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Personality Traits and Academic Performance Relationship

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Abstract

Personality can be defined as all emotional and behavioral characteristics that distinguish people from each other. Distinctive trait approach focuses on social personality and is concerned with defining personality and predicting behavior rather than personality development. Looking at historical development of personality scales, the first ones measured many characteristics together through a more comprehensive and holistic approach. However, for the last two decades, the view of personality structure consisting of five basic factors prevailed. There are many studies in which relationship between personality traits and different behavioral variables were measured. In recent years there is an intensive discussion on relation between personality traits and individual's performance. The goal of this study is to analyze the relation between academic performance of university students and their personality traits. Survey was being conducted among third-year and four-year students at Faculty of Economics and Administrative Sciences of Akdeniz University by using random sampling method. Personality traits of students were measured perceptively with personality inventory. In order to measure students' performance their GPA scores were checked. Pearson correlation analysis was employed in measuring the relation between academic performance and personality traits. According to the research results there is a positive correlation between academic performance and personality traits such as extraversion and openness, while this performance is negatively correlated with neuroticism. Results obtained in the context of this study, followed by discussion and interpretation with the previous literature can provide important clues for future studies interested in evaluating and improving students' academic performance.

Keywords: Personality Traits, Academic Performance

1. Literature Review

Personality can be defined as all of the emotional and behavioral characteristics that separate people from each other. Work on personality psychology studies started in 1900s and since then there were numerous studies on the topic. There are thousands of studies measuring relationship between personality traits and different behavioral variables. Although attitudes and behaviors that determine personality traits in life are different in time, there are important findings that show consistency of these traits. Literature shows that personality traits are influenced by many factors such as genetics, social class, socio-cultural structure, geography and family.

Descriptive theories of personality, which may be found in the literature, are generally psychoanalytic theories, behavioral theories, and humanistic theories. While the psychoanalytic theories, developed under the leadership of Sigmund Freud, concentrated on the psychological properties, behavioral approaches were mainly applied on social personality. Through careful observation of people's relationships and behavior forms with their surroundings, this approach emphasized that these are the basis for the development of personality.

According to Skinner (1974) who was the pioneer of the behavioral approach, there are two types of behavior: reactive and operant. While the stimulant that causes the reactive behavior is always known, the stimulant that causes the operant behavior is not very evident. Reactive behaviors, which are defined as reflex type behaviors, are learned through classical conditioning. However, a large part of the behaviors we show in our daily lives are considered as operant. Operant behaviors can be controlled by the result of behavior. It is emphasized that it is possible for any characteristic of individuals to become behavior, through constant repetition, reward punishment and reinforcement. Therefore, one can conclude that the important effect in personality development is interaction with different people.

Humanistic approach assumes that there is an interaction between situational conditions and individual character traits and that the needs, expectations and perceptions of individuals are important in personality formation. Maslow, who stood out with his work in this field, sees the motivational requirements in a hierarchical structure and acknowledges that people will turn to the upper steps as soon as they satisfy the lower-level requirements. Ultimately, the highest step that an individual can reach is the point of self-realization.

Contrary to the previous theories which emphasize the social aspect of the individual, the characteristic approach seeks to determine the permanent characteristics that guide the behavior of an individual by following his/her behaviors towards different effects. According to this approach, if the characteristics of personality are known, personality can then be revealed.

Distinctive trait approach focuses on social personality and it is mainly interested with defining personality and predicting behavior rather than personality development. Trait approaches developed for personality analysis and identification are also known as condition theories. When looking at the historical development of the personality scales, it can be seen that the first personality scales had more comprehensive, holistic approach that measured various features together. However in the last two decades, the idea that personality is based on

five-factor structure began to dominate. For this reason, as in many other fields, Big Five Personality Model has become a frequently used model of many studies on personality measurement in the management science as well.

This model is based on the assumption that people can understand their own personalities and express it verbally. Although researchers used different names for this model, Costa and McCrae (1995) proposed definition of five main traits as follows: extraversion, agreeableness, conscientiousness, emotional stability and openness.

Numerous studies have found significant relationships between different personality traits and academic performance (Mitrofan and Ion, 2013: 125). Study among Romanian university students found that only agreeableness dimension has significant effect on academic performance. Especially when it comes to artistic interest, creativity and intellectual curiosity, openness as personality trait represents an important indicator of academic performance. On the other hand, some studies have found negative relationships between emotional inconsistency and academic achievement. It can be said that emotional inconsistency affects academic performance due to test anxiety and shyness.

After reviewing 20 studies published between 1996 and 2013, Vedel (2014) pointed out that there is significant correlation between academic performance and personality traits such as agreeableness, conscientiousness and openness. Conscientiousness trait is being considered as the strongest indicator of academic success. In their study among students at university in Belgium, Feyter et. al (2012) found there is a positive correlation between conscientiousness trait and academic performance. In the conducted studies, although there is mixed or relatively weak relationship between academic performance and other four characteristics (agreeableness, extraversion, openness and emotional stability), what is common for most of the studies is that conscientiousness is considered as the strongest indicator of academic performance.

