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Araştırma Makalesi ● Research Article

Üniversite Birinci Sınıf Öğrencileri Arasında Sosyal Uyum, Öğrenme Stili Tercihleri ve Akademik Başarı Arasındaki İlişkisinin İncelenmesi

Examining the Relationship between Social Adaptation, the Learning Style Preferences and Academic Achievement among College Freshmen Students

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Anahtar Kelimeler:
1.Akademik başarı
2.Birinci sınıf
3.Öğrenme tercihleri
4.Sosyal uyum

Öz

Bu çalışma, üniversite birinci sınıf öğrencilerinde sosyal uyum, öğrenme stili tercihleri ve akademik başarı arasındaki ilişkinin incelenmesini amaçlamıştır. Çalışma kesitsel ve kolay örnekleme yöntemi ile belirlenen 520 üniversite birinci sınıf öğrencisinin katılımı ile gerçekleştirilmiştir. Verilerin toplanmasında Üniversite Öğrencilerinin Sosyal Uyum ve Barsch-Öğrenme Tercihleri Envanteri Ölçeği kullanılmıştır. Sosyal uyumu, öğrenme stili tercihlerini ve akademik başarıyı belirleyen tanımlayıcı ve analitik istatistiksel analizler kullanılmıştır. Bulgular, birinci sınıf öğrencilerinin temel öğrenme stili tercihinin görsel (n=168, %32.3) olduğunu göstermiştir. Ayrıca görsel öğrenme stilleri, kişilerarası uyum yeteneği ile önemli ölçüde ilişkiliyken, görsel ve kinestetik öğrenme stilleri, seçim uyumluluğu ile önemli ölçüde ilişkili bulunmuştur. Bir diğer bulguda, kız öğrencilerin kişilerarası ve özbakım uyum ortalama puanı erkeklere göre anlamlı derecede daha yüksek iken, erkeklerin fiziksel ve zihinsel belirti ortalama puanları kız öğrencilere göre daha yüksek olduğu bulunmuştur. Sonuç olarak, eğitimcilerin kullanacakları farklı ve etkili öğretim stratejleri hem öğrencilerin sosyal uyumu sağlamasına yardımcı olmada hem de akademik başarılarına olumlu katkılar sağlayabilir.

Anahtar kelimeler; akademik başarı, birinci sınıf öğrencileri, öğrenme tercihleri, sosyal uyum

Keywords:
1. Academic achievement
2. Freshmen
3.Learning preferences
4.Social adapration

Abstract

This study aimed to examine the relationship between social adaptation, learning style preferences and academic achievement in university freshmen. The study was carried out with the participation of 520 first year university students determined by cross-sectional and easy sampling method. The scale of College Students Social Adaptation and Barsch-Learning Preferences Inventory were used for data collection. Descriptive and analytical statistical analyzes were used to determine social adaptation, learning style preferences and academic achievement. The findings showed that the primary learning style preference of first-year students was visual (n=168, 32.3%). In addition, visual learning styles were significantly associated with interpersonal adaptability, while visual and kinesthetic learning styles were significantly associated with choice congruence. In another finding, it was found that while the mean score of interpersonal and self-care adjustment of female students was significantly higher than that of males, the average scores of physical and mental symptoms of males were higher than female students. As a result, different and effective teaching strategies that educators will use can contribute positively to both helping students achieve social adaptation and academic success.

Key words; academic achievement, freshmen, learning preferences, social adaptation

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Introduction

Attending university is a new and important process in the lives of freshmen which could create adjustment difficulties. First year seems to be the challenging for freshmen to adapt to the school, teachers, lessons and make a new friend and environment. Many studies reported that there are a large number of students could face drop-out due to these problems (Abouzeid et al., 2021). Social, personal, and academic problems in the first year of freshmen are linked to weak adaptation for students (Rashidi & Moghadami, 2017). Although freshmen may face different obligations and difficulties in the first year, a good transition provide self-confidence and self-esteem to develop motivation for social adaptation, learning, to attend classes and academic achievement (Demiral et al., 2020).

Learning style preferences help students adapt to lessons more easily and contribute to their academic success. Thus, while the problems that students encounter in the transition to adapt to their environment will decrease, a positive learning environment will be provided. There are various learning style types for students, and they can be defined as a learning process which is preferred by students (Fenyvaisová, 2006). When students' learning style is aligned with the instructors' teaching style, it helps to enhance students' academic achievement and adaptability skills in the environment.

