

Research Article

Gifted students' value perceptions: differentiation to socio-demographic variables¹

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Article Info

Received: 2 July 2022

Accepted: 20 September 2022

Available online: 30 Sept 2022

Keywords:

Gifted individual

Gifted student

Perceptions for the Values Scale

Value

Value education

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Abstract

In Türkiye, Science and Art Centers (SACs) operate affiliated to the Ministry of National Education (MoNE) in order to develop individual talents and raise awareness of gifted students in preschool, primary school, secondary school and high school without disrupting their regular schooling. It is of great importance for not only the individual happiness of gifted children but also for the entire society to identify them at an early age and educate them as required by their personal abilities. The aim of this study is to examine the value perceptions of gifted students studying at SACs against selected variables. It is a survey research designs. The study sample consists of 712 students attending SACs at 14 different provinces determined with the maximum diversity sampling method. The data were collected by using the "Perceptions for Values Scale" developed by Beldağ (2012) comprised of seven sub-dimensions. Data analysis was performed by applying t-test and One-Way Analysis of Variance. As a result, the variables of gender, mother's education level, grade level, TV program(s) watched, and interests (hobbies) were found to affect value acquisition of gifted students. In light of the study results, it is recommended to include more values education practices in the contents taught at SACs.

To cite this article:

Beldağ, A., (2022). Gifted students' value perceptions: differentiation to socio-demographic variables. *Journal for the Education of Gifted Young Scientists*, 10(3), 503-521. DOI: <http://dx.doi.org/10.17478/jegys.1153098>

Introduction

Giftedness is defined as the combination of above-average ability, creative thinking and sense of mission (Kurnaz & Barışık, 2020). It is known that there is a considerable number of gifted individuals in every society. Educating these individuals right and well has been considered important especially since the second half of the 20th century. Gifted students can be seen as an important and strategic force in understanding and particularly solving social problems. Failing to benefit from this rich potential and provide them good education may bring losses besides new problems to the society.

It has been found that gifted individuals are ahead of their peers in terms of some values, character and personality, as well as their intelligence levels (Cash & Lin, 2022; Kurnaz, Çiftçi, & Karapazar, 2013). The moral identity levels of these students are higher compared to other students (Özbey & Adam Karduz, 2018). Gifted students react at a higher level to situations such as destruction of nature, destruction of living things, injustice to people, pollution of the environment, and war and violence as they are triggered by feelings such as compassion and thinking about the well-being of others (Özbey & Sarıçam, 2016). These students are self-confident and energetic and have leadership skills. For

¹ This paper was produced from the project financed by Recep Tayyip Erdoğan University Scientific Research Projects Coordinator's Office under project number SBA-2018-912.

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this reason, leadership in the gifted is an important part of character education (Berkowitz & Hoppe, 2009). It is crucial for the society, country and humanity to identify the gifted students in the society and to put them through education compliant with their abilities. In addition to helping generate new knowledge and transfer the knowledge of humanity to future generations thanks to their extraordinary traits and thinking skills (Chowkase & Watve, 2021), gifted individuals take interest in many social phenomena such as politics, religion, environmental problems and wars (Farrall & Henderson, 2015). Activating these students' superior thinking skills with different techniques leads to significant improvement in their learning (Avcu & Yaman, 2022). Although they are ahead of their peers in moral development capacity, they face moral dilemmas due to the fact that they go through the fixed stages faster. While these students have the potentials to create great opportunities for the society and humanity depending on the education they receive and the environment they live in, they may emerge as a danger or threat in the opposite scenario (Hökelekli & Gündüz, 2004; Tortop, 2018). The risk is about their leaving school and isolating themselves from society. When the literature is examined, it is seen that although gifted students are at a certain level in terms of values and character traits, some of them exhibit moral problems like arrogance and stubbornness (Kurnaz et al., 2013). Considering these basic differences and problems, special practices and educational institutions are needed in order to meet the educational needs of gifted students (Callahan, Moon, & Oh, 2017).

Identifying gifted children at an early age and educating them around their personal talents is important not only for the individual happiness of these children, but also for raising the quality of social life. During value acquisition process, gifted children form their identities and are affected by their surrounding (Hökelekli & Gündüz, 2004). Raising individuals with values is among the basic duties and expectations of any society. In particular, gifted students stand out in the context of their potential. Sezer (2016) states that families want their children to gain moral, national and universal values through education. It is of particular importance to understand the value orientations of gifted children and to reflect on values education since gifted children are interested in moral and spiritual issues from an early age. Renzulli (2020) emphasized the importance of supporting the moral development of these students. They differ from normal students in terms of some value judgments (Özbey & Sarıçam, 2019). The moral and spiritual potential of these children can prevent the moral corruption and erosion of values experienced in today's world and reach a virtuous society (Hökelekli and Gündüz, 2004). Hardy, Bean, and Olsen (2015) state that moral sensitivity is an indicator of how much importance is given to values and virtues.

Thinking the probability that gifted students can reach important positions in society to guide the society, it is important to know the values they have or to reveal the variables that affect the acquisition of these values. Once appropriate environmental conditions are offered to gifted individuals in terms of family, school, social environment, and so on, it will make overall significant contributions to their self-realization and moral sensitivity development (Özbey, 2016). According to Berkowitz and Hoppe (2009), gifted children have different characteristics compared to their peers, one of which is that they are more intellectual and outgoing. Yılmaz and Tortop (2018) pointed out that gifted students will be able to learn the values to be gained effectively and accurately thanks to their superior thinking power, and these values will enable them to develop positive attitudes and behaviors in their social skills. Hardy et al (2014) stated that these individuals tend to transform the truths that make up their personality into behavior. These social skills acquired by the gifted will play an important role in the realization of their social adaptation. Special talented students with high social responsibility levels have higher emotional intelligence than their peers (Khasawneh & Aldiabat, 2017; Özbey & Adam Karduz, 2018).

Gifted students are defined as individuals who learn faster than their peers, are ahead in creativity, art and leadership capacity, have special academic abilities, can understand abstract ideas, like to act independently in their interests, and perform at a high level, and those students are trained at SACs (MoNE, 2018). Training given at SACs consists of five programs, which are adaptation, support training, recognizing individual talents, developing special talents and project production/management. Students are given a "Certificate of Completion" upon completion of each program. SACs have been active as a part of the Ministry of National Education in Turkey since 2005 in order to improve the individual abilities of special students (painting, music and general mental ability) at the age of pre-school, primary school,

secondary school and high school in a way that does not disrupt their education in schools and to raise awareness. There are 279 SACs in 81 provinces of Turkey at service of eligible students (MoNE 2022). It is important to consider the social aspects (family structure, socio-economic status and special interests) of these students in addition to their experiences at school in the value acquisition process.

Problem of Study

Therefore, this study aimed at examining the value perceptions of gifted students at SACs in relation with a set of variables. In line with this, answer was sought to the following questions. The main problem of study is;

- What is the level of perceptions of gifted children towards values?

