(ISSN: 2602-4047)

Atasoy, R. & Çoban, Ö. (2021). Leadership map of seven countries according to TALIS 2018, *International Journal of Eurasian Education and Culture , 6(14), 2166-2193.*

DOI: http://dx.doi.org/10.35826/ijoecc.431

Article Type (Makale türü): Research Article

LEADERSHIP MAP OF SEVEN COUNTRIES ACCORDING TO TALIS 2018

Ramazan ATASOY
Assistant Prof., Harran University, Şanlıurfa, Turkey, atasoyramazan@gmail.com
ORCID: 0000-0002-9198-074X

Ömür ÇOBAN
Assistant Prof., Karamanoğlu Mehmetbey University, Karaman, Turkey, cobanomur@gmail.com
ORCID: 0000-0002-4702-4152

Received: 01.04.2021 *Accepted: 18.08.2021* *Published: 07.09.2021*

ABSTRACT

Policy-makers and the public are demanding information about how countries' educational Policy-makers and the public are demanding information about how countries' educational systems and schools improve school outcomes as well as ensuring student achievement. They have started to pay attention to national and international exams in measuring student success and making comparisons among countries to see the whole picture of their country in education. In this context, we will discuss cultural, and societal contexts and their influence on various leadership roles (distributed, instructional, transactional and transformational leadership styles), behaviors, and practices. Then, we will provide a map of how the distribution of school leadership is in seven countries (Finland, Japan, Korea, Singapore, Sweden, Turkey, and USA). Finally, we will debate what differences among the leadership styles of seven countries. For this purpose, we used cluster analysis technique. Participants consisted of 1166 school principals in lower secondary schools (ISCED 2) in seven countries. We find out the distribution of distributed leadership in Cluster 1 and it consists mostly of Turkish, American and Finnish principals, respectively. In other words, we implied that Turkish, American and Finnish school principals have similar aspects in this Cluster 1. In Clusters 2, Turkish, Korean, American and Swedish school principals have similar characteristics. Especially, Korean and Turkish school principals are come forward. In Cluster 3, we have the distribution of Swedish and Singaporean school principals is similar. Cluster 4 shows that the largest portion is belonging to Japanese principals. To sum up, the study expressed that leadership styles in different countries clustered in various ways because of individual, national and international cultural and social values. For this reason, we recommended that beyond the leadership styles of countries, researchers should also focus on individual, national and international cultural and social codes.

Keywords: Distributed leadership, Instructional leadership, Transactional leadership, Transformational leadership, TALIS 2018.

INTRODUCTION

The idea of globalization has made many countries compete in economy and they tried to build capacity to meet the needs and demands for 21st century world. They focused on educating employees with high-level skills and knowledge. Hence, they intend to improve their schools to respond to vital human capital (Barber & Mourshed, 2007). Additionally, policy-makers and the public are demanding information about how countries' educational systems and schools improve school outcomes as well as ensuring student achievement (Heck & Moriyama 2010). Policy makers and community countries have started to pay attention to national and international exams in measuring student success and making comparisons among countries to see the whole picture of their country in education (Bryk et al., 2010). Over the past two decades, researchers have begun to advance in comprehending how schools become better in providing quality education for students. Recent studies claimed that successful leadership, in practice, appears within the integration of different leadership styles (Leithwood et al., 2008; Marks & Printy, 2003). Additionally, recent leadership theories have been regulating community changes (Crow, 2006), by bonding with previously well-built leadership models (Brauckmann & Pashiardis, 2011). As a result of this successful leadership practices such as instructional leadership (Hallinger & Heck, 1996; Liu & Hallinger, 2018; Özdemir & Yalçın, 2019), distributed leadership (Heck & Hallinger, 2010; Liu et.al., 2018) transformative leadership (Cemaloğlu & Çoban, 2019; Leithwood & Jantzi, 2006; Sun & Leithwood, 2012), teacher collaboration (Blasé & Blasé, 2000; Çoban, & Atasoy, 2020; Goddard et al., 2015; Limon & Durnalı, 2017), teachers' professional development (Geijsel et al., 2009; Goodwin, 2021; Goddard et al., 2004), school climate (Darling-Hammond, 2017; Durnalı & Filiz, 2019) are vital for student achievement and school outcomes. On the contrary, if school principals have lack of leadership potential, they are unsuccessful to motivate others to achieve goals; make decisions under pressure; cope with complexity and uncertainty (Buchanan & Huczynski, 2017; Yenipınar, Yıldırım & Tabak, 2020).