Therefore, it is very important for the instructors to understand and provide different learning style preferences. This way of teaching techniques may improve social interaction and adaption where effective learning take place. The interest for using diversity of learning preferences of students provide a quality education and enhance academic achievement and build a good teaching-learning relationship. Learning preferences vary from student to student and most common types are visual, auditory, and kinesthetic method (Willingham et al., 2015). To become effective learners, students should understand teaching methods and determine the best learning style preferences. Studies have revealed that students' learning preferences increase in measurements during last decades and affect academic achievement and socio-behavior in later years (Knoll et al., 2017; Rogowsky et al., 2015; Shirazi & Heidari, 2019; Zhu et al., 2018).

Learning style preferences play an important role especially in terms of adapting to the courses and the academic environment in the first year of the students. Although there are studies on the learning style preferences and academic achievement levels of freshmen students in the literature (Almigbal, 2015; Chaudhry, Ashar & Ahmad, 2020; Leite, Svinicki & Shi, 2010; Li et al., 2014; Ruffing et al., 2015; Siddiquei & Khalid, 2018) there is no study examining the relationship between social adaptation, learning style and academic

achievement of freshmen students in Turkey. It is important to examine social adaptation for freshmen just after the stressful life of high school to accommodate a series of changes in learning and interpersonal relationship in a short time. They do need more help as they try to adjust to new life and environment. Adaptability is the ability that the individual deals with or accommodates natural and social environment effectively, including the ability to live independently, to manage his own life, meet the cultural requirement (Hang, 2004). Thus, student adaptation involves transformation of relationship with friends, family, school, teachers, courses, and environment (Yin et al., 2021). Successful social adaptation facilitates the students' rapid adjustment to requirements and learning styles that are new to them, building positive relationships with teachers and fellow students, the actualization of self-realization motives in creative work, which provide a great change of personal and professional self-development for students (Busygina et al., 2019). The studies concluded that psychological (Ding et al., 2020) and parental support (Gao et al., 2020), social activities and engagement (Jin et al., 2021) and counseling services (McNeely & Falci, 2004) help on the success of students' adaptation to the university environment in the first year. Various studies have examined the relationship between learning styles and academic achievement in students in their first year of university (Childs-Kean et al., 2020; Coffield et al., 2004; Ghazivakili et al., 2014; İlçin et al., 2018; Yıldırım et al., 2007), however, gap is detected to examine social adaptation and these variables in Turkish freshmen students. Therefore, the present study examined the relationship between social adaptation, learning style preferences and academic achievement of freshmen students in Turkey.

Materials and Methods

The current research examined the relationship between social adaptation, learning style preferences and academic achievement of freshmen students in Turkey. Participants in this study consisted of students who were studying in their first year at universities. Participants were from five different universities of the cities of Nevşehir and Kayseri in Turkey. Convenient sampling was used to select the participants. The respondents were required to be a freshmen student and informed consent form was obtained from all participants prior to the study. The respondents were also given the choice to discontinue participation at any point in the research. Ethical approval was obtained from Kapadokya University Ethics Committee.

Sample

Out of the 600 questionnaires distributed to the participants and 520 questionnaires were completed and returned. The response rate was 86%. Of the participants, 428 were female (82.3%), and 92 were male (17.7%) and the majority of the students were living alone (n=394, 75.7%). The participants' average age was 18.77 with standard deviation was 1.32. The main learning style preference for the students was visual (n= 168, 32.3%), auditory

(n=97, 18.6%) and kinesthetic (n=75, 14.4%) consecutively. The main course material was the teacher powerpoint slide (n= 396, 76.1%) (Table 1).

