



## The Effects of Academic Self-Concept and Organizational Factors on Academic Achievement

Ömer Faruk CANTEKİN\*<sup>a</sup>

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### Abstract

University students' achievement is influenced by a number of factors. Academic self-concept and organizational factors are among the significant ones. This study aims to investigate the effects of academic self-concept and organizational factors on university students' achievement and to discover whether this varies according to such variables as gender, grade, place of accommodation, educational status of the parents, and preference. The sample of the study consisted of the randomly selected 450 university students attending private and state universities in provincial Ankara. The data were collected using Matovu Academic Self-Concept Scale and Organizational Factors Scale. As a result of the study, it was found that gender, the grade, the place of accommodation, administrative services and practices, and physical setting and equipment positively affected student achievement. Further studies are needed to investigate the combined effects of the variables, including academic self-concept, thought to have an effect on student achievement at university.

## Akademik Benlik Kavramı ve Örgütsel Faktörlerin Akademik Başarı Üzerindeki Etkisi

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### Öz

Üniversite düzeyinde öğrenci başarısı bir dizi değişkenden etkilenmektedir. Akademik benlik kavramı ve örgütsel faktörler bu değişkenlerden önemli olanları arasında yer alır. Bu çalışmanın amacı, akademik benlik kavramının ve örgütsel faktörlerin üniversite öğrencilerinin akademik başarıları üzerindeki etkisini ve bu durumun cinsiyet, yıl, kalınan yer, anne-baba eğitim durumu, tercih değişkenlerine göre farklılık gösterip göstermediğini incelemektir. Araştırmanın örneklemini Ankara ili merkez ilçelerde bulunan devlet üniversitelerinde okuyan öğrencilerden rastgele olarak seçilmiş 460 öğrenci oluşturmaktadır. Veriler Matovu Akademik Benlik Kavramı Ölçeği (MABKÖ) ve Üniversite Öğrencilerinin Akademik Başarılarını Etkileyen Örgütsel Faktörler Ölçeği (ÖBEÖFÖ) aracılığıyla toplanmıştır. Sonuç olarak, cinsiyet, üniversite yılı ve kalınan yer, akademik benlik kavramı ve Yönetiş Hizmet ve Uygulamalar ve Fiziksel Ortam ve Donanım faktörlerinin öğrencilerin akademik başarısını olumlu olarak etkilediği bulunmuştur. Akademik benlik kavramı başta olmak üzere, akademik başarıyı etkilediği düşünülen farklı öğrenci özelliklerinin birlikte değerlendirildiği çalışmalara ihtiyaç vardır.

\*Corresponding Author: cantekin@gazi.edu.tr

<sup>a</sup> Asst. Prof., Gazi University, Faculty of Health Sciences, Department of Social Work, Ankara / Turkey  
https://orcid.org/0000-0001-5096-3233

## Introduction

University students' academic achievement is important as it is a step to a decent profession. Earning a university or college degree has economic, social, psychological and cultural effects on students, their close social ties, and the society as a whole (De Koning et al., 2013; Mayhew et al., 2016). On the other hand, educational investments and expenses, the need for qualified academic staff are listed as the social challenges related to low academic achievement (OECD, 2008). Increasing the level of academic achievement and students getting graduated without needing extra terms are important for a country's economy and educational policies.

One of the building blocks of personality, self-concept refers to one's opinions as to who he is, what meaning his life has, what he is able to do, and how he adapts to the world (Öner, 1987). A perusal of literature brings about different definitions of self-concept. For instance, Rosenberg (1986) defines self-concept as the sum of one's opinions and feelings with reference to themselves as an object. Self-concept is not innate; rather, it is formed through time in the social and physical environments. School, peer groups, and parents contribute significantly to boosting children's self-concept and self-esteem in the early and middle childhood (Frisby & Tucker, 1993). Defined as one's perceptions, feelings, and attitudes towards themselves, self-concept is multidimensional (Marshall, 1989; Wall, 1986). Some of these dimensions are bodily features, social self, cognitive self, and academic self.