The sub-problems of the study are below;

- Is there any differences on gifted students' value perceptions according to sex?
- Is there any differences on gifted students' value perceptions according to grade level in formal education?
- Is there any differences on gifted students' value perceptions according to education level of their parents?
- Is there any differences on gifted students' value perceptions according to occupation of their parents?
- Is there any differences on gifted students' value perceptions according to TV program(s) they watch?
- Is there any differences on gifted students' value perceptions according to their interests (hobbies)?

Method

Research Design

This study was carried out in survey research design since it aims to analyze the value perceptions of gifted students studying in science and art centers in relation with different variables. Survey researchers are conducted on a sample that represents the population and reflects its characteristics (Fraenkel & Wallen, 2009). In that type of studies, the procedural steps are borrowed from quantitative research in order to describe the attitudes, views, behaviors or characteristics of the sample selected from the population (Creswell, 2012). For this reason, survey research design can be used in quantitative, qualitative or mixed methods research (Ponto, 2015)

Participants

SACs were opened for training gifted students in Turkey. Science and art center is defined as “the institution which provides support education services to students with special talents in the fields of general mental skills, visual arts or music in order to improve their abilities and enable them to use their capacities at the highest level while they attend formal educational institutions”. SAC appeals to students who are diagnosed to be gifted or talented at exams in the above-mentioned areas. In SACs, students are given training on their selected abilities on weekdays or weekends outside of formal education hours. In the scope of the training at these centers, project-based, interdisciplinary education programs and activities are organized by means of enrichment and acceleration depending on the abilities of the students for original end products, projects and productions (MoNE, 2018).

The population of the research consists of gifted students studying at SACs located in the Black Sea Region of Turkey. The study sample, which is paraphrased as “the part of the universe chosen to represent it” (Fraenkel & Wallen, 2009), was selected by using the maximum diversity sampling method among purposeful sampling methods. This method was preferred in order to understand whether “there are common or shared phenomena among diverse situations” (Yıldırım & Şimşek, 2011). Of the 15 SACs in the population, 14 could be contacted. As for the participants, 712 out of 2799 beneficiaries at these centers were included in the study. Demographic information about the study group is given in Table 1.

Table 1. Study Sample Demographics

Demographic Information		N
Gender	Female	363
	Male	349
Grade Level in Formal Education	5	105
	6	325
	7	176
	8	62
	9 and higher	44
SAC Program Studied	Support training	118
	Recognizing individual talents	361
	Developing special talents	204
	Project production/management	29
Total		712

Data Collection Tool

In this research, Beldag's (2012) "Perceptions for Values Scale" was used for collecting data (See Appendix). This scale is comprised of two parts. The first part contains personal information while part two includes statements about value perceptions. There are Likert-type items to be answered with one of the five options ("strongly disagree", "disagree", "undecided", "agree" and "strongly agree"). The items in the scale consist of the sub-dimensions of "Being Scientific, Patriotism, Peace, Fairness, Honesty, Aesthetics, Respect". The validity and reliability analyses of the " Perceptions for Values Scale" were conducted during this study and the following results were reached.

Validity and Reliability Analysis

Confirmatory factor analysis was performed to determine the level of validity of the measurement tool for this study. Confirmatory factor analysis is used to check whether a previously used scale fits the factorial structure of a new research study and, if so, to measure the extent it fits the original factor structure (Suhr, 2006). In other words, confirmatory factor analysis is applied to analyze the compatibility between the data and the theoretical structure and to test the suitability of the structure which was developed earlier (Seçer, 2017). In this scope, confirmatory factor analysis was performed to determine whether the " Perceptions for Values Scale" developed by Beldag (2012) would be confirmed in the sample used in the current research. When it comes to the level of reliability, the Cronbach Alpha internal consistency coefficient was calculated.

The results of the confirmatory factor analysis for the Perceptions for Values Scale are presented in Figure 1.

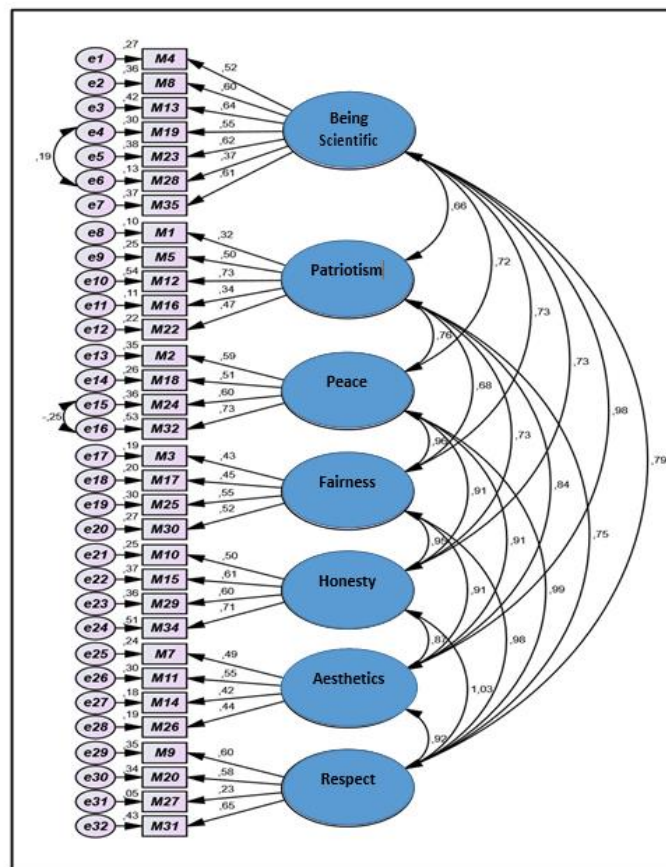


Figure 1. Confirmatory Factor Analysis for the Perceptions for Values Scale

As a result of the confirmatory factor analysis for the Perceptions for Values Scale, some items were excluded from the scale in order to obtain better goodness-of-fit values. These are Item 33 in *Patriotism* sub-scale, Item 21 in *Honesty* sub-scale, and Item 6 in *Peace* sub-scale. As a result, the goodness-of-fit values obtained for the scale were $\chi^2=1075.136$; $df=441$; $\chi^2/df=2.438$; $GFI=.91$; $AGFI=.89$; $CFI=.90$; $RMSEA=0.45$; $SRMR= 0.45$. These values suggest that the Perceptions for Values Scale has acceptable goodness-of-fit values (Bayram, 2010; Şimşek, 2007; Sümer, 2000).

During the scale development stages, the Cronbach Alpha reliability coefficient was calculated as .88. Even better, this feature was calculated as .90 in the present study. It means that the Perceptions for Values Scale is highly reliable.

Data Collection and Analysis

The “Perceptions for Values Scale” was applied to students attending 14 science and art centers in different provinces across the Black Sea Region. Collected data were analyzed with SPSS and AMOS. In the analysis of the data, t-test and One-Way Analysis of Variance were used as applicable for the characteristics of the variables. Skewness and kurtosis values were calculated to decide whether the variables had a normal distribution or not. The results are given in Table 2.

