

Validity and Reliability Study of Academic Self-Efficacy Scale for Faculty Members

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ABSTRACT

In this study, it is aimed to develop a measurement tool with measurement validity and reliability, which can be utilized to identify the academic self-efficacy attitudes of faculty members working in the education faculty. The literature was screened during the development of the scale, the opinions of the teaching staff about the subject were taken one-on-one, and a pool of 40 items was created by making use of the previous studies related to this field. The validity and reliability of the measurement tool were analyzed on the 410-person data set obtained from the application. Exploratory Factor Analysis (EFA) was conducted with the remaining 200 data from the data set, without looking at specific criterion on the structure validity of the scale. As a result of the Exploratory Factor Analysis applied to the data obtained after the first application, 7 items were removed from the 40-item scale. It was determined that the remaining 33 items consisted of 5 sub-dimensions. The scale sub-dimensions are named as follow respectively; "Comparing yourself with other faculty members", "Being able to combat the difficulties faced", "Self-development", "Effective teaching process of a course" and "Extracurricular activity". The Cronbach's alpha coefficient was .877 for the whole scale, and it was as follows for the sub-dimensions in respective order; .920.927.895.833 and .828. These findings have revealed that the scale is a tool that can measure academic staffs' Self-Efficacy levels with five factors. The scale is expected to be used by researchers in the field.

INTRODUCTION

Self-efficacy, a crucial outcome of Social Learning Theory, has been investigated by several scholar in educational sciences (Kaya & Akdemir, 2016; Yıldırım & İlhan, 2010; Özdemir, 2008). Bandura (1990), who explained the behavior of the individual as a structure affected by continuous interaction of cognitive (mental), behavioral and environmental factors, stated in his Social Learning Theory that the behavior was also regulated pursuant to this interaction. The basic principles of Social Learning Theory are mutual determination, symbolization capacity, foresight capacity, indirect learning capacity, self-regulation capacity, and self-efficacy (Bandura, 1990).

Bandura states that the impact of his/her self-efficacy beliefs on the individual is realized in four different ways, which are their impact on cognitive process, on motivation, on coping with negativity and on way of life. The self-efficacy belief is effective in determining the goals of individuals. While an individual with high self-efficacy belief does not have difficulty in setting goals and achieving them, an individual with low self-efficacy belief is unsure of his/her goals and fails in many attempts he/she makes. This situation displays the impact of the self-efficacy belief on cognitive process. The self-efficacy belief plays a very important role in the motivation of individuals. Individuals

become motivated to achieve their goals. There is a direct relationship between motivation and self-efficacy (Ayık & Ataş, 2013). When individuals have high self-efficacy belief as they undertake an action, they also have high motivation when implementing the action in question. If the self-efficacy belief of the individual facing a problem is high, the individual can easily cope with the problem. Self-efficacy beliefs can directly affect how an individual forms his/her social environment as well as having an impact on his/her lifestyle. Self-efficacy beliefs directly affect the individual in forming his social environment and organizational commitment (Ataş Akdemir, 2019). Individuals can avoid being in an environment where they believe to exceed them, or doing activities they believe they cannot do (Ataş Akdemir, 2018; Baysal, 2010; Uzel, 2009; Mengi, 2011; Çubukçu and Girmen, 2007).

The most noticeable cognitive and motivational challenge children encounter during their upbringing is related to the development of their academic self-efficacy. This challenging task, which begins before school for many adolescents, is a process that continues into adulthood and holds an important place in the life of the individual. The challenging competitive process taking place in the academic field especially shows itself as the individual takes his/her place in the society and fulfills his/her duties in professional life. In this

educational process, individuals form an opinion regarding their academic status and develop some beliefs about their own academic potential. Especially academic self-efficacy beliefs are formed in parallel with the development processes of the individual (Zimmerman, 1995). The development of academic self-efficacy of students is considered to be an essential goal for educational institutions (Branson, 2017).

Hodges, Stackpole-Hodges, and Cox (2008) define academic self-efficacy as the trust and belief displayed in learning environments. The literature states that academic self-efficacy of individuals can be formed according to various factors including their overall views, beliefs, and previous experiences about the fields related to their skills and capacities (Menekşe, Anwar, and Purzer, 2018). While these beliefs can be based on their skills and confidence in solving math problems (Hackett & Betz, 1989), they may also be based on performing communication-related tasks such as reading or writing (Shell, Colvin, & Bruning, 1995).

