

Turkish Studies

Educational Sciences

Volume 13/19, Summer 2018, p. 473-499

DOI Number: <http://dx.doi.org/10.7827/TurkishStudies.14129>

ISSN: 1308-2140, ANKARA-TURKEY

Research Article / Araştırma Makalesi

Article Info/Makale Bilgisi

✍ Received/Geliş: Eylül 2018

✓ Accepted/Kabul: Eylül 2018

✍ Referees/Hakemler: Prof. Dr. Nazmi AVCI - Doç. Dr. Levent ERASLAN

This article was checked by iThenticate.

A SCALE DEVELOPMENT STUDY: SUCCESSFUL UNIVERSITY ACADEMICIANS PERCEIVED BY STUDENTS


Ömer ÇELİKKOL* - Hüseyin MERTOL** - Cengiz GAZELOĞLU***

ABSTRACT

Effective communication skills take an important place in terms of the professional and personal qualifications of the teacher. This is because the learning process, in the most general sense, is a communication process itself. In this process, the competence and success of the teacher play the crucial role for a meaningful message exchange. One of the important factors that boost the teacher's influence on the student is his ability to generate healthy communication. The healthy communication of the teacher with the student is required both for high academic achievements and changes in students' attitude behavior.

Success emerges as a changeable concept from person to person and from society to society. What does success verbalize, and who are called as successful? What does a successful life look like? It is very difficult to answer all these questions because there are no distinct and basic criteria that may measure the concept of success. Being aware of this difficulty, the purpose of this study is to identify the characteristics of the academic staffs that are considered as the most successful by the university students and to develop a standard scale tool to be used in determining the qualifications to render academic profession successful. In this study, descriptive method has been used. The scale was constituted in the light of 35 experts' opinions and aimed to determine the qualities that render academic profession successful, and then the scale has been reduced to 23 items as a result of preliminary application studies including 75 people. The final scale has been applied to 234

*  Dr. Öğr. Üyesi, Süleyman Demirel Üniversitesi Eğitim Fakültesi, El-mek: omercelikkol@sdu.edu.tr

**  Dr. Öğr. Üyesi, Süleyman Demirel Üniversitesi Eğitim Fakültesi Sosyal Bilgileri Öğretmenliği, El-mek: huseyinmertol@sdu.edu.tr

***  Dr. Öğr. Üyesi, Süleyman Demirel Üniversitesi, El-mek: cegizgazeloglu@sdu.edu.tr

students selected as the sample. The structural validity, internal reliability and applicability of the "**Scale for Academicians that university students consider successful**" has been shown via Cronbach's alpha value=0.944 and factor analysis (total factor load=66,111%) results. A measuring tool with high validity and reliability, consisting of 23 items and four sub-dimensions, has been achieved as a result of the analyses. It has been identified that the qualifications for successful academicians are visionary leadership, communication skills, classroom management, and democratic attitude. As a result of the analysis, it was determined that the visionary leadership, classroom management and democratic attitude affect communication skills positively. Also, it was concluded that communication skills have a positive effect on the academic profession. However, it is believed that it will be helpful to support the obtained results with larger scale applications.

STRUCTURED ABSTRACT

Success emerges as a changeable concept from person to person and from society to society. What does success verbalize, and who are called as successful? What does a successful life look like? It is very difficult to answer all these questions because there are no distinct and basic criteria that may measure the concept of success. Being aware of this difficulty, the purpose of this study is to identify the characteristics of the academic staffs that are considered as the most successful by the university students and to develop a standard scale tool to be used in determining the qualifications to render academic profession successful. In this study, descriptive method has been used. The scale was constituted in the light of 35 experts' opinions and aimed to determine the qualities that render academic profession successful, and then the scale has been reduced to 23 items as a result of preliminary application studies including 75 people. The final scale has been applied to 234 students selected as the sample. The structural validity, internal reliability and applicability of the "**Scale for Academicians that university students consider successful**" has been shown via Cronbach's alpha value=0.944 and factor analysis (total factor load=66,111%) results. A measuring tool with high validity and reliability, consisting of 23 items and four sub-dimensions, has been achieved as a result of the analyses. It has been identified that the qualifications for successful academicians are visionary leadership, communication skills, classroom management, and democratic attitude.

The population of this study constitutes the students who study at Süleyman Demirel University, Faculty of Education between 2017-2018 academic years. In the preparation process of the scale, 35 expert opinions were consulted. Starting with the opinions originated in the literature, the preliminary application of scale was carried out with 75 students and the second application was actualized with 234 voluntary students.

In the process of adjusting the scale, it started with the academic profession, the qualities that render academicians successful and the qualifications of the academicians that the university students found successful, and then moved onto a literature search. It was requested

that university students write the characteristics of the academicians they find most successful, and draft scales were formed from the obtained responses. As a result of these studies, 88 items that could be included in the draft scale were achieved, 35 experts have been consulted on the clarity and validity of each item as to find if they comply with the predefined purpose.

As a result of expert opinions and pre-application, 65 items that were found to be inappropriate were removed from the item pool. The draft scale, consisting of 23 items, was applied to the sample group composed of 234 students studying at Süleyman Demirel University Faculty of Education. The obtained data were subjected to an internal consistency test and the overall reliability of the test was identified. The data were then subjected to factor analysis and Cronbach's Alpha value was found for each factor.

When carrying out the data analysis obtained by the questionnaire, SPSS 24.0 and LISREL 8.8 programs were used. In analyzing the data, Exploratory Factor Analysis and Structural Equation Modeling (SEM) methods were used. In addition, Cronbach's Alpha coefficients and correlations have been calculated for each subscale of the developed scale.

This study focuses on explaining and examining the qualities of academicians that university students perceive as successful. Reliability and validity analyses were conducted to develop a scale concerning the measurement of the qualifications of academicians that university students consider as successful

Factor analysis has been applied to check the construct validity of the developed scale. It is seen that the factor loads of 23 items which have been decided to be included in the scale are between 0,551 and 0,849. According to the analyzed result, it has been concluded that a certain structure can be measured with a scale consisting of 23 items. In the factor analysis, 23 items were collected under four factors after the varimax rotation technique. According to this, it can be said that a scale consisting of 23 items with structural validity and four factors has been achieved.

The factors that make up the scale, by taking the items they contain into account, are named as follows; Factor 1: Visionary Leadership subscale, 11 items (S11, S12, S13, S14, S15, S17, S18, S20, S21, S22, S23). Factor 2: Communication Skills subscale, 6 items (S2, S6, S7, S8, S9, S10). Factor 3: Classroom Management subscale, 3 items (S3, S4, S5). Factor 4: Democratic Attitude subscale, 3 items (S1, S16, S19). As a result of analysis, it was found out that the Cronbach Alpha coefficients calculated for measuring internal consistency of four factors is high. Thus, it has been ended that the variables that make up the factors consist of the items with internal consistency. As a result of these evaluations, a structural equation model based on communication skills of academicians has been established. This model has been divided into four factors as A, B, C, D. The factor represented in the model by A is "Visionary Leadership", the factor represented by B is called "Communication Ability", the factor represented by C is "Classroom Management" and the factor represented by "D" is expressed by "Democratic Attitude". It has been identified that three factors are

effective on factor B. It was determined that the highest effect was on visionary leadership with a 0.72 ratio among these factors. That is, a unit of change in the factor A will cause a 0.72 increase in communication skills. In the light of this finding, it has been seen that the visionary leadership skills of academicians influence positively their communication skills. It appears that the better the communication skills of the academicians, the more successfully academicians they are perceived by the student.

In addition, the Cronbach Alpha score calculated to determine the internal consistency of the scales was found to be high, and it was concluded that the items formed a unity with internal consistency in identifying the characteristics of the academicians that university students regard as the most successful and determining the qualifications that render the academic profession successful. As a result of the analyzes carried out, it was obtained that the "**Scale for Academicians that university students consider successful**" is a valid and reliable scale.

When developing the scale, it was intended to adhere to the scale development principles in the literature. Therefore, the scale is an original scale. It is expected that the model used in the research will lead the path to the researchers studying on these issues. It is suggested that this scale be used in collecting the data in terms of identifying the characteristics of the academicians that university students regard the most successful and determining the qualifications that render the academic profession successful. As we take a look in the study in general, we can see that among these variables in visionary leadership factor the highest effect with an impact of 0.69 is "The most successful teacher knows that there is something he can learn from his students". The most influential variable in communication skill is "The most successful teacher makes his student active and completes the missing aspects". The most important variable that influenced the classroom management factor was with a 0.63 coefficient, "During the most successful teacher's lesson, I am bored and sleepy". In the lessons of academicians who are generally perceived as unsuccessful, students stated that they are bored and are sleepy in the courses. As for the Democratic Attitude, D factor, the variable with the highest effect has been with a ratio of 0.82, "The most successful teacher is extremely disciplined and formalist". Shortly, students find the extremely disciplined academicians as unsuccessful.