Table 2. Skewness and Kurtosis Values for Variables

Sub-scale/Total	Skewness	Kurtosis
Being Scientific	-,450	-,025
Patriotism	-1,862	4,780
Peace	-1,962	5,967
Fairness	-1,310	2,277
Honesty	-1,949	6,063
Aesthetics	-1,110	2,324
Respect	-1,288	2,718
Total	-1,784	6,032

As seen in Table 2, the kurtosis and skewness values of the sub-scales and the entire scale indicate a normal distribution. According to Kline (2015), skewness values below 3.0 and kurtosis values below 10.0 are considered sufficient for a normal distribution.

Results

Value perceptions of SAC students were analyzed in relation with gender, grade level, father's education level, mother's education level, household income, father's occupation, mother's occupation, TV program(s) watched, and interests. The findings obtained from the analyses are elaborated below.

Gifted Students' Value Perceptions by Gender

In order to find out whether SAC students' value acquisitions differ against the variable of gender, t-Test was conducted. The results are displayed in Table 3.

Table 3. T-Test Results regarding Gender

Values	Gender	n	\bar{X}	SS	t	SD	p																																																																				
Being Scientific	Female	363	3.99	0.64	.853	710	.394																																																																				
	Male	349	3.95	0.66				Patriotism	Female	363	4.45	0.59	-.919	710	.358	Male	349	4.49	0.57	Peace	Female	363	4.49	0.56	1.843	710	.066	Male	349	4.41	0.62	Fairness	Female	363	4.36	0.66	2.853	710	.004**	Male	349	4.22	0.69	Honesty	Female	363	4.52	0.56	2.137	710	.033*	Male	349	4.42	0.61	Aesthetics	Female	363	4.17	0.63	.243	710	.808	Male	349	4.15	0.65	Respect	Female	363	4.32	0.56	1.699	710	.090
Patriotism	Female	363	4.45	0.59	-.919	710	.358																																																																				
	Male	349	4.49	0.57				Peace	Female	363	4.49	0.56	1.843	710	.066	Male	349	4.41	0.62	Fairness	Female	363	4.36	0.66	2.853	710	.004**	Male	349	4.22	0.69	Honesty	Female	363	4.52	0.56	2.137	710	.033*	Male	349	4.42	0.61	Aesthetics	Female	363	4.17	0.63	.243	710	.808	Male	349	4.15	0.65	Respect	Female	363	4.32	0.56	1.699	710	.090	Male	349	4.24	0.62								
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	Male	349	4.24	0.62																																																																							

**p<.01; *p<.05

According to Table 3, the variable of gender yielded no statistically significant results in the whole scale [$t_{(710)}=1.640$; $p>.05$] and in the sub-scales Being Scientific [$t_{(710)}=.853$; $p>.05$], Patriotism [$t_{(710)}=-.919$; $p>.05$], Peace [$t_{(710)}=1.843$; $p>.05$], Aesthetics [$t_{(710)}=.243$; $p>.05$], and Respect [$t_{(710)}=1.699$; $p>.05$]. When the significant differences were examined, value perception levels of female students were higher than those of male students in the sub-scales of Fairness [$t_{(710)}=-2.853$; $p<.05$] and Honesty [$t_{(710)}=2.137$; $p<.05$].

Gifted Students' Value Perceptions by Grade Level

One-Way Analysis of Variance was conducted to determine whether the value acquisitions of SAC students differ against the grade level they attend. The results are shown in Table 4.

Table 4. ANOVA Results regarding Grade Level

Value	Grade Level	n	\bar{X}	SS	SD	F	p	LSD
Being Scientific	5 (1)	105	3.99	.69	4	.815	.516	-
	6 (2)	325	3.97	.63	707			
	7 (3)	176	3.94	.64	711			
	8 (4)	62	4.08	.59				
	9 and higher (5)	44	3.87	.74				
Patriotism	5 (1)	105	4.42	.62	4	3.725	.005	4>5
	6 (2)	325	4.48	.52	707			
	7 (3)	176	4.54	.56	711			
	8 (4)	62	4.43	.60				
	9 and higher (5)	44	4.18	.84				
Peace	5 (1)	105	4.51	.63	4	2.908	.021	1>5
	6 (2)	325	4.48	.53	707			
	7 (3)	176	4.42	.60	711			
	8 (4)	62	4.46	.61				

	9 and higher (5)	44	4.18	.76				
Fairness	5 (1)	105	4.34	.68	4	3.585	.007	-
	6 (2)	325	4.32	.66	707			
	7 (3)	176	4.22	.70	711			
	8 (4)	62	4.44	.46				
	9 and higher (5)	44	4.01	.85				
Honesty	5 (1)	105	4.55	.62	4	1.936	.103	-
	6 (2)	325	4.46	.56	707			
	7 (3)	176	4.46	.61	711			
	8 (4)	62	4.58	.39				
	9 and higher (5)	44	4.31	.80				
Aesthetics	5 (1)	105	4.31	.64	4	2.643	.033	1>5
	6 (2)	325	4.16	.64	707			4>5
	7 (3)	176	4.09	.65	711			
	8 (4)	62	4.19	.57				
	9 and higher (5)	44	4.00	.64				
Respect	5 (1)	105	4.34	.69	4	1.579	.178	-
	6 (2)	325	4.26	.58	707			
	7 (3)	176	4.31	.56	711			
	8 (4)	62	4.33	.40				
	9 and higher (5)	44	4.10	.74				

As seen in Table 4, the variable of grade level was seen to yield nonsignificant difference in the whole scale [$F_{(4,707)} = 2.729; p > .05$] and in sub-scales of Being Scientific [$F_{(4,707)} = .815; p > .05$], Fairness [$F_{(4,707)} = 3.585; p > .05$], Honesty [$F_{(4,707)} = 1.936; p > .05$], and Respect [$F_{(4,707)} = 1.579; p > .05$]. However, the difference was statistically significant for Patriotism [$F_{(4,707)} = 3.725; p < .05$], Peace [$F_{(4,707)} = 2.908; p < .05$], and Aesthetics [$F_{(4,707)} = 2.643; p < .05$]. A closer look at the significant difference reveals that the participants attending the eighth grade [$\bar{X} = 4.43$] had higher perceptions under the dimension of Being Scientific compared to those at the ninth grade or above [$\bar{X} = 4.18$]. In addition, the perceptions of the participants attending the fifth grade [$\bar{X} = 4.42$] were higher than the perceptions of those at and above the ninth grade [$\bar{X} = 4.18$]. In another sub-scale, Peace, it was seen that the fifth-graders [$\bar{X} = 4.51$] had higher perceptions than those at and above the ninth grade [$\bar{X} = 4.18$]. Again, the perceptions of students attending the sixth grade [$\bar{X} = 4.48$] were higher than those at and above the ninth grade [$\bar{X} = 4.18$]. Under the sub-scale of Aesthetics, the fifth-graders [$\bar{X} = 4.31$] showed higher perception levels than those at and above the ninth grade [$\bar{X} = 4.00$]. The participants at the eighth grade also [$\bar{X} = 4.19$] showed higher perceptions than those attending the ninth grade and above [$\bar{X} = 4.00$]. These findings suggest that SAC students' perceptions of being scientific, peace and aesthetics decrease as their grade level increases.