Linenbrink and Pintrich (2003) showed that academic self-efficacy is significantly associated with the individual's learning, cognitive engagement, analytical thinking, academic commitment, strategy use, perseverance, sensitivity to negative emotions and success. In the academic context, beliefs of individuals in controlling their educational processes and results and their beliefs in their being competent have a major impact on achieving their educational goals, their educational interests, as well as their educational performance. Students who rely on their problem solving skills or on capacities in organizing, executing, and arranging their task performance at a specific level of competence have a high level of self-efficacy. Self-efficacy is generally considered as a multidimensional structure, which can be examined in various task areas different from each other (Sharma & Nasa, 2014).

According to Bandura (1993), the individuals with high self-efficacy see problems as challenges they have to overcome instead of threats and set goals to cope with them; and in reaching the goal set by the student based on his/her academic targets, students assume a task-diagnostic orientation that provides beneficial feed to increase the student's performance rather than the self-diagnostic orientation that can lead to low expectations. He thinks that failures are not due to lack of skills, but because of insufficient effort and knowledge. If the individual does not reach the goal set, s/he increases his/her efforts.

The aim of this study was to develop a measuring tool with measurement validity and reliability, which can be utilized to identify the academic self-efficacy attitudes of faculty members working in the education faculties. To this end several statistical processes have been conducted. As a result of the procedures a valid and reliable scale has been developed.

METHOD

In the research, screening model was used, and the existing structure was tried to be described as it was. Therefore, the research is a descriptive study carried out in the screening model (Balçı, 2015: 15).

Study Group

The study group of the research was comprised of a total of 410 faculty members, 120 of whom were females and 290 of whom were males working in the educational faculties of Turkish state universities between 2019-2020. In determining the size of the sample, Kass & Tinsley (1979) finds it sufficient that the sample size is 5 to 10 times the number of items in the scale. When the study group is evaluated for both criteria, it is observed that the sample size is suitable for both value scales.

Scale Development Process

Firstly, the literature was screened during the development of the scale, the opinions of the teaching staff about the subject were taken one-on-one, and a pool of 40 items was created by making use of the previous studies related to this field. It was paid attention that the created items reflect the academic self-efficacy of the faculty members. Item scales were arranged as "(5) Almost always", "(4) Often", "(3) Sometimes", "(2) Rarely" and "(1) Almost never". Prepared scale draft was shown to academicians, who are linguists and educational scientists, and the items that could pose difficulties were rearranged. Additionally, prior to the pilot application, a final application was performed to a student group of 15 for clarity. After the necessary arrangements were carried out in accordance with the suggestions put forth, the draft scale eventually reached its final form, which consisted of 40 items.

Data Collection

Printed scale draft forms were applied to 410 voluntary faculty members, either by face-to-face or dispatched with cargo, by the researcher, without interrupting the on-going education.

Data Analysis

The validity and reliability of the measurement tool were analyzed on the 410-person data set obtained from the application. SPSS 21.0 and LISREL 8.80 package software were utilized for the validity and reliability analysis of the Academic Self-Efficacy Scale, Confirmatory Factor Analysis (CFA) was conducted with the first 210 data from the data set and Exploratory Factor Analysis (EFA) was conducted with the remaining 200 data from the data set, without looking at specific criterion on the structure validity of the scale. In order to determine the compatibility of the data with factor analysis, the Bartlett Sphericity Test and the Kaiser-Meyer Olkin (KMO) coefficient were utilized, and the varimax vertical rotation method was employed for the Exploratory Factor Analysis, Confirmatory Factor Analysis was performed to determine whether the factor structure was confirmed or not. Regarding the reliability of the scale, Cronbach's alpha internal consistency coefficient and item-test total correlation coefficients were calculated, as well as the group averages of 27% sub-/supergroups were compared in determining the internal consistency of the test (Büyüköztürk, 2019).

FINDINGS AND INTERPRETATION

The findings obtained from the validity and reliability analysis of the Academic Self-Efficacy Scale are given below. Findings Regarding Validity of the Scale were calculated with the Kaiser Meyer-Olkin (KMO) and Bartlett Sphericity values to see whether the data were suitable for factor analysis of the data obtained without the application of the Exploratory Factor Analysis (Table 1).

