

Research Article

Comparison of critical thinking dispositions of gifted students in support education (enrolled with SACs) and formal education

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Article Info	Abstract
<p><i>Received:</i> 30 October 2022 <i>Accepted:</i> 26 December 2022 <i>Available online:</i> 30 Dec 2022</p> <p><i>Keywords:</i> Critical thinking Gifted Student Talent Tendency Thinking skills</p>	<p>Critical thinking is the ability of individuals to reason against events, facts, situations, and to analyze and evaluate problem situations. It is the ability to reveal the difference between the arguments between the lines and rhetoric while using elements such as reading, writing, speaking and listening, which are the four basic language skills. The main purpose of this research is to determine the critical thinking dispositions of primary school students diagnosed with gifted. In line with this main purpose, the relationships between students' grade levels, gender, number of siblings, education levels of parents, whether students are gifted or not, their ability to express their thoughts in the family and their critical thinking tendencies will be revealed. In the study, it will be structured using the survey model design, which is one of the quantitative research methods. With the survey model, the critical thinking tendencies of gifted primary school students will be determined in the research. In addition, the relationships between critical thinking dispositions and variables such as grade level, gender, number of siblings, education level of parents, ability to express their thoughts at home will also be examined. The study group of the research consisted of third and fourth grade students studying in the provinces and districts of Tokat and receiving education in Science and Art Centers with 55 gifted, and 187 students with average talent. Thus, a total of 242 students took part in the study group of the research. The data in the research were obtained by using the 'Critical Thinking Tendency Scale for Primary School Students' developed by Uluçmar and Akar (2021). Consisting of 18 items in total, the scale consists of four sub-dimensions. Alpha reliability coefficient of the scale was found .80. The data obtained in the research were analyzed with the help of SPSS package program. Before starting the analysis of the data, normality analyzes were made and as a result of the analysis, Independent Sample t-Test and ANOVA tests were used for the data showing normal distribution of the data. The Kruskal Wallis Test was applied to the data that were not normally distributed. According to the research findings, the critical thinking dispositions of the gifted students were at a good level. No statistically significant difference was found between the critical thinking dispositions of gifted students and the sub-dimensions of the scale, as well as their grade levels, gender status, number of siblings, and parental education status. A significant difference was found in favor of the gifted students between the Science and Art Center students who were diagnosed with gifted and those who continue their education in their regular schools. In addition, the critical thinking dispositions of gifted students who always express their thoughts in the family were significantly higher than those of the gifted students who sometimes express their thoughts.</p>

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Introduction

Thinking skill is a human-specific phenomenon and affects the decision-making process of the individual. An individual has to make decisions at every stage of his life. However, these decisions are sometimes expressed as right and sometimes

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wrong in terms of their consequences. The most important skill that will increase the accuracy of personal decisions both in terms of quality and quantity is critical thinking skill. Critical thinking skills are first acquired with the closest social environment of the individual, and it is expected to develop with the school period. Instructors argue that critical thinking skill is an important skill that should be acquired by students (Alharbi, 2022; Costa, 2001; Lipman, 2003). Especially in the 21st century, where economic, technological, social and societal change accelerates, critical thinking skills are the most basic competencies.

Critical thinking is the ability of individuals to reason against events, facts, situations, and to analyze and evaluate problem situations. It is the ability to reveal the difference between arguments and rhetoric while using the basic four language skills such as reading, writing, speaking and listening. Being able to make the right decisions with the ability to think critically is a characteristic that every person should have, and it is a very important condition for the mental development of individuals (Çıtak & Uysal, 2012). Because, while thinking keeps the mind active, critical thinking establishes connections between concepts and facts, reveals relationships and activates the decision-making mechanism. Thus, new connections are formed between neurons and the neuroplasticity ability of the brain develops. With this ability, learning becomes active and permanent. From this point of view, critical thinking skill not only improves the decision-making ability of the individual, but also strengthens the learning ability.