In the recent literature, we see that school principals' leadership styles is a driving force for enhancing student learning outcomes (Bryk et al., 2010; Robinson et al., 2008) and creating a learning environment in which teachers engage in collaborative work and professional development (Blasé & Blasé, 2000; Goddard et al., 2015). Although a great amount of our knowledge considering the impact of school principals' leadership style on teaching learning processes, school climate, teachers and students derived from studies conducted by scholars (e.g. Walker & Dimmock, 2002; Ko, Walker & Hallinger, 2012; Liu et al., 2018; Ozdemir, 2019; Durnalı, 2019), we have lack of knowledge regarding how the distribution of leadership types by country is. This current study aims to give the detailed information about the distribution of leadership styles such as instructional, distributed and Bass' multi-level leaderships. Besides this, this study enables us to see the heterogeneity in the leadership practices in different countries (Veletić & Olsen, 2021). More specifically, the paper provides researchers a map to understand how the school principals' leadership styles are changing in seven countries (Finland, Japan, Korea, Singapore, Sweden, Turkey, and the USA) according to Teaching and Learning International Survey (TALIS) 2018. The findings of this study could contribute considerably to the growing knowledge about school principals' leadership styles and also give opportunity to policy makers and educators

to see the differences of leadership styles among the countries. Moreover, policy makers, who see leadership differences between the seven countries, will be able to realize what leadership styles they need to pay attention to for school outcomes and student achievement.

Conceptual Framework

The conceptual framework of this study focused on school principals' leadership styles that based on rich theoretical and empirical studies in the field of educational administration (EA). Additionally, the body of the knowledge on outcomes of principals' leadership practices make us compare the applications of different countries. The previous studies (e.g., Bossert et al., 1982; Bryk et al., 2010; Gumus & Bellibas, 2016; Hallinger & Heck, 1996; Heck & Hallinger, 2010; Liu et al., 2018; Marks & Printy, 2003; Ozdemir, 2019; Robinson et al., 2008) provide researchers detailed information about school leadership of the countries. This study will focus on school principals' instructional, distributed, transformative and transactional leadership styles in seven countries according to school principals' opinions in TALIS 2018. We will discuss cultural, and societal contexts and their influence on various leadership roles, behaviors, and practices. Then, we will provide a map that indicates how the distribution of school leadership in seven countries is. Finally, we will debate what differences among the leadership styles of seven countries. The followings are the research questions that the study aimed to answer:

i. How is the distribution of distributed leadership styles in seven countries (Finland, Japan, Korea, Singapore, Sweden, Turkey, and USA) according to school principals' opinions in TALIS 2018?
ii. How is the distribution of instructional leadership styles in seven countries (Finland, Japan, Korea, Singapore, Sweden, Turkey, and USA) according to school principals' opinions in TALIS 2018?
iii. How is the distribution of transformative leadership styles in seven countries (Finland, Japan, Korea, Singapore, Sweden, Turkey, and USA) according to school principals' opinions in TALIS 2018?
iv. How is the distribution of transactional leadership styles in seven countries (Finland, Japan, Korea, Singapore, Sweden, Turkey, and USA) according to school principals' opinions in TALIS 2018?

