

The Effect of The Art Education Status of Gifted Students on Their Professional Preferences

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Abstract:

This study aims to investigate the effect of gifted students' art education on their professional preferences. The survey model, one of the quantitative research models, was used. A total of 320 students from the Çukurova Science and Art Center art field and general talent field, which were determined by the convenience sampling method, constitute the research sample group. The occupational preference inventory prepared by Atli and Kendal (2017) was used in the research. The inventory comprises six sub-dimensions: investigative, entrepreneurial, artistic, social, realistic, and traditional. Independent Sample t-Test and Anova Test were applied for the analyses, and Cohen's d and Eta Square tests were applied to calculate the effect level in meaningful data. As a result of the research on general talent and art students, it has been determined that there are significant differences in gender, school type, school level, and age.


Keywords: Special Talent, Vocational Choice, Art Education, Professional Interest.

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INTRODUCTION

It is important both personally and socially that a person can express himself/herself, that they will not get bored of dealing with it throughout their life, and that he prefers a profession suitable for their personality. It is essential for the individual to choose a profession according to their existing abilities to benefit themselves and the society in which they live because it affects their economic level, social environment, living standard, job satisfaction, and job efficiency. For this reason, choosing a profession is seen as an important turning point in one's life. Selecting a profession that conflicts with the personality traits and interests of the individual negatively affects both their private life and professional life (Aydemir, 2018). The reflection of the individual on their characteristics, interests, training, life experiences, and professional preferences will benefit both themselves and the society they live in (Miller & Cummings, 2009).

Many methods are used to measure the interests of individuals. However, while one of the most preferred methods is inventory application, another is to ask a person directly about their interests. Although it is seen as a conventional method to determine the areas of interest in line with the answers received, it is also possible to reveal the interests by considering the social appreciation (dignity, prestige) against the attitudes related to the job and profession (Kuzgun, 2000). For this reason, inventory and scales should be used in determining interest, where both validity and reliability factors are considered (Herr, Cromer, & Niles, 2004). Holland's (1997) RIASEC professional interest model on identifying professional interests, cognitive abilities, and academic achievement is among the leading models (Vock, Köller, & Nagy, 2013).

Dutch Model of Professional Interest

The vocational Preference Inventory (VPI), initially developed as a short personality test, was primarily used to evaluate professional interests (Gottfredson, 1996). Holland collects the occupational choice inventory in six sub-dimensions. These dimensions were determined as "Realist," "Investigative," "Artistic," "Social," "Entrepreneurial," and "Conventional" (RIASEC). Each type is characterized by a constellation of interests, preferred activities, beliefs, abilities, values, and characteristics. A Holland code (typically the first letters of the RIASEC type that the person most closely resembles) is generated based on evaluations (Nauta, 2010).

Realistic: The realistic dimension is associated with technical and mechanical skills, a dogmatic and practical approach to work, and an interest in working outdoors, with machines or hands. People in this group are more prone to take action than mental activities; they look for logical and concrete solutions while solving problems. They like nature, plants, and animals. Among the professions specific to this type, there are professions such as carpentry, agricultural technicians, and engineering.

Researcher: The researcher includes scientific skills and interests, an intellectual and curious personality, and mathematics and research skills. People in this group enjoy experimenting and observing, researching abstract concepts, and solving problems using analysis synthesis steps. Profession groups that include physics, chemistry, biology, mathematics, and social sciences are among the professions specific to this type.

Artistic: The artistic dimension is associated with innovative and creative features, interests, and skill sets in the arts, including visual and performing arts and creative writing. In addition to the fact that the people in this group have high imagination, developed creative aspects, and can produce original ideas, they have personality traits that work individually rather than in group work and do not like systematic and regular work. Among the professions specific to this type are departments that include fine arts, literature, theater, architecture, and cinema.

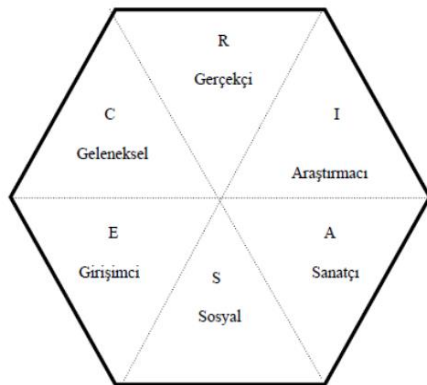
Social: This area is characterized by a social and harmonious attitude, interest in helping others in areas such as teaching or counseling, and interpersonal skills. It can be said that the people in this group like to communicate with people and avoid being involved in mechanical work. As characteristics specific to this area, it is stated that individuals have more humane, sociable, benevolent, and human aspects. Professionals specific to this type include psychologists, teachers, and tourism guides.

Entrepreneur: The entrepreneurial dimension is characterized by an ambitious and dominant personality and leadership skills related to sales, law, and trade; extroverts affect those around them and attach importance to power and prestige. The people in this group have improved leadership characteristics, strong rhetoric, high persuasion skills, and energetic, ambitious, and extroverted characteristics. These individuals enjoy competition and taking risks very much. Occupations such as policy, operator, lawyer, and finance departments can be examples of this type of occupation group.

Traditional: This area is characterized by a systematic and practical approach to work in general, strong office and organizational ability, and conservative values. Individuals have a more traditionally planned structure with certain rules, and enjoy routine work. At the same time, they are individuals with limited imagination, regular, meticulous, and enjoy dealing with numerical data. Among the professions specific to this type, jobs such as accountants, bankers, and office clerks can be given as examples (Holland, 1997).

The closer the types of people are to each other, the higher the harmony between their profession and personality is. While adjacent types of features are called adaptive (e.g., realistic versus traditional; entrepreneur versus social), opposing areas are also referred to as maladaptive (e.g., traditional versus artistic; researcher versus entrepreneur). In addition, according to this theory, people's success in their careers depends on the harmony between their professions and their personalities (Kamaşak and Bulutlar, 2010: 122).