The rapid change in science and technology, the changing needs of the individual and society, innovations and developments in learning and teaching theories and approaches have also directly affected the roles expected from individuals (Güleç, 2020). This change can be produced by people who can produce information, use it functionally in life, solve problems, think critically, be entrepreneurial, determined, have communication skills, empathize, contribute to society and culture, etc. defines an individual with qualifications (Ministry of National Education, 2019). One of the 21st century skills emphasized in the learning process in primary school is critical thinking skills (Fajari, 2021). The learning processes, quality of life, and success in life of students who acquire this skill continue to increase. At the same time, it increases the individual's social and social communication skills. Therefore, critical thinking skills are an important acquisition that should be included in educational curricula (Barell, 2003). While defining the roles expected from the individual in the curriculum of the Turkish education system, the skill of being a 'critical thinker' is also described.

Attitudes are tendencies that guide skills and abilities. There are tendencies that also affect critical thinking skills. These are tendencies such as curiosity, flexibility, honesty, open-mindedness, analytical, self-confidence, and systematicity. Critical thinking dispositions are of great importance for individuals to have critical thinking skills, which is one of the important skills of today. Critical thinking tendencies turn into critical thinking skills. In addition, it removes the obstacles standing in the way of critical thinking skills. For this reason, it is expected that individuals' critical thinking tendencies are determined, deficient skills are gained, and existing ones are developed.

Gifted students are special children for whom countries set political goals for their future. Therefore, enriched education programs are applied for gifted students. These students pass certain intelligence and ability tests to determine whether they are gifted or not. Gifted are determined and developed. In Turkey, gifted students are identified by going through various evaluation stages. Students diagnosed with gifted can receive supportive education at their own school. In addition, Science and Art Centers established in Turkey implement support education programs for gifted students. Gifted students go to Science and Art Centers outside their own schools and receive education in line with their abilities. It is expected that critical thinking skills and tendencies of these children, who are selected from certain stages and who are superior to their peers, are also superior.

It is an important element to gain critical thinking skills to gifted students. However, besides this, students' current critical thinking tendencies should also be determined. A general situation can be revealed. Obstacles and tendencies in front of critical thinking skills can be determined. In line with this profile, the adequacy of students' critical thinking skills in today's conditions can be discussed and an explanation can be made about the issues that need to be developed. Thus, gains related to tendencies that support critical thinking skills can be included in curricula. Educational-political steps can be taken to develop critical thinking skills of gifted students, one of the 21st century skills. Therefore, it is very

important to determine the critical thinking skills of gifted students and to examine their relationship with different variables.

When the literature is examined, it has been observed that the relationships between different variables, learning approaches, problem solving skills and critical thinking skills of nursing students, science students, education faculty students, health school students, physical education department students, secondary school students are examined (Çalışkan, 2009; İskender et al. Karadağ, 2015; Saçlı and Demirhan, 2008; Tümkaya, 2011; Türnüklü and Yeşildere, 2005; Yıldırım and Şensoy, 2011). As for the critical thinking skills of primary school students, it has been observed that studies have been conducted in terms of their relationship with course success, reading time, gender, TV watching time, and social studies course (Akar & Kara, 2016; Demir, 2006). However, no study was found on the relationship between critical thinking dispositions of gifted primary school students and variables such as parental education status, gender status, grade level, special education status, number of siblings, and critical thinking dispositions.

With this research, critical thinking dispositions that affect the problem solving, thinking, reasoning, analysis and evaluation skills of primary school third and fourth grade students diagnosed with gifted were examined in terms of various variables. With the study, an answer will be sought to the question of "at what level are the critical thinking dispositions of gifted students?". Below the sub-problems:

- Is there a statistically significant difference between students' critical thinking dispositions and grade levels/gender/number of siblings/mother' education level/father' education level/being gifted?