Distributed Leadership

Gronn (2002) states that the first references to distributed leadership were based on the social psychology literature in the 1950s and it came to the fore especially in the 1990s and started to attract intense attention. The starting point of distributed leadership envisages the 'multi-leadership' approach as it relies on assumptions as individuals who trust the stakeholders of each other, respect each other's decision, experience and expertise, and are prone to interactive production and open to new ideas and implementation differences. Distributed leadership is a contemporary leadership understanding based on internalized responsibility consciousness with voluntary cooperation and interaction to the extent of competencies of all stakeholders in order to achieve a common organizational goal. Studies on distributed leadership (Freeman et al., 2014; Gronn, 2002; Liu et al., 2018; Spillane, 2005) have defined it as an interactive process where teachers and school

principals shared authority. In their definition, the common and vital keywords are managing simultaneously and being interactive in the process. Distributed leadership' model bases on Activity Theory (Bolden, 2007; Engestrom, 1999, 2000; Watson, 2005). In this approach, shared leadership is perceived as an umbrella concept that includes empowerment, sharing, cooperation and democratic management. According to Flessa (2009), leadership is an organizational phenomenon, not an individual; because organizational change and innovation in distributed leadership is a group activity based on organizational relationships rather than individual activities. Gronn (2000) also states that the problems encountered in the classical leadership dualistic approach (either the leader or the viewers come to the fore) can be overcome with this activity theory and states that the activity theory is 'a bridge that connects the gap between the opposite poles resulting from the dualistic approach in leadership'. The activity theory approaches the process as a whole and emphasizes the view that all factors must operate as a whole in mutual interaction. Elmore (2000) believes that leadership should be spread to all school stakeholders rather than merely being placed in one position and emphasizes the importance of promoted leadership practice to be realized with their joint contribution.

In school practices, distributed leadership makes school principals to establish an environment that is based on collaboration, cooperation, empowerment, and sharing authority. In this respect, this leadership style is the base for teacher leadership because it ensures teachers a wide variety of authority to use initiative in their classroom practices and out of classroom (Bellibaş & Liu, 2018; Heck & Hallinger, 2009). This study inspired by TALIS 2018 experts' approach and the items indicated that school principals provide teachers, parents and students well opportunity to actively participate in decision process at school (OECD, 2018). In other words, school principals manage the school with shared mind of teachers, students and parents (Gumus et al., 2013).

Instructional Leadership

The literature expressed that instructional leadership came from school effectiveness and mainly focused on school principals' efforts to improve teachers' instructional practices and accomplish higher student achievement (Hallinger, 2003). Previous studies claimed that effective instructional leaders should monitor student learning outcomes by managing the curriculum, creating a supportive learning environment and observing teachers' classroom practices (Bellibaş, 2015; Hallinger, 2014; Ozdemir, 2019; Yalçın & Ereş, 2021). Shortly, school principals indirectly impact the learning outcomes via supporting teachers and creating a fruitful learning environment. Additionally, school principals directly impact on student achievement by observing the classroom practices and quality of teaching (Supovitz et al., 2010). Hallinger and Murphy (1985) designed a comprehensive model of instructional leadership and they indicated three dimensions that are consisted of defining school's mission, managing the instructional program and promoting a positive and supportive learning climate in their model. They also introduced ten sub-dimensions under these three dimensions. Framing and communicating the school goals were the two sub-dimensions of defining school's mission. The first two tasks could help school principal collaboratively set up a clear school vision in the school and ensure the quality of teaching processes in the light of this school vision. Coordinating the curriculum, supervising and

evaluating instruction and monitoring student achievement were the three sub-dimensions of managing the instructional program. The second three sub-dimensions make school principals promote classroom outcomes effectively. The third dimension composed of five leadership tasks that are protecting instructional time, promoting professional development, maintaining high visibility, providing incentives for teachers and for learning. The last five sub-dimensions provide school principals to establish a school climate that promotes teachers' professional development and quality of classroom outputs. Moreover, this supportive and solidarity learning environment enable teachers to take into consideration individual and collective responsibility for quality of teaching. Additionally, Leithwood et. al. (2020) claimed that school principals influenced students' achievement via the four paths model- rational, emotional, organizational, and family paths. Each of these paths encourages students' academic achievement, teachers' collaborative professional development and enhance learning atmosphere in a positive way.