Keywords: Higher Education, Leadership, Sociology of Education

ÜNİVERSİTE ÖĞRENCİLERİN BAŞARILI OLARAK GÖRDÜĞÜ AKADEMİSYENLER ÖLÇEĞİ

ÖZET

Başarı toplumdan topluma kişiden kişiye değişken bir kavram olarak karşımıza çıkmaktadır. Başarı neyi ifade eder, kimlere başarılı denir? Başarılı bir hayat neye benzer? Tüm bu soruların cevabını vermek, başarı kavramını ölçen belirgin ve temel kriterlerin olmaması nedeniyle çok zordur. Bu zorluğun bilincinde olan bu çalışmanın amacı, üniversite

öğrencilerinin en başarılı buldukları akademisyenlerin özelliklerini tespit etmek ve akademisyenlik mesleğini başarılı kılacak niteliklerin belirlenmesinde kullanılmak üzere standart bir ölçek aracı geliştirmektedir. Araştırmada betimsel yöntem kullanılmıştır. Akademisyenlik mesleğini başarılı kılacak nitelikleri belirlemek amacıyla geliştirilen “Üniversite öğrencilerin başarılı olarak gördüğü akademisyenler Ölçeği”, 35 uzman görüşü doğrultusunda ve 75 kişilik ön uygulama çalışmaları sonucunda 23 maddeye ulaşılmıştır. Örneklem olarak seçilen 234 öğrenciye son ölçek uygulanmıştır. Akademisyenlik mesleğini başarılı kılacak nitelikleri belirlemek amacıyla geliştirilen “Üniversite öğrencilerin başarılı olarak gördüğü akademisyenler Ölçeği” nin yapısal geçerliliği, iç güvenilirliği ve uygulanabilirliği Cronbach’s alfa değeri =0.944 ve faktör analizi (Toplam faktör yükü=%66,111) sonuçları ile gösterilmiştir. Analizler sonucunda 23 madde ve dört alt boyuttan oluşan, geçerliliği ve güvenilirliği yüksek bir ölçek aracına ulaşılmıştır. Akademisyenlik mesleğini başarılı kılan niteliklerin vizyoner liderlik, iletişim becerileri, sınıf yönetimi, demokratik tutum olduğu görülmüştür. Analiz neticesinde vizyoner liderlik, sınıf yönetimi ve demokratik tutumun iletişim becerilerini, iletişim becerilerinin de akademisyenlik mesleğini olumlu yönde etkiledi saptanmıştır. Bununla birlikte elde edilen sonuçların ölçeğin daha geniş alanlı uygulamalar ile desteklenmesi yararlı olacaktır.

Anahtar Kelimeler: Yüksek Öğretim, Liderlik, Eğitim Sosyolojisi

1. Introduction

Effective communication is the facilitator in all kinds of human relationships and in all fields of professions. It is necessary for employees to have more command of communication skills, especially in some professional areas where there is an essentialness to be together with people more often. Examples of this include psychiatrists, psychologists, psychological counselor, social service experts, physicians, nurses, teachers, bankers, lawyers or salespeople (Korkut, 2005). Effective use of the mother tongue is very important for both the individual and the society. To be able to explain himself / herself correctly and fully Turkish Language Teaching in Primary and Secondary Education It is among the general objectives of its programs (Bağcı, 2012). In addition to these professions, academic profession is among the leading professions where communication skills are supposed to be high.

It is known that academic profession and the basic pillars of this profession are based on ancient periods. As a result of new developments and changes, “Should the academic profession have a teaching-based structure or a research-based structure?” is still one of the topics discussed. In order to better understand this situation related to the academic profession, there is a necessity to understand and comprehend the effects of change and development emerged in the historical process about the academic profession (Odabaşı, Fırat, İzmirli, Çankaya & Mısırlı 2010). Just like in all fields of education, change and development in higher education is a continuous process. The assigned areas and job descriptions of the academicians in this process continue to undergo changes and developments. In this current age, the academician and higher education concepts emerged under the leadership of contemporary and developing countries have prioritized the concept of "entrepreneurial university" which is open to innovations, adapting to the development and rapid exchange of information, supporting all kinds of initiatives and improvement (Odabaşı, 2006). It is important to bear in mind that the basic element of development and change is always the qualified man power. That is, qualified manpower emerges as one of the cornerstones of development and change. One of the other chief objectives of higher education institutions is to bring the achievement

into forefront by taking aim at it according to various criteria. Here, we are face with the "What are the indicators of success?" question. Measurable targets are indicators of success (Rosen, 1998). Measurement in institutions with high performance is a lifestyle, and management considers these measurement results in the context of bringing higher performance to the next level. Although measuring is an important process; it is important to know what we measure and how we measure. According to Rosen (1998), "it is significant to measure the right things with the right methods and tools".

To provide academicians with advancement based on education and training activities and to strengthen this development, it is essential to use the methods and tools correctly. It is not possible to make the situation, the state, or the performance better unless we measure (Işığışık, 2004). One of the most fundamental goals of education is to enable people to express themselves and to establish community as a social asset to other individuals. In this sense, individuals benefit from a lot of speaking skills in daily life. To be able to use a language that can be developed more effectively methods are used (Orhan, Kırbaş & Topal, 2012). In the process of evaluating the education and training activities of academicians, they are requested that they share the results of the evaluation process with the academicians themselves and to act with a plan based on development and progress. Nonetheless, it will not be a very accurate discourse to express that the self-sufficiency of academicians means that the academicians deliver successful teaching (Goddard, Hoy & Woolfolk-Hoy, 2000).

In many societies, the understanding of success means the results from a taken exam and net numbers. This result ignores the individual's personal abilities and emotional intelligence (Goleman, 1995). To be successful in the formal education system is associated with the academic grades taken in the courses. However, it is inevitable that in the post-training period, that is to say in the professional life, individuals have to acquire self-learning at the very beginning of their work to improve themselves. In formal education institutions, students are taught basic concepts and principles of disciplines in general. However, this teaching cannot suffice with the aims. Apart from this teaching, learning strategies are among one of the main topics to be taught as well. Beginning from the primary education, at every stage of teaching, the required learning methods and techniques related to the course should be given a priority while the course is being delivered (Subaşı, 2000). Today, as information disseminates rapidly, from basic education to higher education, there are two crucial needs of students at all levels of their schooling. The first one is the motivation; the other issue is how the subjects should be taught. Motivation is not just a simple concept. On the contrary, it has a multi-dimensional structure. People also have different types of motivation (Ryan & Deci, 2000). Therefore, using strategies based on different learning techniques and methods may have the ability to be successful and relevant. It is inevitable that teaching activities should be designed and implemented in such a way as to meet these two needs (Özer, 1998). Activities such as brain storming, discussion, internet research, theater, individual and group work, and flexible group work have made the lessons more interesting and enjoyable. As a result of this, it was seen that their interest in the lesson increased (Demir & Gürol, 2017).

When the studies in the literature are examined, it is seen that in their study by Akın & Çetin (2007) a "Success Orientation Scale" was developed and three factors were put forward. These factors were named as learning orientation, performance approach orientation, performance avoidance orientation. It was found out that Cronbach alpha values of the scale were 0.77 for the learning orientation, 0.79 for the performance approach orientation and 0.78 for the performance avoidance orientation, respectively. Another study named as "Motivation and Learning Strategy Scale" was conducted by Büyüköztürk et al. (2004) and they divided motivation into 6 factors. The " Academic Motivation Scale " created by Bozanoğlu (2004) is a scale that intended to measure the relationship of students' success and motivation at school. There are 3 sub-dimensions in total of 20

items on the scale. Factors related to these sub-dimensions are called "self-transcendence", "use of knowledge" and "discovery".

2. Material and Method

This scale development study was conducted in accordance with the descriptive research process. Descriptive research is a study to examine the situation as it is and to carry out a situation determination of current time. In descriptive studies, mostly a screening model is used. The screening model is accepted as a study which is performed on large groups so as to determine certain characteristics of a particular group, to determine the opinions and attitudes of the individuals in the group associated with the facts or events and to try to explain the facts or events (Yaşar, 2014).

As a general rule, it is expressed that the sample size should be at least five times bigger than the observed variable. If there are strong, reliable associations and a small number of significant factors, the number of samples can be set to 50, provided that the number of variables is greater. If there are strong, reliable relationships and a small number of significant factors, the sample size can be decided to be 50, provided that it is greater than the variable number. On the other hand, Kline (1994) emphasizes that carrying out a sampling of 200 people is usually sufficient to obtain reliable factors, and added that when the factor structure is clear and small, this figure may fall to 100. However, it was stated that it is useful to study with larger samples (Büyüköztürk, 2002). Therefore, a survey study was conducted onto 234 students as a sample.

The population of this study constitutes the students who study at Süleyman Demirel University, Faculty of Education between 2017-2018 academic years. In the preparation process of the scale, 35 expert opinions were consulted. Starting with the opinions originated in the literature, the preliminary application of scale was carried out with 75 students and the second application was actualized with 234 voluntary students.

2.1. Process of Scale Preparation

In the process of adjusting the scale, it started with the academic profession, the qualities that render academicians successful and the qualifications of the academicians that the university students found successful, and then moved onto a literature search. It was requested that university students write the characteristics of the academicians they find most successful, and draft scales were formed from the obtained responses. As a result of these studies, 88 items that could be included in the draft scale were achieved, 35 experts have been consulted on the clarity and validity of each item as to find if they comply with the predefined purpose.

2.2. Validity and Reliability

As a result of expert opinions and pre-application, 65 items that were found to be inappropriate were removed from the item pool. The draft scale, consisting of 23 items, was applied to the sample group composed of 234 students studying at Süleyman Demirel University Faculty of Education. The obtained data were subjected to an internal consistency test and the overall reliability of the test was identified. The data were then subjected to factor analysis and Cronbach's Alpha value was found for each factor.

2.3. Analysis of the Data

When carrying out the data analysis obtained by the questionnaire, SPSS 24.0 and LISREL 8.8 programs were used. In analyzing the data, Exploratory Factor Analysis and Structural Equation Modeling (SEM) methods were used. In addition, Cronbach's Alpha coefficients and correlations have been calculated for each subscale of the developed scale.