Gifted Students' Value Perceptions by Father's Education Level

One-Way Analysis of Variance was conducted in order to find out whether the value acquisitions of BİLSEM students differ in relation with their father's level of education. The results are presented in Table 5 below.

Table 5. ANOVA Results regarding Father's Education Level

Value	Father's Education Level	n	\bar{X}	SS	SD	F	p	LSD
Being Scientific	Primary School (1)	27	4.07	.60	4	.523	.719	-
	Secondary School (2)	42	3.98	.71	707			
	High School (3)	147	3.97	.57	711			
	University (4)	390	3.95	.68				
	Postgraduate (5)	106	4.03	.60				
Patriotism	Primary School (1)	27	4.68	.31	4	2.028	.089	-
	Secondary School (2)	42	4.54	.47	707			
	High School (3)	147	4.53	.57	711			

	University (4)	390	4.43	.58				
	Postgraduate (5)	106	4.41	.66				
Peace	Primary School (1)	27	4.58	.57	4	.449	.216	-
	Secondary School (2)	42	4.56	.51	707			
	High School (3)	147	4.45	.60	711			
	University (4)	390	4.41	.63				
	Postgraduate (5)	106	4.51	.43				
Fairness	Primary School (1)	27	4.37	.75	4	.157	.960	-
	Secondary School (2)	42	4.27	.64	707			
	High School (3)	147	4.28	.65	711			
	University (4)	390	4.30	.69				
	Postgraduate (5)	106	4.26	.68				
Honesty	Primary School (1)	27	4.61	.42	4	.889	.470	-
	Secondary School (2)	42	4.55	.60	707			
	High School (3)	147	4.50	.52	711			
	University (4)	390	4.44	.63				
	Postgraduate (5)	106	4.47	.56				
Aesthetics	Primary School (1)	27	4.28	.61	4	.795	.529	-
	Secondary School (2)	42	4.27	.54	707			
	High School (3)	147	4.18	.60	711			
	University (4)	390	4.13	.68				
	Postgraduate (5)	106	4.16	.60				
Respect	Primary School (1)	27	4.43	.46	4	.828	.508	-
	Secondary School (2)	42	4.26	.56	707			
	High School (3)	147	4.30	.57	711			
	University (4)	390	4.25	.63				
	Postgraduate (5)	106	4.33	.53				

Table 5 shows that there was no statistically significant difference regarding the variable of father’s education level in the whole scale [$F_{(4,707)} = .967; p > .05$] and in sub-scales of Being Scientific [$F_{(4,707)} = .523; p > .05$], Patriotism [$F_{(4,707)} = 2.028; p > .05$], Peace [$F_{(4,707)} = .449; p > .05$], Fairness [$F_{(4,707)} = .157; p > .05$], Honesty [$F_{(4,707)} = .889; p > .05$], Aesthetics [$F_{(4,707)} = .795; p > .05$], and Respect [$F_{(4,707)} = .828; p > .05$].

Gifted Students’ Value Perceptions by Mother’s Education Level

One-Way Analysis of Variance was conducted in order to find out whether the value acquisitions of BİLSEM students differ in relation with their mother’s level of education. The results are presented in Table 6.

Table 6. ANOVA Results regarding Mother’s Education Level

Value	Mother’s Education Level	n	\bar{X}	SS	SD	F	p	LSD
Being Scientific	Primary School (1)	68	4.01	.60	4	1.392	.235	-
	Secondary School (2)	50	4.12	.56	707			
	Lise (3)	192	3.94	.62	711			
	University (4)	335	3.93	.67				
	Postgraduate (5)	67	4.06	.66				
Patriotism	Primary School (1)	68	4.57	.44	4	3.773	.005	1>4 3>4
	Secondary School (2)	50	4.49	.52	707			
	Lise (3)	192	4.56	.53	711			
	University (4)	335	4.38	.64				
	Postgraduate (5)	67	4.48	.54				
Peace	Primary School (1)	68	4.43	.54	4	1.541	.189	-
	Secondary School (2)	50	4.57	.52	707			
	Lise (3)	192	4.51	.59	711			
	University (4)	335	4.40	.61				
	Postgraduate (5)	67	4.45	.57				
Fairness	Primary School (1)	68	4.29	.69	4	.841	.500	-
	Secondary School (2)	50	4.28	.62	707			
	Lise (3)	192	4.36	.63	711			

	University (4)	335	4.25	.71				
	Postgraduate (5)	67	4.27	.65				
Honesty	Primary School (1)	68	4.53	.52	4	.537	.709	-
	Secondary School (2)	50	4.47	.73	707			
	Lise (3)	192	4.51	.54	711			
	University (4)	335	4.44	.60				
	Postgraduate (5)	67	4.47	.64				
Aesthetics	Primary School (1)	68	4.23	.55	4	2.028	.089	-
	Secondary School (2)	50	4.27	.52	707			
	Lise (3)	192	4.23	.58	711			
	University (4)	335	4.09	.70				
	Postgraduate (5)	67	4.14	.66				
Respect	Primary School (1)	68	4.33	.53	4	.780	.539	-
	Secondary School (2)	50	4.33	.57	707			
	Lise (3)	192	4.31	.57	711			
	University (4)	335	4.24	.62				
	Postgraduate (5)	67	4.30	.58				

As can be seen in Table 6, there was no statistically significant difference regarding the variable of mother’s education level in the whole scale [$F_{(4,707)}=1.760; p>.05$] and sub-scales of Being Scientific [$F_{(4,707)}=1.392; p>.05$], Peace [$F_{(4,707)}=1.541; p>.05$], Fairness [$F_{(4,707)}=.841; p>.05$], Honesty [$F_{(4,707)}=.537; p>.05$], Aesthetics [$F_{(4,707)}=2.028; p>.05$], and Respect [$F_{(4,707)}=.780; p>.05$], while significant difference was found under Patriotism [$F_{(707)}=3.773; p<.05$]. When the significant difference was examined, it was seen that patriotism perceptions were higher among participants whose mothers are graduates of Primary School [$\bar{X}=4.57$] compared to those whose mothers are graduates of university [$\bar{X}=4.38$]. In a similar vein, the participants whose mothers are graduates of high school [$\bar{X}=4.56$] showed higher value perceptions than university graduates [$\bar{X}=4.36$]. These findings suggest that BİLSEM students achieve patriotism value at a lower level as mother’s education level increases.