As Gronn (1986, 1999, 2003) has discussed, the term of instructional leadership give responsibility to school principals to create a collegiality, collaborative culture, to promote teachers' professional development and improve teaching and learning in the classrooms. In the current study, the concept of instructional leadership based on TALIS 2018 report. The report highlights principals' endeavors to support cooperation among teachers for new teaching practices, to ensure them to take responsibility for improving new teaching skills and students' learning outcomes, to observe classrooms for quality of education (OECD, 2018). Shortly, we focused on the roles of instructional leaders about developing teachers' professional development, ensuring classroom outputs and observing classroom practices.

Transactional and Transformative Leadership

Transformational leadership literature expressed that the term was firstly introduced in Dawston's *Rebel Leadership* in 1973. Then, Burns (1978) systematized the concept of transformational leadership in his classic work, *Leadership*, which he wrote on political leadership. He defined two types of leadership models: transactional leadership and transformational leadership. Bass took this distinction one step further and conducted experimental research on it (Burnes, 2004). According to him, the leader is the person who creates a high level of morale, motivation and performance on the team. Transformational leaders are leaders who can change their environment. In transformational leadership approach, the leader and his/her followers should have a strong relationship and it is essential to achieve the vision formed around this strong bond and to transform the organization. These leaders do not react to environmental situations, but also create a new environment (Bass & Avolio, 1993). On the contrary, transactional leadership is a leadership style based on maintaining what is present in the organization, managing the organization with rewards and suggestions and motivating employees in this way (Bass, 1995; Bass et al., 2003; Bass & Steidlmeier, 1999). According to Cemaloğlu and Çoban (2019), transformational leadership is the ability to empower, strengthen, and distribute the power of the viewers to action in order to realize its vision. The elements of transformational leadership are; vision, communication, determination, commitment, concentration, empowerment, empowerment, and

organizational learning opportunities (Atasoy, 2020). The transformational leader recognizes the audience's tendency, need, and desire and uses this need to motivate the audience. Beyond daily organizational processes, it collects behavior and features such as idealized influence, inspired motivation, intellectual stimulation and individual support (Bass et al., 2003). The dimensions of transformational leadership are briefly described below:

Charisma or Idealized Impact: Leaders are respected and trusted. The leader is self-confident, determined, consistent and willing to take risks. Charisma is attributed to the leader by the followers who watch. The idealized effect, unlike charisma, includes the behavior of establishing a vision and setting a mission in interacting with the followers of the leader.

Inspired Motivation: The leader shows determination and determination to realize this vision by creating a vision that activates and accelerates the group for the future. In other words, inspired motivation; It is the process of creating a vision, conveying the vision, concentrating the efforts of the audience by using symbols and modeling and creating suitable behaviors (Cemaloğlu, 2013).

Intellectual Stimulation: It is the process of influencing the audience to enable them to become more aware of the problems and to see the problems with a different and new perspective. In order to cope with difficulties and obstacles, the leader conducts inquiries of the subordinate's usual patterns of behavior and thinking by enabling them to create new perspectives on pre-existing problems. Thus, subordinates can question acceptance and traditional solutions that have existed from time to time (Karip, 1998). Transformational leaders encourage their subordinates' creativity in the intellectual stimulation management style, enabling them to prefer innovation and change rather than traditional approaches.

Individual Support: It is the process of providing support and encouragement to the audience by developing their knowledge, skills and experiences. Transformational leaders with an individual support management style basically focus on the personal needs of team members. These kinds of leaders are leaders who have established empirical relationships with their subordinates and have empathy skills that attach importance to their personal development (Bass & Avolio, 1993).