2.4. Structural Equation Modeling

The SEM applications, whose importance and use have recently gained attention in social sciences and behavioral sciences, have begun to become integral parts of a large number of scientific research initiatives. SEM, which will today be easily named as a research method all by itself, provides the researchers with quite different advantages (Simsek, 2007). SEM has been one of the most important analytical methods in social areas in the last 25 years. SEM has now begun to be widely applied in explaining the relationship between variables and formulating theories in social sciences (Kaplan, 2000).

The discussions in the historical course of Structural Equation Modeling are concerned with four kinds of models in chronological order. These are regression analysis, path analysis, confirmatory factor analysis and structural equation modeling, respectively. The initial model includes the Least Squares criterion for calculating the regression weights and the linear regression model for the use of the correlation coefficient. The last one, Structural Equation Modeling (SEM), consists of combining path analysis and confirmatory factor analysis. That is, SEM is the combination of observed variables and latent variables. SEM was originally developed by scientists Karl Joreskog (1973), Ward Keesling (1972) and David Wiley (1973). That is why it is known as the JKW model, which involves the initials of these scientists. However, with the development of LISREL, the first computer program in 1973, it is known as a linear structural relationship (Schumacker, 2004).

The first general Structural Equation Modeling was developed by Karl Jöreskog (1970, 1973), Keesling (1972) and Wiley (1973). Wright's path analysis lacks the ability to test a hypothetical causal structure that is taken into consideration. In addition to path analysis, the latent variable and the conceptual synthesis of measurement models formed the basis of contemporary SEM. SEM models actually combine validator factor models and path models. SEMs include latent and observed variables. The evolution of models about the inference concerning the latent variables obtained from the covariances between observed variables (indicator) continued in sociology during the 1960's (Çelik, 2009).

According to the program used in the analysis of the SEM, different names and different fit indices may be encountered by the program. The results of the LISREL package program, according to the fit criteria such as Chi-square value AGFI, GFI, RMSEA NNFI and CFI are generally interpreted by researchers (Sümer, 2000).

Table 1.1: Model Fit Criteria

CRITERIA	GOOD FIT	ACCEPTABLE FIT
GFI	$0.95 \leq \text{GFI} \leq 1$	$0.90 \leq \text{GFI} \leq 0.95$
AGFI	$0.90 \leq \text{AGFI} \leq 1$	$0.85 \leq \text{AGFI} \leq 0.90$
CFI	$0.97 \leq \text{CFI} \leq 1$	$0.95 \leq \text{CFI} \leq 0.97$
NNFI	$0.97 \leq \text{NNFI} \leq 1$	$0.95 \leq \text{NNFI} \leq 0.97$
NFI	$0.95 \leq \text{NFI} \leq 1$	$0.90 < \text{NFI} \leq 0.95$
RMSEA	$0 < \text{RMSEA} < 0.05$	$0.05 \leq \text{RMSEA} \leq 0.10$

Source: Akıncı, D. E., "Information Criteria in Structural Equation Models", Doctoral Thesis, Mimar Sinan University of Fine Arts, Institute of Science, Istanbul, 2007.

3. Findings and Discussion

In this section, findings achieved as a result of the analysis of data to standardize the developed scale are presented in tables and content. Besides, construct validity methods were applied to ensure the validity of the scale.

3.1. Studies on the validity of the scale

3.1.1. Content validity

Content validity is used to find if the measuring instrument covers the basic elements of the structure to be measured. As for the content validity of the scale, the experts in the field are requested that they explain whether the items on the scale are meaningful, whether the expressions are clear and understandable, and whether they cause different meanings (Koçak et al., 2015: 174). During the scale development process, literature review was performed first. Then, a draft scale consisting of 88 items was prepared according to the information obtained from the literature review. The resulting scale was then reviewed by researchers. Recurrent expressions were deleted and a draft scale of 23 items was obtained for pilot application.

A team of 30 experts was identified during the scale development process. Each of the items in the produced 88-item scale was ranked by experts through a triple rating as "1-Item is required and must remain in the pool of items", "2- Item is useful but insufficient", "3- Item is not necessary". The Content Validity Rate was calculated for each scale item. The Content Validity Rate is obtained with the following equality "R", the number of experts say required and "N", total number of experts; $CVR=[R/(N/2)]-1$ (Alpar, 2012).

Lawshe (1975) states that the minimum CVR values of the items that can be scaled by the number of experts should be as it is in Table 1. The items whose CVR values are smaller than the minimum value shown in Table 1 should be removed from the scale (Geçkil, T. & Tikici M., 2015).

Table 1.2. Minimum CVR Values of Items that can be taken to the scale by Number of Experts

Number of Experts	Minimum Value	Number of Experts	Minimum Value
5	0,99	13	0,54
6	0,99	14	0,51
7	0,99	15	0,49
8	0,78	20	0,42
9	0,75	25	0,37
10	0,62	30	0,33
11	0,59	35	0,31
12	0,56	40+	0,29

Since the number of experts is 35, it is required that the smallest CVR value be 0,31 at $\alpha = 0,05$ significance level. In this study, 35 experts rated 88 items, and the Content Validity Ratio-CVR for each item has been calculated (Table 2). According to 35 expert opinions, the Content Validity Ratio (CVR) calculated for each item must be greater than the minimum value (0.31) as it is shown in Table 1. On the other hand, it is recommended that the CVR of the items to be included in the scale should not be below 0.78. In this study, the items with higher than 0.78 CVR were accepted, while the items lower than this value were rejected and removed from the scale. Accordingly, 65 items from 88 items were subtracted from the scale and a 23-item candidate scale form was created.

The CVR values of the items in the scale ranged from 0.83 to 1.0 and the Scale Content Validity Index (S-CVI) was calculated as 0.91 (Table 2). It has been expressed that the Content

Validity Index for the total of the scale is 0.80 and above, which is acceptable (Polit and Beck, 2006). Accordingly, the Content Validity Ratios of items in candidate scale and the scale Content Validity Index are at the acceptable levels.

Table 2. Content Validity of items By Experts

Item No	Required	Useful But Insufficient	Unnecessary	CVR	Item No	Required	Useful But Insufficient	Unnecessary	CVR
1	25	5	5	0,43	45	33	1	1	0,89
2	23	5	7	0,31	46	35	0	0	1,00
3	25	5	5	0,43	47	32	2	1	0,83
4	17	7	9	-0,03	48	34	1	0	0,94
5	22	8	5	0,26	49	34	1	0	0,94
6	25	5	5	0,43	50	22	8	5	0,26
7	23	5	7	0,31	51	22	7	6	0,26
8	23	6	6	0,31	52	18	9	8	0,03
9	24	5	6	0,37	53	15	14	6	-0,14
10	25	6	4	0,43	54	10	18	7	-0,43
11	25	8	2	0,43	55	16	15	4	-0,09
12	24	9	2	0,37	56	23	8	4	0,31
13	15	11	9	-0,14	57	25	5	5	0,43
14	26	8	1	0,49	58	27	7	1	0,54
15	25	7	3	0,43	59	19	5	11	0,09
16	24	7	4	0,37	60	25	7	3	0,43
17	32	2	1	0,83	61	21	7	7	0,20
18	27	4	4	0,54	62	34	0	1	0,94
19	28	7	0	0,60	63	33	1	1	0,89
20	27	5	3	0,54	64	32	1	2	0,83
21	25	6	4	0,43	65	35	0	0	1,00
22	26	9	0	0,49	66	25	5	5	0,43
23	21	9	5	0,20	67	33	2	0	0,89
24	33	1	1	0,89	68	33	1	1	0,89
25	19	8	8	0,09	69	35	0	0	1,00
26	23	7	5	0,31	70	33	1	1	0,89
27	25	7	3	0,43	71	32	2	1	0,83
28	33	2	0	0,89	72	34	1	0	0,94
29	34	1	0	0,94	73	33	0	2	0,89
30	26	7	2	0,49	74	33	1	1	0,89
31	35	0	0	1,00	75	25	4	6	0,43
32	25	7	3	0,43	76	19	9	7	0,09
33	28	4	3	0,60	77	23	9	3	0,31
34	26	8	1	0,49	78	22	7	6	0,26
35	26	5	4	0,49	79	25	8	2	0,43
36	19	8	8	0,09	80	26	7	2	0,49
37	24	8	3	0,37	81	14	16	5	-0,20
38	19	9	7	0,09	82	23	9	3	0,31
39	18	9	8	0,03	83	34	0	1	0,94
40	21	9	5	0,20	84	24	7	4	0,37
41	22	8	5	0,26	85	21	9	5	0,20
42	18	8	9	0,03	86	14	16	5	-0,20
43	12	13	10	-0,31	87	19	14	2	0,09
44	18	7	0	0,03	88	21	8	6	0,20
								KGİ	0,91

The Content Validity Index (CGI) related to the scale, as a result of expert opinions, refers to the average of the content validity rates of the remaining items on the draft scale. It is expected that Content Validity Index is higher than 0.67 (Alpar, 2014). Because the Content Validity Index is $KGI=0,91>0,67$, the scale was found as statistically significant.