Positive correlation was being found between post-secondary academic success and openness (O'Connor and Paunonen, 2007: 977). Openness was often found to be positively associated with intelligence measures. In addition, in many students there was the negative correlation between extraversion and academic success. However, there are some studies that show the opposite results. For example, positive relationship between extraversion and classroom notes in the MBA program was found in the study of O'Connor and Paunonen (2007: 977). Many studies are emphasizing negative correlation between emotional stability and academic success. Agreeableness is a personality trait that in some studies show positive while in others negative correlation with academic performance. While conscientiousness was found to have positive relation with academic success, it was also found to be its most important indicator (O'Connor and Paunonen, 2007).

2. Method

The purpose of this study is to examine the relationship between personality traits and academic performance. In order to examine this relationship, correlation analysis was performed between personality dimensions and performance. To measure personality traits of students, personality trait scale developed by Costa and McCrae (1992) and adapted to Turkish by Sumer and Sumer (2005) was being used. General academic grade average score was used to evaluate the academic performance of the students. Pearson correlation analysis was used to determine the relationship between academic performance and personality traits.

3. Validity and reliability of the measurement tool

First, validity and reliability analyzes were conducted for the personality scale. While indicator of internal consistency Cronbach Alpha value was being calculated for reliability, confirmatory factor analysis was used for construct validity. Values calculated for each dimension are given in Table 1. All calculated values are above the acceptable limit of 0.70 (Nunnally, 1978).

Table 1. Personality Scale Reliability Test Results

Factors	Cronbach's Alpha
Extraversion	0,71
Agreeableness	0,75
Conscientiousness	0,72
Emotional stability	0,81
Openness	0,74

For construct validity, the five-factor structure of scale was tested by conducting confirmatory factor analysis. The confirmatory factor analysis revealed that the scale is compatible with 44 items and 5 sub-dimensions. When the compliance indices for the measurement model are examined, it can be said that all the items included in the measurement model are compatible with the model. These findings indicate that expressions in the scale are clearly explained by the factors and can be regarded as proof of the structural validity of the scale.

Table 2. Compliance Indexes for Personality Measurement Model

Model	χ^2	χ^2/sd	RMSEA	GFI	AGFI	CFI	TLI	NFI
	612,57	2,16	0,061	0,94	0,91	0,92	0,91	0,91

4. Analysis Results

Average score and standard deviation values for personality traits and academic performance of university students participating in the survey according to gender variable and in general are given in Table 3. The average score of students' general academic note average who participated in the survey was 2.56. Looking at the gender group, it can be concluded that female participants are more successful than male ones. When examining personality traits' average scores, it can be seen that in general students have higher average scores for agreeableness traits while all average scores of all factors related to personality trait are higher with female than with male. Emotional stability level is higher with female than with male. While agreeableness is the highest average trait with female, openness is the highest one with male.

Table 3. Average scores for personality traits for General and Gender Variable

Gender		Extraversion	Agreeableness	Conscientiousness	Emotional Stability	Openness	GPA
Male	Average	3,35	3,61	3,32	2,94	3,62	2,38
	N	50	50	50	50	50	50
	Standard deviation	0,81	0,65	0,69	0,68	0,65	0,61
Female	Average	3,33	3,89	3,43	3,34	3,73	2,69
	N	46	46	46	46	46	46
	Standard deviation	0,75	0,62	0,62	0,65	0,63	0,49
Total	N	96	96	96	96	96	96
	Average	3,34	3,78	3,39	3,18	3,68	2,56
	Standard deviation	0,78	0,65	0,65	0,69	0,64	0,56

Table 4 shows the existence of relationship between personality characteristics and academic performances of students in general. Analysis results show that from all personality traits extraversion has the highest level of correlation with performance. After extraversion, openness is the second highly related trait with academic performance. Results also showed the existence of negative correlation between emotional stability and performance.

Table 4. Correlation values between Personality Traits and Academic Performance

Personality Traits	Performance	
	Correlation Coefficient	Significance
Extraversion	0,47**	0,000
Agreeableness	0,09	0,143
Conscientiousness	0,69	0,292
Emotional stability	-0,18**	0,007
Openness	0,15*	0,020

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

N= 96

5. Conclusion

The results of the research provide evidence for the existence of relationship between academic performance and personality traits. Especially individuals with extraversion personality trait can have higher academic performance. Individuals with this traits are more active, social and open to new experiences and because of these they are ready to learn more (Ordun, 2005). Energetic and optimistic individuals have high academic performance. Since these individuals are more open for social interaction it is easier for them to learn in university environment and this situation is being reflected in their performance scores. Results of this study show that, although at low level, relationship between performance and openness dimensions still exists. Researchers interpret the intellectual curiosity of open-minded people as facilitator in learning conditions. In addition people with openness personality trait are perceived to be more creative. Neuroticism is considered to be negatively correlated with academic performance. Neuroticism refers to ambivalence in the case of psychological balance. Those individuals who score high on this trait are considered to be fearful, anxious, prone to depression and with low achievement motivation (Ordun, 2005). It is not surprising that these negative adjectives are cause for academic failure. Results of the current study can provide important clues for future studies on evaluation and improvement of students' academic performance.

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