

Ebru KÜLEKÇİ¹, Habib ÖZGAN²

ADAPTATION OF THE SOCIALLY RESPONSIBLE LEADERSHIP SCALE TO TURKISH: A VALIDITY AND RELIABILITY STUDY³

This study aims at examining the validity and reliability of the Turkish form of Socially Responsible Leadership Scale (SRLS). For this purpose, the scale was implemented to 692 college students from different faculties and departments. The data was analyzed by SPSS and LISREL programs. The Confirmatory Factor Analysis (CFA) was performed to determine the construct validity of the scale. The CFA was performed to determine whether the factor structure of the original form is verified in the sample of Turkish college students, revealed that the model is sufficiently compatible. Test-retest reliability coefficient and Cronbach Alpha coefficient was calculated for the reliability of SRL scale and the results showed that the scale was reliable. It is assumed that the final version of the scale with 8 dimensions and 60 items is valid and reliable. The study indicates that there is a significant difference between the participants' SRLS perceptions and the faculty they are studying at and the membership to any student clubs.

Key words: The Socially Responsible Leadership, validity, reliability, variable, Confirmatory factor analysis

INTRODUCTION

Change is one of the most prominent facts of the age. It can be seen in technological, economic, social, cultural, and even in moral contexts. Nowadays, as the global competition has gained more importance, rapidly growing scientific and technological developments have affected the whole society. In this process, making societies effective and productive can only be possible by adaptation to existing change (Bülbül, 2010: 32). Since the environment, which the individuals live in, is unstable and, is unstable and indefinite (Altınkurt & Yılmaz, 2010: 125), individuals have to develop leadership skills to be adapted themselves to the change around them. It can be not possible that traditional leadership models can be successful in today's world (Lichtenstein, Uhl-Bien, Marion, Seers, Orton & Schreiber, 2006: 2). More effective leadership models need to be developed beyond the scope of traditional models (Hogendorp, 2012: 35). Accordingly, many leadership training models have been proposed to develop leadership skills. One of them is the Social Change Model. The ultimate purpose of the Social Change Model is to figure out how to constitute positive social change. It argues that it is only possible with social responsibility based leaders, who understand the essence of the change (Gleason, 2012: 2). The

¹ Yrd. Doç. Dr., Kilis 7 Aralık University , Education Sciences, ebrukulekci@kilis.edu.tr

² Doç. Dr., Gaziantep University, Education Sciences

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Socially Responsible Leadership was developed for the people who desire to know how to work effective and cooperative with other people for the benefit of the society (Komives & Wagner, 2009: 9; Dugan, 2008: 50; Page, 2010: 18; Hogendorp, 2012: 11). The Socially Responsible Leadership includes the awareness of the influence of group decisions and actions on the other groups (Gagner, Ostick & Komives, 2009: 11) in a purposeful and collaborative process based on values, which results in positive social changes (Skendall, 2012: 14; Higher Education Research Institute, (HERI), 1996: 18; Cilente, 2009: 50; Wagner, 2006:8; Buschlen & Johnson, 2014: 34). The Socially Responsible Leadership has commonly been investigated in the literature. For instance, in Seemiller's (2006) study, students who have taken courses about leadership within the Social Change Project and the changes in leadership skills were examined. Dugan (2006a) identified SRL levels of the college students. Another study carried out by Dugan (2006b) investigated the relation between the gender of college students and 8 dimensions of the Social Change Model and identified their SRL levels. Dugan, Komives and Segar conducted a research in 2008 and measured the level of SRL of college students by using a scale on the basis of the Social Change Model. Skendall (2012) examined the effects of a leadership course on the SRL level of senior college students. Dugan (2008) conducted a study in the USA to determine the SRL level of the male and female members of student clubs. He examined the effects of the student clubs on their leadership levels. Buschlen and Dvorak (2011) carried out a study to evaluate whether the leadership course influence the SRL level of students or not. Haber, Page, and Komives (2009) measured the SRL level of college students with the Socially Responsible Leadership Scale (SRLS). Ricketts and Bruce (2008) identified college students' perceptions about leadership with the SRLS.

Universities aim to be in interaction with community and life by trying to serve the community. This view is indicated the importance of contribution to community. Students not only complete their individual and professional development during their university lives but also graduate from a higher education institution by equipping themselves with skills and knowledge that would contribute to the community they live in as well. Universities as educational institutions must encourage and enable students to produce and implement projects towards community's various problems for a habitable world; to come up with solutions for common problems and to create awareness towards responsibilities related to community. Within this context, as an institution, universities' and students' leadership in social responsibility projects will help contribute to realization of their main goals; individual and professional development of the college students' by giving chances to them to take a part in community work and also to contribute positive change and development of the community. On that account developing scales to determine student skills has become a vital issue.

SRLS, measuring the perceived leadership level of college students, was developed by Tyree in 1998 and has been extensively used in the literature (Tyree, 1998). There is no scale to measure leadership skills in this way in Turkey; hence adapting the Socially Responsible Leadership Scale from English to Turkish is considered to be an important contribution to the field.

The purpose of this article is to examine the normative values, validity, and reliability of the Turkish form of the Socially Responsible Leadership scale. In addition, it aims to assess the scale in terms of some variables such as having a membership in the faculty or student clubs.

The main research question of this study is expressed as follows:

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Is the Turkish form of the Socially Responsible Leadership scale valid?

The sub-questions of this study are:

1. Is the Turkish form of the Socially Responsible Leadership scale reliable?
2. What are the standard values of the Socially Responsible Leadership scale?
3. Are there any significant differences between college students' perceptions of Socially Responsible Leadership and the faculty that they attend?
4. Are there any significant differences between college student's perceptions of Socially Responsible Leadership and their membership to student clubs?

METHOD

Research Model

This is a descriptive study, in which a survey method was applied. Survey is a method that intends to describe a past or current event as it is. Individual, subject or objects under study are tried to be described within its conditions and as they are. There is no attempt to either change or affect them (Karasar, 2005). Socially Responsible Leadership scale was adapted to Turkish and norm studies were made based on different variables in the study. Therefore, survey method was preferred.