3.1.2. Construct Validity

Structural validity indicates the ability to measure the entire concept or conceptual structure of the scale. In other words, structural validity refers to the process of understanding what the scale is and what scale is making sense of (Geçkil, T. & Tikici M., 2015). Factor Analysis was used to evaluate the construct validity. In the factor analysis of "**Scale for Academicians that university students consider successful**", basic component analysis method was used

In order to ensure construct validity, the "Kaiser-Meyer-Olkin Measure of Sampling Adequacy" and "Bartlett's Test of Sphericity" must be applied before Factor Analysis. The result of "Bartlett's Test of Sphericity" should be statistically significant ($p < 0.05$) and CVR value should be higher than 0.50. When "Kaiser-Meyer-Olkin Measure of Sampling Adequacy" value is between 0,50 and 0,70, it is regarded as medium, 0,70 and 0,80 is good, 0,80 and 0,90 is very good, and 0,90 and over is perfect, respectively. As the Bartlett's Test of Sphericity" result is ($p < 0.05$), it means that there is a correlation between the scale items and that the data obtained are suitable for Factor Analysis (Geçkil, T. & Tikici M., 2015: 59). The suitability of the data set for Factor Analysis is presented in Table 3.

Table 3. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and "Bartlett's Test of Sphericity" Table for Factor Analysis of Data

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,944
	Approx. Chi-Square	4712,740
Bartlett's Test of Sphericity	df	253
	Sig.	,001

In this study, the value of "Kaiser-Meyer-Olkin Measure of Sampling Adequacy" (KMO) was found to be 0,944. This displays that the sample size is excellent. As a result of Bartlett's Test of Sphericity analysis, $\chi^2 = 4712,740$ and $p < 0.001$ values were obtained. This indicates it is a statistically significant value, and that the sample is sufficient and the data are normally distributed.

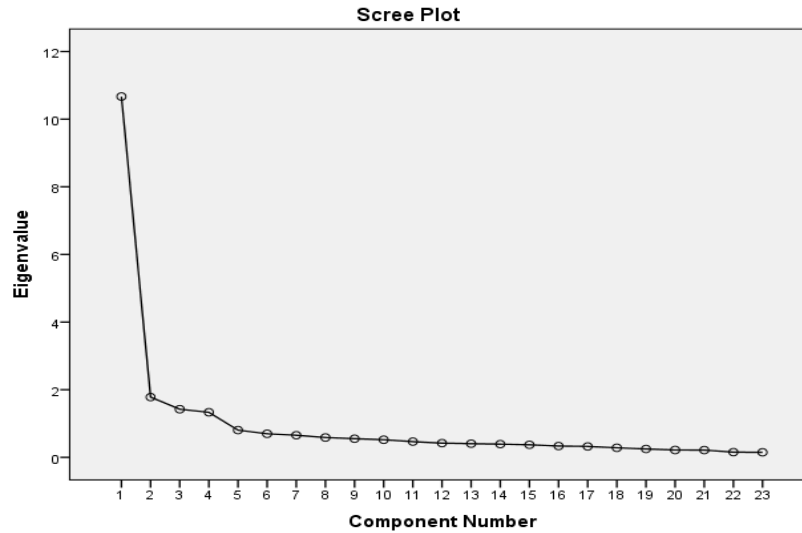
When factor number is determined, line graph of variance percentages (Table 4) (Figure 1) has predicated on. As a result of the factor analysis, a four-factor structure emerged which has an explanatory value of 66,111% of the total variance. Factor 1 has been able to explain 31,411% of the total variance, Factor 2; 48,001% of the total variance, Factor 3; 57,256% of the total variance, Factor 4; 66,111% of the total variance, in turns.

Table 4. Total Variance Explained Rates of Factors (n=234)

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Factor 1	10,669	46,386	46,386	7,225	31,411	31,411
Factor	1,781	7,744	54,130	3,816	16,590	48,001
Factor	1,423	6,186	60,316	2,129	9,255	57,256
Factor	1,333	5,794	66,111	2,037	8,855	66,111

In factor analysis, the explained variance is considered as an indicator of how well the relevant concept or structure is measured. It is important that the variables involved in the analysis could explain 2/3 of the total variance. But it is difficult to achieve this rate in social and behavioral sciences (Büyüköztürk, 2002). For this reason, the variance rates between 40% and 60% in social sciences are deemed as sufficient (Özcan & Balyer, 2013).

Figure 1. Eigen Value Line Chart (Scree Plot)



In this study, factors are able to explain 66,111% of the total variance. This rate has been interpreted as statistically significant. The line graph is obtained by combining the eigenvalues of the items. It is stated that it gives the number of factors of the breaking points (Büyüköztürk, 2002). As we through the Figure 1, it can be seen that the breaking points that are fast decreasing in the line graph are the factors 1, 2, 3 and 4, and after the factor of 5, it is understood that the graph shows a more horizontal appearance. Accordingly, it is determined that the number of important factors included in the scale is 4. There is a flattening after the rapid decline in the first factor. It can be seen that for a one-factor structure before using Varimax rotation technique, the explained variance percentage is 46,386, while after varimax rotation this ratio has gone down to 31,411 (Table 4). However, when deciding on the number of factors, the only ones whose core values are 1 and above are considered. This indicates that the scale explains 66,111% and shows that it has more variance (Table 4).

In Table 5, the factor loads of the factors originating from factor analysis and factor loads of the four have been explained by the factor analysis with the varimax rotation technique. Factor load shows the correlation between the item in the factor and the factor. When a factor has a lower factor load value, it indicates that there is not a strong enough relationship with this factor. The factor load that an item possesses is considered when the item is removed from the scale. Although it is explained that the factor load value of the item should be higher than 0.30, there are some theorists who argue that this value should be at least 0.40 (Geçkil, T. & Tikici M., 2015). As it is shown in Table 5, the factor loads of the items are between 0.551 and 0.849 and are in the acceptable level.

Table 5. Factor Analysis Results

Item No	Factor 1	Factor 2	Factor 3	Factor 4
S22	0,809			
S14	0,807			
S13	0,806			
S18	0,802			
S12	0,782			
S21	0,780			
S15	0,726			
S23	0,706			
S20	0,701			
S11	0,688			
S17	0,666			
S7		0,760		
S6		0,719		
S9	0,486	0,711		
S8	0,402	0,701		
S2		0,673		
S10	0,441	0,633		
S3			0,849	
S4			0,794	
S5			0,551	
S19				0,825
S1				0,715
S16				0,655

Factors obtained as a result of factor analysis and the items are given in table 5. The first factor is constituted of 11 items. The factor loads of the items in this factor range from 0.666 to 0.809. The items collected under this factor (S11, S12, S13, S14, S15, S17, S18, S20, S21, S22, S23) refer to the visionary leadership. For this reason, this factor is called as "Visionary Leadership". The second factor consists of 6 items. The factor loads of the items in this factor range from 0,633 to 0,760. The items collected under this factor (S2, S6, S7, S8, S9, S10) point to the communication skills. Therefore, this factor is named as "Communication Skills". The third factor includes of 3 items. The factor loads of the items under this factor range from 0.551 to 0.849. The items gathered under this factor (S3, S4, S5) show the classroom management. For this reason, this factor is called as "Classroom Management". The fourth factor is composed of 3 items. The factor loads of the items under this factor range from 0,655 to 0,825. The items collected under this factor (S1, S16, S19) display the democratic attitude. For this reason, this factor is called as "Democratic Attitude".

3.2. Calculation of the Internal Consistency of the Scale

Cronbach's Alpha internal consistency values of the developed scale have been computed. The total scores of the scale and the internal consistency values for the sub-factors can be found in Table 6. The Cronbach's Alpha value, indicating the internal consistency of the items, was found as 0.931. When we look at Cronbach's Alpha value, it can be said that there is an internal consistency of the complete scale.

Table 6. Cronbach's Alpha Value and Total Correlations of The Items

S.N.	Average When Item Extracted	Variance When Item Extracted	Total Correlation	Cronbach's Alpha	S.N.	Average When Item Extracted	Variance When Item Extracted	Total Correlation	Cronbach's Alpha
<i>S1</i>	35,21	135,283	0,390	0,933	<i>S13</i>	35,49	131,006	0,739	0,926
<i>S2</i>	35,49	135,228	0,536	0,929	<i>S14</i>	35,45	130,616	0,718	0,926
<i>S3</i>	35,78	138,473	0,449	0,930	<i>S15</i>	35,64	134,079	0,766	0,927
<i>S4</i>	35,60	137,319	0,452	0,930	<i>S16</i>	34,47	133,298	0,363	0,935
<i>S5</i>	35,25	132,996	0,473	0,931	<i>S17</i>	35,56	132,882	0,684	0,927
<i>S6</i>	35,38	133,964	0,591	0,928	<i>S18</i>	35,62	131,488	0,788	0,925
<i>S7</i>	35,47	132,916	0,667	0,927	<i>S19</i>	34,71	135,012	0,320	0,936
<i>S8</i>	35,58	134,296	0,677	0,927	<i>S20</i>	35,66	133,585	0,686	0,927
<i>S9</i>	35,46	129,437	0,756	0,925	<i>S21</i>	35,60	132,532	0,747	0,926
<i>S10</i>	35,33	132,731	0,631	0,928	<i>S22</i>	35,59	132,052	0,781	0,926
<i>S11</i>	35,48	132,714	0,678	0,927	<i>S23</i>	35,73	135,720	0,666	0,928
<i>S12</i>	35,70	134,860	0,710	0,927					

If any of the scale items in Table 6 are eliminated, it may be noticed that a higher value than the given one cannot be reached. For this reason, it can be interpreted that inclusion of all items in table 6 may increase the reliability of the scale. At this stage, the internal consistency of the factors also needs to be calculated.