Self-concept consists of one's general evaluations and perceptions as to themselves and ASC is part of the general self-concept (Marsh, 1987). ASC is described as the totality of one's knowledge and perceptions about themselves in the cases of academic success (Wigfeld & Karpathian, 1991). It is also defined as the judgement a student has formed about a specific academic effort, considering how capable he is in comparison with the other students (Arseven, 1986). ASC consists of a student's perceptions about himself in different disciplines (e.g., math, science etc.) or general academic realm (Marsh et al., 2008). It involves not only students' feelings about themselves

There are numerous definitions of academic self-concept in the literature (Arseven, 1986; Wigfeld & Karpathian, 1991; Guay et al., 2003; Traütwein et al., 2006), but the common points can be summarized as 1) academic self-concept is one's subjective evaluation about themselves, 2) it involves social comparison, 3) it has both cognitive and affective content, 4) it is not limited to only one academic area, 5) it expresses personal opinions and feelings as to one's academic abilities.

As one of the concepts on which the oldest and most comprehensive educational research have been conducted, ASC (Marsh et al. 2012) has been found to be related with a series of outcomes and variables including academic effort (Traütwein et al. 2006), academic achievement (Skinner et al. 1990; Guay et al. 2003; Valentine and Dubois, 2005; Marsh and Craven, 2006; Awad, 2007), academic interest and long term academic goals (Marsh et al. 2005, 2007; Pinxten et al. 2010), and positive ASC has been defined to facilitate reaching educational goals (Seaton et al. 2009). Positive ASC is stated to be significant in school life and education and to affect learning outcomes (Wolff et al. 2018: 58). Besides, it is pointed out that students with high success level have high academic self-concept, those with high academic self-concept have high levels of learning, and the effect of academic self-concept on success is stronger than the effect of success on academic self-concept (Dean, 1977; Lau and Chan, 2001; Newfield and McElyae, 1983). On the other hand, low ASC can affect decisions regarding education and career and may lead to failure (Davis, 1966; Marsh et al. 2008). In addition, there are studies indicating that academic self-concept may differ according to such demographic variables as gender, age (Wigfield et al. 2001), and the grade (Liu and Wang, 2005; Jacops et al. 2002).

It is believed that student success is not only affected by internal factors of personal traits, ASC, academic self-sufficiency or subjective wellbeing but also by external factors, such as social support and organizational factors (Véronneau and Dishion, 2011; Rice et al. 2013; Memduhoğlu & Tarhan, 2013; Ekinci & Gökler, 2017; Wang et al. 2019). Organizational factors can be investigated under four dimensions: 1) professional competency and practices of instructors, 2) administrative services and applications, 3) communication, 4) physical environment and equipment (Memduhoğlu & Tanhan, 2013: 115).

The aim of this study is to describe the effects of academic self-concept and organizational factors on university students' achievement. Also, whether this varies according to such variables as gender, grade, place of accommodation, educational status of the parents, and preference was investigated.

## Method

This section covers research design, population and sample, data collection tools and data analysis.

### Research Design

The study is based on relational survey method. Relational survey method aims to determine the existence and/or the degree of covariance between two or more variables (Karasar, 2003).

In this study, the effects of academic self-concept and organizational factors on students' achievement were examined. Besides, how level of achievement differs according to demographic variables was investigated. In the study, student success was considered as the dependent variable while academic self-concept, organizational factors and demographic features were considered as independent variables.

### Population and Sample

The population of the study consists of randomly selected 450 university students attending private and state universities located in the central districts of Ankara.

### Data Collection Tools

The data were collected through a form. The first section of the form includes demographic information (current general point average, gender, grade, place of accommodation, educational status of the parents, and preference). The second and third sections include Matovu Academic Self-Concept Scale (MASCS) and "Scale of Organizational Factors Affecting Student Academic Achievement (SOFASAA), respectively.

*MASCS.* In the determination of students' academic self-concept, the data were collected with MABKÖ. Matovu Academic Self-Concept Scale, developed by Liu and Wang (2005) and later adapted to university students by Matovu (2014), was adapted to Turkish by Cantekin and Gökler (2019) to be used for the samplings of university students in Turkey. The scale comprises 20 items that assess academic self-concept of university students. MASCS has a two-factor structure consisting of Academic Confidence and Academic Effort and provides two separate total scores for each factor. For the dimensions, Cronbach Alpha internal consistency coefficients were obtained as 0.960 and 0.964, respectively. Cronbach Alpha internal consistency coefficient for the entire scale was calculated as 0.930. MASCS is a 7-point Likert-type scale (strongly disagree, disagree, disagree somewhat, neither agree nor disagree, agree somewhat, agree, strongly agree).