Sample

The sample consists of students who attended of the Kilis 7 Aralık University in 2013-2014 academic year. They were selected from the population by simple random sampling model. 700 students were randomly selected from Faculty of Education, Faculty of Theology, Faculty of Arts and Sciences, and 2-year Vocational School. 8 participants were removed from the study because of inadequate answers. The data collected from 692 students was analyzed. Demographic characteristics of participants are as follows: 63.9% female and 36.1% male students. 35.5% of the students study at Faculty of Education, 28.8% at Faculty of Theology, 16.9% at 2-year Vocational School and 18.8% at Faculty of Arts and Sciences. Moreover, the scale was applied on 110 students selected from department of elementary education at the Faculty of Education for test-retest reliability. 52.7% of these students are females and 47.3% of are males.

In order to assess the Socially Responsible Leadership scale according to some variables, the population of the study was determined as the college students studying across the Turkey. The sample was selected within the population by stratified sampling method.

The scale was applied at the universities selected from seven regions that were considered to be representative of Turkey (Marmara, Central Anatolia, Mediterranean, Black Sea, Eastern Anatolia, Southeastern Anatolia, and Aegean). While selecting these universities not only the population and quality, but also the year of establishment of the universities were considered. Finally, 10 universities from 7 regions were selected as the sample. The diversity of the sample is achieved by selecting college students from different faculties and vocational schools. Table 1 shows the number of student groups, gender, age, faculty or vocational school, and year of study.

Table 1. Demographic Characteristics of the Participants during the Standardization Phase of SRLS

Variable	Group	N	%
Gender	Female	742	58.5
	Male	526	41.5
Faculty or Vocational School	Faculty of Education	437	34.5
	Faculty of Theology	138	10.9
	2-Year Vocational School	275	21.7
	Faculty of Arts and Sciences	187	14.7
	Faculty of Economics and Administrative Sciences	103	8.1
	Faculty of Engineering	128	10.1
Year	Freshmen	389	30.7
	Sophomore	305	24.1
	Junior	298	23.5
	Senior	276	21.8
Age	16-19	339	26.7
	20-23	744	58.7
	24-27	185	14.6
Membership to Student Clubs	Yes	205	16.2
	No	1063	83.8
Mother's Educational Level	Illiterate	285	22.5
	Elementary School	551	43.5
	Secondary School	206	16.5
	High School	170	13.4
	University	56	4.4
Father's Educational Level	Illiterate	76	6
	Elementary School	473	37.3
	Secondary School	214	16.9
	High School	288	22.7
	University	217	17.1
Hometown	Village	220	17.4
	Town	39	3.1
	District	375	29.6
	City	460	36.3

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	Metropolis	174	13.7
Region	Black Sea	147	11.6
	Mediterranean	212	16.7
	Eastern Anatolia	168	13.2
	Marmara	195	15.4
	Aegean	160	12.6
	Central Anatolia	174	13.7
	Southeastern Anatolia	212	16.7
Total		1268	

Table 1 indicates that 58.5% of the sample is female and 41.5% male. The majority of the sample is in the age of between “20-23”, and 83.8% of the participants do not have a membership to any student clubs. A small portion of the participants are members of student clubs. Low participation to student clubs is notable as long as these clubs help young individuals to know and contribute to the society.

Table 1 shows that the mothers have lower educational level than fathers. It also shows that the majority of the participants (36.3%) live in cities.

Data collection instrument

Personal information form and the Socially Responsible Leadership scale were used as data collection instruments.

In the personal information form, the participants provided information about their gender, age, type of high school they graduated, average monthly income, the educational level and marital status of their parents, places they were raised, the field they study, year of study at the university, and the number of siblings they have.

The Socially Responsible Leadership Scale developed by Tyree (1998) was applied to designate the Socially Responsible Leadership level of students. Tracy Tyree configured the SRLS for her PhD thesis in 1998 and used in this study by reducing the number of items in the scale in order to make the scale more useful in the research. Afterwards, 3 different versions of the SRLS were created. The second version that includes 8 dimensions and 68 items known as 8C of the Social Change Model of the scale was used in this study. The dimensions can be listed as “Controversy with Civility,” “Commitment,” “Congruence,” “Collaboration,” “Citizenship,” “Change,” “Consciousness of Self,” and “Common Purposes.”

Scale Adaptation Process

To adapt SRLS from English to Turkish approvals from Craig E. Slack, the coordinator of National Clearinghouse for Leadership Programs, have been obtained. The original form of the scale has been translated into Turkish by five experts who were fluent in both two languages and had knowledge about the scale structure. The commonality among the translated items has been created and consulted by two experts from the education science. As a result of the consultations, some arrangements have been made on the scale. The final Turkish form of the

scale has been translated into English by three experts. This translated form of the scale has been compared with the original one. Eventually it was decided that there was no differences between the original form and the Turkish form of the scale.

The final Turkish scale was sent to eight experts in the field of education management, who were interested in leadership issues. The scale has been finalized based on the feedback received in terms of its convenience to Turkish settings.

The scale has been implemented on 110 college students as a pilot study. The items of the scale were examined whether they were clearly comprehended or not and the last arrangements were made.

700 students from different faculties and schools participated in this part of the study to determine the structure validity.

Data analysis

SPSS 20.0 and LISREL 8.8 programs were used for the data analysis. Due to the fact that the factor pattern of the scales are revealed by quantitative and qualitative methods and the studies carried out for construct validity in original cultures, it is recommended to make confirmatory factor analysis directly in cross-cultural scale adaptation studies (Çokluk, Şekercioğlu & Büyüköztürk, 2012: 283).

The Socially Responsible Leadership scale has construct validity which was established in previous studies and in its different versions. In this study, the factors of the original scale were not changed; however, confirmatory factor analysis was done to investigate the cross-cultural convenience. Cronbach alpha coefficient values of the sub-scales were calculated for the internal consistency. Pearson correlation coefficient was calculated for the test-retest reliability by applying the scale on 110 participants two times in a three week interval. After proving the Socially Responsible Leadership scale as a valid and reliable instrument, the second stage of the study began. This stage included standardization of the scale and examining the scale from the perspective of some variables. Thus, descriptive statistics values were calculated for total scale and sub-scale scores and the normality of the distribution was investigated as a first step. Subsequently, in order to identify the difference between the total SRLS scores and the subscale scores according to various independent variables collected from normative study, parametric statistical techniques was used. T-test was implemented to understand whether the difference between the means of two unrelated samples is significant or not. One Way ANOVA was conducted to determine if the difference between the means of two or more unbound samples is significant and differs from zero.