As a result of the analysis, the KMO value was found to be .817 and the Bartlett Sphericity value was found to be $[X^2 = 4798.902; p < .001]$. The fact that the minimum value of KMO for factor analysis is .60 and that the Bartlett Sphericity test turned out to be significant provides sufficient evidence for the acceptability of the analysis values (Aiken, 2000; Field, 2013). Determination of the factor load values were based on the value 0.30, and the factor load values below 0.30 were ignored (DeVellis, 2003; Field, 2013). After rotation, 5 factors with eigenvalues greater than 1 were taken into account. The total variance explained by 5 factors was 65.859%. It is accepted that this rate is sufficient at 40% and above in social sciences (Büyüköztürk, 2019; Tavşancıl, 2014). In addition, since the size of the sample was higher than 300 (Field, 2013), the scree plot was examined. The scree plot of the scale can be found below.

As seen on the scree plot (Graph 1), which includes the eigenvalues and factor numbers in the graph, it was determined that the slope formed a plateau after the sixth point. Therefore, the analysis was decided to be repeated for 5 factors. According to the result of Exploratory Factor Analysis, 8 items were deleted with varimax rotation, and the distribution of the 37 items of the final scale according to the sub-dimensions, factor load values, variance and total variance rates of the factors are presented in Table 2.

As can be seen in Table 2, in the analysis repeated for 5 factors and to which varimax rotation was applied, the contribution of the factors to the total variance was found to be 17.137% for the first factor, 15.527% for the second factor, 13.170% for the third factor, 10.658% for the fourth factor and 9.366% for the fifth factor. The total contribution of 5 factors to variance was determined as 65.859%. Büyüköztürk (2019) accepts that the factor load value of 0.45 or higher is a good measure for the items to remain on the scale. However, it is stated that items above 0.30 can also remain on the scale (Kline, 2015). According to this, the items with a load value of over 0.30 were also included in the scale.

When Table 2 was examined, 7 items were removed from the 40-item scale in terms of acceptance levels of factor load

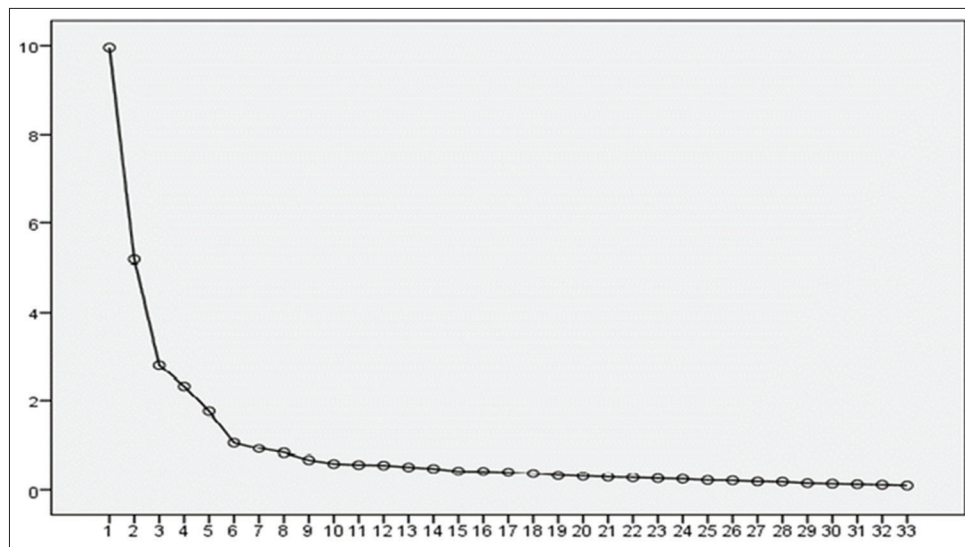
values and overlapping. It was determined that the remaining 33 items consisted of 5 sub-dimensions. Based on the judgments reflected by the scale items, the scale sub-dimensions are as follows respectively; Factor 1 has been named as "Comparing yourself with other teaching staff," Factor 2

Table 2. Distribution of factor, item factor loads and factor variances regarding the attitude scale to be used for education planning