Gifted Students’ Value Perceptions by Father’s Occupation

One-Way Analysis of Variance was conducted in order to find out whether the value acquisitions of the participants differ in relation with their father’s occupation. The results are shown in Table 7.

Table 7. ANOVA Results regarding Father’s Occupation

Values	Father’s Occupation	n	\bar{X}	SS	SD	F	p	LSD
Being Scientific	Worker (1)	72	3.99	.63	4	.856	.490	-
	Civil Servant (2)	423	4.00	.65	707			
	Tradespeople (3)	57	3.94	.62	711			
	Retired (4)	38	3.84	.72				
	Self-employed (5)	122	3.91	.62				
Patriotism	Worker (1)	72	4.56	.48	4	.626	.644	-
	Civil Servant (2)	423	4.46	.58	707			
	Tradespeople (3)	57	4.41	.65	711			
	Retired (4)	38	4.42	.62				
	Self-employed (5)	122	4.47	.60				
Peace	Worker (1)	72	4.57	.45	4	2.545	.038	1>4
	Civil Servant (2)	423	4.44	.58	707			5>4
	Tradespeople (3)	57	4.42	.63	711			
	Retired (4)	38	4.21	.81				
	Self-employed (5)	122	4.49	.59				
Fairness	Worker (1)	72	4.36	.58	4	.475	.754	-
	Civil Servant (2)	423	4.30	.69	707			
	Tradespeople (3)	57	4.21	.72	711			
	Retired (4)	38	4.25	.64				

	Self-employed (5)	122	4.28	.67				
Honesty	Worker (1)	72	4.56	.49	4	2.252	.062	-
	Civil Servant (2)	423	4.47	.59	707			
	Tradespeople (3)	57	4.27	.79	711			
	Retired (4)	38	4.48	.49				
	Self-employed (5)	122	4.51	.56				
Aesthetics	Worker (1)	72	4.24	.61	4	.559	.693	-
	Civil Servant (2)	423	4.14	.65	707			
	Tradespeople (3)	57	4.17	.68	711			
	Retired (4)	38	4.09	.60				
	Self-employed (5)	122	4.19	.61				
Respect	Worker (1)	72	4.31	.47	4	.244	.913	-
	Civil Servant (2)	423	4.28	.61	707			
	Tradespeople (3)	57	4.22	.61	711			
	Retired (4)	38	4.24	.64				
	Self-employed (5)	122	4.29	.58				

As in Table 7, the variable of father’s occupation yielded nonsignificant difference in the whole scale [$F_{(4,707)} = .964; p > .05$] and in sub-scales of Being Scientific [$F_{(4,707)} = .856; p > .05$], Patriotism [$F_{(4,707)} = .626; p > .05$], Fairness [$F_{(4,707)} = .475; p > .05$], Honesty [$F_{(4,707)} = 2.252; p > .05$], Aesthetics [$F_{(4,707)} = .559; p > .05$], and Respect [$F_{(4,707)} = .244; p > .05$]. However, there was significant difference in Peace [$F_{(4,707)} = 2.545; p < .05$]. A closer look at the significant difference showed that the individuals who had worker fathers [$\bar{X} = 4.57$] had higher perceptions than those whose fathers are retired [$\bar{X} = 4.21$] under the dimension of Peace. Again, children of self-employed fathers [$\bar{X} = 4.49$] showed higher perceptions than those whose fathers are retired [$\bar{X} = 4.21$].

Gifted Students’ Value Perceptions by Mother’s Occupation

One-Way Analysis of Variance was conducted in order to find out whether the value acquisitions of the participants differ in relation with their mother’s occupation. The results are shown in Table 8.

Table 8. ANOVA Results regarding Mother’s Occupation

Values	Mother’s Occupation	n	\bar{X}	SS	SD	F	p	LSD
Being Scientific	Worker (1)	29	3.80	.60	5	1.938	.086	-
	Civil Servant (2)	327	3.95	.68	706			
	Tradespeople (3)	12	3.90	.69	711			
	Retired (4)	14	3.86	.63				
	Unemployed (5)	264	3.96	.61				
	Self-employed (6)	66	4.18	.56				
Patriotism	Worker (1)	29	4.42	.52	5	.954	.445	-
	Civil Servant (2)	327	4.42	.59	706			
	Tradespeople (3)	12	4.46	.41	711			
	Retired (4)	14	4.35	.77				
	Unemployed (5)	264	4.51	.59				
	Self-employed (6)	66	4.53	.51				
Peace	Worker (1)	29	4.54	.42	5	1.366	.235	-
	Civil Servant (2)	327	4.41	.63	706			
	Tradespeople (3)	12	4.52	.44	711			
	Retired (4)	14	4.28	.84				
	Unemployed (5)	264	4.46	.56				
	Self-employed (6)	66	4.57	.47				
Fairness	Worker (1)	29	4.32	.53	5	1.151	.332	-
	Civil Servant (2)	327	4.23	.73	706			
	Tradespeople (3)	12	4.37	.41	711			
	Retired (4)	14	4.23	.61				
	Unemployed (5)	264	4.33	.65				
	Self-employed (6)	66	4.42	.60				
Honesty	Worker (1)	29	4.57	.41	5	1.625	.151	-

	Civil Servant (2)	327	4.41	.63	706			
	Tradespeople (3)	12	4.43	.61	711			
	Retired (4)	14	4.48	.44				
	Unemployed (5)	264	4.50	.57				
	Self-employed (6)	66	4.61	.54				
Aesthetics	Worker (1)	29	4.20	.66	5	2.208	.052	-
	Civil Servant (2)	327	4.09	.68	706			
	Tradespeople (3)	12	4.22	.71	711			
	Retired (4)	14	4.14	.60				
	Unemployed (5)	264	4.20	.59				
	Self-employed (6)	66	4.35	.54				
Respect	Worker (1)	29	4.29	.50	5	1.973	.081	-
	Civil Servant (2)	327	4.23	.64	706			
	Tradespeople (3)	12	4.47	.52	711			
	Retired (4)	14	4.05	.59				
	Unemployed (5)	264	4.30	.55				
	Self-employed (6)	66	4.43	.52				

According to One-Way Variance results regarding the variable of mother’s occupation, BİLSEM students did not show significant difference in the sum of the scale [$X^2_{(5)} = 2.142; p > .05$] and in sub-scales of Being Scientific [$F_{(706)} = 1.938; p > .05$], Patriotism [$F_{(706)} = .954; p > .05$], Peace [$F_{(706)} = 1.366; p > .05$], Fairness [$F_{(706)} = 1.151; p > .05$], Honesty [$F_{(706)} = 1.625; p > .05$], Aesthetics [$F_{(706)} = 2.208; p > .05$], and Respect [$F_{(706)} = .1.973; p > .05$].

Gifted Students’ Value Perceptions by TV Program(s) Watched

Again, One-Way Analysis of Variance was conducted to see whether SAC students have different perceptions depending on the TV program(s) they watch. The findings are shown in Table 9 below.