Figure 1. Holland's Occupational Choice Hexagon



Source: (Kamaşık and Bulutlar, 2010: 122)

Even if the individual's professional preferences vary at every age and in every period, their interests or areas of talent play an active role in the profession they want to choose. Many studies have been conducted on occupational preferences from the primary school to university (Flexer, 2008; Bezanson, 2003; Can&Taylı, 2014). Early identification of individuals' interests and orientations is important regarding professional preferences, national added value, social benefit, and individual satisfaction. In particular, it will be beneficial for society to determine the interests of individuals whose particular talent areas are more advanced than their peers and to receive training in this direction. These students are considered more successful than their peers (Gagne, 2003; Sternberg, Jarvin, & Grigerenko, 2010), and the education they need may also differ (Kaya, Ogurlu, & Hizli, 2017).

Special, talented individuals differ from their peers with their metacognitive characteristics (Kail, 2000), intellectual development (Achter, Lubinski, Benbow & Eftekhari-Sanjani, 1999), their ability to comprehend and combine academic and emotional knowledge to solve problems (Gottfredson, 2003). For this reason, they begin to think about their careers earlier than their peers (Kerr and Sodano, 2003; Silverman, 1993). In terms of education and career development, the gifted individual is confronted at a younger age than their peers with the issue that their preferences (i.e., interests and values) are sufficient to produce mature, valid information and can evaluate this information and can help clarify the current complexity (Schmidt, Lubinski, & Benbow, 1998). Some researchers state that intellectually gifted and highly successful students differ from their peers in terms of their intellectual abilities and professional preferences (Stapf, 2003). Specially talented individuals will carry their current potential to the highest level with the training they need in areas or areas for their outstanding talents. When determining the fields of verbal, mathematical, visual, or auditory ability, it is crucial that they have a tendency and interest in the areas (Chen and Wong, 2013). Of course, talent alone is insufficient for positive and

successful vocational training development. However, it is crucial to choose a profession that matches their interests, needs, abilities, and personal life. (Lofquist & Dawis, 1991; Lubinski & Benbow, 2000). In particular, the process is central to success, professional interests, and decision-making for the selected job and post-professional satisfaction. (Gottfredson, 1996). While making a professional choice, the individual is expected to consider their ability in the areas they are interested in and enjoys working in (Chen and Wong, 2013). Previous studies have determined factors such as gender differences (Ferriman, Lubinski, and Benbow, 2009; Kerr and Sodano, 2003) and high potentiality (Achter vd., 1999; Silverman, 1993) affect the occupational preferences of exceptionally talented individuals. Her education, culture, environmental expectations and interests, and abilities are active in her career choices. In addition to determining the individual's area of interest, receiving an education in that area of interest will enable them to develop their interest and ability. With the art education of gifted individuals who are prone to the field of art, it was observed that they developed self-confidence (Bayav, 2007; Koca, 2007), self-esteem (Barış, 2002; Toy, 2006), social skills (Barış, 2008), creative thinking skills (Zimmerman, 2009; Köse, 2006; Keser, 2019), visual perception skills (Carroll, 1987), environmental awareness (Durmuş, 2009) and entrepreneurship characteristics (Mohamed Helmy Elfiel, 2019). Science and Art Centers (BİLSEM) have been established in our country to provide specially talented individuals with the education they need for their field of interest. Individuals with high artistic skills are educated in the areas of "Visual Arts" and "Music," while individuals with interest and skills in mathematics, science, and social sciences are educated in the field of "General Talent" (MEB, 2016). Although, there are studies indicating that the education they receive in BİLSEM affects children's personality development and their skill and talent development in the field they are related to (Sözel, 2019).

In the literature review, there are many studies to determine the professional preferences of individuals with unique talents (Kher-Durlabhji, Lacina-Gifford, Carter, & Lalande, 1997; Kara 2019), the problems they encounter when determining their professional preferences (Kaya, Ogurlu, & Hizli, 2017; Bostan, Bostan, Öztürk & Öztürk, 2020;.), the guidance needed when determining a career (Yusof, Mokhtar, Sulaiman & Mohtar, 2020; Chen & Wong, 2013), the change of professional preferences over the years (Schmidt, Lubinski, & Benbow, 1998), or to investigate the differences between individuals with unique talents and their peers with normal development (Miller & Cummings, 2009; Vock, Köller & Nagy, 2013). However, no study has been found on the effect of the art education status of specially talented individuals on their professional preferences.

The Aim of the Study

The individual's basic skills, characteristics, abilities, and equipment should be considered in occupational preferences. To determine these characteristics of the individual, it was aimed to give an idea to exceptionally talented individuals about their professional

preferences by using the Holland Professional Choice inventory and to determine whether their status of receiving art education from these individuals affects their preferences. For this purpose, answers to the following questions will be sought;

1. Is there a significant difference in the occupational preferences of gifted students according to the field they are diagnosed with?
2. Is there a significant difference in the professional preferences of gifted general and art talent students according to gender?
3. Is there a significant difference in the professional preferences of gifted general and art talent students according to their school levels?
4. Is there a significant difference in the professional preferences of gifted general and art talent students according to age?
5. Is there a significant difference in the professional preferences of gifted general talent students and gifted art talent students according to the type of school?

METHOD

Research Method: The survey model, one of the quantitative research models, was used. According to Karasar (2004), screening models aim to describe a past or present situation as it is. The event, person, or object subject to the research is tried to be defined as it is under its conditions, and no effort is made to change or affect them in any way.

Participants

The convenience sampling method was used in the study. The appropriate sampling method is explained as the selection of the sample from the unit that can be easily applied due to time and labor limitations (Büyüköztürk et al., 2009). A total of 320 students ranging from fifth to twelfth-grade students studying general talent, music, and visual arts at the Adana Science and Art Center make up the study's sample group. 35% (112) of the students participating in the study were female in the field of art (SA), 23.1% (74) were female in the field of general talent (GYA), 15% (48) were male in the area of art (SA), and 26.9% (86) were male in the field of general talent (GYA).

Table.1

Demographic Characteristics of the Sample Group

Area of Diagnosis	Female		Male		Total	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Artspace	112	35,0	48	15,0	160	50,0

General Capability Area	74	23.1	86	26,9	160	50.0
Total	186	58.1	134	41.9	320	100

Data Collection Tools

In the first part, the researcher creates a personal information form. This form consists of gender, school type, school level, and age variables.