3.2.1. Factor 1: Internal Consistency Analysis of Visionary Leadership Factor

The table for internal consistency of the Cultural Difference Issues Factor is given in Table 7 and its Cronbach's Alpha value is measured as 0.948. Additionally, it is also noted that there will be no significant increase in Cronbach's Alpha value if each item is eliminated separately. According to the analysis result, we can say that the internal consistency level of the items that generate the Visionary Leadership Factor is high.

Table 7. Internal consistency Table of Visionary Leadership Factor

Item No	Average When Item Extracted	Variance When Item Extracted	Total Correlation	Cronbach's Alpha
<i>S11</i>	14,53	35,602	0,707	0,946
<i>S12</i>	14,75	36,556	0,777	0,944
<i>S13</i>	14,54	34,331	0,813	0,942
<i>S14</i>	14,50	34,079	0,792	0,943
<i>S15</i>	14,69	36,410	0,798	0,943
<i>S17</i>	14,61	35,787	0,703	0,946
<i>S18</i>	14,67	34,831	0,842	0,941
<i>S20</i>	14,71	36,017	0,725	0,945
<i>S21</i>	14,66	35,356	0,802	0,942
<i>S22</i>	14,65	35,144	0,834	0,941
<i>S23</i>	14,79	37,133	0,715	0,946

3.2.2. Factor 2: Internal Consistency Analysis of Communication Skills Factor

The internal consistency table of the subscale formed by the items in the Communication Skill Factor has been given in Table 8 and Cronbach's Alpha value was measured as 0.886. In addition, it was also observed that there would be no significant increase in Cronbach's Alpha value if each item was eliminated separately. It can be said according to the analysis result that the internal consistency level of the items constituting the Communication Skill Factor is high.

Table 8. Table for Internal Consistency of Communication Skills Factor

Item No	Average When Item Extracted	Variance When Item Extracted	Total Correlation	Cronbach's Alpha
S2	8,07	10,932	0,594	0,883
S6	7,96	10,592	0,647	0,875
S7	8,04	10,211	0,757	0,857
S8	8,15	10,777	0,743	0,862
S9	8,04	9,408	0,805	0,848
S10	7,91	10,306	0,672	0,871

3.2.3. Factor 3: Internal Consistency Analysis of Classroom Management Factor

The table for the internal consistency of the subscale created by the items in the Class Management Factor has been provided in Table 9 and Cronbach's Alpha value was measured as 0.702. Furthermore, it may also be understood that there will be no significant increase in Cronbach's Alpha value if each item is eliminated separately. According to the analysis result, it can be stated that the internal consistency level of the items that make up the Class Management Factor is high.

Table 9. Table for Internal Consistency of Classroom Management Factor

Item No	Average When Item Extracted	Variance When Item Extracted	Total Correlation	Cronbach's Alpha
S3	3,26	2,280	0,596	0,568
S4	3,09	2,078	0,578	0,553
S5	2,73	1,491	0,476	0,756

3.2.4. Factor 4: Internal Consistency Analysis of Democratic Attitude Factor

The table for the internal consistency of the subscale composed by the items in Democratic Attitude Factor has been given in Table 10 and Cronbach's Alpha value has been measured as 0,640. It is also discovered that there will be no significant increase in this value if each item is eliminated separately. It can be commented according to the analysis result that the internal consistency level of the items forming the Democratic Attitude Factor is high.

Table 10. Table for Internal Consistency of Democratic Attitude Factor

Item No	Average When Item Extracted	Variance When Item Extracted	Total Correlation	Cronbach's Alpha
S1	4,93	4,258	0,457	0,544
S16	4,19	3,693	0,391	0,635
S19	4,43	3,401	0,519	0,440

In this part of the study, analyses of the demographic characteristics about the collected surveys and whether the factors such as visionary leadership, communication skills, classroom management and democratic attitude were statistically different according to demographic characteristics have been presented.

Table 11: Differences among Factors related to Demographic Characteristics

Variables	Factor	Group	n	\bar{x}	Std.	(p)
Gender	Visionary Leadership	Female	234	1.44	0.62	0.309
		Male	82	1.52	0.49	
	Communication Skills	Female	234	1.60	0.66	0.923
		Male	82	1.59	0.56	
	Classroom Management	Female	234	1.44	0.60	0.002
		Male	82	1.69	0.73	
	Democratic Attitude	Female	234	2.19	0.88	0.043
		Male	82	2.43	0.89	

As a result of the evaluations, 82 men and 234 women participated in the study. Whether or not there is a statistical difference among factors such as Visional leadership, Communication skills, Classroom management and Democratic attitude have been identified by t test. According to the test result, when academicians are evaluated in terms of class management, it can be realized that there is a difference between men and women. The males think that the faculty member is more successful in classroom management compared to the females. The general average of males has been found as 1.69 while the average of females was determined as 1.44. A similar situation applies within the democratic attitude factor. For this factor, it was detected that the average of men is 2.43 whereas the average of women is 2.19. Because the participants are more mostly women, the idea that men are more open to communication and democratic may have stemmed from the female participants' negative attitudes towards women. On the other hand, when the numbers of male and female academics who attend the classes of the participants is closely examined, it is seen that the previous opinion may be supported by the fact more male academicians lecture in the courses.

Table 12. Relationship Between Factors and Age Groups

Variables	Factor	Group	n	\bar{x}	Std.	(p)
Age	Visionary Leadership	16-18 ^{A/B/C}	10	2.10	0.51	0.001
		19-21 ^A	176	1.48	0.64	
		22-24 ^B	106	1.41	0.52	
		25 and above ^C	24	1.24	0.25	
	Communication Skills	16-18 ^{A/B/C}	10	2.30	0.69	0.000
		19-21 ^A	176	1.62	0.66	
		22-24 ^B	106	1.58	0.59	
		25 and above ^C	24	1.29	0.26	
	Classroom Management	16-18 ^{A/B/C}	10	2.06	0.46	0.015
		19-21 ^A	176	1.54	0.70	
		22-24 ^B	106	1.41	0.57	
		25 and above ^C	24	1.47	0.53	
	Democratic Attitude	16-18	10	2.76	0.58	0.093
		19-21	176	2.30	0.93	
		22-24	106	2.11	0.80	
		25 and above	24	2.34	0.98	

10 participants in the 16-18 age group, 176 participants in the 19-21 age group, 106 participants in the 22-24 age group and 24 participants in the 25 and above age group have taken part in this study. It was identified that among the four factors only the democratic attitude of the teaching members has not shown any difference among the age groups of the individuals. It was found as a result of analysis of variance that there is difference in visionary leadership, communication skills and classroom management factors. In terms of visionary leadership, those who are in the 16-18 age group differ from all other age groups. While the general average of the 16-18 age group was found as 2.10, the average of the other age groups was identified as 1.48, 1.41, 1.24, respectively. A similar situation has been observed in communication skills and classroom management factors. The average

of these factors according to age groups has been demonstrated in Table 12. However, the respondents in all age groups have the same idea about the democratic attitude of the faculty member. In other words, it is noticed that there is no statistical difference in terms of democratic attitude among age groups.

Table 13. Relationship between Factors and Departments

Variables	Factor	Group	n	\bar{x}	d.f.	(p)
Department	Visionary Leadership	Classroom Teaching ^a	125	1.38	0.51	0.039
		Social Studies Teaching ^A	116	1.57	0.68	
		Other	75	1.42	0.54	
	Communication Skills	Classroom Teaching ^A	125	1.47	0.51	0.003
		Social Studies Teaching ^A	116	1.75	0.73	
		Other	75	1.59	0.61	
	Classroom Management	Classroom Teaching	125	1.43	0.58	0.191
		Social Studies Teaching	116	1.58	0.76	
		Other	75	1.52	0.55	
	Democratic Attitude	Classroom Teaching ^A	125	2.08	0.89	0.004
		Social Studies Teaching ^A	116	2.45	0.92	
		Other	75	2.24	0.78	

As for the departments of the students, 125 of the participants are Classroom Teaching students, 116 of them are Social Studies Teaching students and 75 of the students are from other departments. In terms of Visionary Leadership, it was determined that there is a statistically difference between Classroom Teaching students and Social Studies Teaching students. While the average of Social Studies Teaching students was found as 1.57, the average of Classroom Teaching students was found to be 1.38. It is believed that Social Studies Teaching students think that the academicians who were thought to have more democratic attitude lectured in their courses. The similar state applies to the Communication Skills and Democratic Attitude factors. The general averages of the relevant sections are given in Table 13.

Table 14. Class Grade Relationship of Factors

Variables	Factor	Group	n	\bar{x}	d.f.	(p)
Class	Visionary Leadership	1st Year ^A	103	1.61	0.70	0.007
		2nd Year	26	1.52	0.74	
		3rd Year	100	1.41	0.45	
		4th Year ^A	60	1.26	0.45	
		Graduated	27	1.47	0.56	
	Communication Skills	1st Year	103	1.71	0.72	0.072
		2nd Year	26	1.73	0.82	
		3rd Year	100	1.56	0.51	
		4th Year	60	1.44	0.58	
		Graduated	27	1.54	0.50	
	Classroom Management	1st Year ^{A/B}	103	1.67	0.80	0.013
		2nd Year	26	1.61	0.78	
		3rd Year ^A	100	1.42	0.50	
		4th Year ^B	60	1.36	0.50	
		Graduated	27	1.46	0.50	
	Democratic Attitude	1st Year ^A	103	2.46	0.85	0.000
		2nd Year	26	2.35	1.12	
		3rd Year	100	2.19	0.87	
		4th Year ^A	60	1.82	0.77	
		Graduated	27	2.59	0.79	

The participants of the study consist of 103 1st year students, 26 students 2nd year students, 100 3rd year students and 27 students graduated students. It was detected in connection with the Visionary Leadership that there was a statistically significant difference in the 95% confidence level between the 1st year students and the fourth-year students. As the class level increases, the students tend to think that the academicians are inadequate about visionary leadership. Regarding the class management, it was figured out that there is a statistically significant difference between 1st year students and 3rd year students as well as between 1st year students and the fourth-year students. It is seen that as the class level goes up, students tend to find the academicians' classroom management competencies insufficient. Finally, as we go over the Democratic Attitude, it is noted that there is a statistically significant difference between 1st year students and the fourth-year students. This situation shows that as the class level goes up, students tend to consider academicians inadequate about democratic attitudes.

