



## RESEARCH ARTICLE

# Investigation into Academic Perseverance Levels of Gifted Students Regarding Some Variables

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### ABSTRACT

With positive psychology, more focus is placed on the strengths of individuals. Thus, in recent years, it has been seen that features, such as courage, optimism, hope, forgiveness, gratitude and perseverance, have been the subject of more research. However, features associated with positive psychology have not been adequately studied in gifted students. In this study, perseverance, one of the positive psychology concepts, was discussed and academic perseverance in gifted students was examined. In this context, this study aimed to examine the academic perseverance levels of gifted students regarding various variables. The study group of this research consisted of 152 gifted students attending the 5th and 6th grades. The data in this study were collected using the Academic Perseverance Scale. Descriptive statistics and t-test were used in the data analysis. As a result of the analysis, when the study findings were examined, the findings showed that the academic perseverance levels of the gifted students were above average and high. It was observed that the academic perseverance levels of gifted students did not differ significantly according to gender and school type but differed significantly according to grade level. The findings were discussed together with the studies in the current literature, and suggestions were presented to researchers and practitioners.

Before the 21st century, researchers generally emphasized the significance of intelligence for success. However, especially with positive psychology, it has been seen that intelligence alone is insufficient for success and it has been realized that perseverance has an important place in success (Farrington et al., 2012). In the literature, perseverance is defined as showing passion and determination for long-term goals. It includes perseverance and effort to overcome difficulties. In this context, perseverance is considered in two dimensions. While hopeful enduring difficulties constitute the first dimension, making an effort and maintaining motivation constitute the second dimension (Duckworth et al., 2007).

When the studies in the literature on the concept of perseverance are examined, it is seen that many variables are used. While some of these studies are positive variables, such as self-control, high academic performance, and cognitive ability, some are negative variables, such as anxiety, suicide, and depression (Credé et al., 2017; Kim, 2015). In recent studies, the concept of perseverance in specific areas is the subject of research (Serin,

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2021). Academic perseverance emerges as one of these special areas (Clark & Malecki, 2019). He expressed it as an individual characteristic in the field of education that students focus on their goals and are determined and resilient on the path to their goals. It is defined as having features that enable students to resist possible difficulties in educational life and overcome obstacles (Rojas et al., 2012).

Nowadays, low achievement has become an important situation in gifted students as well as in normally developing students (National Association for Gifted Children, 2015). In this context, concepts related to social-emotional development that will reduce failure and enable students to be more successful have been the subject of some research (Eklund, 2018; Snyder & Linnenbrink-Garcia, 2013). In these studies, social-emotional factors have been shown to be important in the success process (Mohler, 2019).

Students' success at school is sometimes highlighted by their families and sometimes by their teachers (Çelik & Sarıçam, 2018). However, this situation constitutes the main source of stress in students' lives (Kapıkıran, 2016). It is also a fact that academic experiences have an important place in human life due to the long education life. It is emphasized that effort is much more important than success in the academic life process (Sarıçam et al., 2016). For success, many positive characteristics, such as intelligence, confidence and creativity must be present together. However, it is emphasized that perseverance is necessary for both well-being and success (Duckworth et al., 2007). Studies on academic perseverance have concluded that academic perseverance significantly predicts life satisfaction and academic success (Clark & Malecki, 2019). In the study conducted by Jiang et al. (2019), it is stated that perseverance has a changeable and situational aspect.

Singh and Jha (2008) examined the trait of perseverance in university students. In this study, it was concluded that as perseverance levels increased, students' life satisfaction and positive emotions increased. Consistent results were obtained in the study conducted by Vinothkumar and Prasad (2016). In the study conducted by Salles, Cohen, and Mueller (2014), the findings showed that being determined reduced burnout at work and there was a significant relationship between well-being.

It can be said that perseverance has a positive relationship with many positive characteristics, both directly and indirectly. It can be stated that it contributes to the psychological well-being of individuals. The concept of perseverance has been researched with many variables. Some of these variables are concepts, such as awareness, hyperarousal, perfectionism, self-confidence and satisfaction (Mofield & Peters, 2015; Perrone-McGovern, et al., 2015). In addition to general perseverance, concepts, such as academic perseverance in specific fields, are just now being examined. In this context, academic perseverance is a new research field that has not been studied much yet.