The occupational preference inventory prepared by Atli and Keldal (2017) was used. In the inventory, there are sub-dimensions that determine the 6-person type of realistic, researcher, artistic, social, entrepreneurial, and traditional personality.

Realistic: Technical and mechanical skills are characterized by a dogmatic and practical approach to work and an interest in working outdoors, with machines or hands.

Researcher: Scientific skills and interests are characterized by an intellectual and curious personality and mathematical and research abilities.

Artistic: It is characterized by creative and creative features and a set of interests and skills in the arts, including visual and performing arts and creative writing.

Social: A social and harmonious attitude is characterized by an interest in helping others in areas such as teaching or counseling and interpersonal skills.

Entrepreneur: Characterized by an extroverted, ambitious, and dominant personality and leadership skills in areas of interest in sales, law, and commerce.

Traditional: A systematic and practical approach to work is characterized by solid bureau and organizational capability and conservative values.

The scale consists of 30 items, and a 9-point Likert rating was used. The Cronbach Alpha value of the scale varies between .65 and .85. In the studies using this scale, Cronbach's alpha value was found to be .72 (Bostan, Bostan, Öztürk & Öztürk, 2020). In this study, .78 for the realistic sub-dimension, .81 for the researcher sub-dimension, .74 for the artist sub-dimension, .86 for the social sub-dimension, .84 for the entrepreneur sub-dimension, and .84 for the traditional sub-dimension. In this study, Cronbach's alpha value was found to be 82.

Data Collection and Analysis

Personal information forms and scales were prepared on the form and applied to students, and the data used in the study were obtained. Before the inventory was applied, the researcher created the informative text containing the necessary explanations, and volunteerism was taken as a basis for the study participation. Students were asked to fill in

the items in the inventory according to the most appropriate option. It took a student approximately 20-30 minutes to complete the inventory. Before the study, the number of participants was determined by applying the G Power power analysis test. The statistical analyses to be used in light of the data collected from the participants were determined. A normality test was applied to examine the distribution of the data to determine the analysis of the relationship between the art education status of gifted students and their professional preferences. Correlation analysis was performed with Frequency Distribution Test, Independent Sample t-test, and ANOVA test in normally distributed data. Cohen d and Eta Square values were calculated to determine the effect level.

Ethical consideration

In this study, all rules stated to be followed within the "Higher Education Institutions Scientific Research, and Publication Ethics Directive" scope was observed. None of the actions stated under the title "Actions Against Scientific Research and Publication Ethics," which is the second part of the directive, was not taken.

Ethical review board name: Istanbul University Cerrahpaşa Scientific Publication Ethics Board

Date of ethics review decision: 27.05.2022

Ethics assessment document issue number: 2022/131

FINDINGS

This section includes the findings and comments obtained by analyzing the research questions determined.

Table.2

Analysis Table Regarding the Field of Diagnosis and Professional Preferences of Especially Talented Students

		Realistic	Investigator	Artistic	Social	Enterprising	Conventional
		R	I	A	S	E	C
Art Field	N	160	160	160	160	160	160
	\bar{x}	7.33	8.12	9.50	8.54	4.93	3.38
	ss	3.62	3.81	3.29	3.53	3.24	3.02
General Talented Field	N	160	160	160	160	160	160
	\bar{x}	7.42	8.84	7.66	8.36	4.97	3.99
	ss	3.63	3.88	3.81	3.65	3.30	3.42

According to the results of the analysis made for the first research question, when the field of special talented students' diagnosed and their occupational preferences were examined, it was found that the scoring average of the students in the area of art was high in the artistic, social and research sub-dimensions, and the scoring average of the students in the field of general talent was high in the researcher, social and artistic sub-dimensions (Table.2).

Table. 3

Anova Test Results Regarding Gender and Occupational Preferences of Especially Talented Students

Variable	Source of Variance	Sum of Squares	sd	Mean of Squares	F	p	$ \eta^2$	Difference
Realistic	Between Groups	18.948	4	6,316	0.480	.696		
	In-group	4155.799	316	13,151				
	Total	4174.747	320					
Investigator	Between Groups	120.234	4	40.078	2,740	0.043	.024	GTF Girl>AF Girl>GTF Boy>AF Boy
	In-group	4621.654	316	14.625				
	Total	4741.888	320					
Artistic	Between Groups	674.327	4	.776	19.613	.000	.157	AF Girl>GTF Girl>AF Boy>GTF Boy
	In-group	3521.560	316	11.461				
	Total	4295.888	320					
Social	Between Groups	75.481	4	25.160	1.976	.117		
	In-group	4023.719	316	12.733				
	Total	4099.200	320					
Enterprising	Between Groups	2.001	4	0.667	0.062	.980		
	In-group	3393.199	316	10.738				
	Total	3395.200	320					
Conventional	Between Groups	95.370	4	31.790	3.097	,027	.029	GTF Boys>AF Boys>GTF
	In-group							
	Total							

In-group	3244.117	316	10,266	Girls>AF Girls
Total	3339.488	320		

Table. 4

Descriptive Statistical Table on Gender and Occupational Preferences of Special Ability Students

	Gender	N	χ	ss
	Art Field Girl	112	8.46	3.827
Researcher	General Talented Field Girl	74	9.34	3.833
	Art Field Male	48	7.31	3.685
	General Talented FieldMale	86	8.42	3.888
	TOTAL	320	8.48	3.855
	Art Field Girl	112	10.11	3.085
Artistic	General Talented Field Girl	74	9.05	3.789
	Art Field Male	48	8.08	3.338
	General Talented Field Male	86	6.47	3.419
	TOTAL	320	8.58	3.670
	Art Field Girl	112	3.21	2.749
Conventional	General Talented Field Girl	74	3.35	3.345
	Art Field Male	48	3.75	3.570
	General Talented Field Male	86	4.53	3.412
	TOTAL	320	3.68	3.236