FINDINGS

In this section, findings of non-parametric test results, validity, and reliability analysis will be discussed.

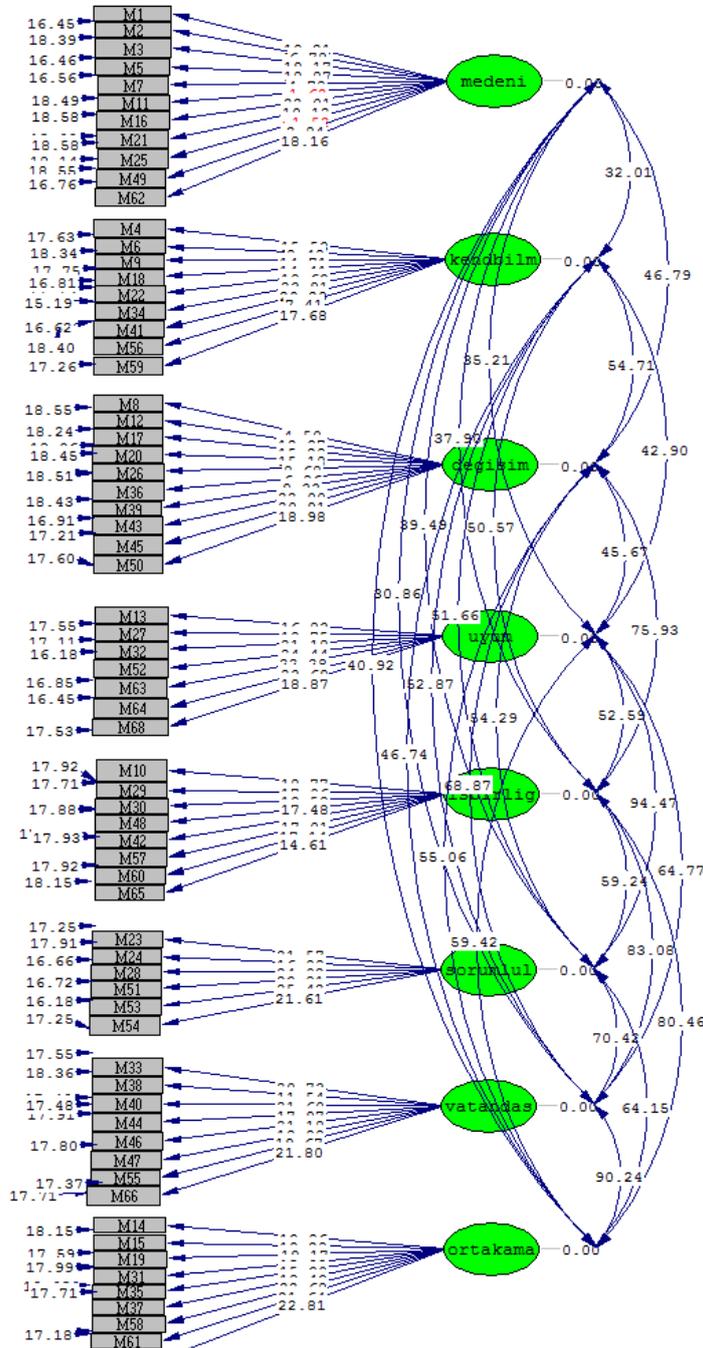
Validity studies

68 items and 8-factor structure were tested by CFA. The objective of Confirmatory Factor Analysis is to test verification of a predetermined structure (Yılmaz & Çelik, 2009; Bayram,

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2010; Çokluk, Şekercioğlu & Büyüköztürk, 2012). This study aims to test verification of the 68 items and 8 factors present in the original scale.

Figure 1. The Path Diagram of SRLS



As a first step of the confirmatory factor analysis, t values that determine to what extent the latent variables explains the observed variables were examined. While t values are being examined, it is important to find a red arrow (Çokluk, Şekercioğlu & Büyüköztürk, 2012: 304).

Accordingly, the color of the arrows link items to relevant factors and whether there was a change or not have been observed (Seçer, 2013: 149). As Figure 1 indicates, the item 11 and 25 are not significant and their color is red. As a result of investigating the defect variance, it has been found that defect variance is significantly high (1.00). Therefore the items 11 and 25 were excluded from the analysis.

Further, factor loadings of the each item were investigated. Factor loadings of the items should be at least .30 and above (Seçer, 2013: 150). Consequently, because some items' factor loadings are below .30 they were found insignificant (e.g. M2 (0.27), M7 (0.19), M8 (0.17), M36 (0.26), M49 (0.11), M56 (0.29)). Defect variance of those items were found as M2 (.93), M7 (.96), M8 (.97), M36 (.93), M49 (.99), M56 (.92), which are significantly high. Thus, these 6 items have been excluded from the analysis.

The fit indices were compared with limit values and the model's fit values have been improved. As a result, a modification for the items between 6 and 9 and between 1 and 3 respectively was suggested. As observed in the table 1, the modification process contributed significantly to the model's fit indices.

Quite number of fit indices is used to evaluate validity of a model in confirmatory factor analysis process. Some of those are Chi-Square- Goodness, Root Mean Square Error of Approximation (RMSEA), and Comparative Fit Index (CFI) (Yılmaz & Çelik, 2009). The model that contains 60 items and 8 factors was tested by confirmatory factor analysis. The results and fit indices are shown in Table 2.