Method

Model of the Research

The study was structured using the survey design, which is one of the quantitative research methods. Survey research is the process of collecting data to determine the characteristics of a particular group (Büyüköztürk et al., 2014). In this study, critical thinking tendencies of gifted primary school students will be determined. In addition, the relations between critical thinking dispositions and grade level, gender, number of siblings, education level of mother and father, and special education status will also be examined.

Participants

The study group of the research consisted of third and fourth grade students studying in Tokat province and its districts. In Turkey, students pass through various assessment stages and are diagnosed with gifted. These identified students start to study at Science and Art Centers. Therefore, the data of the gifted students were obtained from the students of the Science and Art Center located in Tokat and its districts. 55 gifted students participated in the study. In addition, one of the sub-problems is to determine whether critical thinking disposition is the feature that distinguishes gifted students. Therefore, data on critical thinking disposition of students with 187 average abilities were also collected. Demographic information for the students participating in the study is shown in Table 1.

Table 1. Demographic Information of Gifted Students Participating in the Study

Variable	Group	n	%
Grade level	Third grade	20	36,4
	Fourth grade	35	63,6
Gender	Girl	28	50,9
	Boy	27	49,1
Number of siblings	A sibling	4	7,3
	Two siblings	34	61,8
	Three siblings	13	23,6
	Four siblings and above	4	7,3
Mother education	Primary education	14	25,5
	High school	11	20,0
	University	30	54,5
Father education	Primary education	9	16,4

	High school	14	25,5
	University	32	58,2
Ability to express thoughts	Anytime	29	52,7
	Sometimes	26	47,3
	I don't express	0	0

When Table 1 is examined, 36.4% (N=20) of the gifted students participating in the research are third grade students and 63.6% (N=35) are fourth grade students. 50.9% (N=28) of these students are female and 49.1% (N=27) are male students.

In the research, the relationship between gifted students and students with average ability was also examined. The number of gifted and average talents of the students who participated in the study are shown in Table 2.

Table 2. The Status of Being Gifted

Variable		f	%
Being gifted	Gifted	55	22,73
	Nongifted	187	77,27

When Table 2 is examined, 22.73% (N=55) of the students participating in the research are gifted students and 77.27% (N=187) are students with average talent.

Data Collection

The data in the research were obtained by using the 'Critical Thinking Tendency Scale for Primary School Students' developed by Uluçınar and Akar (2021). Critical thinking disposition scale consists of 18 items and four sub-dimensions. The sub-dimensions were named as 'Maturity and Open-mindedness, Mindfulness and Skepticism, Curiosity and Questioning, Bias and Objectivity'. Students are asked to respond to the scale items prepared in a four-likert type with one of the levels of 'never, sometimes, most of the time and always'. The lowest score that can be obtained from the scale is 18, and the highest score is 72. The higher the score, the higher the critical thinking skill level. Alpha reliability coefficient for the data collection scale was calculated and the results are shown in Table 3.

Table 3. Alpha Reliability Analysis of the Scale in General and Its Sub-Dimensions

Dimension	Alpha
Maturity and Open-Minded	.67
Caution and Skepticism	.71
Curiosity and Questioning	.82
Bias and Objectivity	.71
Critical Thinking Tendencies	.80

According to Kılıç (2016), if the Alpha reliability coefficient is above .60, the scale is at an 'acceptable' level. In this study, it is seen that the reliability coefficient for the whole scale and its sub-dimensions is greater than .60. Before starting the collection of research data, the necessary legal permissions for data collection were obtained from the Tokat Provincial Directorate of National Education. In addition, consent was sought from the families of the students regarding the collection of data. In the research, the data were obtained by the researcher by going to the classrooms of the students. Before starting data collection, students were given detailed information about the research and answering the scale. Then the scale was distributed to the students and collected again after being answered by the students.

Data Analysis

The data obtained from the students were loaded into the SPSS package program and made analyzable. Normality tests were performed to decide with which tests to analyze the data. Information on the normality of the data is given in Table 4.