Transformational leaders are leaders who can reflect the transformation they have created in their minds to real life. They are leaders who can change and transform not only their environment and organization but also their followers' minds and perspectives. While doing this transformation, they use the idealized effect, suggestive motivation, intellectual stimulation and individual support, which are the elements of transformational leadership (Bass et al., 2003). Otherwise, leaders indicated unwillingness to change, no desire to manage complexity and uncertainty, and insufficient in decision-making processes (Yenipınar, Yıldırım & Tabak, 2020).

In this paper, the definition of these two leaderships relies on TALIS 2018 report. According to the report, school principals who behave as transactional leaders give penalties or rewards based on teachers' performance, increase or decrease teachers' teaching load and check for mistakes and errors in school managing processes. Additionally, to the report, school principals who behave as transformative leaders share common set of beliefs about teaching and learning, open to accept new ideas, create an atmosphere to develop new ideas and for school improvement, they cooperate with local community (OECD, 2018).

METHOD

The current survey model study focused the clustering of the countries according to the perceived leadership styles of school principals. For this purpose, we used cluster analysis technique which is an exploratory method for classifying observations or cases into groups without any prior theory about the number of groups (Papi & Teimouri, 2014). Cluster analysis attempts to identify clusters of points in space. In this method, the main focus is how to divide a cluster of points into two in the most acceptable manner, and after that, how the repetition of this process proceeds until the individual points are reached (Edwards & Cavalli-Sforza, 1965). The aim of clustering is found out the observations on the basis of x1, . . . xn, whether fall into analysis relatively distinct groups. Cluster analysis is a useful method for segmentation and identification of (dis)similar groups of objects, cases or observations as possible to each other, but as distinct as possible from objects in other clusters (Sarstedt & Mooi, 2019).

Sampling

The TALIS 2018 data which was conducted and collected in 2018 was downloaded from the Organization for Economic Cooperation and Development (OECD) official web page (OECD, 2018). In the TALIS 2018 survey, canonical sampling design was used during the sampling process. Sampling design of each participating country was drawn at two stages (selection of schools and teachers) by the cooperation with central consortium and national team accordance with the OECD terms of reference. In this study, to prevent possible bias in cluster analysis, only participants who completed all the 16 items were selected. Participants consisted of 1166 school principals in lower secondary schools (ISCED 2) in seven countries (Finland [147], Japan [195], Korea ([145], Singapore [165], Sweden [161], Turkey [192] and United Stated [159]) who responded to the TALIS Principal. % 67.8 of them are male and most of them are at the age between 40-59. Although there is no generally accepted guideline concerning minimum sample sizes and the number of clustering variables selected to ensure valid results, it can be claimed the simple size of the study according to the recent rules-of-thumb based on the recommendations of the literature (Sarstedt & Mooi, 2019). In this context, Qiu and Joe (2009) recommend using a minimum sample size of 10 times, and Dolnicar et al. (2014) suggest a sample size of 70 times the number of clustering variables. As a result, we can express that our sampling is in an acceptable range according to the recent rules-of-thumb.

Data collecting tools

In this study, we only used TALIS 2018 school questionnaire. OECD TALIS and national study teams collected data online, translated them into their languages. In this study, we selected the variables according to the TALIS 2018 framework and relevant literature. In this context, distributed leadership is composed of 3 items; instructional leadership consisted of 3 items, transactional leadership included 5 items and transformational leadership covered 5 items. In Table 1, we indicated the leadership styles and their items.

Table 1. Leadership Styles and their Items

Leadership Stills	Item wording
Distributed Leadership	(DLA) Staff with opportunities to actively participate in school decisions
	(DLB) Parents or guardians with opportunities to actively participate in school decisions
	(DLC) Students with opportunities to actively participate in school decisions
Instructional leadership	(INSA) I took actions to support cooperation among teachers to develop new teaching practices
	(INSB) I took actions to ensure that teachers take responsibility for improving their teaching skills
	(INSC) I took actions to ensure that teachers feel responsible for students' learning outcomes
Transactional Leadership	(TSA) I make the important decisions on my own
	(TSB) I reviewed school administrative procedures and reports
	(TSC) I resolved problems with the lesson timetable in this school
	(TSD) A change in a teacher's work responsibilities
	(TSE) Material sanctions i.e. reduced annual increases in pay are imposed on the teacher
Transformational Leadership	(TFA) School staff share common set of beliefs about teaching and learning
	(TFB) This school quickly responds to changes when needed
	(TFC) This school readily accepts new ideas
	(TFD) This school makes assistance available for development of new ideas
	(TFE) The school co-operates with the local community