There was no significant difference in the professional preferences of gifted General Talent Field (GTF) students and gifted Art Field (AF) students according to gender in realistic, social and entrepreneurial sub-dimensions ($p>.05$). In the researcher sub-dimension according to gender in the professional preferences of gifted general talent students and gifted artfield students,024) ($p<.05$, Table.3). According to the Post Hoc test, this significance was found to be high between the researcher score average of the female students with GTF ($\chi=9.34$)and the research score average of the female students with AF (8.46); high between the research score average of the female students with AF (8.46)and the research score average of the male students with GTF (8.42); high between the research score average of the male students with GTF (8.42) and the research score average of the male students with AF (7.31) (Table.4). Again, when the artistic sub-dimension is examined, it is

seen that there is a moderate difference (.157). This difference was found to be high between the artistic score average of AF female students ($\chi^2 = 10.11$) and the artistic score average of AF female students (9.05); high between the artistic score average of AF female students (9.05) and the artistic score average of AF male students (8.08); high between the artistic score average of AF male students (8.08) and the artistic score average of AF male students (6.47) (Table.4). In addition, in the traditional sub-dimension, there is a weak level (.02=029). According to this difference; AF female students' artistic score average ($\chi^2 = 10.11$) and GTF female students' artistic score average (149.05) were found to be high; AF female students' artistic score average (159.0516) and GTF male students' artistic score average (178.08) were found to be high; AF male student' artistic score average (8.08) GTF male students' artistic score average (186.47) were found to be high (Table 4).

Table. 5

Anova Test Results Regarding School Level and Professional Preferences of Special Talented Students

Variable	Source of Variance	Sum of Squares	sd	Mean of Squares	F	p	η^2	Difference
Realistic	Between Groups	28.739	4	9.580	0.730	.535		
	In-group	4146.008	316	13,120				
	Total	4174.747	320					
Investigator	Between Groups	164,504	4	54.835	3,786	.011	0,072	GTF Secondary School>AF Secondary School>GTF High School >AF High School
	In-group	4577.887	316	14.485				
	Total	4741.887	320					
Artistic	Between Groups	356.201	4	118,734	9.524	.000	.074	AF High School >AF Secondary School>GTF Secondary School>GTF High School
	In-group	3939.687	316	12.467				
	Total	4295.888	320					
Social	Between Groups	21.465	4	7.155	0.554	645		
	In-group	4077.735	316	12.904				
	Total	4099.200	320					

Enterprising	Between Groups	142,194	4	47.389	4604	.004	.033	AF High School >GTF Secondary School>AF Secondary School>GTF High School
	In-group	3253.006	316	10.294				
	Total	3395.200	320					
Conventional	Between Groups	61.602	4	20.534	1.980	.117		
	In-group	3277.885	316	10.373				
	Total	3339.487	320					

Table. 6

Descriptive Statistical Table on School Level and Professional Preferences of Special Talented Students

Score	School Level	N	\bar{x}	sd
Investigator	AF Secondary School	131	8.40	3.745
	GTF Secondary School	124	9.15	3.742
	AF High School	26	6.58	3.818
	GTF High School	39	7.90	4.191
	TOTAL	320	8.48	3.855
Artistic	AF Secondary School	131	9.26	3.297
	GTF Secondary School	124	8.20	3.788
	AF High School	26	10.35	3.013
	GTF High School	39	6.33	4.038
	TOTAL	320	8.58	(3,670)
Enterprising	AF Secondary School	131	4.59	3.108
	GTF Secondary School	124	5.40	3.368
	AF High School	26	6.35	3.286
	GTF High School	39	3.82	2.955
	TOTAL	320	4.95	3.262

There was no significant difference in the professional preferences of gifted General Talent Field (GTF) students and gifted Art Field (AF) students in realistic, social and traditional sub-dimensions according to the school level ($p>.05$). |According to the school

level, there is a weak level in the researcher sub-dimension in the professional preferences of gifted general talent students and gifted art field students (.02=072) ($p < .05$, Table.5). According to the Post Hoc test, this significance was found to be high between the researcher score average of the secondary school students with GTF ($\chi = 9.15$) and the research score average of the secondary school students with AF (8.40); high between the research score average of the secondary school students with AF (8.40) and the research score average of the high school students with GTF (7.90); high between the research score average of the high school students with GTF (7.90) and the research score average of the high school students with AF () (Table.6). Again, when the artistic sub-dimension is examined, it is seen that there is a low level of significance (074). This difference was found to be high between the artistic score average of AF high school students ($\chi = 10.35$) and the artistic score average of AF secondary school students (9.26); high between the artistic score average of AF secondary school students (9.26) and the artistic score average of GTA secondary school students (8.20); high between the artistic score average of GTF secondary school students (8.20) and the artistic score average of GTF high school students (6.33) (Table.6). In addition, a low level of significance was found in the entrepreneur sub-dimension ($p < .05$, Table.6). Accordingly, it was determined that the mean entrepreneurial score of AF high school students was high ($\chi = 6.35$) and the mean entrepreneurial score of GTF secondary school students was high (5.40); the mean entrepreneurial score of GTF secondary school students was high (5.40) and the mean entrepreneurial score of AF secondary school students was high (4.59); the mean entrepreneurial score of AF secondary school students was high (4.59) and the mean entrepreneurial score of GTF high school students was high (3.82) (Table.6).

Table. 7

Anova Test Results Regarding the Age Levels and Professional Preferences of Especially Talented Students

Variable	Source of Variance	Sum of Squares	of sd	Mean of Squares	F	p	η^2	Difference
Realistic	Between Groups	77.511	6	37.483	1.188	.315	.045	
	In-group	4097.236	314	12.699				
	Total	4174.747	320					
Investigator	Between Groups	188.834	6	37,767	2.605	.025	.062	GTF 12-14 Years>GTF 10-11 Years>AF 10-11 Years>AF 12-14 Years>GTF 15-17 Years>AF
	In-group	4553.053	314	14,500				
	Total	4741.888	320					