Table 9. ANOVA Results regarding TV Program(s) Watched

Values	TV Program(s) Watched	n	\bar{X}	SS	SD	F	p	LSD
Being Scientific	Movie (1)	225	3.92	.63	8	4.023	.000	6>7
	TV Series (2)	162	3.87	.70	703			3>7
	Documentary (3)	161	4.15	.57	711			
	Magazine (4)	10	3.88	.48				
	Sports (5)	77	4.06	.65				
	News (6)	23	4.19	.51				
	Cartoons (7)	21	3.59	.67				
	Contest (8)	19	3.72	.69				
	Nothing (9)	14	3.94	.68				
Patriotism	Movie (1)	225	4.44	.58	8	2.481	.012	5>9
	TV Series (2)	162	4.48	.57	703			6>9
	Documentary (3)	161	4.45	.62	711			
	Magazine (4)	10	4.54	.53				
	Sports (5)	77	4.67	.43				
	Haber (6)	23	4.57	.50				
	Cartoon (7)	21	4.28	.56				
	Contest (8)	19	4.29	.55				
	Nothing (9)	14	4.11	.87				
Peace	Movie (1)	225	4.41	.56	8	.509	.850	-
	TV Series (2)	162	4.45	.64	703			
	Documentary (3)	161	4.50	.56	711			
	Magazine (4)	10	4.45	.34				
	Sports (5)	77	4.50	.57				
	Haber (6)	23	4.30	.82				
	Cartoon (7)	21	4.47	.68				
	Contest (8)	19	4.39	.61				
	Nothing (9)	14	4.44	.53				

Fairness	Movie (1)	225	4.23	.68	8	.547	.822	-
	TV Series (2)	162	4.30	.74	703			
	Documentary (3)	161	4.32	.66	711			
	Magazine (4)	10	4.37	.42				
	Sports (5)	77	4.35	.67				
	Haber (6)	23	4.42	.49				
	Cartoon (7)	21	4.27	.69				
	Contest (8)	19	4.38	.51				
	Nothing (9)	14	4.17	.83				
Honesty	Movie (1)	225	4.46	.59	8	.707	.686	-
	TV Series (2)	162	4.46	.64	703			
	Documentary (3)	161	4.50	.56	711			
	Magazine (4)	10	4.57	.28				
	Sports (5)	77	4.52	.53				
	Haber (6)	23	4.58	.43				
	Cartoon (7)	21	4.35	.81				
	Contest (8)	19	4.40	.59				
	Nothing (9)	14	4.21	.58				
Aesthetics	Movie (1)	225	4.14	.61	8	1.721	.090	-
	TV Series (2)	162	4.09	.68	703			
	Documentary (3)	161	4.25	.65	711			
	Magazine (4)	10	4.42	.40				
	Sports (5)	77	4.20	.64				
	Haber (6)	23	4.39	.51				
	Cartoon (7)	21	3.96	.73				
	Contest (8)	19	4.09	.49				
	Nothing (9)	14	3.94	.82				
Respect	Movie (1)	225	4.24	.58	8	1.350	.216	-
	TV Series (2)	162	4.32	.60	703			
	Documentary (3)	161	4.34	.58	711			
	Magazine (4)	10	4.35	.48				
	Sports (5)	77	4.26	.61				
	Haber (6)	23	4.33	.57				
	Cartoon (7)	21	4.08	.70				
	Contest (8)	19	4.30	.45				
	Nothing (9)	14	3.94	.67				

As can be seen in Table 9, it was found out that the students' value perceptions were not significantly different against the TV program(s) they watch in the whole scale [$F_{(8,703)} = 1.422; p > .05$] and in sub-scales of Peace [$F_{(8,703)} = .509; p > .05$], Fairness [$F_{(8,703)} = .547; p > .05$], Honesty [$F_{(8,703)} = .707; p > .05$], Aesthetics [$F_{(8,703)} = 1.721; p > .05$], and Respect [$F_{(8,703)} = 1.350; p > .05$]. However, a significant difference was found under the dimensions of Being Scientific [$F_{(8,703)} = 4.023; p < .05$] and Patriotism [$F_{(8,703)} = 2.481; p < .05$]. More specifically, the participants who watch news [$\bar{X} = 4.19$] had higher value perceptions of being scientific than those watching cartoons [$\bar{X} = 3.59$]. Moreover, the participants watching documentaries [$\bar{X} = 4.15$] had higher levels of value perceptions compared to those watching cartoons [$\bar{X} = 3.59$]. Under another dimension, Patriotism, it was seen that the students who follow sports shows [$\bar{X} = 4.67$] had higher value perceptions than those who do not watch TV at all [$\bar{X} = 4.11$]. Another finding is that the individuals watching news [$\bar{X} = 4.57$] had higher value perceptions than peers who do not watch TV at all [$\bar{X} = 4.11$].

Gifted Students' Value Perceptions by Interests

The students' value perceptions were analyzed against their interests by applying One-Way Analysis of Variance. The results are displayed in Table 10 below.

Table 10. ANOVA Results regarding Interests

Values	Interest	n	\bar{X}	SS	SD	F	p	LSD
Being Scientific	Sports (1)	218	3.94	.66	5	3.187	.007	3>5
	Music (2)	99	3.92	.73	706			4>5
	Books (3)	206	4.06	.58	711			
	Painting (4)	103	4.06	.61				
	TV (5)	43	3.73	.61				
	Computers (6)	43	3.81	.69				
Patriotism	Sports (1)	218	4.52	.56	5	1.600	.158	-
	Music (2)	99	4.37	.71	706			
	Books (3)	206	4.48	.55	711			
	Painting (4)	103	4.46	.52				
	TV (5)	43	4.31	.69				
	Computers (6)	43	4.51	.50				
Peace	Sports (1)	218	4.41	.62	5	3.354	.005	-
	Music (2)	99	4.34	.74	706			
	Books (3)	206	4.50	.53	711			
	Painting (4)	103	4.59	.46				
	TV (5)	43	4.47	.47				
	Computers (6)	43	4.25	.64				
Fairness	Sports (1)	218	4.24	.73	5	1.805	.110	-
	Music (2)	99	4.34	.71	706			
	Books (3)	206	4.35	.65	711			
	Painting (4)	103	4.37	.58				
	TV (5)	43	4.16	.65				
	Computers (6)	43	4.12	.65				
Honesty	Sports (1)	218	4.43	.62	5	1.781	.114	-
	Music (2)	99	4.44	.73	706			
	Books (3)	206	4.52	.52	711			
	Painting (4)	103	4.58	.48				
	TV (5)	43	4.38	.61				
	Computers (6)	43	4.34	.57				
Aesthetics	Sports (1)	218	4.13	.63	5	4.776	.000	4>6
	Music (2)	99	4.07	.69	706			3>6
	Books (3)	206	4.27	.58	711			
	Painting (4)	103	4.30	.61				
	TV (5)	43	3.94	.68				
	Computers (6)	43	3.93	.69				
Respect	Sports (1)	218	4.21	.62	5	3.652	.003	3>6
	Music (2)	99	4.24	.69	706			4>6
	Books (3)	206	4.39	.52	711			
	Painting (4)	103	4.36	.54				
	TV (5)	43	4.16	.55				
	Computers (6)	43	4.11	.62				