Table 2. Comparison between Standard Goodness Of Fit Measures And The Research Findings

Goodness of Fit Measures	Good Fit	Acceptable Fit	Goodness of Fit Measures in the First Stage	Goodness of Fit Measures in the second stage
RMSEA	$0 \leq \text{RMSEA} \leq 0.05$	$0.05 \leq \text{RMSEA} \leq 0.08$	0.061	0.057
NFI	$0.95 \leq \text{NFI} \leq 1.00$	$0.90 \leq \text{NFI} \leq 0.95$	0.97	0.97
NNFI	$0.95 \leq \text{NNFI} \leq 1.00$	$0.95 \leq \text{NNFI} \leq 0.97$	0.98	0.98
CFI	$0.95 \leq \text{CFI} \leq 1.00$	$0.95 \leq \text{CFI} \leq 0.97$	0.98	0.98
GFI	$0.95 \leq \text{GFI} \leq 1.00$	$0.90 \leq \text{GFI} \leq 0.95$	0.76	0.78
AGFI	$0.90 \leq \text{AGFI} \leq 1.00$	$0.85 \leq \text{AGFI} \leq 0.90$	0.75	0.77
RFI	$0.90 < \text{RFI} \leq 1.00$	$0.85 < \text{RFI} \leq 0.90$	0.96	0.97
RMR			0.059	0.049
χ^2	$0 \leq \chi^2 \leq 2df$	$2sd \leq \chi^2 \leq 3df$	6245,14	5034.49
χ^2/sd	$0 < \chi^2/df \leq 2$	$2 \leq \chi^2/df \leq 3$	2,85	2.99

Table 2 reveals the results of confirmatory factor analysis of SRLS. The values are considered as having two stages. In the first stage, the data has been obtained out of 68 items. In the second stage, after the exclusion of 8 items and the modification process based on t test results, defect

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rate, and factor loadings, the data has been obtained out of 60 items. According to the results, the first stage was found as $X^2=6245.14$; $df=2182$, $p=.00$ and the second stage as $X^2=5034.49$; $df=1680$, $p=.00$.

Due to the fact that X^2 cannot be considered as statistics value itself, it can only be evaluated by the ratio of degree of freedom (df) (Çokluk, Şekercioğlu & Büyüköztürk, 2012: 268). This ratio has been found as $(X^2/df)= 2.85$ in the first stage, and as $(X^2/df)= 2.99$ after the exclusion of some items in the second stage. This value should be between 2 and 3 to consider model as significant and fit (Gizir & Gizir, 2005: 117). In this context X^2/df ratio can be stated as it has a significant level of compliance value.

Another value considered for the compatibility of the model is RMSEA (Root Mean Square Error of Approximation). RMSEA is expected to be .05 or lower. However, the model can be accepted as compatible if the RMSEA value is between .05 and .08 (Bayram, 2010: 76). RMSEA was found as 0.061 in this study and it declined to 0.057 after the analysis in the second section. According to the final value of RMSEA, the model of this study can be stated as compatible.

The goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI) were investigated within the scope of the study. GFI was accepted as a good index and as a sample variance expressed by the model (Ayyıldız & Cengiz, 2006: 79; Çokluk, Şekercioğlu & Büyüköztürk, 2012: 269). AGFI is a kind of GFI value that is adjusted by the number of sample. AGFI is more representative fit index in larger sample cases. The model is more compatible when GFI and AGFI values are getting close to 1 (Bayram, 2010: 75). GFI and AGFI take values ranging between 0 and 1. GFI and AGFI values were calculated as 0.78 and 0.77 respectively. .95 and above GFI and AGFI values correspond to excellent compatibility, .90 and above correspond to unacceptable level compatibility. Since, GFI and AGFI values of this study are low, it has poor compatibility.

Finally, Normed Fit Index (NFI), Non-normed Fit Index (NNFI), and Comparative Fit Index (CFI) values were investigated. CFI checks against the adaptation of existing model and takes values between 0 and 1.00. A model can be stated as good when CFI value is between 0.97 and 1 (Bayram, 2010: 76; Çokluk, Şekercioğlu & Büyüköztürk, 2012: 270). NFI is positively correlated with the number of sample and takes values between 0 and 1.00. While 0.95 and 1 NFI correspond to good compatibility, 0.90 and 0.95 account for acceptable compatibility (Bayram, 2010: 75). When NNFI takes values between 0.95 and 0.97, it means that the scale has an acceptable compatibility. On the other hand, the values between 0.95 and 1.00 mean good compatibility (Çokluk, Şekercioğlu & Büyüköztürk, 2012: 270). In this study, NFI, NNFI, and CFI values were calculated as 0.97, 0.98, and 0.98 respectively, which reveals that the model of the study has a good compatibility.

Factor loadings and defect rates after exclusion of the some items from analysis are as follows:

Figure 2. Confirmatory Factor Analysis Results of the Conscious of Self Subscale

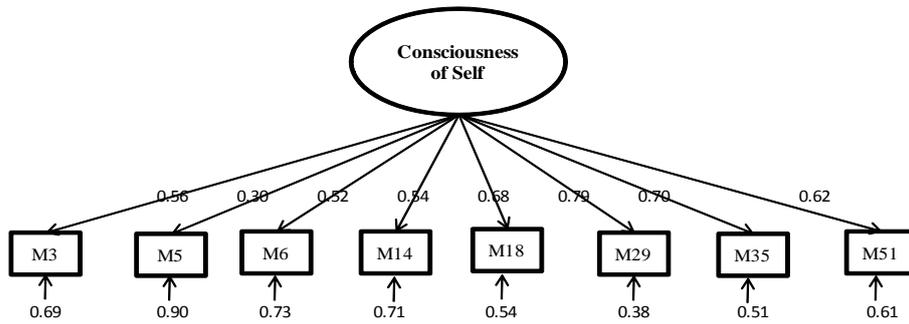


Figure 3. Confirmatory Factor Analysis Results of the Congruence Subscale

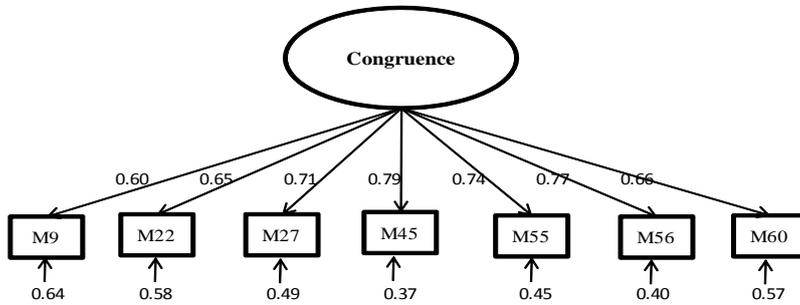
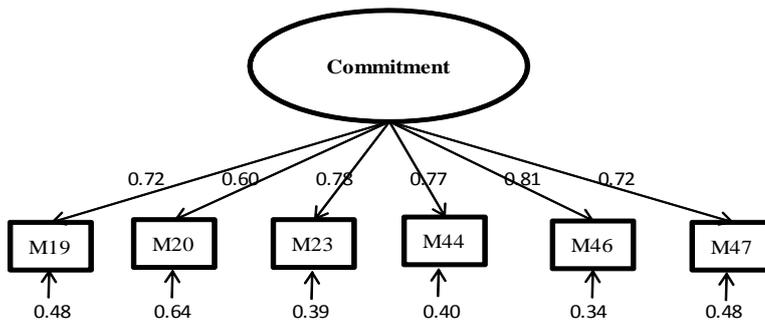