Table 1. Participants' Socio-demographic Characteristics

		N	%
Gender	Female	428	82.3
	Male	92	17.7
Residency	Alone	394	75.7
	With family	126	24.3
Learning Style Preferences	Visual	168	32.3
	Auditory	97	18.6
	Kinesthetic	75	14.4
	Visual and Auditory	66	12.6
	Visual and Kinesthetic	50	9.6
	Auditory and Kinesthetic	48	9.2
	Visual, Auditory and Kinesthetic	16	3.3
Study resource	Teacher's powerpoint slide	396	76.1
	Notes	85	16.3
	Textbooks	39	7.6

Instruments

Socio-demographic form: This form was used to gather the participants' information such as gender, residency, learning style preferences and study resources.
College Freshmen Adaptability Scale: The College Freshmen Adaptability Scale (Xiefeng Lu, 2008). This scale was used to investigate the social adaptability of college freshmen. The social adaptability scale has 7 subdimensions to measure freshmen's social adaptability. With this scale, the participants' learning, interpersonal, role, choice, self-care, environmental identity adaptability and physical and mental symptoms were measured. The scale has 5-point Likert questionnaires; agree, somewhat agree, uncertain, somewhat disagree and disagree. The internal consistency coefficient of the scale is 0.90.
Barsch-Learning Preference Inventory (BLPI). This scale was used to identify freshmen's learning preferences with 24 items for visual, auditory, and kinesthetic method. This scale was selected because it is reliable, valid, concise, and easy to complete. It has been used by many researchers before.

Data Statistics

Dependent variable was a students' learning style and independent variables included social adaptation, academic achievement, gender, age, residency, and study resources. SPSS statistical software 25.0 version was used for statistical data processing. Descriptive analysis, independent t-test, ANOVA and Pearson Product moment correlation analysis were calculated.

Results

This study examined the relationship between social adaptation, the learning style preferences and academic achievement among college freshmen students in Turkey. Most of the participants were female in this study (n=428, 82.3%). The most used learning styles were visual (n=168, 32.3%) and auditory (n=97, 18.65) among the students. However, the least used learning styles among the students were visual, auditory, and kinesthetic (n=16, 3.3%). In addition, students mostly preferred to study with teacher's power points presentation (n=396, 76.1%) as compared to notes (n=85, 16.3%) and textbook (n=39, 7.6%). The textbook resource was found the least study resource among the participants.

Table 2 indicates the independent t-test results of gender, residency, and study resources by learning style preferences. The result revealed that there is a statistical difference between gender and learning style preferences (t=3.45, p=0.012). Also, the female students used visual, auditory, kinesthetic, visual, and auditory, visual, and kinesthetic, auditory, and kinesthetic, visual, auditory, and kinesthetic learning style preferences more than male students. There is no statistical difference found between residency (t=4.08, p=0.354), study resource (t=3.73, p=0.978) and learning style preferences (Table 2).

Table 2: Independent t-test Results of Gender, Residency, and Study Resources by the Learning Style Preferences

		V.	A.	K.	V. & A.	V. & K.	A. & K.	V. A. K.	t	p value
		n, %	n, %	n, %	n, %	n, %	n, %	n, %		
Gender	Female	136 (31.7)	81 (18.9)	62 (14.4)	56 (13)	41 (9.5)	40 (9.3)	12 (3.2)	3.45	0.012
	Male	32 (34.7)	16 (17.3)	13 (14.1)	10 (10.8)	9 (9.7)	8 (8.6)	4 (4.8)		
Residency	Alone	145 (36.8)	96 (24.3)	56 (14.2)	48 (12.1)	36 (9.1)	8 (2)	5 (1.5)	4.08	0.354
	With family	43 (34.1)	28 (22.2)	16 (12.6)	13 (10.3)	11 (8.7)	9 (7.1)	6 (5)		
Study Resource	Teachers ppt	136 (34.3)	96 (24.2)	72 (18.1)	56 (14.1)	18 (4.5)	12 (3)	6 (1.8)	3.73	0.978
	Notes	32 (37.6)	17 (20)	11 (12.9)	9 (10.5)	8 (9.4)	5 (5.8)	3 83.8)		
	Textbook	10 (25.6)	8 (20.5)	6 (15.3)	5 (12.8)	4 (10.2)	4 (10.2)	2 (5.4)		

Teacher ppt: Teacher power point slides, V: Visual, A: Auditory, K: Kinesthetic, V. & A: Visual and Auditory, V.& K: Visual and Kinesthetic, A. & K: Auditory and Kinesthetic, V. A. K: Visual, Auditory, Kinesthetic

Also, table 3 indicates the relationship between learning style preferences and academic achievement (GPA), there is no statistical difference found between learning style preferences and academic achievement (GPA) (F test=3,476, p=0.085). However, the result of ANOVA showed that gender had significant main effect on freshmen's social adaptability (Gender: $F(1, 347) = 2.66$, $p<0.05$). There was no association between residency $F(1, 211) =$

1.85, p= 0.182 and study resource F (1, 408) = 2.38, p= 0.281. The results of t-test showed that interpersonal adaptability and self-care adaptability female's score higher than male score (t=-1.57, p< 0.01; t= -1.23, p< 0.05). However, physical, and mental symptoms female score lower significantly than male score (t= 2.38, p<0.05).