Table 4. Normality Analysis of Research Data

Variable	Group	Kolmogorov-Smirnov	Skewness	Kurtosis	Applied Test
Grade Level	Third grade	.20	.039	-1,046	Independent t-Test
	Fourth grade	.20	-.319	-.341	
Gender	Girl	.16	-.505	-1.072	Independent t-Test
	Boy	.20	.199	-.092	
Number of siblings	A sibling	.00*	-.265	.443	Kruskal Wallis
	Two siblings	.16	-.349	-.639	
	Three siblings	.20	-.442	.209	
	Four siblings and above	.00*	1,643	3,038	
Mother education	Primary education	.20	.76	1,117	One Way ANOVA
	High school	.20	.136	-1,527	
	University	.19	-.828	.027	
Father education	Primary education	.20	.781	.743	One Way ANOVA
	High school	.20	-.186	-1,259	
	University	.20	-.523	-.276	
Ability to express thoughts	Anytime	.20	-.181	-.703	Independent t-Test
	Sometimes	.20	.117	-.218	

When Table 4 is examined, it is seen that the Independent Sample t-Test and One-Way ANOVA Test were applied in the analysis of normally distributed data. In the analysis of non-normally distributed data, the analysis was performed with the Kruskal Wallis Test. The score ranges in Table 5 were used to evaluate students' critical thinking dispositions.

Table 5. Critical Thinking Tendencies Scale Mean Scores Ranges

Desk	Score Range	Trend Level
1	1,00 – 1,75	Weak tendency
2	1,76 – 2,50	Medium trend
3	2,51 – 3,25	Good trend
4	3,26 – 4,00	Strong trend

Results

The critical thinking disposition mean scores of the students participating in the research were calculated. The obtained information is presented in Table 6.

Table 6. Students' Critical Thinking Dispositions Mean Scores

Dimension	Gifted			Average Skilled		
	N	\bar{X}	ss	N	\bar{X}	ss
Maturity and Open-Minded	55	3,28	.65	187	2,98	.63
Caution and Skepticism	55	2,99	.64	187	2,62	.66
Curiosity and Questioning	55	3,05	.75	187	2,56	.66
Bias and Objectivity	55	2,72	.72	187	2,72	.71
Critical Thinking Tendencies	55	3,01	.46	187	2,71	.41

When Table 6 is examined, it can be stated that the critical thinking dispositions of the gifted students ($\bar{X}=3.01$) and the students with average ability ($\bar{X}=2.71$) are at the level of 'good disposition' when the mean scores for the whole scale are examined.

In the study, the relationship between the critical thinking dispositions of gifted students and their grade levels was examined using the Independent Sample t-Test. Information on the results of the analysis is given in Table 7.

Table 7. The Relationship Between Students' Critical Thinking Dispositions and Grade Levels

Dimension	Variable	N	\bar{X}	ss	t	sd	p
Maturity and Open-Minded	Third grade	20	3,3250	.61825	.37	53	.71
	Fourth grade	35	3,2571	.67651			
Caution and Skepticism	Third grade	20	2,9100	.65687	.65	53	.52
	Fourth grade	35	3,0286	.63827			
Curiosity and Questioning	Third grade	20	2,8100	.81943	1,74	53	.09
	Fourth grade	35	3,1886	.69102			
Bias and Objectivity	Third grade	20	2,6875	.63802	.25	53	.81
	Fourth grade	35	2,7357	.77636			
Critical Thinking Tendencies	Third grade	20	2,9250	.46105	1,04	53	.31
	Fourth grade	35	3,0587	.46029			

When Table 7 is examined, no statistically significant difference was found between students' critical thinking dispositions and grade levels ($p > .05$). There was no statistically significant difference between the sub-dimensions of the scale of critical thinking dispositions and the grade levels of gifted students ($p > .05$).

