a prioritised subject among the interests of gifted students may be the reason for affecting students' self-efficacy, motivation and skills in writing, which is one of the basic language skills taught in the Turkish course.

In the study, a relationship was found between the self-efficacy for writing and the writing motivation of gifted students, but there was no significant relationship between their writing self-efficacy and skills. Gifted students who attend science and art centers are engaged in writing activities on various topics or projects, and they are provided with opportunities to present their writings to their peers in these institutions. It can be assumed that the writing activities contribute to the development of students' writing skills, thereby enhancing their writing self-efficacy. Gifted students who present their writings to their peers during presentations may receive positive feedback, which could increase their perception of competence in writing and boost their motivation for future writing endeavors. Although there is a correlation between the narrative and informative writing skills of gifted students, no significant relationship was found between their writing skills and their writing self-efficacy or writing motivation. Reading fantasy books that enhance their imagination during leisure time might facilitate gifted students in incorporating their own experiences into narrative texts. As a result, improved narrative writing skills might encourage them to write about scientific subjects they are interested in due to their inherent curiosity. However, it is observed that gifted students have lower writing attitudes compared to their typically developing peers. As a consequence, meaningful relationships between writing self-efficacy, motivation, and skills might not emerge for gifted students. Since creativity is an important characteristic of gifted students like motivation and general ability (Renzulli, 1986), creative writing activities may be needed to improve the writing skills of gifted students. Overall, the study revealed a moderate relationship between the writing self-efficacy and motivation of gifted students, while their writing skills showed a significantly low negative correlation with writing self-efficacy and motivation. This indicates that students' motivation and self-efficacy for writing are closely related and these two variables seem to have a substantial impact on their writing performances (Pajares, Valiante & Cheong, 2006; Olthouse, 2010) . These results may also suggest that students lack a realistic perspective about their own abilities.

Suggestions

1. Creative writing activities that support the improvement of writing skills for gifted students may be conducted.
2. The study carried out with gifted secondary school students may also be conducted with gifted primary school students.

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Ethics statement: In this study, we declare that the rules stated in the "Higher Education Institutions Scientific Research and Publication Ethics Directive" are complied with and that we do not take any of the actions based on "Actions Against Scientific Research and Publication Ethics". At the same time, we declare that there is no conflict of interest between the authors, which all authors contribute to the study, and that all the responsibility belongs to the article authors in case of all ethical violations.

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