					15-17 Years		
					AF 15-17 Years old>AF 12-14 Years old>AF 10-11 Years old>GTF 12-14 Years old>GTF 10-11 Years old>GTF 15-17 Years old		
Artistic	Between Groups	384.194	6	76.839	6.168	.000	.079
	In-group	3911.694	314	12,458			
	Total	4295.888	320				
Social	Between Groups	18.618	6	3.724	0.287		.920
	In-group	4080.582	314	12.995			
	Total	4099.200	320				
Enterprising	Between Groups	112.160	6	22.432	2.145		.060
	In-group	3283.040	314	10.456			
	Total	3395.200	320				
Conventional	Between Groups	83.411	6	16.682	1.609		.157
	In-group	3256.076	314	10,370			
	Total	3339.487	320				

Table. 8

Descriptive Statistical Table on Age Levels and Occupational Preferences of Special Ability Students

Score	Age Level	N	\bar{X}	sd
Investigator	AF 10-11 Years	68	8.71	3.856
	GTF 10-11 Years	86	8.90	3,505
	AF 12-14 Years	56	8.02	3.430
	GTF 12-14 Years	36	9.86	4.223

	AF 15-17 Years	35	7.00	4.109
	GTF 15-17 Years	39	7.90	4.191
	TOTAL	320	8.48	3.855
	AF 10-11 Years	68	9.21	3.258
	GTF 10-11 Years	86	7.97	3.546
	AF 12-14 Years	56	: 9.45	3.379
Artistic	GTF 12-14 Years	36	8.44	4.212
	AF 15-17 Years	35	10.14.	(3.246)
	GTF 15-17 Years	39	6.33	3.716
	TOTAL	320	8.58	(3,670)

As an answer to another research question, no significant difference was found in the professional preferences of gifted General Talent Field (GTF) students and gifted Art Field (AF) students according to their age level in realistic, social, entrepreneurial and traditional sub-dimensions ($p > .05$). According to the school level, there is a weak level in the researcher sub-dimension in the professional preferences of gifted general talent students and gifted art field students ($.02 = 072$) ($p < .05$, Table.7). According to the Post Hoc test, this significance was found to be high between the researcher score average of the students aged 12-14 years ($\chi = 9.86$) and the research score average of the students aged 10-11 years (); high between the research score average of the students aged 10-11 years (8.90) and the research score average of the students aged 10-11 years (8.71); high between the research score average of the students aged 10-11 years (8.71) and the research score average of the students aged 12-14 years (); high between the research score average of the students aged 12-14 years (8.02) and the research score average of the students aged 15-17 years (); high between the research score average of the students aged 15-17 years (7.90) and the research score average of the students aged 15-17 years (Table).8). Again, when the artistic sub-dimension is examined, it is seen that there is a low level of.

This difference was found to be high between the artistic score average of AF 15-17 years old students ($\chi = 10.14$) and the artistic score average of AF 12-14 years old students (9.45); high between the artistic score average of AF 12-14 years old students (9.45) and the artistic score average of AF 10-11 years old students (9.21); high between the artistic score average of AF 10-11 years old students (9.21) and the artistic score average of AF 10-11 years old students (8.44); high between the artistic score average of AF 12-14 years old students () and the artistic score average of GTF 10-11 years old students (7.97); high between the artistic score average of GTA 10-11 years old students (7.97) and the artistic score average of GTF 15-17 years old students (6.33) (Table).8).

Table.9

Anova Test Results Regarding the Type of School and Professional Preferences of Special Talented Students

Variable	Source of Variance	Sum of Squares	sd	Mean of Squares	F	p	$ \eta^2$	Difference
Realistic	Between Groups	39.063	4	13.021	(0.995)	395		
	In-group	4135.684	316	13088				
	Total	4174.747	320					
Investigator	Between Groups	89.894	4	29.965	2.035	.109		
	In-group	4651.993	316	14.721				
	Total	4741.888	320					
Artistic	Between Groups	277.176	4	92.392	7.265	.000	.065	AF Private School>AF Public School>GT F Private School>GT F Public School
	In-group	4018.711	316	12.717				
	Total	4295.888	320					
Social	Between Groups	22.617	4	7.539	0.584	.626		
	In-group	4076.583	316	12.901				
	Total	4099.200	320					
Enterprising	Between Groups	29.275	4	9.758	0.916	0.433		
	In-group	3365.925	316	10.652				
	Total	3395.200	320					
Conventional	Between Groups	49.640	4	16.547	1.589	.192		
	In-group	3289.847	316	10.411				
	Total	3339.487	320					

Table. 10

Descriptive Statistical Table on School Type and Professional Preferences of Special Talented Students

Score	School Type	N	\bar{x}	sd
Artistic	state school	75	9.41	3.133
	state school	70	7.44	3.933
	AF Private School	85	9.58	3.434
	GTF Private School	90	7.83	3.724
	TOTAL	320	8.58	(3,670)

As an answer to the last research question; no significant difference was found in the professional preferences of gifted General Talent Field (GTF) students and gifted Art Field (AF) students according to school type; realistic, researcher, social, entrepreneurial, and traditional sub-dimensions ($p > .05$, Table.9). However, when we look at the artistic sub-dimension, it is seen that there is a low level of 074). This difference was found to be high between the artistic score average of the AF private school students ($\bar{x} = 9.58$) and the artistic score average of the AF public school students (9.41); high between the artistic score average of the AF public school students (9.41) and the artistic score average of the GTF private school students (7.83); high between the artistic score average of the GTF private school students (7.83) and the artistic score average of the GTF public school students (7.44) (Table 10).

CONCLUSION AND DISCUSSION

In studies investigating the effect of art education on the individual, there are three different opinions cognitive approach, psychological approach, and self-developmental approach. While the cognitive approach explains the use of art in the evaluation of children's knowledge about the changing world, the psychological approach explains art as the reflection of the inner worlds of individuals. In the third approach, art education is where individuals establish a relationship with the society they are in, understand their self-development, and become a tool for communicating with society (Zimmerman and Zimmerman, 2000).