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
AOYÖ016	.821				
AÖYÖ13	.805				
AÖYÖ25	.794				
AÖYÖ26	.789				
AÖYÖ17	.784				
AÖYÖ6	.777				
AÖYÖ27	.767				
AÖYÖ15	.759				
AÖYÖ4	.701				
AÖYÖ31		.833			
AÖYÖ29		.813			
AÖYÖ28		.805			
AÖYÖ30		.803			
AÖYÖ32		.801			
AÖYÖ22		.723			
AÖYÖ19		.605			
AÖYÖ24			.831		
AÖYÖ23			.812		
AÖYÖ33			.794		
AÖYÖ14			.704		
AÖYÖ2			.639		
AÖYÖ12			.617		
AÖYÖ21			.562		
AÖYÖ20				.781	
AÖYÖ18				.702	
AÖYÖ11				.699	
AÖYÖ9				.675	
AÖYÖ1				.672	
AÖYÖ5				.592	
AÖYÖ7					.850
AÖYÖ8					.850
AÖYÖ10					.760
AÖYÖ3					.649
Eigenvalues	9.957	5.190	2.811	2.339	1.769
Eigenvalues After Rotation	5.655	5.124	4.346	3.517	3.09
Variance Explained	17.137	15.527	13.170	10.658	9.366
Explained					
Total Variance					65.859

Table 1. Kaiser-Meyer-Olkin (KMO) and Bartlett Sphericity Test Results

Kaiser-Meyer-Olkin Measure	Sampling Compliance	.871
Bartlett Sphericity Test Chi-square Value		4798.902
	Degree of freedom	528
	Significance level	.000



Graph 1. Scree plot

Table 3. Model-data fit for the Cyber Academic Self-efficacy scale

Fit Indices	Best Fit Range	Acceptable fit range	The values	Model fit values of this study
χ^2/sd	$0 \leq \chi^2/sd < 2$	$2 \leq \chi^2/sd \leq 5$	2.911	Acceptable
RMSEA	$0 \leq RMSEA < 0.05$	$0.05 \leq RMSEA \leq 0.10$	0,080	Acceptable
NNFI	$0.95 \leq NNFI \leq 1.00$	$0.90 \leq NNFI < 0.95$	0,94	Acceptable
CFI	$0.95 \leq CFI \leq 1.00$	$0.90 \leq CFI < 0.95$	0,94	Acceptable
SRMR	$0 \leq SRMR < 0.05$	$0.05 \leq SRMR \leq 0.10$	0,073	Acceptable

as “Being able to combat the difficulties faced,” Factor 3 as “Self-development,” Factor 4 as “Effective teaching process of a course,” and Factor 5 “Extracurricular activity”.

Confirmatory Factor Analysis

The data obtained were tested by Confirmatory Factor Analysis (CFA), which is included in the Structural Equation Modeling (SEM) analysis (Şeker & Gençdoğan, 2014). CFA is used alongside with EFA in scale development studies. Using the SEM analysis, the extent to which the current theoretical structure overlaps with the available data can be tested (Schumacker & Lomax, 2004). The “Academic Self-Efficacy Scale” that contains 33 items with 5 factors, 1 of which is inverse, obtained as a result of EFA was subjected to the Confirmatory Factor Analysis. In CFA, the 5-factor structure resulting from EFA was tested, and comments based on various fit indices were made.

When the fit values obtained as a result of Confirmatory Factor Analysis are examined, the following values were obtained (Table 3): RMSEA, .080; $\chi^2/df=2.911$; SRMR=.073; NFI=.91; NNFI=.94; IFI=.94; CFI=.94; RFI=.90; GFI=.68; AGFI=.63. The GFI and AGFI index of the scale being low can be explained by the sample size. These indices are the fit index affected by the sample size. It yields higher results in large samples (Çokluk et al., 2014). When the reference value ranges found in the literature are examined, it can be said that the values obtained are within the acceptable reference range (Schumacker &

Lomax, 2004; Hooper, Caughlan & Mullen, 2008; Thompson, 2004). The path diagram for confirmatory factor analysis is given in Figure 1.

When Figure 1 is examined, the factor loads (in the range of $\lambda = 0.47-0.90$) and error variance values (in the range of $\epsilon = 0.18-0.64$) of the two-level measurement model tested for cyber victimization are seen to be within an acceptable range. These values show that the equivalent items represent the factors they are in sufficiently. After all these procedures, it was decided that the “Academic Self-Efficacy Scale of Faculty Members” with 33 items and 5 factors presents a structure with which valid and reliable results can be obtained.

Reliability Analysis

Correlation values of the three factors with each other and with the total scale are given in Table 4. According to the correlation analysis, the factors seem to have significant relationships with one another.