Analysis of data

Data were analyzed using SPSS for Windows 23 program. Before the analysis, researchers are checked data set. In the data cleaning phase, missing (if necessary), erroneous, and inconsistent entries, duplicate detection are removed from the data and we conducted the study on 1166 school principals and we used 17 items to see the distribution of the leadership styles in seven countries. Concerning missing values, the literature claimed that many data mining methods such as cluster analysis are inherently performed to work robustly with missing values. The analysis processes of this study are shown in Figure 1.

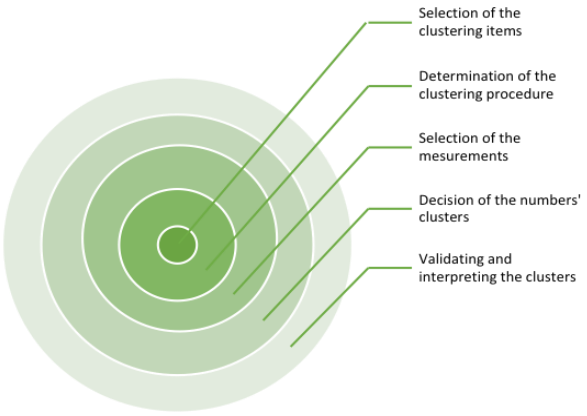


Figure 1. Steps of Clustering Process.

In the phase of selection of data from the international data set, we reduced the size of the data through related leadership items and country selection. To transform the data into a uniform representation for processing, we eliminated irrelevant features and we provided a highly problem-specific approaches and we improved the quality of the data mining process. At the beginning of the clustering process, we selected and grouped 16 appropriate psychometric variables in an application-specific way for clustering identifying four leadership styles of school principals based on the relevant literature and TALIS 2018 conceptual framework. In the choice of the candidate variables, we also followed external and internal validation criteria to evaluate the quality of the clustering process. Before starting the grouping, we have taken pragmatically different routes to determine the selection variables and clusters size such as hierarchical cluster analysis methods (HCA) which are characterized by the tree-like structure and are interpreted as a top-down process, k-means partitioning methods and two-step clustering while the basic goal of these procedures is the grouping similar objects into clusters (Becker et al., 2015; Kotler & Keller, 2015; Sarstedt & Mooi , 2019).

According to the school principals' responses, firstly, it was subjected to HCA using Ward's method with Squared Euclidean distance. Selecting agglomerative clustering with Ward's linkage procedures, until all the objects have been merged into one big cluster, it was obtained four clusters according to the dendrogram and screen pilot output.

In Figure 2, the dendrogram and screen pilot outputs obtained from TALIS 2018 data set by using the Ward Linkage method, which is one of the leading items, are given. According to Figure 2, the items in the selected data set correspond to four leadership styles in the field of educational management. Moving from this point, cluster analysis of each of the leadership styles was made according to the countries to be more specific.