Figure 4. Confirmatory Factor Analysis Results of the Commitment Subscale



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Figure 5. Confirmatory Factor Analysis Results of the Collaboration Subscale

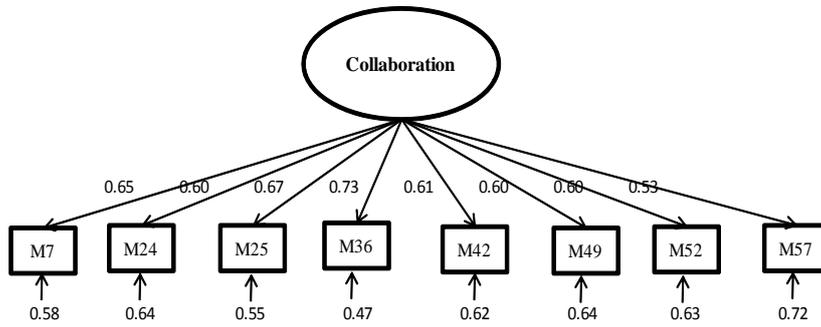


Figure 6. Confirmatory Factor Analysis Results of the Controversy with Civility Subscale

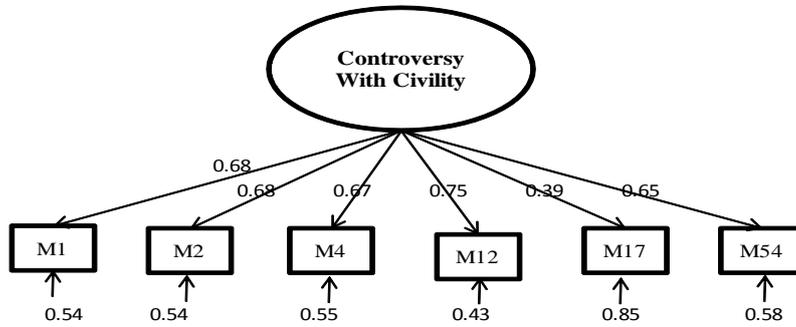


Figure 7. Confirmatory Factor Analysis Results of the Common Purpose Subscale

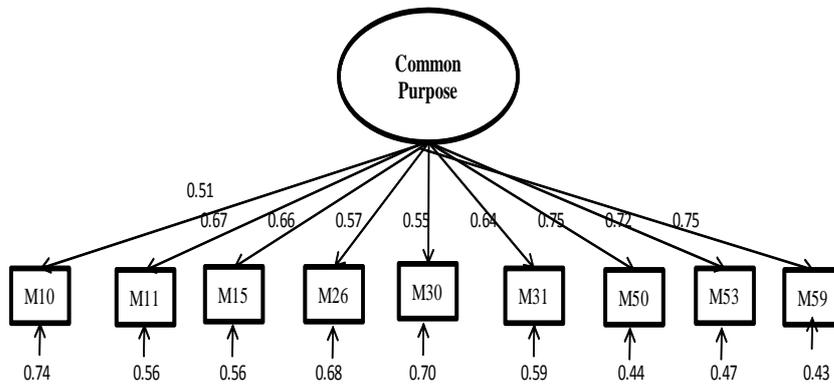


Figure 8. Confirmatory Factor Analysis Results of the Citizenship Subscale

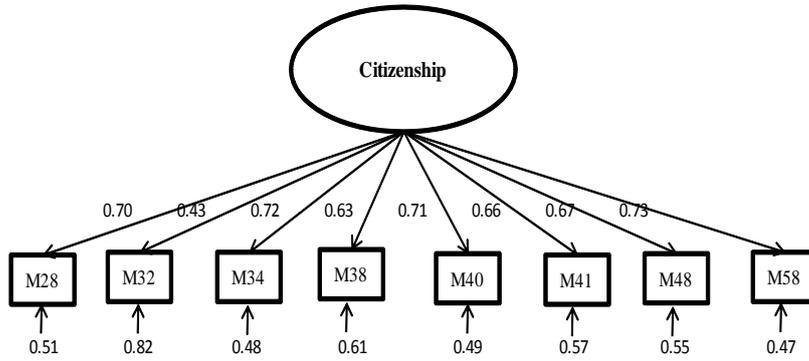
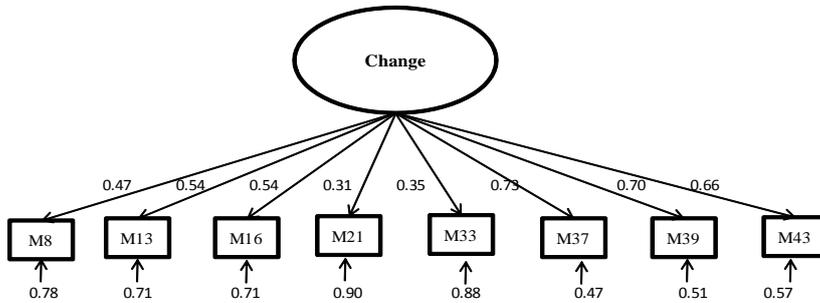


Figure 9. Confirmatory Factor Analysis Results of the Change Subscale



The figures above indicate the factors of SRLS and the items that belong to these factors. It can be observed from the figures that the factor loadings of 60 items are in the 30-81 range.

Reliability Studies

Reliability of the scale has been examined by test-retest reliability coefficient and internal consistency coefficient.

Table 3. Test-retest Reliability Coefficient of the SRLS

Implementation	N	Test-Retest	Cronbach Alpha
1. Implementation	110	.80	.93
2. Implementation	110		

Cronbach's Alfa coefficient was calculated as .93 for the Turkish form of the scale. It was applied to 110 college students with an interval of three weeks in order to determine test-retest reliability. The test-retest reliability coefficient was calculated as .80. Consequently, the Turkish form of the scale has been stated as reliable and valid for this research group.