Student success is one of the important goals of educational institutions. The National Association for Gifted Children (2015) called for more research on social-emotional development in the process of increasing the academic success of gifted students. Thus, it is thought that the gap between the potential and performance of gifted students will be smaller, and they can use their potential more effectively. More studies on social-emotional development and academic development are needed to fill the gap in the field. Within this scope, it is thought that measuring the perseverance trait, especially in gifted students, will be important. Based on this, the question "What is the academic determination of gifted students?" constitutes the problem statement. The following sub-problems were determined to reveal more detailed findings regarding the main problem statement.

1. What is the academic determination of gifted students?
2. Do the academic perseverance levels of gifted students differ according to gender, grade level and school type?

## Method

### Research Model

In this study, a descriptive survey model was used because it was aimed to examine the academic perseverance levels of gifted students. Descriptive studies are studies aimed at describing what is and determining what it is (Erkuş, 2017). The dependent variable of this research was the level of academic perseverance, and the independent variables were the genders, school types and grade levels of gifted students.

### Working Group

152 volunteer gifted students attending BİLSEM in Aydın province constitute the study group of this research. The characteristics of the study group are presented in Table 1.

As shown in Table 1, 78 (51.3%) of the gifted students in the study group were female, and 74 (48.7%) were male. 73 (48%) of the gifted students continued to the 5th grade and 79 (52%) to the 6th grade. When looked at by school type, 77 (50.7%) gifted students went to state school and 75 (49.3%) gifted students went to private school.

**Table 1.** Demographic Characteristics of the Working Group

Variables		f	%
Gender	Female	78	51,3
	Male	74	48,7
Grade Level	5	73	48,0
	6	79	52,0
School Type	State	77	50,7
	Private	75	49,3
Total		152	100

### Data Collection Tool

In this research, a personal information form was used to reach the demographic characteristics of the students and the "Academic Grit Scale" was used to measure their academic perseverance levels.

**Personal Information Form.** The personal information form was prepared by the researchers. There were questions to determine the gender, grade level, school type, number of siblings and sibling order of the gifted students participating in this research.

**Academic Grit Scale (AGS).** Academic Grit Scale (Academic Grit Scale) was developed by Clark and Malecki (2019) for secondary school students and adapted to Turkish by Sağkal et al. (2020). The measurement tool consists of 10 items and a single dimension. In the Likert-type measurement tool, students can mark one of the options "does not apply to me at all," "does not apply to me," "applies to me a little," "applies to me mostly" and "applies to me completely." The lowest score from the scale is 10 and the highest score is 50. A high score of the students is interpreted as a high level of academic perseverance and a low level of academic perseverance is interpreted as a low level of academic perseverance. During the adaptation of the scale to Turkish, Cronbach's alpha coefficient was .92 and test-retest reliability was .90. Item-total correlations ranged from .63 to .80. As a result of all analyses, it has been concluded that the Turkish form of the scale is a valid and reliable measurement tool (Sağkal et al., 2020).

### Data Collection

During the data collection process, necessary permissions were first obtained from the researchers who adapted the measurement tool. Later, official permission for this research was obtained through correspondence, and consent forms were received from the parents of the volunteer students who wanted to participate in this research. In addition, ethics committee approval was received from the Aydın Adnan Menderes University Rectorate Educational Research Ethics Committee with decision no 2022/4-XIV. After all permissions were obtained to conduct this study, gifted students were allowed to fill out the measurement tool at their appropriate time.

### Data Analysis

SPSS 21 program was used to analyze the data. First, descriptive statistics were used on the data obtained and frequency, percentage calculations, standard deviations and arithmetic averages were used. It was checked whether the data obtained showed normal distribution and the skewness and kurtosis values of the data were

examined. As a result of the analysis, the skewness value of the academic perseverance score was calculated as -1.008 and the kurtosis value was calculated as 1.022. According to Field (2009) and Kalaycı (2014), the kurtosis-skewness value being between -2 and +2 indicates a normal distribution. Thus, it was determined that the data obtained showed a normal distribution. In line with these results, parametric test statistics were used to analyze the data. In pairwise comparisons, "independent group t-test" was used for gender, grade level and school type variables.