The relationship between the critical thinking dispositions of gifted students and their gender status was examined using the Independent Sample t-Test. Information on the results of the analysis is given in Table 8.

Table 8. The Relationship Between Students' Critical Thinking Dispositions and Gender Status

Dimension	Gender	N	\bar{X}	ss	t	sd	p
Maturity and Open-Minded	Girl	28	3,2768	.67474	-.058	53	.95
	Boy	27	3,2870	.63815			
Caution and Skepticism	Girl	28	2,9571	.59717	-.331	53	.74
	Boy	27	3,0148	.69487			
Curiosity and Questioning	Girl	28	3,0786	.80432	.275	53	.78
	Boy	27	3,0222	.71540			
Bias and Objectivity	Girl	28	2,7411	.73435	.237	53	.81
	Boy	27	2,6944	.72501			
Critical Thinking Tendencies	Girl	28	3,0139	.47686	.062	53	.95
	Boy	27	3,0062	.45274			

When Table 8 is examined, no statistically significant difference was found between the students' critical thinking skills and their gender status in the whole scale and its sub-dimensions ($p > .05$).

In the study, the relationship between the critical thinking dispositions of gifted students and the number of siblings was also examined. The results of Kruskal Wallis analysis on the difference between the critical thinking dispositions of gifted students and the number of siblings are shown in Table 9.

Table 9. The Results of Kruskal Wallis Analysis Regarding the Difference Between Critical Thinking Dispositions and Number of Siblings

Dimension	Number of Siblings	N	Rank Average	X^2	sd	p
Maturity and Open-Minded	A sibling	4	35,00	5,78	3	.12
	Two siblings	34	30,87			
	Three siblings	13	21,46			
	Four siblings and above	4	17,88			
Caution and Skepticism	A sibling	4	26,88	2,89	3	.42
	Two siblings	34	28,88			
	Three siblings	13	29,96			
	Four siblings and above	4	15,25			
Curiosity and Questioning	A sibling	4	19,00	2,30	3	.51

	Two siblings	34	30,12			
	Three siblings	13	26,62			
	Four siblings and above	4	23,50			
Bias and Objectivity	A sibling	4	24,75	1,13	3	.77
	Two siblings	34	28,56			
	Three siblings	13	29,69			
	Four siblings and above	4	21,00			
Critical Thinking Tendencies	A sibling	4	24,50	3,00	3	.39
	Two siblings	34	30,46			
	Three siblings	13	25,96			
	Four siblings and above	4	17,25			

When Table 9 is examined, it is seen that there is no statistically significant difference between the critical thinking dispositions of gifted students and the number of siblings ($p>.05$). In the study, the relationship between the critical thinking dispositions of gifted students and their mother's educational status was also examined. The results of the one-way analysis of variance regarding the difference between the critical thinking dispositions of gifted students and their mother's educational status are shown in Table 10.

Table 10. One-Way Analysis of Variance Results of the Difference Between Critical Thinking Dispositions and Mother Educational Status

Dimension		Sum of Squares	sd	Mean Squares	f	p
Maturity and Open-Minded	Between groups	1,632	2	.816	1,997	.146
	In-group	21,249	52	.409		
	Total	22,882	54			
Caution and Skepticism	Between groups	1,519	2	.759	1,907	.159
	In-group	20,710	52	.398		
	Total	22,228	54			
Curiosity and Questioning	Between groups	2,320	2	1,160	2,117	.131
	In-group	28,498	52	.548		
	Total	30,817	54			
Bias and Objectivity	Between groups	1,047	2	.523	1,000	.375
	In-group	27,210	52	.523		
	Total	28,257	54			
Critical Thinking Tendencies	Between groups	1,138	2	.569	2,863	.066
	In-group	10,332	52	.199		
	Total	11,470	54			

When Table 10 is examined, it is seen that there is no statistically significant difference between the educational status of mothers and their critical thinking dispositions ($p>.05$).