*SOFASAA.* In the determination of organizational factors affecting student success, "Scale of Organizational Factors Affecting Student Academic Achievement" developed by Memduhoğlu and Tanhan (2013) was employed. The scale consists of 22 items assessing the organizational factors affecting university students' academic achievement and is a 5-point Likert-type scale (totally disagree, slightly agree, moderately agree, strongly agree, totally agree). Each item is in affirmative form. The scale includes four different factors which are "professional competency and practices of instructors", "administrative services and applications", "communication", and "physical environment and equipment". Alpha coefficients of SOFASAA were found as 0.903 for the first factor, 0.900 for the second, 0.815 for the third, and 0.761 for the fourth, and total alpha reliability coefficient was determined as 0.926. Thus, the scale is valid and reliable and can assess organizational factors affecting student success in educational organizations.

### Data Collection

The data were collected through the form applied to university students on the university campuses in the academic year 2017-2018.

### Data Analysis

In the study, factors affecting student success were tried to be determined. Normality hypothesis was examined with Kolmogorov-Smirnov and Shapiro Wilk tests before the analyses, and data were observed to come from a normally distributed population. Therefore, parametric statistical methods were employed in comparisons. As parametric methods were employed in statistical analyses, mean and standard deviation values were shown in the tables. In the comparison of two independent variables, t-test was used, and one-way variance analysis (ANOVA) used in the comparison of more than two independent variables. In variance analysis, Tukey test, as one of the multiple comparison tests, was utilized when null hypothesis was rejected. In the investigation of procedural

relationships, regression analysis was used. The analyses were carried out with IBM SPSS v22 Package Program and upper limit for significance was accepted as 0.05.

### Findings

As seen in Table 1, gender, grade, and place of accommodation have a statistically significant effect on academic achievement of students. Considering the average values, male students can be said to be more successful than female students. When the result of the multiple comparison test is analysed, students at the 2nd grade are more successful than others and those staying at dormitories have higher level of academic achievement than that of others. Further, as can be seen in Table 1, educational status of the parents is a non-effective variable on students' academic achievement.

**Table 1.** Comparison of academic achievement according to demographic variables

Variable	Level	n	%	Mean <sup>§</sup>	St. deviation	t / F
<b>Gender</b>	Female	183	39.8	2,56	,52	-4.72**
	Male	277	60.2	2,80	,53	
<b>Grade</b>	1	62	13.5	2,68 <sup>a</sup>	,56	6.17**
	2	79	17.2	2,91 <sup>b</sup>	,47	
	3	113	24.6	2,68 <sup>a</sup>	,54	
	4	93	20.2	2,78 <sup>a</sup>	,52	
	5	113	24.6	2,62 <sup>a</sup>	,36	
<b>Place of Accommodation</b>	Family	199	43.3	2,64 <sup>a</sup>	,56	3.50*
	Dormitory	133	28.9	2,82 <sup>a</sup>	,51	
	Flat shared with friends	33	7.2	2,59 <sup>a</sup>	,69	
	Other	95	20.7	2,70 <sup>a</sup>	,46	
<b>Educational Level of Mother</b>	1	163	35.4	2,71	,55	1.54
	2	95	20.7	2,75	,56	
	3	124	27.0	2,62	,49	
	4	78	17.0	2,78	,56	
<b>Educational Level of Father</b>	1	78	17.0	2,71	,50	0.35
	2	89	19.3	2,69	,54	
	3	143	31.1	2,74	,56	
	4	150	32.6	2,68	,54	

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; <sup>§</sup> upper indices show different means.

**Table 2.** Regression analysis for determining the variables affecting academic achievement

Variable	Coefficient	St. Error	t
Fixed	1,377	,177	7.792***
Academic Confidence	,232	,052	4.505***
Academic Effort	,125	,050	2.491**
Professional Competencies of Instructors	,044	,039	1.143
Administrative Services and Practices	,114	,046	2,462**
Communication	-,053	,038	-1.396
Physical Setting and Equipment	-,074	,032	-2,294**

Table 2 shows Academic Confidence, Academic Effort, Administrative Services and Practices, and Physical Setting and Equipment factors have a significant effect on students' academic achievement. While one point increase in Academic Confidence factor increases academic achievement with an average of 0.232 point, one point increase in Academic Effort increases academic achievement with an average of 0.125 point. One point increase in Administrative Services and Practices leads to an average of 0.114 point increase in students' academic achievement. Physical Setting and Equipment factor has a negative effect on student success.