Table15. Relationship Between Factors and Place of Residence

Variables	Factor	Group	n	\bar{x}	Std.	(p)
Location	Visionary Leadership	Village and Town	60	1.45	0.75	0.273
		County center	110	1.53	0.62	
		City center	146	1.41	0.48	
	Communication Skills	Village and Town	60	1.61	0.75	0.404
		County center	110	1.66	0.68	
		City center	146	1.55	0.54	
	Classroom Management	Village and Town	60	1.53	0.79	0.434
		County center	110	1.44	0.54	
		City center	146	1.55	0.66	
	Democratic Attitude	Village and Town	60	2.05	0.83	0.096
		County center	110	2.25	0.90	
		City center	146	2.34	0.90	

As a result of statistical analysis, it was discovered that visionary leadership, communication skills, classroom management and democratic attitude of the faculty member have statistically shown no difference in terms of the places where the parents of the participating individuals lived. This state demonstrates that the place the students live has shown no difference in their attitudes towards academicians

Table 16. Results of the Explanatory Factor Analysis

Factors		Factor Loads	Eigen value	% variance explained	α
A	Visionary Leadership		10.669	46.386	0.948
A1	The most successful teacher can empathize with his students.	0.809			
A2	The most successful teacher knows that there is something he can learn from his students.	0.807			
A3	The most successful teacher is able to criticize himself and is aware of his / her shortcomings.	0.806			
A4	The most successful teacher is positive and motivating.	0.802			
A5	The most successful teacher is always open to innovations.	0.782			
A6	The most successful teacher does not make a distinction between his students, he behaves equally to everyone.	0.780			
A7	The most successful teacher knows how to use his bag of bricks productively.	0.726			
A8	The most successful teacher is both respectful and respected by students.	0.706			
A9	The most successful teacher listens respectfully to all students without distinguishing them according to their appearance and thoughts.	0.701			
A10	The most successful teacher goes out of the box and has the vision.	0.688			
A11	The most successful teacher does not think that he is the most successful teacher but continually develops himself.	0.666			
B	Communication Skills		1.781	7.744	0.886
B1	The most successful teacher makes his student active and completes the missing aspects.	0.760			
B2	The most successful teacher teach using various methods and techniques.	0.719			
B3	The most successful teacher makes his students feel loved and prepare them for life.	0.711			
B4	The most successful teacher renders his students gain the skills that will prepare them to profession.	0.701			
B5	The most successful teacher concerns with his students sufficiently.	0.673			
B6	The most successful teacher shows interest in the problems of the students.	0.633			
C	Classroom Management		1.423	6.186	0.702
C1	* The most successful teacher constantly deals with his mobile phone during the course.	0.849			
C2	* The most successful teacher often comes to the class late.	0.794			
C3	* During the most successful teacher's lesson, I am bored and sleepy.	0.551			
D	Democratic Attitude		1.333	5.794	0.640
D1	* The most successful teacher is extremely disciplined and formalist.	0.825			
D2	* The most successful teacher displays a repressive, over-authoritarian attitude.	0.751			
D3	* The most successful teacher uses only the method of lecture in his class.	0.655			

* Marked questions have been reverse encoded.

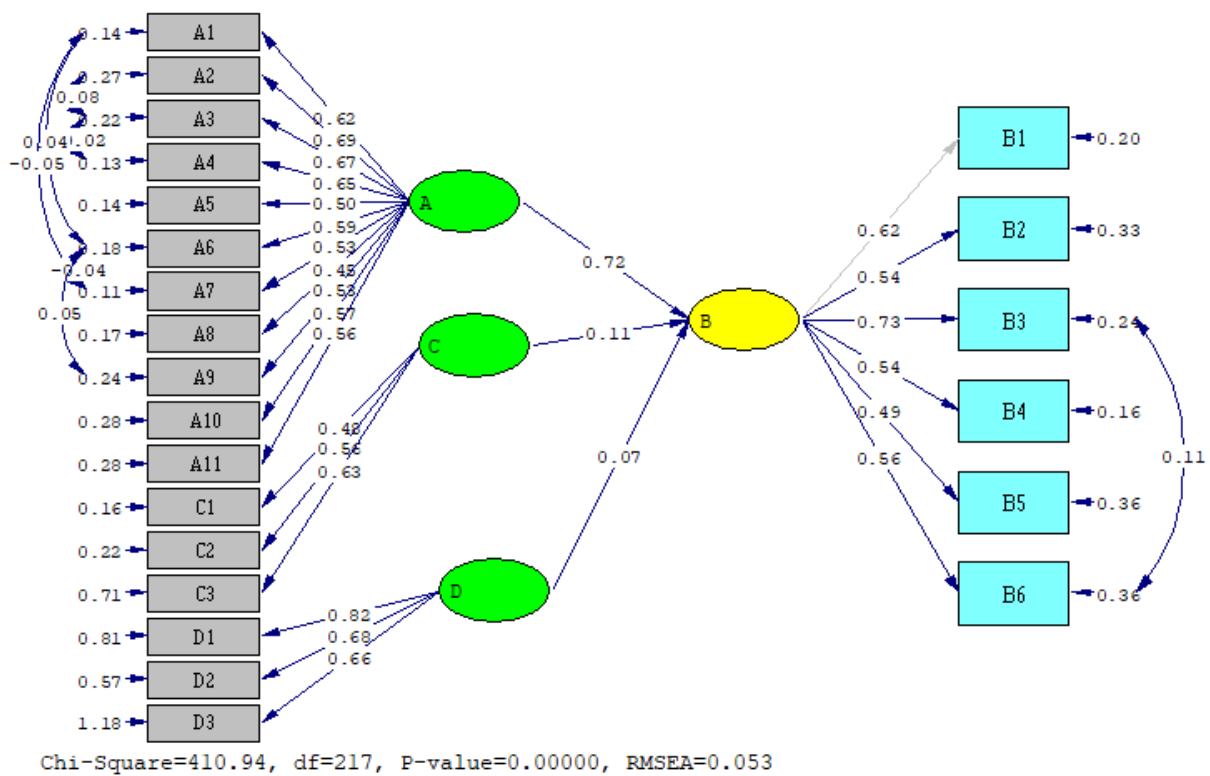


Figure 1. Determination of Effective Factors on Communication Skills by SEM

The results of the structural equation model examining the perceptions of entrepreneurs regarding the impacts of tourism can be observed in Figure 1. The results show that the developed structural equation model was congruent with the empirical data. The value of $X^2/sd.$, which is used to evaluate the model's compliance, is less than 3, which demonstrates that the model's compliance is acceptable (Yılmaz, 2011).

As a result of these analyses, factor analysis was applied to the data to ensure the validity of the structural equation modeling approach. The calculation of the KMO value about 0.944 shows that factor analysis can be applied to the data. The ratio of total variant explanation was determined to be approximately 67%.

Table 17. Fit Indices

CRITERIA	GOOD FIT	ACCEPTABLE FIT	MODEL
GFI	$0.95 \leq GFI \leq 1$	$0.90 \leq GFI \leq 0.95$	0.90
AGFI	$0.90 \leq AGFI \leq 1$	$0.85 \leq AGFI \leq 0.90$	0.87
CFI	$0.97 \leq CFI \leq 1$	$0.95 \leq CFI \leq 0.97$	0.99
NNFI	$0.97 \leq NNFI \leq 1$	$0.95 \leq NNFI \leq 0.97$	0.99
NFI	$0.95 \leq NFI \leq 1$	$0.90 < NFI \leq 0.95$	0.98
RMSEA	$0 < RMSEA < 0.05$	$0.05 \leq RMSEA \leq 0.10$	0.053

Source: Schermelleh-Engel, K. & Moosbrugger, H., "Evaluating The Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures", *Methods of Psychological Research Online*, Vol:8 No:2, 23-74, 2003.

The package software used in the Structural Equation Model (SEM) analysis shows different results for the compliance indices. LISREL users usually interpret the results based on the compliance indices such as GFI, AGFI, RMSEA, CFI and NNFI in addition to the Chi-Square value. As a result of the analysis, Table 17 indicates that the model's compliance indices show good compliance. In addition, corrections were made in line with the modifications suggested by the software.

In Figure 1, you can find the structural equation model based on the communication skills of academicians. In the model, the factor represented by A is "Visionary Leadership", the factor represented by B is "Communication Skill", the factor represented by C is "Classroom Management" and the factor represented by D is "Democratic Attitude". It is seen that 3 factors are effective on B factor. Among these factors, the highest effect is on the visionary leadership with a ratio of 0.72. That is, a unit of change in factor A will lead to an increase of 0.72 in communication skills. Under the light of these findings, it can be noted that the Visionary Leadership skills of academicians influence their communication skills positively. It appears that the better the communication skills of the academicians have the more successful academicians they are perceived by the students.