Upon examination of Table 4, it is observed that the correlation values between the general scale and its sub-dimensions show a medium and high level relationship. This situation supports the fact that all dimensions and scales measure a similar structure.

In order to determine whether or not the scale’s internal criterion validity was ensured, the item-total test correlation and the significance of the averages between the 27% sub-/supergroups were examined. The mean, standard deviation,

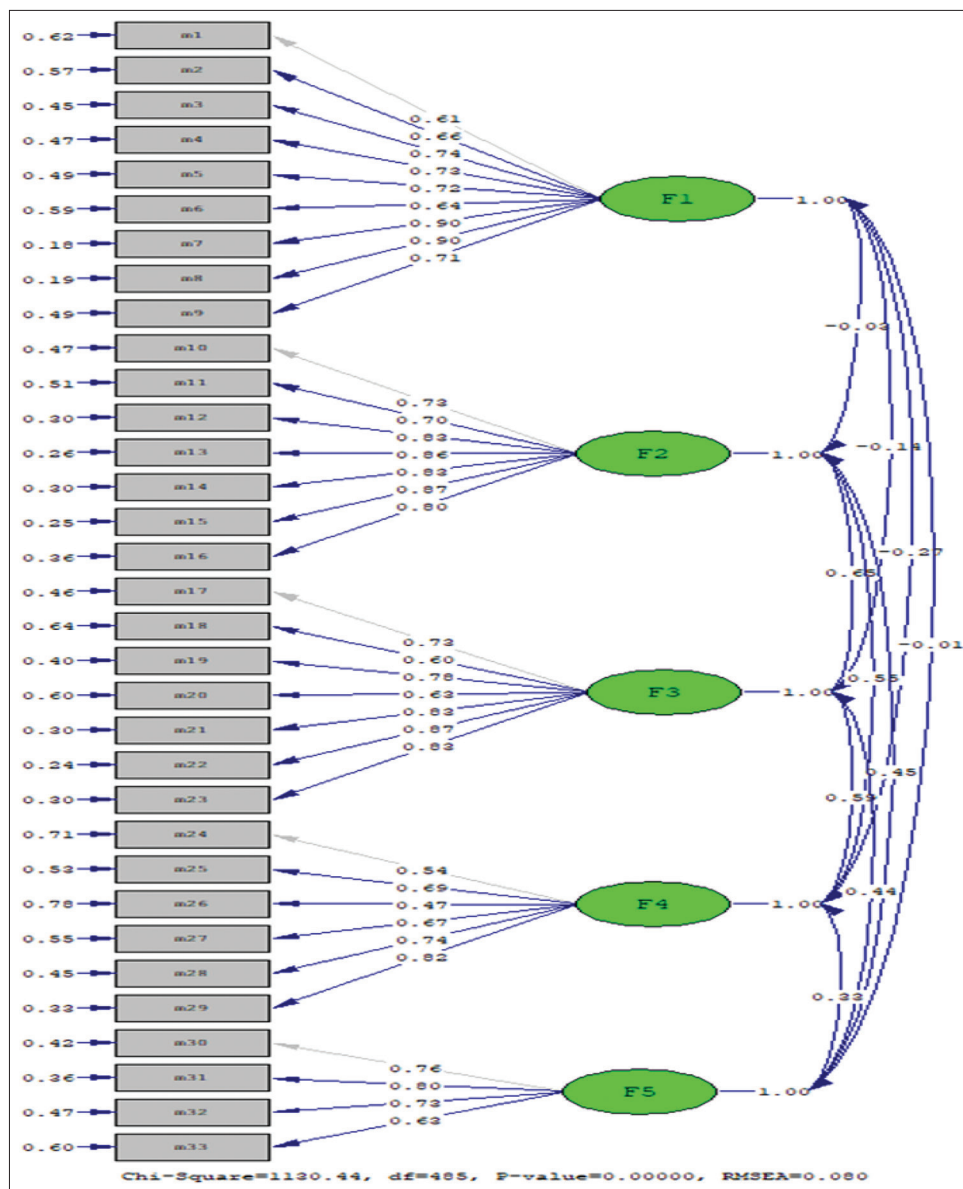


Figure 1. Confirmatory factor analysis path diagram

Table 4. Correlation values between factors

Factors	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	1	-.143 *	-.270 **	-.031 **	-.124
Factor 2		1	.615	.464 **	.367 **
Factor 3			1	.484 **	.376 **
Factor 4				1	.344 **
Factor 5					1

and item total correlations belonging to the scale are given in Table 4.