As Table 10 shows, there was found no significant difference in value perceptions against hobbies in the whole scale [$F_{(5,706)}=3.533; p>.05$] and in sub-scales of Patriotism [$F_{(5,706)}= 1.600; p>.05$], Peace [$F_{(5,706)}= 3.354; p>.05$], Fairness [$F_{(5,706)}= 10.570; p>.05$], and Honesty [$F_{(5,706)}= 9.293; p>.05$], while there were significant difference under the sub-scales of Being Scientific [$F_{(5,706)}= 3.187; p<.05$], Aesthetics [$F_{(5,706)}= 4.776; p<.05$], and Respect [$F_{(5,706)}= 3.652; p<.05$]. In the significant differences, the following highlights were noted. The individuals who are into books showed higher value perceptions [$\bar{X}=4.06$] than those who are interested in watching television [$\bar{X}=3.73$] regarding the value of Being Scientific. Furthermore, the students who are interested in painting [$\bar{X}=4.06$] showed higher value acquisitions than those interested in watching TV [$\bar{X}=3.73$]. Under the dimension of Aesthetics, value perceptions appeared higher

among those interested in painting [$\bar{X} = 4.30$] compared to those who are into computers [$\bar{X} = 3.93$]. Likewise, the participants interested in books [$\bar{X} = 4.27$] had higher value acquisitions than those who are into computers [$\bar{X} = 3.93$]. As another comparison, the scores from Respect were higher among those who like reading books [$\bar{X} = 4.39$] compared to peers who like computers [$\bar{X} = 4.11$]. Finally, the respondents who are interested in painting [$\bar{X} = 4.36$] had higher value acquisitions than those interested in computers [$\bar{X} = 4.11$].

Discussion and Conclusion

This study was carried out to investigate value perceptions of gifted students studying in BİLSEMs against a set of variables. The results are discussed in reference to the existing literature.

To start with, gifted students' value acquisitions were looked for both genders. It was seen that females have higher perception levels of *fairness* and *honesty*, while females and males are at a similar level of perceptions regarding other values, which are *being scientific*, *patriotism*, *peace*, *aesthetics*, and *respect*. In the related literature, Oğuz Namdar and Akbayrak (2019) concluded that drama practices increased gifted students' conceptual awareness of the value of justice at a significant level and that the students were able to associate the concept with daily life besides defining and exemplifying that value. Umar (2018) found that gifted girls and boys do not vary significantly in universal moral values. Ayverdi (2021) concluded that there is no significant difference between female and male students' attitudes towards environmental values. On the contrary, Topçu (2015) noted that gifted students mostly define values in a sociological context and there are gender differences in the way they perceive values. The related literature reports both consistent and divergent findings concerning the variable of gender. This can be explained with respondents' social, cultural and economic context as well as the effect of the media/social-media, which has an important place in the lives of the students today, and varying perception levels of individuals of the same age in addition to students' dissimilar interests (Camcı, 2011; Roper & Silverman, 2009).

Secondly, the present study revealed that students' value acquisitions differ at different grade levels. More particularly, this variable seems to be effective on three of the values in the scale: *patriotism*, *peace* and *aesthetics*. As the grade level increases, the gifted students' perception of patriotism, peace and aesthetics get lower. Umar (2018) found that while the average score of children aged 12-13 in universal moral values was the lowest, children aged 10-11 obtained the highest scores in the same scale. Roper and Silverman (2009) can be helpful in explaining this finding. The authors pointed out that as well as the intelligence levels of gifted students, their moral interests develop at earlier ages and more clearly than their peers.

In addition to the foregoing, parents' views on values education seem to matter. They regard values education important so they find the value education activities at BİLSEMs partially sufficient (Sezer, 2016). In the same direction, Avcu and Yaman (2022) underline the positive effect of families' participation in values education activities. Educational level of the father does not seem to be an influential factor on value acquisition of gifted students. This finding was almost repeated when it came to the mother's education level. This variable affects the perceptions regarding patriotism among all other sub-scales. In other words, mothers' education level is a powerful variable for the acquisition of the value of patriotism. Research by Türk and Nalçacı (2011) is in conformity with this finding. The finding finds further support from the literature on parents' education level. Umar (2018) and Ayverdi (2021) concluded that value acquisition is not affected from the father's educational status. As regards parents' occupations as a potential factor on value acquisition, the father's occupation seems to influence *peace* among other values. As reported in the relevant table above, the respondents whose fathers are workers or self-employed perceive the value of peace at a higher level than those whose fathers are retired. On the contrary, the mother's occupation does not seem to affect the respondents' value acquisition. Similarly, Umar (2018) found that gifted students' acquisition of universal moral values differs in cases their fathers are workers or civil servants, but the same generalization cannot be made for the mother's profession. It should be recalled that demographic characteristics matter in appraising the effect of parents' educational status and profession on the value acquisition of gifted students. In the current research, the mothers' lower level of education and the high number of unemployed mothers may have directly affected the result. In this regard, one of the most striking points is that value

acquisitions of the students whose mothers are primary school and high school graduates are higher than those whose mothers studied at university. In the evaluation of this result, parents' engagement or nonengagement in business life should be taken into account. As it can be seen from the demographic data, it seems worth noting that the study sample includes a considerably high number of mothers who do not have a job.

As another result, type of television programs seems to be a meaningful variable in gifted students' value acquisition. It is not surprising that the students who follow documentaries and news exhibit higher acquisition levels of *Being Scientific* compared to those watching cartoons. Additionally, it was seen that watchers of sports and news showed hold higher perceptions of *Patriotism* compared to those who do not watch TV at all. This could be due to the increased awareness about the realities of the world and the country as a result of watching news shows. Besides, the showing of national competitions in sporting programs might be a determiner of acquisition of the value of patriotism.

As the last topic of discussion, Girgin and Satmaz (2019) assert that organizing scientific conversations at a regular basis helps gifted students *Be Scientific*. Also, Sak (2017) drew attention to the importance of enriching the learning processes of gifted students through seminars, conferences and different types of projects. Various activities are available outside school so that gifted students can engage in in their spare time. These activities are also useful for value acquisition. Hébert and Smith (2018) emphasized the importance of supporting the socio-emotional aspects of gifted students. In this regard, the present study reported that interest (hobby) is an influential variable in acquisition of values of *Being Scientific*, *Aesthetics* and *Respect*. In this scope, it is an expected result that television viewers have a lower perception of the *Being Scientific* than those who read books and paint. It can be inferred that reading books and engaging in painting have a positive effect on developing a scientific attitude. In support of this, Berkowitz and Hoppe (2009) pointed out that the intellectual and social aspects of gifted children are much more prominent. Avcu and Yaman (2022) concluded that biography-aided differentiated education practices positively affect the value development of gifted students. It is thus essential to make such practices more widespread. In this case, it seems vital to diversify special interests of gifted children and provide sound guidance for them for the development of their social features.