Table 3. The Results of ANOVA test of Learning Style Preferences and Academic Achievement (GPA)

	V.	A.	K.	V. & A.	V. & K.	A. & K.	V. A. K.	P value	F-test
N	168	97	75	66	50	48	16	0.085	3.476
Mean (GPA)	4.8	4.26	5.1	3.8	4.21	3.42	3.1		
SD	0.62	0.61	0.58	0.36	0.28	0.42			

V: Visual, A: Auditory, K: Kinesthetic, V. & A: Visual and Auditory, V.& K: Visual and Kinesthetic, A. & K: Auditory and Kinesthetic, V. A. K: Visual, Auditory, Kinesthetic

Pearson correlation was calculated to determine the relationship between social adaptation, learning style preferences and academic achievement among freshmen students (Tablo 4). The Pearson correlation results revealed that the visual learning styles significantly correlated with interpersonal adaptability at p=.001 significance value their correlation coefficient being .251, r^2=14 which accounts for 14% variance. This implies that visual learners have high interpersonal skills in terms of social adaptability to the environment. The visual and kinesthetic learning styles had significantly correlated with choice adaptability at p=.018 significance level, their correlation coefficients being .106 (r^2= 9). The correlation coefficient of the visual and kinesthetic learning styles accounts for 9% of the variation. This finding indicates that visual and kinesthetic learners prefer using a wide variety of strategies and choices. It can be stated that visual and kinesthetic learners easily socialize in the new environment and facilitate their challenges in the classroom. They are aware of what practicing and learning strategies they need as they positively develop their attitudes about social adaptation. However, a high level of negative correlation was found between role adaptability and visual learning style (r=-.603), choice adaptability and auditory learning style (r=-.716), environmental identity adaptability and kinesthetic (r=-.689), learning adaptability and visual and auditory learning style (r=-.628), self-care adaptability and visual and kinesthetic learning style (r=-.736), academic achievement and visual, auditory and kinesthetic learning style (r=-.666).

Table 4: The Results of Correlation Among Social Adaptation, Learning Style Preferences and Academic Achievement (n=520)

		1	2	3	4	5	6	7	8
Visual	Pearson (r)	-.476**	.251**	-.603**	-.508**	-.218**	-.336**	-.638**	-.226**
	p value	.125	.001	.652	.994	.107	.211	.647	.285
	r^2	7	14	4	0	6	7	12	9
Auditory	Pearson (r)	-.395**	-.149**	-.208**	-.716**	-.526**	-.652**	-.387**	-.684**

	p value	.132	.147	.188	.362	.508	.344	.277	.193
	r^2	2	1	0	2	3	8	4	1
Kinesthetic	Pearson (r)	-.562**	-.318**	-.482**	-.134**	-.090**	-.689**	-.263**	-.635**
	p value	.421	.302	.179	.164	.286	.233	.203	.714
	r^2	2	3	4	1	4	2	1	7
Visual and Auditory	Pearson (r)	-.628**	-.107**	-.356**	-.265**	-347**	-305**	-154**	-.287**
	p value	.662	.208	.096	.325	.247	.777	.196	.151
	r^2	5	6	4	0	14	12	5	7
Visual and Kinesthetic	Pearson (r)	-.146**	-.364**	-.106**	.106**	-.736**	-.162**	-.232**	-.199**
	p value	.303	.253	.341	.018	.328	.825	.623	.722
	r^2	3	10	2	9	8	14	3	4
Auditory and Kinesthetic	Pearson (r)	-.273**	-.712**	-665**	-609**	-.610**	-.720**	-.717**	-.588**
	p value	.473	.358	.305	.097	.132	.362	.472	.135
	r^2	2	5	8	3	1	1	4	3
Visual, Auditory and Kinesthetic	Pearson (r)	-.358**	-.421**	-.287**	-.287**	-.422**	-.226**	-.608**	-.666**
	p value	.257	.168	.142	.362	.537	.541	.764	.355
	r^2	1	3	5	9	7	12	3	4