Item-total correlations ranged between 0.283 and 0.740. According to Karagöz (2016), it can be said that the items distinguished between the individuals sufficiently, since the total correlations of the items were 0.25 and above.

The significant difference between the item mean scores of the 27% sub-/supergroups also indicates how

much the items distinguished between individuals in terms of measured behavior (Büyükoztürk, 2012: 171). The t-test results of the 27% sub-/supergroups are presented in Table 5.

Upon examination of Table 6, the t values are seen to be significant for all items found in the scale. These results show that the items found in the scale have high validity and that items are distinctive.

When the Cronbach's Alpha coefficients were examined in Table 7, they were identified for the first factor as .920,.927 for the second factor,.895 for the third factor,.833 for the fourth factor,and .877 for the fifth factor. When all the factors in the scale were evaluated all together, Cronbach's Alpha reliability coefficient that is valid for the whole scale was identified as .877. Accordingly, it is seen that the data collected from the scale had internal consistency. Kılıç (2016) stated that the scales with a Cronbach's Alpha value above 0.70 in general have internal consistency, meaning the scale in question is deemed reliable.

Table 5. Item-total statistics

Item no	\bar{X}	Item total correlation	Standard deviation	Madde no	\bar{X}	Item total correlation	Standard deviation
1	3.76	.338	.894	18	4.06	.512	.925
2	3.78	.686	1.025	19	4.14	.542	.927
3	3.34	.583	1.080	20	4.08	.468	.870
4	2.42	.258	1.041	21	3.71	.632	1.120
5	3.65	.615	.9435	22	4.11	.598	.926
6	2.94	.354	1.126	23	4.12	.628	.865
7	3.28	.574	1.117	24	4.14	.626	.9173
8	2.93	.501	1.227	25	2.54	.340	1.056
9	2.22	.283	.929	26	2.48	.406	.984
10	3.50	.604	1.061	27	2.81	.371	.977
11	3.98	.448	.905	28	3.96	.687	1.001
12	3.65	.648	1.130	29	3.96	.688	.944
13	2.63	.329	1.034	30	3.93	.740	.986
14	3.95	.633	.961	31	3.99	.706	.969
15	2.49	.357	1.012	32	3.77	.628	1.076
16	2.63	.282	.876	33	4.10	.674	.912
17	2.52	.296	.993				

Table 6. T-test results related to item distinctiveness

Item no	t	p	Item no	t	p
1	5.48	.00	18	8.08	.00
2	13.68	.00	19	8.96	.00
3	10.78	.00	20	7.71	.00
4	4.25	.00	21	10.99	.00
5	10.46	.00	22	9.70	.00
6	5.22	.00	23	10.59	.00
7	10.47	.00	24	11.50	.00
8	8.87	.00	25	5.45	.00
9	-7.28	.00	26	6.53	.00
10	11.99	.00	27	5.71	.00
11	7.34	.00	28	12.32	.00
12	11.31	.00	29	12.97	.00
13	5.19	.00	30	14.00	.00
14	10.68	.00	31	12.72	.00
15	5.73	.00	32	11.99	.00
16	4.16	.00	33	12.24	.00
17	4.09	.00			

CONCLUSION AND SUGGESTIONS

This scale development study was conducted to reveal the academic self-efficacy of the faculty members working in the faculties of education. In order to develop the so-called "Faculty Members Academic Self-Efficacy Scale", the national and international literature as well as the opinions of the academic staff were primarily benefited from. In this way, expressions related to academic self-efficacy of the faculty members were turned into a scale item. EFA was applied

Table 7. Cronbach's Alpha coefficients of the factors

Factors	Cronbach α
Factor 1	.920
Factor 2	.927
Factor 3	.895
Factor 4	.833
Factor 5	.828
General	.877