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Cronbach Alfa coefficient was analyzed in order to determine reliability coefficient of the data obtained from SRLS. Cronbach Alpha is .93 for the whole scale as shown in Table 3. Cronbach Alpha coefficients for sub-factors of the scale are as follows:

Table 4. Cronbach's Alpha Coefficients for Subscales of the SRLS.

Subscale	Original SRLS (Tyree, 1998) 104 Items	SRLS-R2 (Dugan, 2006) 68 Items	The Turkish Version of SRLS 60 Items
Consciousness of Self	.82	.78	.81
Congruence	.82	.79	.87
Commitment	.83	.83	.87
Collaboration	.77	.80	.83
Common Purpose	.83	.81	.86
Controversy With Civility	.69	.72	.79
Citizenship	.92	.90	.85
Change	.78	.82	.76

Table 4 shows the Cronbach's Alpha coefficients of both two versions of the scale and sub-dimensions obtained from the study. Cronbach's Alpha takes values between 0.00 and 1.00 (Cronbach, 1951: 302).

Cronbach's Alpha coefficient values vary between .69 and .92 in the first version of the scale while it varies between .78 and .90 in the second version. In this study, reliability coefficients of the sub-factors in the Turkish version of SRLS values are between .76 and .87. "Commitment" dimension of the scale was observed as the highest reliability coefficient value whereas "congruence" dimension was the lowest. There are different views about Cronbach's Alpha coefficient. However, values between .70 and .95 are usually accepted as significantly reliable (Tavakol & Dennick, 2011: 54).

The findings show that the Turkish version of the scale can be regarded as reliable for this research group.

Correlations among the Socially Responsible Leadership Scale factors

Pearson Product Moment Correlation Analysis was calculated to determine the correlations among the 8 subscales. The results vary between 0.54-0.82 which is statistically significant. The results are given in Table 5.

Table 5. Correlations Between the SRLS Factors

		Con Civi	Consc.Se lf	Chang e	Congruen ce	Collaborati on	Commitme nt	Citizenshi p	Com .Pur.
Cont.Civil.	Cor.Co ef	1.00							
Consc. Self	Cor. Coef	.76*	1.00						
Change	Cor. Coef	.88*	.92*	1.00					
Congruence	Cor. Coef	.79*	.83*	.86*	1.00				
Collaborati on	Cor. Coef	.81*	.88*	.98*	.87*	1.00			
Commitme nt	Cor.Co ef	.81*	.87*	.90*	.95*	.89*	1.00		
Citizenship	Cor. Coef	.75*	.88*	.96*	.90*	.96*	.91*	1.00	
Com. Pur	Cor. Coef	.82*	.85*	.91*	.88*	.95*	.89*	.95*	1.00

* $p < 0.01$

As the table 5 indicates, there is a positive and significant correlation among all dimensions. While the highest correlation is between “Collaboration” and “Congruence” dimensions (.98), the lowest is between “Consciousness of Self” and “Controversy with Civility” (.76).

SRLS after Validity and Reliability Checks

8 items including 6 items whose factor loading values are below .30 and 2 items whose t values are insignificant were excluded from analysis as a result of validity and reliability checks. Eventually, the process of adapting the scale to Turkish was carried out on 60 items. The subscales have following number of items: ‘Consciousness of Self’ consists of 8, ‘Congruence’ 7, ‘Commitment’ 6, ‘Collaboration’ 8, ‘Common Purpose’ 9, ‘Controversy with Civility’ 6, ‘Citizenship’ 8 and ‘Change’ 8 items. The item numbers of the subscales are as follows:

Consciousness of Self: 3, 5, 6, 14, 18, 29, 35, 51.

Congruence: 9, 22, 27, 45, 55, 56, 60.

Commitment: 19, 20, 23, 44, 46, 47.

Collaboration: 7, 24, 25, 36, 42, 49, 52, 57.

Common Purpose: 10, 11, 15, 26, 30, 31, 50, 53, 59.

Controversy with Civility: 1, 2, 4, 12, 17, 54.

Citizenship: 28, 32, 34, 38, 40, 41, 48, 58.

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Change: 8, 13, 16, 21, 33, 37, 39, 43.

Three items (5, 17, and 21) were coded reverse because of expressing negative situations on the final version of SRLS. Therefore, Socially Responsible Leadership Scale was translated and adapted to Turkish. It has 60 items with 3 reverse-codes and 8 dimensions. Socially Responsible Leadership Scale is regarded as a valid and reliable instrument, which is ready to use.

Investigation of SRLS in Terms of Some Variables

In this section, findings from investigation of the SRLS in terms of some variables will be discussed. Primarily, SRLS distribution was investigated to find out whether it is normal or not. The data for the standardization of the study is shown in the table below:

Table 6. Normality Values of the SRLS and All Sub-scales for College Students

	C.S	Con.	Com.	Col.	Con.Cv	C.P.	Ctz.	Chg.	SRL
N	1268	1268	1268	1268	1268	1268	1268	1268	1268
Mean	31.14	29.82	25.80	32.07	23.43	36.38	31.69	30.48	240.84
Medyan	32	31	27	32	24	37	32	31	245
Mod	30	35	30	32	26	32	32	30	263
Std. Dev.	4.50	4.80	4.13	5.14	3.63	5.95	5.23	4.30	32.46
Skewness	-1.168	-1.989	-2.039	-1.349	-1.468	-1.341	-1.151	-1.204	-1.978
Std. Er.	.069	.069	.069	.069	.069	.069	.069	.069	.069
z	-16.93	-28.83	-29.55	-19.55	-21.28	-19.43	-16.68	-17.45	-28.67
Kurtosis	2.944	5.825	5.994	3.360	3.250	3.568	2.900	3.138	6.464
Std. Er.	.137	.137	.137	.137	.137	.137	.137	.137	.137
z	21.49	42.52	43.75	24.53	23.72	26.04	21.17	22.91	47.18
Ranj	32	28	24	32	24	36	32	32	231
25. Percentile	29	28	24	30	22	34	29	28	229
50. Percentile	32	31	27	32	24	37	32	31	245
75. Percentile	34	33	29	36	26	40	35	33	262
Kolmogorov-Smirnov	3.697	5.042	5.510	4.654	4.879	4.262	3.105	4.123	4.173
sd	1268	1268	1268	1268	1268	1268	1268	1268	1268
p	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*

* $p < 0.05$

(Abbreviations: C.S.: Consciousness of Self, Con: Congruence, Com: Commitment, Col: Collaboration, Con.Cv.: Controversy With Civility, C.P.: Common Purpose, Ctz.: Citizenship, Chg: Change, SRL: Socially Responsible Leadership)

Table 6 presents descriptive statistics for overall SRLS and the sum of sub-scales. According to this data, Arithmetic Mean of overall SRLS is (\bar{X}) 240.84, Median 245, Standard Deviation 32.46, Skewness -1.978, Standard Deviation of Skewness .69, Kurtosis 6,464 and Standard Deviation of kurtosis 0.137.