### Findings

The findings obtained regarding the sub-problems of this research are included in this section.

“What is the academic perseverance determination of gifted students?” The finding regarding the question is presented in Table 2.

**Table 2.** Academic Perseverance Level Score of Gifted Students

	n	$\bar{X}$	sd
Academic Perseverance Level	152	41,70	6,47

Considering the average scores of gifted students according to Table 2, the academic perseverance level was  $\bar{X} = 41.70$ . Considering that the lowest score obtained from the scale is 10 and the highest score is 50, it can be stated that the academic determination levels of gifted students are high.

When Table 3 is examined, as a result of the analyses regarding the gender of gifted students, it is seen that there is no significant difference ( $p > .05$ ) between the academic perseverance levels of gifted female students and gifted male students.

**Table 3.** t Test Results of Academic Perseverance Level Scores of Gifted Students

		n	$\bar{X}$	ss	t	p	Cohen's d	
Academic Perseverance	Gender	Female	78	42.22	6.62	1.005	.31	0.16
		Male	74	41.16	6.30			
	Grade Level	5 <sup>th</sup> Grade	73	42.78	5.02	1.991	.04	0.32
		6 <sup>th</sup> Grade	79	40.71	7.46			
	School Type	State	77	41.74	6.38	.070	.94	0.01
		Private	75	41.67	6.60			

According to this finding, it can be said that gifted female students and male students show similar characteristics in terms of academic determination.

As a result of the analysis of the grade levels of gifted students, it was seen that there was a significant difference ( $p < .05$ ) between the academic perseverance levels of gifted 5th grade students and gifted 6th grade students. According to this finding, it can be said that the academic perseverance scores of gifted 5th grade students are higher than gifted 6th grade students.

As a result of the analysis regarding the school type of gifted students, it was seen that there was no significant difference ( $p > .05$ ) between the academic perseverance levels of gifted students attending public schools and gifted students attending private schools. It can be said that the academic perseverance scores of gifted students are similar depending on the type of school. The effect size calculated to evaluate the real difference in mean scores between the groups was low in academic perseverance level scores according to gender ( $d = .16$ ), medium in grade level ( $d = .32$ ) and low in school type ( $d = .01$ ). Cohen (1988) stated that if the d value is less than .2, the effect size will be considered weak, if it is .5, it will be considered medium, and if it is greater than .8, it will be considered strong.

### Discussion, Conclusion and Recommendations

There are limited studies in the literature on the determination and academic perseverance of gifted students. Therefore, in this section, the results of the current study are discussed, including research conducted on typically developing students and some variables related to positive psychology. The current study aimed to examine the academic perseverance levels of gifted students regarding some variables. As a result of the

analyses made in this context, it was seen that the average academic perseverance levels of gifted students were quite high. Serin (2021), who reached a similar conclusion with this finding, examined the academic perseverance levels of 4th-grade students and found that the academic perseverance levels of the participants were high.

When the characteristics of gifted students are examined, characteristics, such as being curious and persistent, support this result of the current research. It is possible that academic perseverance, a special area of perseverance considered a psychological feature, will also be high in this sense. The success of individuals in a job depends on their determination and perseverance in that job (Sarıçam et al., 2016).

Peterson and Seligman (2004) state that perseverance can be learned. Based on the fact that students' perseverance characteristics can be improved, some studies have shown an increase in the participants' perseverance. A 10-session psycho-educational program was developed and implemented in one of these studies. As a result of the research, it was concluded that the perseverance levels of the students in the experimental group increased (Ekinçi & Hamarta, 2020). As Tough (2012) stated, determined children are more likely to be more successful individuals in the future. In this context, it is thought that it would be effective to plan studies in this direction for gifted students.

In the current study, the high levels of determination of gifted students can be explained by the characteristics of gifted students. It is also thought that the special education received by gifted students contributes to this situation. Studying at BİLSEM until secondary school gave them the opportunity to realize the importance of effort. Additionally, their high mental skills might contribute to their determination.