In the study, the relationship between the critical thinking dispositions of gifted students and their father's educational status was also examined. The results of the one-way analysis of variance regarding the difference between the critical thinking dispositions of gifted students and their father's educational status are shown in Table 11.

Table 11. One-Way Analysis of Variance Results of the Difference Between Critical Thinking Dispositions and Educational Status of Fathers

Dimension		Sum of Squares	sd	Mean Squares	f	p
Maturity and Open-Minded	Between groups	.806	2	.403	.949	.394
	In-group	22,076	52	.425		
	Total	22,882	54			

Caution and Skepticism	Between groups	.360	2	.180		
	In-group	21,869	52	.421	.428	.654
	Total	22,228	54			
Curiosity and Questioning	Between groups	1,783	2	.891		
	In-group	29,035	52	.558	1,596	.212
	Total	30,817	54			
Bias and Objectivity	Between groups	.576	2	.288		
	In-group	27,681	52	.532	.541	.586
	Total	28,257	54			
Critical Thinking Tendencies	Between groups	.696	2	.348		
	In-group	10,773	52	.207	1,680	.196
	Total	11,470	54			

When Table 11 is examined, it is seen that there is no statistically significant difference between the father's education status of gifted students and their critical thinking dispositions ($p > .05$).

In the study, the relationship between the critical thinking dispositions of gifted students and students with average ability was also examined. The Independent Sample t-Test results regarding the critical thinking dispositions of gifted and average talented students are shown in Table 12.

Table 12. The Relationship Between Students' Critical Thinking Dispositions and Gifted Status

Dimension	Being Gifted	N	\bar{X}	SS	t	sd	p
Maturity and Open-Minded	Gifted	55	3,28	.65095	3,05	240	.00
	Nongifted	187	2,98	.62856			
Caution and Skepticism	Gifted	55	2,99	.64159	3,67	240	.00
	Nongifted	187	2,62	.66395			
Curiosity and Questioning	Gifted	55	3,05	.75544	4,38	240	.00
	Nongifted	187	2,56	.65998			
Bias and Objectivity	Gifted	55	2,72	.72338	-.022	240	.98
	Nongifted	187	2,72	.70744			
Critical Thinking Tendencies	Gifted	55	3,01	.46087	4,41	240	.00
	Nongifted	187	2,71	.41172			

When Table 12 is examined, it is seen that there is a statistically significant difference between the average score of the gifted students ($\bar{X}=3.01$) and the average score of the students with average talent ($\bar{X}=2.71$) ($p < .05$). When the mean scores are examined, it is seen that this difference is in favor of the gifted students.

In addition, it is seen that there is a significant difference in favor of gifted students in the sub-dimensions of maturity and open-mindedness, carefulness and skepticism, inquisitiveness and questioning ($p < .05$). No statistically significant difference was found in the bias and objectivity sub-dimension of the scale ($p > .05$).

In the research, the relationship between the critical thinking dispositions of gifted students and their ability to express their thoughts in the family was also examined. The results of the one-way analysis of variance regarding the difference between the critical thinking dispositions of gifted students and the level of expressing their thoughts within the family are shown in Table 13.

Table 13. One-Way Analysis of Variance Results Regarding the Difference Between Critical Thinking Dispositions and Expression Levels

Dimension	Variable	N	\bar{X}	ss	t	sd	p
Maturity and Open-Minded	Anytime	29	3,52	.55473	3,01	53	.00
	Sometimes	26	3,02	.65925			
Caution and Skepticism	Anytime	29	3,07	.59588	1,01	53	.31
	Sometimes	26	2,89	.68872			
Curiosity and Questioning	Anytime	29	3,33	.69750	3,13	53	.00

	Sometimes	26	2,74	.70375			
Bias and Objectivity	Anytime	29	2,78	.75399	.62	53	.54
	Sometimes	26	2,65	.69670			
Critical Thinking Tendencies	Anytime	29	3,18	.44792	3,05	53	.00
	Sometimes	26	2,82	.40785			

When Table 13 is examined, a statistically significant difference was found between the mean score of the gifted students who always express their thoughts in the family (N=3.18) and the mean scores of the gifted students who sometimes express their thoughts (N=2.82) ($p < .05$). When the mean scores are examined, it is seen that this difference is in favor of the students who always express their thoughts in the family.