*p<.05, **p<.01,1: learning adaptability;2: interpersonal adaptability;3: role adaptability;4: choice adaptability;5: self-care adaptability;6: environmental identity adaptability; 7: physical and mental symptoms;8: Academic achievement (GPA)

Discussion

This study examined the relationship between social adaptation, learning style preferences and academic achievement among freshmen students. The response rate of the study was an 86%. As the result indicated that 32.3% students had visual preference, 18.6% students had auditory preference, 14.4% students possessed kinesthetic preference, 12.6% students were visual-auditory preference, 9.6% students were visual-kinesthetic, 9.2% students were auditory-kinesthetic, and 3.3% students were visual-auditory-kinesthetic learning style preferences.

The present study findings showed that the visual learning styles significantly correlated with interpersonal adaptability and visual and kinesthetic learning styles were correlated with choice adaptability. There was no relationship found between learning style preferences and academic achievement. Also, social adaptation subdimensions were found to be negatively correlated with the learning style preferences and academic achievement in this study. It can be stated that visual learners have high interpersonal skills as kinesthetic learners have variety of choices of strategies in learning. The result of the study indicated that a large portion of freshmen preferred to study with teacher power point slide (76.1%). In the literature, the most common learning style preferences are visual and other learning styles can be found between gender (Bobek & Tversky, 2016; Dosher & Lu, 2017; Harris & Sagi, 2018).

Lujan and DiCarlo (2006) reported that one in third students had single approach for learning as they become freshmen in the college. Other studies determined that 25% of college freshmen students preferred to have multiple approach for learning (Al-Rukban et

al., 2010). The study by Espinoza-Poves et al. (2019) concluded that mostly preferred learning style are reading/writing and multimodal style as a model of VARK among college freshmen students. Visual, auditory, and kinesthetic style were the least used by these students. These findings in the literature are not in line with the present study' results.

Also, there are numerous studies in this field on learning style and academic achievement among college freshmen and the results support that learning style, academic achievement and performance are not associated during first year of college (Almigbal, 2015; Censor et al., 2006; Johnson, 2009; Samarakoon et al., 2013). It should be noted that the present study findings are in line with some of the research results regarding the relationship of variables of age, gender, residency and learning style preferences (Dryer et al., 2016; Emamepur & Shams, 2004; Yılmaz & Orhan, 2010).

From the opposite perspective, Dobson (2010) demonstrated that gender play an important role in learning style preferences. The study concluded that female first year college students were found to be more successful than male first year college students as male students show poorer academic performance. On the contrary, Ren et al. (2015) stated that male freshmen students have a robust capacity for future academic performance, and they are easily initiate intervention programs to minimize any potential problems that are inherent in learning.

One of the main findings of this study was that social adaptability differ between female and male students. Gender had significant main effect on freshmen's social adaptability. Female students are better adjusted to university life in terms of interpersonal adaptability and self-care adaptability. However, male students are better adjusted in terms of physical and mental symptoms. The study by Clinciu (2013) found that male students are better adjusted to university life when compared to female students and this study results are inconsistent with the results in this. Many studies indicate that male students are better adjusted to university life than female students (Enochs and Roland, 2006, Abdullah et al., 2009). Although, in this study, female students are better adjusted interpersonal adaptability and self-care adaptability, male students are better adjusted physical and mental symptoms in university adaptability as freshmen.

Conclusion

There have been many researchers studied student academic achievement and learning style preferences, but social adaptation, learning style preferences and academic achievement among freshmen has not been carried out. This research study brought new findings relating to social adaptation, learning style preferences and academic achievement among freshmen students. As college is an important milestone of student's career and life, to better adapt of living environment is a great importance for freshmen's academic success which is linked to the learning style preferences. The results of this study may help educators to design effective teaching strategies and understand student' learning style for the diverse need of students. They can also guide freshmen for the learning method and preferences when build

good atmosphere which may solve problems of adaptation, improve interpersonal interactions, and explore form of the concept of learning style.

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