It has been observed that there is no difference in the academic perseverance levels of gifted students according to gender and school type. There are studies in the literature that support this finding. In the study conducted by Serin (2021), it was determined that there was no difference between the academic perseverance scores of the participants according to gender. Similarly, in the study conducted by Yıldız (2019), Duckworth et al. (2007), Gümüş (2021), Taytaş (2021) and Kaynar (2021), there was no difference in students' perseverance levels according to gender. Akyıldız (2020), who obtained the inconsistent results with these results, found a difference in students' perseverance levels according to their gender.

It was concluded that the academic perseverance levels of 5th-grade gifted students were higher than the academic perseverance levels of 6th-grade gifted students. Kaynar (2021) examined the concept of perseverance in university students and found differences according to grade levels. The determination levels of 2nd-grade students were higher. Gümüş (2021) examined the perseverance levels of high school students and found a significant difference according to grade level. It was concluded that the determination levels of 9th-grade students were higher than other grade levels. In the study conducted by West et al. (2016), it was observed that students' perseverance levels decreased as the grade level increased. While all these studies support the result in the current study, inconsistent results were obtained in the study conducted by Yıldız (2019). In this study, no significant difference was found in the perseverance scores of the participants according to their grade levels (9-12 grade levels).

In the current study, the lack of differentiation in perseverance level according to gender and school type can be explained by the fact that perseverance is also related to personality traits. Perseverance, like other character traits, is affected by both genes and environment (Duckworth, 2018). In addition, this may be the reason for the lack of variation according to school type. It can be stated that the developmental period of gifted students has an effect on the differentiation according to grade level.

Researchers, such as Ziegler and Stoeger (2012), Fletcher and Sampson (2012), Mofield and Peters (2015) and Reis and McCoach (2000), have conducted research on the social-emotional development of gifted students. In these studies, it has been determined that perfectionism has different effects on the success of gifted students. It is stated that concepts, such as emotional awareness, sensitivity, emotion regulation, and subjective well-being, are important factors in the success of gifted students (Snyder & Linnenbrink-Garcia, 2013). It is a fact that the abilities of gifted students will further develop with effort, which is one of the cornerstones of

perseverance (Dweck, 2006). Therefore, effort and struggle are important for gifted students to build success (Yeager and Dweck, 2012). Dixson et al. (2016) examined the concepts of courage, hope, and academic self-efficacy in gifted students and examined their impact on academic success. It was observed that all three variables examined strongly affected the academic success of gifted students.

Mofield and Peters (2018) found in their study that the relationship between perfectionism and success attitudes was high. Blaas (2014) stated that social-emotional difficulties and failure are inextricably intertwined. Olszewski-Kubilius (2017) emphasized that concepts, such as motivation, perseverance, endurance and courage are important levers of success. Mohler (2019) applied an intervention program in his study. After the intervention program, it was found that disciplined work, courage and perseverance were important and positive variables affecting the general intelligence level.

Students' success in life is much more important than their success in school. Individuals who are resilient, do not give up and show perseverance will often achieve success in their lives thanks to these characteristics they possess. Efforts to help gifted students achieve success in their lives should be increased. In this context, first of all, it can be recommended to conduct more research on the perseverance characteristics of gifted students. Thus, the studies to be conducted will provide us with the opportunity to understand gifted students better. In this way, data can be obtained that will shed light on the further development of their perseverance characteristics.

Psycho-educational programs can be developed to develop the determination of gifted students further. Studies to be conducted in this context are significant regarding evidence-based practices. This study was conducted by collecting data from 5th and 6th-grade gifted students attending BİLSEM. Working with gifted students in different BİLSEMs and different developmental periods will contribute to filling the gap in the field. In addition, the current study examined the differentiation between students' demographic characteristics and academic perseverance scores. Different psychological or demographic characteristics can also be considered, and the relationship or predictive levels between them can be examined. With the increasing importance of positive psychology today, research on other positive psychology concepts can be planned with gifted students.

In summary, the concept of perseverance has come to the fore with the realization that perseverance is an important predictor of success. Determined individuals can continue to work tirelessly to achieve their goals over and over again. He tries hard to achieve what he wants and maintains his goals even in the face of difficulties. While determined individuals achieve success, they also get satisfaction from the difficult process they face. Not only success comes with success, but also happiness, self-confidence and well-being. In this context, many studies need to be conducted to shed light on the concept of perseverance and its specific areas. It is important to include gifted individuals as well as normally developing individuals in these studies.

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