Skewness, Kurtosis and Kolmogorov Smirnov values are important for normality tests. Skewness is defined as asymmetry in the distribution of data. Skewness coefficient represents the degree of divergence from the normal distribution. A Skewness coefficient equal to 0 it means that the distribution is symmetric according to the mean. If it is lower than 0, Skewness will be negative (left); and if it is higher than 0, Skewness will be positive (right) (Çokluk, Şekercioğlu & Büyüköztürk, 2012: 208). In this study, Skewness values for overall scores and sub-scale scores were found as negative which means that the distribution is on the left side.

Kurtosis is a measure that indicates how sharp the distribution is. A Kurtosis coefficient equal to 0 means the distribution is normal. The distribution recedes if Kurtosis is low than zero and the distribution becomes sharp if Kurtosis is higher than zero (Çokluk, Şekercioğlu & Büyüköztürk, 2012: 209). In this study, the Kurtosis values for overall scores and sub-scale scores were calculated as positive which means that the distribution is sharp.

Kolmogorov Smirnov value is recommended to be examined when the sample 'n' number is more than 30 (Seçer, 2013: 25; Can, 2013: 89). Since in this study 'n' number is 1268, Kolmogorov Smirnov analysis was performed. After the test, 'p' was calculated as p=0.00. It can be concluded that the data is not have a normal distribution under the normal circumstances. However, according to the Central Limit Theorem, while the count of the selected simple random sample grows up to 'n' units; sample rate 'p' gets close to the normal distribution. The ratio of sample distribution approaches the normal distribution on the condition that sample volume is $n \geq 30$. Normal distribution characteristics are utilized in the analysis relevant to sample distribution of the rates which fulfills this requirement (Yüzer, 2003: 191). Due to this study meets the condition of $n \geq 30$ ($n=1268$), standard values and parametric tests was performed by assuming that the data has a normal distribution according to the Central Limit Theorem.

In general sense, considering the standard values, individuals who have low than 229 points from the socially responsible leadership scale is categorized as 'low level of socially responsible leadership'. 229.01-261.99 points are equivalent to mid-level while 262 and above points are corresponded to high level of SRL.

For the 'Consciousness of Self' factor, the scores categorized as less than 29 means low level, 29.01-33.99 mid-level, and 34 and above high level of consciousness of self. Individuals were divided into three classes in the 'Congruence' factor: less than 28 score means low level congruence, 28.01-32.99 scores mid-level, 33 and above scores are high level congruence. For the 'commitment' factor, the scores were categorized as low (less than 24), mid-level (24.01-28.99) and high (29 and more).

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Individuals who have less than 30 points from the ‘collaboration’ factor was classified as low, 30.01-35.99 points as mid-level, and 36 and more points as high level compliance. For the ‘Controversy with Civility’ factor, individuals with less than 22 points was categorized as low level of Controversy with Civility skills while people with points between 22.01 and 25.99 points was categorized as mid-level skills. 26 and over points was categorized as high level of Controversy with Civility skills. For the ‘Common Purposes’ factor, it was concluded that participants with less than 34 points have low level, 34,01-39,99 points have mid-level, and 40 and more points have high level of skills in accordance with common purposes. In the ‘Citizenship’ factor, the participants was classified in three categories according to their citizenship behaviors which are low (less than 29 points), mid-level (29.01- 34.99 points), and high (35 and above scores). Finally, in the ‘Change’ factor, creating and managing change skills of participants was classified as low (less than 28 points), medium (28.01- 32.99 points), and high (33 and more scores).

After finding that the distributions are normal, parametric statistic techniques was used to determine the difference between overall SRL scores and sub scale scores in terms of some independent variables.

Table 7 presents the descriptive statistics of college students’ about socially responsible leadership in accordance with the faculty they attend.

Table 7. Descriptive Statistics for College Students’ Perceptions about SRLS in Terms of Faculties

	Faculty	N	\bar{X}	sd
SRL	1.Faculty of Education	437	239.39	30.80
	2.Faculty of Theology	138	243.94	32.66
	3.Vocational School	275	236.11	31.90
	4.Faculty of Arts and Sciences	187	238.94	38.99
	5.Faculty of Economics and Administrative Sciences	103	250.23	26.85
	6.Faculty of Engineering	128	247.84	30.18

As a result of comparison between students’ perceptions and faculties, the students from Faculty of Economics and Administrative Sciences have the highest score in SRL perceptions (\bar{X} =250.23). Vocational School students have the lowest score in SRL perceptions.

Table 8. ANOVA Results of College Students' Perceptions about SRLS in Terms of Faculties

	Variance	Sum of Squares	df	Mean Square	F	Sig.	Sig.Df
SRL	Between Groups	24409.03	5	4881.808	4.700	.000*	5-3, 6-3
	Within Groups	1310799.27	1262	1038.668			
	Total	1335208.31	1267				

*p<0.05

ANOVA test was used in order to determine if there was a difference between the type of faculty and students' perceptions. As a result of ANOVA, a significant difference was found. $F(5, 1262) = 4.700$, $p < 0.05$ indicates that 6 different faculties have different impacts on students' SRLS perceptions. Scheffe test was performed to identify which groups have the difference in term of faculty type. According to Scheffe test results, a significant difference was observed among Vocational School ($\bar{X} = 236.11$), Faculty of Economics and Administrative Sciences ($\bar{X} = 250.23$), and Faculty of Engineering students' scores ($\bar{X} = 247.84$).