The democratic attitude factor has an effect on communication skills of the academicians at least 7%. That is to say, a unit of increase in the democratic attitude of the faculty member leads to a positive 0.07 of increase in their communication skills. It seems that the democratic attitude of academicians is thought to be effective on their communication skills.

Finally, the classroom management factor has been influential with a ratio of 0.11 on the communication skills of academicians. Shortly, classroom management skill affects communication skills.

When the Figure 1 is examined, it is noticed that there are 11 variables that affect the A (Visionary Leadership) factor. Among these variables, the most effective one with a ratio of 0.69 is the A2 variable (**The most successful teacher knows that there is something he can learn from his students**). Students were united in the opinion that the educator is not only agent in the process, meaning that the teaching activity should be a reciprocal process. The second highest effect has been on the A3 variable with a ratio of 0.67 (**The most successful teacher is able to criticize himself and is aware of his / her shortcomings**). It can be interpreted that those who are open to criticism and who are open to development and who know themselves are perceived as more successful. The third variable is A8 with a ratio of 48% (**The most successful teacher is both respectful and respected by students**). It is clear that students care about mutual respect. The other variables such as A1 (**The most successful teacher can empathize with his students**), A4 (**The most successful teacher is positive and motivating**), A5 (**The most successful teacher is always open to innovations**), A6 (**The most successful teacher does not make a distinction between his students, he behaves equally to everyone**), A7 (**The most successful teacher knows how to use his bag of bricks productively**), A9 (**The most successful teacher listens respectfully to all students without distinguishing them according to their appearance and thoughts**), A10 (**The most successful teacher goes out of the box and has the vision**) and A11 (**The most successful teacher does not think that he is the most successful teacher but continually develops himself**). The degrees of influence of these variables are 0.62, 0.65, 0.50, 0.59, 0.53, 0.58, 0.57 and 0.56, respectively. It is seen that academicians who are open to innovations and behave equally to all people are perceived as successful by the students in general.

C and D factors are affected by 3 variables. The variable that has the highest effect is **C3** variable (**During the most successful teacher's lesson, I am bored and sleepy**) with ratio of 0.63. In the lessons of academicians who are generally perceived as unsuccessful, the students express that they are bored and feel sleepy. The third variable becomes the C1 with a ratio of 0.48, (**The most successful teacher constantly deals with telephone during the course**). That is, a unit of change in C1 variable will cause a 48% of increase in C factor. The academicians that students perceive as unsuccessful are more likely to be dealing with his mobile phone during the courses.

As for the D factor, the variable with the most effect is the D1 variable with a coefficient of 0.82 (**The most successful teacher is extremely disciplined and formalist**) while the variable with the least effect is the D3 (**The most successful teacher uses only the method of lecture in his class**) variable with a coefficient of 0.66. The students characterize the overly disciplined and formal teachers as unsuccessful people who only use lecture in their lessons.

It is noticed that there are 6 variables that affect the communication skill factor. Among these factors, the highest effect on the factor B is the variable of B3 with a ratio of 73%, (**The most successful teacher makes his students feel loved and prepare them for life**). The second highest effect is B1 (**The most successful teacher makes his student active and completes the missing aspects**) with a ratio of 62%. The teachers who are able to train the students actively in classes and provide practice-based training are considered as successful. The least effect on the factor B is the variable of B5 (**The most successful teacher concerns with his students sufficiently**) with a ratio of 49%. Here we face with the view that successful teachers are interested in with their students.

4. Conclusion and Interpretation

This study focuses on explaining and examining the qualities of academicians that university students perceive as successful. Reliability and validity analyses were conducted to develop a scale concerning the measurement of the qualifications of academicians that university students consider as successful

Factor analysis has been applied to check the construct validity of the developed scale. It is seen that the factor loads of 23 items which have been decided to be included in the scale are between 0,551 and 0,849. According to the analyzed result, it has been concluded that a certain structure can be measured with a scale consisting of 23 items. In the factor analysis, 23 items were collected under four factors after the varimax rotation technique. According to this, it can be said that a scale consisting of 23 items with structural validity and four factors has been achieved.

The factors that make up the scale, by taking the items they contain into account, are named as follows; Factor 1: Visionary Leadership subscale, 11 items (S11, S12, S13, S14, S15, S17, S18, S20, S21, S22, S23). Factor 2: Communication Skills subscale, 6 items (S2, S6, S7, S8, S9, S10). Factor 3: Classroom Management subscale, 3 items (S3, S4, S5). Factor 4: Democratic Attitude subscale, 3 items (S1, S16, S19). As a result of analysis, it was found out that the Cronbach Alpha coefficients calculated for measuring internal consistency of four factors is high. Thus, it has been ended that the variables that make up the factors consist of the items with internal consistency. As a result of these evaluations, a structural equation model based on communication skills of academicians has been established. This model has been divided into four factors as A, B, C, D. The factor represented in the model by A is "Visionary Leadership", the factor represented by B is called "Communication Ability", the factor represented by C is "Classroom Management" and the factor represented by "D" is expressed by "Democratic Attitude". It has been identified that three factors are effective on factor B. It was determined that the highest effect was on visionary leadership with a 0.72 ratio among these factors. That is, a unit of change in the factor A will cause a 0.72 increase in communication skills. In the light of this finding, it has been seen that the visionary leadership skills of academicians influence positively their communication skills. It appears that the better the

communication skills of the academicians, the more successfully academicians they are perceived by the student.

In addition, the Cronbach Alpha score calculated to determine the internal consistency of the scales was found to be high, and it was concluded that the items formed a unity with internal consistency in identifying the characteristics of the academicians that university students regard as the most successful and determining the qualifications that render the academic profession successful. As a result of the analyzes carried out, it was obtained that the "**Scale for Academicians that university students consider successful**" is a valid and reliable scale.

When developing the scale, it was intended to adhere to the scale development principles in the literature. Therefore, the scale is an original scale. It is expected that the model used in the research will lead the path to the researchers studying on these issues. It is suggested that this scale be used in collecting the data in terms of identifying the characteristics of the academicians that university students regard the most successful and determining the qualifications that render the academic profession successful. As we take a look in the study in general, we can see that among these variables in visionary leadership factor the highest effect with an impact of 0.69 is "The most successful teacher knows that there is something he can learn from his students". The most influential variable in communication skill is "The most successful teacher makes his student active and completes the missing aspects". The most important variable that influenced the classroom management factor was with a 0.63 coefficient, "During the most successful teacher's lesson, I am bored and sleepy". In the lessons of academicians who are generally perceived as unsuccessful, students stated that they are bored and are sleepy in the courses. As for the Democratic Attitude, D factor, the variable with the highest effect has been with a ratio of 0.82, "The most successful teacher is extremely disciplined and formalist". Shortly, students find the extremely disciplined academicians as unsuccessful.

5. Application of Scale

Researchers can apply the scale themselves without the need for an implementer. The instruction prepared for the scale is sufficient for implementation and is recommended to consider the following points.

5.1. Responding

The university students who took part in and responded the questionnaire were asked to indicate the most successful academicians by marking one of the options as "Always", "Often", "Sometimes", "Rarely", "Never".

5.2. Scoring

For each of the items of scale in which university students regard the teachers as most successful, 5 is given to "Always", 4 is given to "Often", 3 is given to "Sometimes", 2 is given to "Rarely", 1 is given to "Never". The score of each subscale is determined by taking the arithmetic average of subscale scores. The average score of the four subscales obtained is the score of the success level of the most successful academicians considered by the university students. As the score increases, the level of success increases. The questions of (S11, S12, S13, S14, S15, S17, S18, S20, S21, S22, S23) were used in "Visionary Leadership", (S2, S6, S7, S8, S9, S10) were used in "Communication Skills", (S3, S4, S5) were used in "Class Management" and (S1, S16, S19) were used to obtain the "Democratic Attitude" scores.

**SCALE FOR ACADEMICIANS THAT UNIVERSITY STUDENTS CONSIDER
SUCCESSFUL**

	QUESTIONS	Always	Often	Sometimes	Rarely	Never
1	* The most successful teacher displays a repressive, over-authoritarian attitude.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	The most successful teacher concerns with his students sufficiently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	* The most successful teacher constantly deals with his mobile phone during the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	* The most successful teacher often comes to the class late.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	* During the most successful teacher's lesson, I am bored and sleepy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	The most successful teacher teach using various methods and techniques.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	The most successful teacher makes his student active and completes the missing aspects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	The most successful teacher renders his students gain the skills that will prepare them to profession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	The most successful teacher makes his students feel loved and prepare them for life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	The most successful teacher shows interest in the problems of the students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	The most successful teacher goes out of the box and has the vision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	The most successful teacher is always open to innovations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	The most successful teacher is able to criticize himself and is aware of his / her shortcomings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	The most successful teacher knows that there is something he can learn from his students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	The most successful teacher knows how to use his bag of bricks productively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	* The most successful teacher uses only the method of lecture in his class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	The most successful teacher does not think that he is the most successful teacher but continually develops himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	The most successful teacher is positive and motivating.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	* The most successful teacher is extremely disciplined and formalist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	The most successful teacher listens respectfully to all students without distinguishing them according to their appearance and thoughts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	The most successful teacher does not make a distinction between his students, he behaves equally to everyone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	The most successful teacher can empathize with his students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	The most successful teacher is both respectful and respected by students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Expressions with an asterisk were reversed coded.</i>						