Art aims to reveal the meaning in the content of the work, not to define it by the appearance of the resulting products. Art stimulates entrepreneurship and independence feelings in the individual. The work of art is expected to be original. Art education aims to educate tastes and emotions, to create a perspective towards a beautiful work, and to give an aesthetic view to every stage of daily life. Art should be included in the educational process of each individual starting from preschool, not only for being a profession but also

with or without special abilities (Aral, 1999). Interest and skill areas and life experiences play a significant role in the professional preferences of individuals. If the individual realizes these areas early, it will also make it easier for him/her to direct their life. The gifted individual begins to research the profession they want to do before their peers (Schmidt, Lubinski, & Benbow, 1998). They need differentiated or enriched education to develop their areas of interest. Providing these children with the education they need from an early age is seen as a national gain (Madeja, 1983). Even if the field in which the child is diagnosed is different, their education about any of the branches of art during their education will provide them with an aesthetic perspective, and socialization, explore the entrepreneurial spirit, and develop their artistic ability, if any (Hurwitz, 1983).

Conclusions Regarding the Research Question

Science and Art Centers are the leading institutions that provide education to gifted students in our country. In these institutions, the student receives training only in the field they are diagnosed in. While students diagnosed in the area of General Talent are studying in the fields of social sciences, science, and mathematics, students diagnosed in art receive only music or visual arts education. Considering the field of diagnosis and professional interests of these students, it was seen that the mean score of the students in the field of art was high in the artistic, social, and research sub-dimensions, and the mean score of the students in the area of general talent was high in the researcher, social and artistic sub-dimensions. When the results are examined, it is seen that there are common sub-dimensions in both areas. The fact that gifted students are curious, research-loving, questioning, and sensitive to their environment and the society they live in is compatible with the researcher and social sub-dimension, and the fact that they are sensitive, idealistic, aesthetic, emotional, introverted, and creative is compatible with the artistic sub-dimension (Yusof, Mokhtar, Sulaiman and Mohtar, 2020). On the other hand, the study showed that the entrepreneurship sub-dimension had the lowest mean score in both areas. Similar results in the literature.

Conclusions Regarding the Research Question

When examined according to genders, it was seen that in the researcher sub-dimension, female students in the field of general talent had the highest mean score, followed by female students in the field of art, male students in the field of general talent and male students in the field of art, respectively. In their study, Webb ve diğ(2002) found that gifted female students had more investigative characteristics than male students. In another dimension of art, female students in the art field have the highest mean score. In contrast, the mean scores of female students in the general talent field, male students in the art field and male students in the general talent field are observed, respectively. In the traditional sub-dimension, the highest average score of male students in the general talent

area is seen. Then, the art field is listed for male students, the general talent field as female students, and the art field as female students.

Conclusions Regarding the Research Question

According to the school level, the mean scores of secondary school students in the field of general talent, secondary school students in the field of art, high school students in the field of art, and high school students in the field of general talent are ranked in the research sub-dimension. Similarly, when the age levels were examined, it was determined that the students between the ages of 12-14 had the highest general ability, and the students between the ages of 15-17 had the lowest average score in the research sub-dimension. It is seen that as the students' school level or age level increases, there is a decrease in the direction of the researcher. Future anxiety is gradually moving away from the questioning student model due to the anxiety of being able to settle in the university (Kumandaş and Kutlu, 2014). In the artistic sub-dimension, the average score of high school students in art is the highest. Afterward, secondary school scores in the field of art, a secondary school in the field of general talent, and high school scores in general talent are listed. The artistic score of the student receiving art education increases, and the artistic score of the student who does not receive art education decreases as the school level increases. The student's art education changes their creativity, imagination, and perspective towards events as well as the development of their artistic ability (Zimmerman, 2009). The highest average score in the entrepreneurship sub-dimension is seen in high school students in the art field. Then, the mean scores of secondary school students in general talent, secondary school students in the art field, and high school students in the general talent field are respectively followed. In his study, Shavinina (2008) defined the characteristics of the gifted entrepreneurial individual as; innovative, creative, capable of working independently, not afraid of difficulties, perfectionist, and not like to be bound by rules. On the other hand, Lena and Lindemann (2014) defined the artist as a creative, perfectionist person who enjoys working independently and producing original works. It can be interpreted that the state of the gifted student's art education affects the entrepreneurship aspect.

Conclusions Regarding the Research Question

In the artistic sub-dimension, it was determined that the student between the ages of 15-17 had the highest mean score, and the student between the ages of 15-17 had the lowest mean score. According to the "maturation theory" developed by Arnold Gesell et al., children are born with some innate abilities, and their abilities begin to emerge as they mature. (Ulutaş, Ersoy, 2004). In this process, education is of great importance. If a suitable environment is created for the child and the right people can guide them, they can develop their talent. These are intense feelings of aesthetics and creativity. Supporting it in the early period will be productive, creative individuals who understand and perceive the beauties in the environment (Feeny and Moravcik, 1987). Lowenfield (1947) and Gardner (1980) reported that when adults are not given the necessary support and equipment, their artistic

abilities will be blunted, and at the same time, their inner skills will be lost if they intervene too much about the product offered by an adult (Ulutaş, Ersoy, 2004).

Conclusions Regarding the Research Question

Significant differences were observed only in the artistic sub-dimension when the school types of gifted students were examined. Accordingly, private school students diagnosed from the art field with the highest average score, then the average score of public school students diagnosed from the art field, the average score of private school students diagnosed from the general talent field, and the average score of students going to the diagnosed public school from the general talent field, respectively. It is thought that one of the reasons for this difference is that art lessons are taught by classroom teachers at the primary school level in public schools affiliated with the Ministry of National Education, and art lessons are taught by art teachers in private schools. Students attending the Science and Art Center support the elimination of deficiencies by receiving the art education they need in these centers, whether their formal education is private or public school.

In general, the fact that gifted students receive art education has led to the development of their artistic, entrepreneurial, and social aspects.

RECOMMENDATIONS

Based on the survey results;

- Investigation of the factors underlying the vocational choices of gifted students, the overlap between the professions they want to choose and their interests, and the interests and professional preferences of students graduating from Science and Art Centers,
- Organizing information seminars for gifted students on professional promotion days and what they should pay attention to in their professional preferences,
- Organizing training on the professional preferences of exceptionally talented students for their teachers and parents,
- It is recommended that art education courses be held by art teachers in public schools affiliated with the Ministry of National Education.