on the scale draft created with the opinions of experts and managers. The 40-item scale trial form, which was created in the wake of the steps followed by considering the scale development process, was rearranged in line with expert opinions. There were 40 expressions in the scale. The scale draft form was applied to 410 faculty members, who were teaching in different departments of the Faculties of Education in State Universities in the fall semester of 2019-2020 academic year. Exploratory Factor Analysis was applied to 200 individuals of the study group, and Confirmatory Factor Analysis was applied to the remainder. The reliability of the scale was examined by calculating the Cronbach's Alpha reliability coefficients. As a result of the Exploratory Factor Analysis applied to the data obtained after the first application, 7 items were removed from the 40-item scale. It was determined that the remaining 33 items consisted of 5 sub-dimensions. Based on the judgments reflected by the scale items, the scale sub-dimensions are as follows respectively; Factor 1 was named as "Comparing yourself with other faculty members" (4, 6, 13, 15, 16, 17, 25, 26, 27), Factor 2 as "Being able to combat the difficulties faced" (19, 22, 28, 29, 30, 31, 32), Factor 3 as "Self-development" (2, 12, 14, 21, 23, 24, 33), Factor 4 as "Effective teaching pro-

cess of a course” (1, 5, 9, 11, 18, 20), and Factor 5 “Extra-curricular activity” (3, 7, 8, 10). It was determined that the five-factor structure of the scale explained 65.859% of the total variance. The Cronbach’s alpha coefficient was .877 for the whole scale, and it was as follows for the sub-dimensions in respective order; .920, .927, .895, .833 and .828.

As a result of the exploratory factor analysis, confirmatory factor analysis was performed to determine the compatibility of the scale consisting of 33 items, 1 of which is negative, and 5 sub-dimensions on the basis of structure. When the fit values obtained as a result of Confirmatory Factor Analysis were examined, the following values were obtained: RMSEA, .080; $\chi^2/df=2.911$; SRMR=.073; NFI=.91; NNFI=.94; IFI=.94; CFI=.94; RFI=.90; GFI=.68; AGFI=.63. It was concluded that the model was acceptable, as the scale’s RMSEA and SRMR values were lower than 0.08 and the CFI and NNFI values were higher than .90. Another conclusion made was that the “Academic Self-Efficacy Scale of Academic Staff” made up by a total of 33 items is a tool capable of measuring the academic self-efficacy levels of faculty members, who worked in Faculties of education, in five sub-dimensions, and that it can obtain valid and reliable results.

The applications of the scale developed can be made for the faculty members working in other faculties of universities in future studies. The current scale can also be used to identify the academic self-efficacy of faculty members who work in other official institutions or organizations providing education by making the necessary analyses and adaptations.

This study reports the developmental procedures of a scale to investigate self-efficacy level of academic staff. It is suggested to conduct more research studies to confirm and consolidate the findings of the instrument in various context.

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ACADEMIC SELF-EFFICACY SCALE

This scale has been prepared to determine your academic self-efficacy level. After reading each statement, indicate how much the statements describe you by checking the box on the opposite side.

	Almost always	Often	Sometimes	Rarely	Almost never
1. Instead of intensive lessons, I work by spreading them over time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I understand difficult parts in textbooks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I organize extra-curricular activities for appropriate course contents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I can criticize thoughts of another faculty member.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I associate the content of a course with the materials of other courses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I ensure that other faculty members respect me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I take part in extracurricular activities (sports, clubs and activities).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I take part in associations operating inside or outside the university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I have a student do the presentation of a concept during the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I have students prepare a qualified assignment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I create a discussion environment relevant to the topic in question.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I examine the studies conducted by other faculty members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. In my field, I think that I am better equipped than other faculty members, with whom I work together in the same department.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I constantly conduct research and screen the literature to improve myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. In terms of information and knowledge, I think I have reached the highest level in my field.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I prefer to conduct my studies alone rather than as a team with other faculty members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I do not care about the criticism of other faculty members about my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I manage the process of my courses effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. During the course, I correct the misunderstandings of the students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I encourage students to ask questions so that they can use high-level thinking skills during the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. When I am sufficiently prepared, I can also successfully teach courses outside my field.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. If I am not successful, I try to work harder.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I capitalize on opportunities that help improve my skills and abilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I aim to continuously improve myself in terms of knowledge and skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. It is very important for me to look more successful than other faculty members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. It is very important for me to look more knowledgeable than other faculty members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. My academic skills have been remarkable for other faculty members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I believe that I can effectively deal with unexpected academic situations (preparing assignments, projects, presentations, administrative tasks etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. I know how to deal with unexpected academic situations thanks to my skills (talents).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Since I trust my skills in dealing with challenges, I can maintain my composure when I encounter with academic challenges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. When I encounter a problem relevant to the school life, I can in general find many solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Whatever I encounter academically, I can usually handle it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. I review current studies in my field and conduct research on topics that interest me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>