REFERENCES

Akıncı, D. E. (2007). "Yapısal Eşitlik Modellerinde Bilgi Kriterleri", Doktora Tezi, Mimar Sinan Güzel Sanatlar

- Akın, A. & Çetin, B. (2007). Başarı Yönelimleri Ölçeği: Geçerlik ve Güvenirlik Çalışması. *Eurasian Journal of Educational Research (EJER)*, Jan2007, Issue 26, p1-12.
- Alpar, R. (2014). Spor Sağlık ve Eğitim Bilimlerinden Örneklerle Uygulamalı İstatistik ve Geçerlik-Güvenirlik,
- Alpar, R. (2012). *Uygulamalı İstatistik ve Geçerlik-Güvenirlik*, Ankara: Detay Yayınları.
- Bağcı, H. (2012). Ortaöğretim 9. Sınıf Öğrencilerinin Yazılı Anlatım Alan Bilgisi Başarı Düzeyleri Üzerine Bir Araştırma, *Electronic Turkish Studies*, 7 (4).
- Bozanoğlu, İ. (2004). *Akademik Güdülenme Ölçeği: Geliştirmesi, Geçerliği, Güvenirliği*. Ankara: Ankara Üniversitesi Yayınları.
- Büyüköztürk, Ş. (2002). Faktör Analizi: “Temel Kavramlar ve Ölçek Geliştirmede Kullanımı”, *Kuram ve Uygulamada Eğitim Yönetimi Dergisi*, 32, 470-483.
- Büyüköztürk, Ş., Akgün, Ö, E., Özkahveci, Ö. ve Demirel, F. (2004). Güdülenme ve Öğrenme Stratejileri Ölçeğinin Türkçe Formunun Geçerlik ve Güvenirlik Çalışması. *Kuram ve Uygulamada Eğitim Bilimleri*, 4(2), 207-239.
- Çelik, H. E. (2009). Yapısal Eşitlik Modellemesi ve bir Uygulama: Genişletilmiş Online Alışveriş Kabul Modeli, *Doktora Tezi. Fen Bilimleri Enstitüsü. Eskişehir Osman Gazi Üniversitesi: Eskişehir*.
- Çelikkol, Ö. & Kalaycı, I. (2014). The Satisfaction Levels of Teachers on Putting into Practice About Professional Development Study, *European Journal of Research on Education*, Special Issue: Contemporary Studies in Education, 103-108.
- Çokluk, Ö., Şekercioğlu, G. & Büyüköztürk, Ş. (2009). *Sosyal Bilimler İçin Çok Değişkenli İstatistik SPSS ve Lisrel Uygulamaları*, Pegem Akademi Yayınları, Ankara: Detay Yayıncılık.
- Demir, S. & Gürol, M. (2017). Farklılaştırılmış Öğretim Yöntemlerinin Öğrencilerin Akademik Başarı Puanlarına, Öğrenme Yaklaşımlarına ve Öğrenmenin Kalıcılığına Etkisi, *Electronic Turkish Studies*, 12 (14).
- Ekici, S. & Tuncel, G. (2015). Göç ve İnsan, *Birey ve Toplum Dergisi*, (5), 9, 9-22.
- Garcia, T. (1995). The role of motivational strategies in self-regulated learning. *New Directions for Teaching and Learning*, 63, 29-42.
- Geçkil, T. & Tikici M. (2015). “Örgütsel Demokrasi Ölçeği Geliştirme Çalışması”, *Amme İdaresi Dergisi*, (48), 4, 41-78.
- Goddard, R. D., Hoy, W. K. & Woolfolk-Hoy, A. W. (2000). Collective Teacher Efficacy: Its Meaning, Measure, And Impact on Student Achievement. *American Educational Research Journal*, 37(2), 479- 507.
- Goleman, D. (1998). *Working with Emotional Intelligence*. New York: Bantam Books
- Göç İdaresi Genel Müdürlüğü, Türkiye Göç Raporu, (2016). http://www.goc.gov.tr/files/files/2016_yiik_goc_raporu_haziran.pdf, Erişim Tarihi:15.02.2018.
- Gözüm, S. & Aksayan, S. (2003). “Kültürlerarası Ölçek Uyarlaması İçin Rehber II: Psikometrik Özellikler ve Kültürlerarası Karşılaştırma”, *Hemşirelik Araştırma Geliştirme Dergisi*, (5), 1, 1-14.

- Işığışık, E. (2008). Performans Ölçümü, Yönetimi ve İstatistiksel Analizi. *Ekonometri ve İstatistik*, 7, 123.
- Kaplan, D., (2000). "Structural Equation Modelling: Foundations and Extensions", *Sage Publications, Advanced Quantitative Techniques in The Social Science* (10). 272.
- Kaştan, Y., (2015). "Türkiye’de Göç Yaşamış Çocukların Eğitim Sürecinde Karşılaşılan Problemler", *Uluslararası Sosyal ve Eğitim Bilimleri Dergisi*, (2), 4, 216-229.
- Koçak, V., Altıntuğ, K., Geçkil, E. & Ege, E. (2015). "Babaların Doğum Sonu Güvenlik Hisleri Ölçeği’nin Geçerlik ve Güvenirliğinin İncelenmesi", *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, (18), 3, 172-180.
- Koçak, Y. & Terzi, E. (2012). "Türkiye’de Göç Olgusu, Göç Edenlerin Kentlere Olan Etkileri ve Çözüm Önerileri", *Kafkas Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, (3), 3, 163-184.
- Korkut, F. (2005). Yetişkinlere yönelik iletişim becerileri eğitimi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(28).
- Odabaşı Y. (2006). Değişimin ve Dönüşümün Aracı Olarak Girişimci Üniversite, *Girişimcilik ve Kalkınma Dergisi [Journal of Entrepreneurship and Development]*, 1(1), 87-104.
- Odabaşı, H.F., Fırat, M., İzmirli, S., Çankaya, S. & Mısırlı, A. (2010). Küreselleşen Dünyada Akademisyen Olmak [Being Academician in Globalizing World]. *Anadolu University Journal of Social Sciences (Anadolu Üniversitesi Sosyal Bilimler Dergisi)*, 10 (3), 127-142.
- Orhan, S., Kırbaş, A. & Topal, Y. (2012). Görsellerle Desteklenmiş Altı Şapka Düşünme Tekniğinin Öğrencilerin Konuşma Becerilerini Geliştirmesine Etkisi, *Electronic Turkish Studies*, 7 (3).
- Özcan, K. & Balyer, A. (2013). "Liderlik Oryantasyon Ölçeğinin Türkçeye Uyarlanması", *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 1, (9), 136-150.
- Özdemir, S.M., Benzer, H. & Akbaş, O. (2009). "Almanya'da Yaşayan 15-19 Yaş Türk Gençlerinin Eğitim Sorunlarına İlişkin Bir İnceleme (Kuzey Ren Vestfalya Örneği)", *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, (10), 1, 23-40.
- Özer, B. (1998). *Eğitim Bilimlerinde Yenilikler* (Editör: Ayhan Hakan) içinde Öğrenmeyi Öğretme (ss: 147-162) Eskişehir: Anadolu Üniversitesi, Açıköğretim Fakültesi Yayınları.
- Rosen, R. (1998). İnsan Yönetimi. İstanbul. Mees Yayınları.
- Ryan, R., & Deci, E. (2000). Intrinsic and Extrinsic Motivations: *Classic definitions and new directions. Contemporary Educational Psychology*. 25, 54-67.
- Sarıtaş, E., Şahin, Ü. & Çatalbaş G. (2016). "İlkokullarda Yabancı Uyruklu Öğrencilerle Karşılaşılan Sorunlar", *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (Ek1), 208-229.
- Schermelleh-Engel, K. & Moosbrugger, H. (2003). "Evaluating The Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures", *Methods of Psychological Research Online*, 8 (2), 23-74.
- Schumacker, R. E. & Lomax, R. G. (2004). "A Beginner's Guide To Structural Equation Modeling", Second Edition, *Mahwah Lawrence Erlbaum Associates*, 2004.
- Soba, M. (2012). Üniversite Öğrencilerinin Performanslarının Akademisyenler Tarafından Analitik Hiyerari Süreci İle Değerlendirilmesi (Uşak Üniversitesi Örneği). *Elektronik Sosyal Bilimler Dergisi*, 42(42).

-
- Subaşı, G. (2000). Verimli Ders Çalışma Alışkanlıkları Eğitiminin Akademik Başarı, Akademik Benlik Kavramı ve Çalışma Alışkanlıklarına Etkisi. *Eğitim ve Bilim*, 25(117).
- Sümer, N. (2000). “Yapısal Eşitlik Modelleri: Temel Kavramlar ve Örnek Uygulama”, *Türk Psikoloji Yazıları*, 3(6):49-73.
- Şimşek, Ö. F. (2007). *Yapısal Eşitlik Modellemesine Giriş Temel İlkeler ve LISREL Uygulamaları*, Ankara: Ekinoks Yayınları.
- Uzun, N. & SAĞLAM, N. (2005). “Sosyo-Ekonomik Durumun Çevre Bilinci ve Çevre Akademik Başarısı Üzerine Etkisi”. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*,
- Yaşar, M. (2014). “İstatistiğe Yönelik Tutum Ölçeği: Geçerlilik ve Güvenirlik Çalışması”, *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 36, 59-75.
- Yılmaz, V., Yıldız, Z. & Arslan, T. (2011). Üniversite Öğrencilerinin Çevresel Duyarlılıkları ile Çevresel Davranışlarının Yapısal Eşitlik Modeliyle Araştırılması. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, 30, 271-278.