Recommendations

In light of the study results, the following recommendations were proposed for the field and decision-makers.

- As SAC students move away from awareness of values as their grade levels increase, it is necessary to include more values education practices in the training contents of SAC. In addition, applied trainings and projects should be run for teachers working in SACs so that values education practices can be carried out satisfactorily as planned before.
- Departing from the proposition values education cannot be complete at school, families should take a role as stakeholders and they should be invited to informing seminars.
- Guidance should be given to students for watching movies, reading books or doing activities featuring various aspects that support values education practices. As a result, students' value acquisition is likely to escalate.
- In order for schools to take a more active role in the acquisition of values, physical facilities should be rearranged accordingly and awareness of all school personnel about the value acquisition processes should be raised.

Acknowledgement

I owe thanks to the Recep Tayyip Erdoğan University Scientific Research Projects Coordinator's Office and the participants for precious opinions (Project No: SBA-2018-912).

Ethical Standards

Ethical approval of the study was obtained from the Social and Human Sciences Ethics Committee of Recep Tayyip Erdogan University (2022/86).

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Appendix 1. Perceptions for Values Scale (Turkish Version)

Değerlere Yönelik Algılar Ölçeği						
Açıklama: Bu ölçek sizin değerlere yönelik algınızı ölçmek için geliştirilmiştir. Aşağıdaki ifadelere katılma durumunuza uygun olan kutucuğu işaretleyiniz.						
Kesinlikle Katılmıyorum 1 Katılıyorum 2 Kararsızım 3 Katılıyorum 4 Kesinlikle Katılıyorum 5						
No	Maddeler	1	2	3	4	5
1	Vatan toprağı için savaşmak anlamsızdır.*					
2	Ortak sorunlarımızı bir araya gelerek çözmeliyiz.					
3	Yakın arkadaşımız da olsa haksız olduklarında uyarmalıyız.					
4	Deneylerden sonra, öğrendiklerimizi açıklamak bize zevk verir.					
5	Bu ülkenin vatandaşı olduğumuz için gurur duymalıyız.					
6	Arkadaşlarımızın kavga etmesi beni üzer.					
7	Farklı kültürlerin tarihi eserlerini de korumalıyız.					
8	Bilimsel içerikli sergiler gezilmelidir.					
9	Arkadaşlarımızın düşüncelerine katılmasak bile onları sonuna kadar dinlemeliyiz.					
10	Sonuçları olumsuz olsa bile doğruları söylemeliyiz.					
11	Tarihi eserleri gezmek insana huzur verir.					
12	Milli bayramlar bize vatanın önemini hatırlatır.					
13	Bir olaya etki eden etmenleri araştırmalıyız.					
14	Tarihi eserler, görüntü kirliliğine neden olmaktadır.*					
15	Sözlerimiz ve davranışlarımız birbiriyle tutarlı olmalıdır.					
16	Günümüzde vatanın önemi kalmamıştır.*					
17	Kantin kuyruğunda sıra beklenmelidir.					
18	Barış yanlısı ülkeler daha huzurludur.					
19	Doğa olaylarının nasıl oluştuğunu öğrenmek isteriz.					
20	Küçükler, büyüklere saygı göstermelidir.					
21	Zor durumda kalırsam hırsızlık yaparım.*					
22	Vatanını seven kişi işini en iyi yapan kişidir.					
23	Öğrendiklerimizle ilgili deney yapmalıyız.					
24	Arkadaşlar arasındaki anlaşmazlıkların çözülmesine yardımcı olunmalıdır.					
25	Adaletin olmadığı yerde huzursuzluk (kargaşa) vardır.					
26	Çevremizdeki her şey düzenli olmalıdır.					
27	İnsanlar düşüncelerini kendilerine saklamalıdır.*					
28	Çevremizdeki doğa olaylarını sorgulamalıyız.					
29	Kimse doğruluktan ayrılmamalıdır.					
30	Sınıfta alınan kararlar sınıftaki çoğunluğun görüşünü kapsamalıdır.					
31	Arkadaşlık ilişkileri, birbirine saygılı olmayı gerektirir.					
32	Bütün insanlar barış içinde yaşamalıdır.					
33	Vatan toprağı bizim için değerlidir.					
34	Bulduğumuz değerli eşyaları sahiplerine ulaştırmaya çalışmalıyız.					
35	Öğrendiklerimizi günlük hayatta uygulamalıyız.					

*Ters maddeler : 1,14,16,21,27

Appendix 2. Perceptions for Values Scale (English Version)

Perceptions for Values Scale						
Description: This scale was developed to measure your perception of values. Tick the box that corresponds to your agreement with the following statements.						
Strongly disagree 1 Dissagree 2 Undecided 3 Agree 4 Strongly Agree 5						
No	Items	1	2	3	4	5
1	Fighting for the homeland is meaningless*					
2	We should come together to solve our common problems.					
3	We should warn one when s/he is wrong even if s/he is our close friend.					
4	We enjoy explaining what we have learned after experiments.					
5	We should be proud to be citizens of this country.					
6	It upsets me when my friends fight.					
7	We should also protect the historical artifacts of other cultures.					
8	Scientific exhibitions should be visited.					
9	We should listen to our friends to the end even if we disagree with what they say.					
10	We should tell the truth even if the consequences are bad.					
11	Visiting historical monuments gives peace of mind.					
12	National holidays remind us of the importance of the homeland.					
13	We should investigate the factors that influence a happening.					
14	Historical artifacts cause visual pollution.*					
15	Our words and actions should be consistent with each other.					
16	Homeland is not important today.*					
17	Queue should be followed at the canteen.					
18	Peace-loving countries are more peaceful.					
19	We want to learn how natural phenomena occur.					
20	Younger people must show respect to seniors.					
21	I'll steal if I'm in trouble.*					
22	Who that loves his country is the one who does his job best.					
23	We should experiment with what we have learned.					
24	Assistance should be given to resolve disputes between friends.					
25	Where there is no justice, there is unrest (chaos).					
26	Everything around us should be ordered well.					
27	People should keep their thoughts to themselves.*					
28	We should question the natural phenomena around us.					
29	No one should stray from the righteousness.					
30	Decisions made in the classroom should cover the opinion of the majority in the class.					
31	Friendships require showing respect to each other.					
32	All people should live in peace.					
33	Homeland is valuable to us.					
34	We should try to return the valuables we find to their owners.					
35	We should practise what we have learned in daily life.					

Adverse items: 1,14,16,21,27

Note: English language validity study of this scale has not been conducted.