## Discussion and Conclusion

In this study, the relationship between ASC and academic achievement was investigated and the increase in the dimensions of ASC (academic confidence and academic effort) were observed to increase academic achievement. Secondly, as the organizational factors, “Professional Competencies of Instructors” and “Communication” factors were seen to have no effect on students’ academic achievement; however, “Administrative Services and Practices” and “Physical Setting and Equipment” factors had an effect on students’ academic achievement. In addition, the study took into account the demographic variables predicting academic achievement which include gender, grade, place of accommodation, and educational status of the parents. Results indicated that gender, grade and place of accommodation positively affect students’ academic achievement while educational status of the parents did not affect students’ academic achievement.

Parallel to the main finding of this study, there are a number of studies indicating that academic effort, as one of the dimensions of ASC, has a positive effect on students’ academic achievement (Dika, 2012; Gibbison et al. 2011; Jansen & Suhre, 2010; Nunez, 2009; Reynolds & Weigand, 2010; Torenbeek et al., 2010; Zhou et al., 2015; Mihaela, 2015). Similarly, there are other studies stating the positive effect of academic confidence on students’ academic achievement (Fenning and May, 2013; Krumrei-Mancuso et al. 2013). Thus, in line with the international research, in this study, ASC has been proven to have a positive effect on academic achievement in the sampling of Turkish students. In this regard, ASC can be considered as a universally shared common ground independently of culture. In future studies, this issue should be tested with different cultures.

It is thought-provoking that professional competencies of instructors and communication factors, as the organizational factors, did not have an effect on students’ academic achievement. This may indicate that students benefit more from other sources rather than instructors while reaching learning outcomes. This finding may evoke a student-centred learning at the first glance; however, it also shows that the function of instructors in reaching outcomes have declined (Cantekin, 2015). Moreover, it is stated that successful students do not only have high academic performance but also are content with the school setting where they receive education (OECD, 2017). This suggests that external factors may also affect academic achievement. Hence, in his study, this was detected in the factors of administrative services and practices and physical setting and equipment. Administrative services and practices factor include such dimensions as providing students with social and cultural activities, offering consultancy service, and including students in the decision making process. When related literature is examined, students’ participation in social and cultural activities apart from educational activities (van der Zanden, et al. 2018), providing students with course equipment and documents (Shi, 2019), and offering psychological counselling and guidance (Shaterloo & Mohammadyari, 2011) are stated to have a positive effect on students’ academic achievement. Therefore, an improvement in administrative services and practices is seen to increase student success. However, an improvement in physical setting and equipment factor was seen to decrease students’ academic achievement in this study. When the related literature is analysed, different results are found. To illustrate, in studies conducted in different countries, while physical opportunities and sources were found to have a positive effect on student success (Lee et al. 2005; Huang, 2010), investments made in the physical opportunities of the school were seen to cause no improvement in students’ success (Martorell et al. 2016: 28). As a result, the finding regarding that an improvement in the sub-dimension of physical environment decreased student success can be explained with the environmental features of the schools where participating students of this research study at and the forms of students’ perception of these features.

Considering the demographic variables, in terms of related literature on gender, there are studies concluding that female students were more successful than male students, as opposed to the finding of the current study (Steinmayr & Spinath, 2008; Gibb et al. 2008; Matthews et al. 2009; Voyer & Voyer, 2014). This suggests that the relationship between gender and academic achievement should not be directly handled with gender, but together with other variables. In other words, it is possible to say that there are mediating variables that explain the relationship between gender and academic achievement.

When related literature on the duration of education is examined, no research comparatively focusing on the relationship between the grade and academic achievement has been found. However, in the current study, students on the 2nd grade were observed to be more successful than other students. More research regarding this issue needs to be conducted in future studies.

In studies related to accommodation, in line with the findings of this study, students residing in dormitories had higher academic achievement than those staying at other forms of accommodation (Kaya et al. 2005;

Koçbeker, 2007; Arlı, 2013). Therefore, staying at the dormitory can be said to have a positive effect on student success.

In this study, educational levels of parents were seen to have no effect on students' academic achievement. There are various studies conducted on this issue. While some studies concluded that students whose parents' educational level was high were observed to have high academic achievement (Bowman, 2014; De Wit et al. 2012; Nunez, 2009; Shaw et al. 2012; Yazedjian, Toews, & Navarro, 2009), other studies did not find such a relationship (Friedman & Mandel, 2011; Dika, 2012; Soria et al. 2013; Zhou et al. 2015).

To conclude, further studies are needed to jointly investigate different features of students, which are believed to affect academic achievement. Besides, academic self-concept should be taken into account in these studies. By doing so, features of students can be addressed within a holistic approach.

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