When the sub-dimensions of the scale are examined, it is seen that there is a significant difference in favor of gifted students in terms of maturity and open-mindedness and inquisitiveness and questioning ($p < .05$). However, no significant difference was found in the dimensions of caution and skepticism, and bias and objectivity ($p > .05$).

Discussion and Conclusion

As a result of the research, it was determined that critical thinking disposition is a distinctive feature for gifted students. Similarly, gifted students have more mature, open-minded, careful, skeptical, curious and questioning personalities in terms of critical thinking disposition than average gifted students. Expressing their thoughts at home supports gifted people to be critical thinkers. Again, it has been observed that students who constantly express their thoughts at home have a more mature, open-minded, curious and questioning personality in terms of critical thinking dispositions. The grade levels, genders, number of siblings and educational status of parents do not affect critical thinking dispositions of gifted students.

In the studies of Ocak and Kalender (2017) and Köksal and Çöğmen (2018), it was determined that female students' critical thinking skills are at a higher level than males. However, as a result of this research, it was seen that the critical thinking dispositions of gifted students were not affected by gender. The reason for this difference can be attributed to the good and distinctive level of critical thinking dispositions of gifted students. Since gifted students have strong critical thinking dispositions, it can be stated that this difference at the gender level is closed.

Critical thinking skill is expressed as an important power and inherent ability of gifted students (Heller, 2005; Renzulli, 2005; Ziegler & Stöger, 2004). The results of this study support this statement. Supporting students' strengths will increase their self-confidence and improve their ability to express themselves. Therefore, as Köksal, Gögsu and Akkaya (2017) stated in their studies, gifted students should receive critical thinking skills training in their education life.

No significant relationship was found between students' critical thinking skills and grade levels. A similar situation was found in the studies of Aral (2005), Kösal and Çöğmen (2018). However, in some studies, it has been determined that critical thinking skills have a positive relationship with age and grade level (Ay & Akgöl, 2008; Kahraman, 2008). Knowledge and experience are of great importance in acquiring critical thinking skills. Students' knowledge and experience levels can be affected by factors such as age and educational status. Therefore, it may be expected that there is a positive relationship between critical thinking skills and grade level. However, it can be said that the reason why gifted students are not detected is that the students increase their knowledge and experience at the same level due to their giftedness. This similarity may be the reason why the difference in critical thinking disposition among gifted students did not change depending on the grade level. In addition, in this study, the change between the third and fourth grade levels was examined. As the grade level difference increases, the direction and size of the relationship between gifted and critical thinking disposition may also change.

Recommendations

Based on the research results, the following suggestions can be expressed;

- Critical thinking disposition, which is a distinctive feature for gifted students, can be used in the process of identifying gifted students.

- In the education programs applied for the development of critical thinking skills of gifted students, learning outcomes aimed at revealing, developing and supporting critical thinking dispositions can be included.
- Critical thinking dispositions of gifted students who express themselves were found to be stronger. Therefore, gifted students should be given the opportunity to speak and express themselves at home, at school and in their social environments.

Biodata of Author



Osman Aslan is a PhD graduate. Aslan started to work as a classroom teacher at the Ministry of National Education in 2006, when he completed his undergraduate education in the field of classroom teaching. Aslan, who was appointed as the director of the Science and Art Center in 2020, still carries out this duty. He has various articles and refereeing in national and international journals.

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Academic social media links: <https://scholar.google.com.tr/citations?user=alwFDsIAAAAJ&hl=tr>

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