References

- Achter, J. A., Lubinski, D., Benbow, C. P., & Eftekhari-Sanjani, H. (1999). Assessing vocational preferences among gifted adolescents adds incremental validity to abilities: A discriminant analysis of educational outcomes over a 10-year interval. *Journal of Educational Psychology*, 91(4), 777. <https://doi.org/10.1037/0022-0663.91.4.777>
- Aral, N. (1999). Sanat eğitimi-yaratıcılık etkileşimi [Art Education-Creativity interaction]. *Hacettepe University Journal of the Faculty of Education*, 15, 11-17.

- Atli, A. & Keldal, G. (2017). Mesleki kişilik tipleri envanterinin geliştirilmesi. [Developing an inventory of occupational personality types]. *Eskişehir Osmangazi University Journal of Social Sciences*, 18(1), 73-93. <https://doi.org/10.17494/ogusbd.330743>
- Aydemir, L. (2018). Üniversite öğrencilerinin meslek tercihlerini belirleyen faktörlere yönelik bir inceleme [An investigation on the factors that determine the career choices of university students]. *Anemon Muş Alparslan University Journal of Social Sciences*, 6(5), 713-723. <https://doi.org/10.18506/anemon.378084>
- Barış, A. D. (2002). *Examination of the self-concept levels of high school students with and without music education according to various variables* [Unpublishing doctoral dissertation]. Gazi University.
- Barış, A. D. (2008). Müzik eğitimi ve benlik tasarımı [Music education and self-design]. *Primary Teacher Educator Magazine*, 15, 12-15.
- Bayav, D. (2007). *Sanat eğitimiyle gelişen uyumlu kişilik, azalan şiddet eğilimi* [Harmonious personality developing with art education, decreasing tendency towards violence]. 3. Paper presented at the National Art Education Symposium, Art Education and Violence (November 19-21, Ankara, ss. 349-356), Gündüz Education Publishing.
- Bostan, A., Bostan, T., Öztürk, S.S., & Öztürk, L. (2020). Özel yetenekli öğrencilerin meslek seçimleri ile Holland ölçeğine göre belirlenen kişilik tipleri arasındaki ilişkinin incelenmesi [Examination of the relationship between the career choices of gifted students and the personality types determined according to the Holland scale]. *Atlas Journal*, 6 (36), 1112-1127. <https://doi.org/10.31568/atlas.569>
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö.E., Karadeniz, Ş., & Demirel, F. (2009). *Bilimsel araştırma yöntemleri* [Scientific research methods]. Pegem Akademi.
- Can, A. & Taylı, A. (2014). Ortaokul öğrencilerinin kariyer gelişimlerinin incelenmesi [Examining the career development of secondary school students]. *Abant İzzet Baysal University Faculty of Education Journal*, 14(2), 321-346.
- Carroll, K. L. (1987). *Towards a fuller conception of giftedness: Art in gifted education and the gifted in art education* (Publication No. 1987. 8721089) [Doctoral dissertation, Columbia University]. PQDT Open.
- Chen, C. P., & Wong, J. (2013). Career counseling for gifted students. *Australian Journal of Career Development*, 22(3), 121-129. <https://doi.org/10.1177/1038416213507909>
- Durmuş, N. (2009). *Görsel sanatlar eğitiminin ilköğretim I. kademedeki öğrencilerde çevre bilinci düzeylerinin gelişmesine katkısı* [The contribution of visual arts education to the improvement awareness level of I st grade students in primary school] (Publication No. 234475) [Master's thesis, Gazi University]. Yöktez.
- Feeney, S. and Moravcik, E. (1987). A Thing of Beauty: Aesthetic Development in Young Children. *Young Children*, September; 7-15.

- Ferriman, K., Lubinski, D., & Benbow, C. P. (2009). Work preferences, life values, and personal views of top math/science graduate students and the profoundly gifted: Developmental changes and gender differences during emerging adulthood and parenthood. *Journal of Personality and Social Psychology*, 97(3), 517. <https://doi.org/10.1037/a0016030>
- Flexer, R. W. (2008). Transition planning for secondary students with disabilities. Prentice Hall.
- Gagne, F. (2003). Transforming gifts into talents: The DMGT as a developmental theory. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp. 60-74 Boston: Allyn and Bacon. <https://doi.org/10.1080/1359813042000314682>
- Gottfredson, L. (2003). The science and politics of intelligence in gifted education in *Handbook of gifted Education* (3rd edn). N. Colangelo and G.A. Davis. <https://eric.ed.gov/?id=ED475670>
- Gottfredson, L. S. (1996). Gottfredson's theory of circumscription and compromise. *Career choice and development*, 179-232.
- Herr, L.E., S.H. Cromer, and S.G. Niles. (2004). *Career Guidance and Counseling Systematic Approaches*. Pearson Education.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd Ed.). Odessa: Psychological Assessment Resources. http://www.iaevg.org/crc/files/Communication_Strategy_No.4_Bezanson694_2.pdf
- Hurwitz, A. (1983). *The Gifted and Talented in Art: A Guide to Program Planning*. Davis Publications.
- Kail, R. (2000). Speed of information processing: Developmental change and links to intelligence. *Journal of School Psychology*, 38(1), 51-61.
- Kamaşak, R., & Bulutlar, F. (2010). Kişilik, mesleki tercih ve performans ilişkisi: akademik personel üzerine bir araştırma [The relationship between personality, career choice and performance: a research on academic staff]. *Journal of Organization and Management Sciences*, 2(2), 119-126.
- Kara, N. (2019). Impact of digital media on gifted students' career choices. *Journal for the Education of Gifted Young Scientists*, 7(2), 99-112. <https://doi.org/10.17478/jegys.555339>
- Karasar, N. (2004). *Bilimsel araştırma yöntemi. [Scientific research method]*. Edition. Nobel Publisher.
- Kaya, F., Ogurlu, U., & Hızlı, E. (2017). Career decisions of gifted students in Turkey. *Journal of European Education*, 5(1), 35-51.
- Kerr, B., & Sodano, S. (2003). Career assessment with intellectually gifted students. *Journal of Career Assessment*, 11(2): 168-186. <https://doi.org/10.1177/106907270301100200>
- Keser-Cihaner, S., & Erdem, P. (2018). The effectiveness of plastic arts education weighted creative drama in the education of gifted/talented children. *Global Journal of Arts Education*, 8(3), 108-113. <https://doi.org/10.18844/cerj.v9i1.3856>