Table 9 presents the findings regarding the relation between membership status to student clubs and SRL perceptions.

Table 9. T-test results for College Students' Perceptions of SRL in Accordance with the Membership Status to Students Clubs

	Membership status	N	\bar{X}	sd	df	t	p
SRL	Member	205	253.00	23.23	1266	5.938	.000*
	Non-membership	1063	238.50	33.45			

*p<0.05

According to Table 9, there is a significant difference between the membership status to student clubs and overall SRLS scores, $t(1266) = 5.938$, $p < 0.05$. Considering the overall SRLS scores, it was observed that the students who have a membership to any kind of student clubs have higher level of SRL perceptions ($\bar{X} = 253.00$) than the students with no membership ($\bar{X} = 238.50$). Therefore, student clubs can be stated as an element that effects students' perceptions of socially responsible leadership.

RESULTS AND DISCUSSION

Socially responsible leadership scale developed by Tyree (1998) was adapted to Turkish in order to determine Socially Responsible Leadership level of the college students'. The validity

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and reliability levels of the study were investigated by a field study with 692 participants who were students at various universities in Turkey. The Confirmatory Factor Analysis was performed in order to find the construct validity of the scale. Moreover, in order to determine reliability of the study test-retest and Cronbach's Alpha Coefficient methods were performed.

T values, defect variations and factor loadings were examined within confirmatory factor analysis. As a result, 2 items, (M11) and (M25), was excluded from the scale due to insignificant t value. 6 items, (M2, M7, M8, M36, M49, M56), were also excluded as a result of factor loading value which was less than .30 and a defect variation higher than .90.

The Confirmatory factor analysis have revealed that the model has an adequate level of adaptation to the sample consisted of college students of Turkey. Fit indices of the model were investigated within CFA and Chi-square value, which was calculated as significant ($X^2=5034.49$; $df=1680$, $p=.00$,). Calculated fit indices as $RMSEA=0.059$, $NFI=0.97$, $CFI=0.98$, $GFI=0.78$, and $AGFI=0.77$ confirms the model is well adapted. Regarding reliability, the internal consistency coefficient was found as .93. In order to indicate that the scale is independent of time, test-retest reliability coefficient was calculated as .80 which resulted from application of the scale within a three week interval. These results relevant to reliability have revealed that the scale is sufficiently reliable.

Each item of the socially responsible leadership scale has a five-point Likert type classification including the following statements: 1) strongly disagree, 2) disagree, 3) partially agree, 4) agree, and 5) strongly agree. The scale has 8 dimensions such as "Controversy with Civility," "Commitment," "Congruence," "Collaboration," "Citizenship," "Change," "Consciousness of Self," "and Common Purposes." The analysis was performed over 60 items by excluding 8 items as a result of CFA.

As a consequence of CFA and the other analysis, the final form of the scale with 8 dimensions and 60 items was assumed as reliable and valid and has a robust theoretical basis. 1268 students selected from 7 different regions across Turkey completed the scale for standardization process. Within standardization study, the raw scores and z scores of the scale were calculated and therefore low, medium (mid), high levels for overall socially responsible leadership scores, and subscale scores were identified.

Since Socially Responsible Leadership scale is not present in domestic literature, it is believed that this study will help researchers to save time. Considering literature, there are various studies emphasizing the influences of different faculties and schools on SRL perceptions of students'. For instance, Anderson (2012) conducted a study that aimed at identifying SRL perceptions of students in Physical Education Department. Ricketts and Bruce (2008) carried out a study on students of Agriculture Faculty and examined their SRL perceptions.

The analysis performed in this study has concluded that different types of faculties have different kinds of influences on students' perceptions about SRL. Significant differences with respect to faculty type are mostly in favor of students from Faculty of Economics and Administrative Sciences, Faculty of Engineering, and Faculty of Theology as opposed to Vocational School students. While the highest SRL perceptions belong to students from Faculty of Economics and Administrative Sciences, Faculty of Engineering, and Faculty of Theology respectively, the lowest belongs to Vocational School students. The courses taken by Economics and Administrative Sciences, Agriculture and Theology Faculties' students and

memberships to student clubs are considered factors as affecting these results. The courses such as ‘Institutional Social Responsibility,’ ‘Entrepreneurship,’ ‘Social Enterprise,’ ‘Social Sensitivity Projects,’ and ‘Leadership and Community Service Applications’ can be considered as influencing factors for those results mentioned above.

An analysis was performed in order to reveal if there was a significant relationship between SRL perceptions of the college students` and membership status to clubs. According to the analyze results, it was found that there is a significant difference between membership status to student clubs and overall SRLS scores. The students having a membership to any student clubs have higher scores in SRL perceptions than the students without any membership to the clubs.

In a research conducted by Dugan (2008), students were divided into two groups as members of a student club and non- members. Dugan stated that there was a significant difference between Commitment, Congruence, Collaboration, Common Purposes, and Controversy with Civility dimensions and scores of both groups in favor of members of female clubs. Haber and Komives (2009) carried out a study that revealed that membership to student clubs is important for male and female students to improve their leadership and social participation values. Dugan and Komives (2010) argued that some environmental factors such as official leadership programs, participation to student clubs, socio-cultural negotiations, and community services have a considerable contribution to the leadership capacity of students. Additionally, Page (2010) argued that students who join in-campus activities have exhibited a significant increase in their SRL perceptions. This study supports the view arguing that the participation to students clubs positively affects SRL perceptions of the college students.

In conclusion, this study contributes to the literature by supporting the idea that there is a positive relationship between being a member of student unions and socially responsible leadership. Moreover, participation to in-campus clubs raises socially responsible leadership perceptions in general.

RECOMMENDATIONS

This study concludes that the students who are members of any student clubs have higher SRL perceptions than others’. With regard to this consequence, student clubs in the universities should be valued and supported by university administrations both financially and morally.

Because SRL perceptions of students differ according to faculty type and the positively affected by taken courses, the courses such as Institutional Social Responsibility, Entrepreneurship, Social Sensitivity Projects, and Community Service Applications should be compulsory for all faculties and schools in order to improve leadership skills of students.

Socially Responsible Leadership is a new issue for Turkish settings. More studies are necessary to diversify sample groups.

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