- Kher-Durlabhji, N., Lacina-Gifford, L. J., Carter, R.C., & Lalande, L. K. (1997). A career in teaching: Comparing views of gifted and talented adolescents. *Journal of Secondary Gifted Education*, 9(1), 21-27. <https://doi.org/10.1177/1932202X970090010>
- Koca, Ş. (2007). *Mesleki müzik eğitimi alan ve almayan lise öğrencilerinin genel kişilik özelliklerinin kişilik envanterlerine göre incelenmesi [Examination of general personality traits of high school students who received and did not receive vocational music education according to personality inventories]* (Publication No. 211056) [Doctoral dissertation, Selçuk University]. Yöktez.
- Köse, G. (2006). *İlköğretim kurumları resim-iş eğitimi programında yer alan baskı resim tekniklerinin yaratıcı kişilik oluşturmadaki yeri ve önemi [The place and importance of printmaking techniques in the painting education program of primary schools in creating creative personality]*. [Unpublished master's thesis]. Gazi University.
- Kumandaş, H., & Kutlu, O. (2014). Yükseköğretime öğrenci seçmede ve yerleştirmede kullanılan sınavların oluşturduğu risk faktörlerinin okul başarısı üzerindeki etkileri [The effects of risk factors created by the exams used in selecting and placing students in higher education on school success]. *Turkish Journal of Psychology*, 29(74), 15-31. <https://hdl.handle.net/11494/4006>
- Kuzgun, Y. (2000). *Meslek danışmanlığı: Teoriler ve uygulamalar [Vocational counseling: Theories and applications]*. Nobel Publisher.
- Lena, J.C., & Lindemann, D. J. (2014). Who is an artist? New data for an old question. *Poetics*, 43, 70-85. <https://doi.org/10.1016/j.poetic.2014.01.001>
- Lofquist, L. H., & Dawis, R. V. (1991). *Essentials of person-environment correspondence counseling*. Minneapolis: University Press.
- Madeja, S. S. (1983). *Gifted and Talented in Art Education*. National Art Education Association, 1916 Association Dr., Reston, VA 22091.
- Miller, K., & Cummings, G. (2009). Gifted and talented students' career aspirations and influences: A systematic review of the literature. *International Journal of Nursing Education Scholarship*, 6(1). <https://doi.org/10.2202/1548-923X.1667>
- Milli Eğitim Bakanlığı (MEB) (2016). Bilim ve Sanat Merkezi Yönergesi [Science and Art Center Directive]. dated and 31.05.2006 numbered 26184 Resmî Gazete, Ankara. Available Adress: https://orgm.meb.gov.tr/meb_iys_dosyalar/2016_10/07031350_bilsem_yonergesi.pdf
- Mohamed Helmy Elfiel, H. (2019). A proposed enrichment program for developing future work skills and its effect on entrepreneurial self-efficacy among a sample of gifted students in the faculty of specific education, Alexandria University. *International Journal of Learning Management Systems*, 7(2), 66-81.

- Nauta, M. M. (2010). The development, evolution, and status of Holland's theory of vocational personalities: Reflections and future directions for counseling psychology. *Journal of Counseling Psychology*, 57(1), 11. <https://doi.org/10.1037/a0018213>
- Pilavcı, D. (2007), *Bilgi çağında değişen kariyer anlayışı ve üniversite öğrencilerinin kariyer tercihlerini etkileyen faktörler üzerine bir uygulama [A practice on factors affecting the changing career understanding in the information age and career preferences of university students]*. (Publication No. 220665) [Master's thesis, Çukurova University]. Yöktez.
- Schmidt, D. B., Lubinski, D., & Benbow, C. P. (1998). Validity of assessing educational-vocational preference dimensions among intellectually talented 13-year-olds. *Journal of Counseling Psychology*, 45(4), 436.
- Shavinina, L. V. (2008). Early signs of entrepreneurial giftedness. *Gifted and Talented International*, 23(1), 9-16. <https://doi.org/10.1080/15332276.2008.11673508>
- Silverman, L. K. (1993). *Counseling the gifted and talented*. Love Publishing Co.
- Sözel, H. K. (2019). Öğretmenlerin üstün yetenekli bireylerin eğitimine yönelik tutumlarının değerlendirilmesi [Evaluation of Teachers' Attitudes towards the Education of Gifted Individuals]. *Anadolu University Faculty of Education Journal*, 3(1), 40-54.
- Stapf, A. (2003). *Hochbegabte Kinder: Persönlichkeit, Entwicklung, Förderung*. CH Beck.
- Sternberg, R. J., Jarvin, L., & Grigorenko, E. L. (2010). *Explorations in giftedness*. Cambridge University Press.
- Ulutaş, İ., & Ersoy, Ö. (2004). Okul öncesi dönemde sanat eğitimi [Art education in pre-school period]. *Kastamonu Education Journal*, 12(1), 1-12.
- Vock, M., Köller, O., & Nagy, G. (2013). Vocational interests of intellectually gifted and highly achieving young adults. *British Journal of Educational Psychology*, 83(2), 305-328. <https://doi.org/10.1111/j.2044-8279.2011.02063.x>
- Webb, R. M., Lubinski, D., & Benbow, C. P. (2002). Mathematically facile adolescents with math-science aspirations: New perspectives on their educational and vocational development. *Journal of Educational Psychology*, 94, 785-794.
- Yusof, R., Mokhtar, M., Sulaiman, S. N. A., & Mohtar, M. (2020). Consistency between personality career interest and sciences field among gifted and talented students. *Journal for the Education of Gifted Young Scientists*, 8(3), 1147-1161. <https://doi.org/10.17478/jegys.667323>
- Zimmerman, E. (2009). Reconceptualizing the role of creativity in art education theory and practice. *Studies in Art Education*, 50(4), 382-399. <https://doi.org/10.1080/00393541.2009.11518783>

Zimmerman, E. and Zimmerman, L. (2000). Art education and early childhood education: the young child as creator and meaning maker within a community context. *Young Children*, November; 87-92.

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