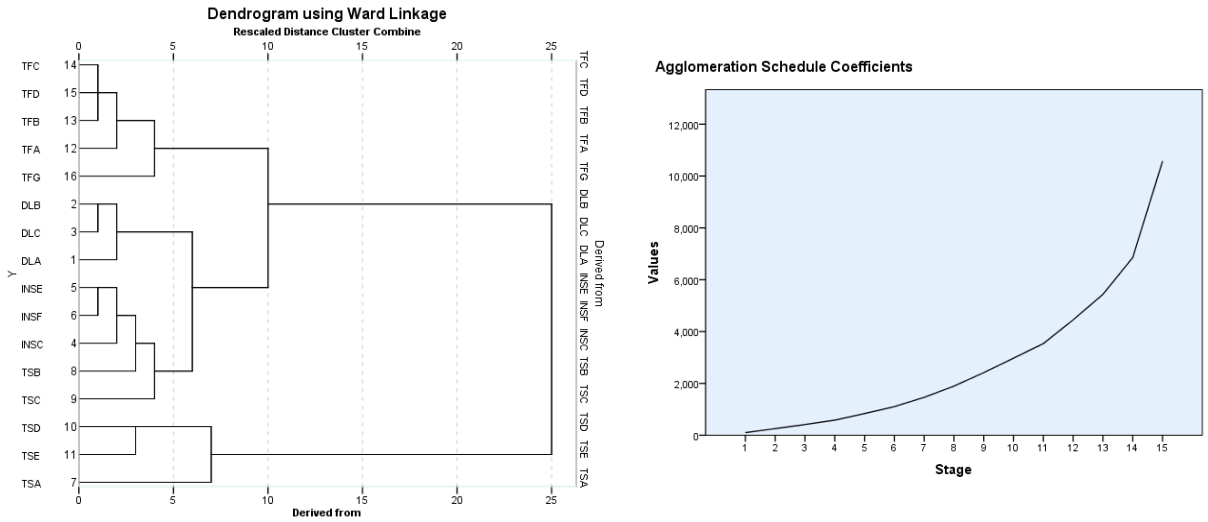


Figure 2. HCA Dendrogram and Scatter Pilot Outputs of Selected Items.

In Figure 2, two items of transactional leadership are included in instructional leadership items. However, since the conceptual framework in the literature supports the fact that these two items are related to the

transactional leadership, therefore we discussed these two leaders in the transactional leadership dimension. We have also tested the provision of four clusters obtained with HCA with the K-Means method and we decided by supporting them with the One-Way ANOVA results that the cluster distribution of the countries regarding these four leadership styles is appropriate. Additionally, we used Scheffe test to find out that there is no significant difference between DLA and DLB items of distributor leadership [clusters 3 and 4]; INSF item of instructional leadership [clusters 2 and 4]; TSA and TSE [clusters 1 and 3] and transformational leadership [clusters 2 and 4] and TFE [clusters 3 and 4].

The discriminant analysis findings show all clusters of four leadership styles are not prior probability and indicate that distributed leadership 90.2% of original grouped cases correctly classified; instructional leadership 92.6% of original grouped cases correctly classified; transactional leadership 69.4% of original grouped cases correctly classified; transformational leadership 72.6% of original grouped cases correctly classified. Table 2 indicates the discriminant analysis findings on all clusters of four leadership styles.

Table 2. Discriminant Analysis Findings

	Function	Eigenvalue	% of Variance	Canonical Correlation	Wilks' Lambda (λ)	X^2	sd	p
DL	1	15.630	96.6	.969	.039	3735.35	9	.000
	2	.538	3.3	.592	.643	506.683	4	.000
INS	1	5.560	93.2	.921	.108	2567.607	9	.000
	2	.403	6.8	.536	.711	394.062	4	.000
TS	1	1.192	64.9	.737	.262	1391.989	15	.000
	2	.427	23.3	.547	.575	575.285	8	.000
	3	.218	11.9	.423	.821	205.144	3	.000
TF	1	5.830	97.7	.924	.129	2335.643	15	.000
	2	.108	1.8	.312	.878	148.217	8	.000

Finally, in the stage of clusters' determination and interpretation processes, we used two-step cluster method, more suitable for very large data sets. We found out that the average of silhouette measure of cohesion and separation vary between 0.40 and 0.60. Each variable's importance of prediction for the construction of a specific cluster range between +1 and 0.3. This means that average silhouette values are in acceptable range. Thus, we claimed the stability of the results drawing different clustering methods until similar results or little changes.

FINDINGS

As descriptive statistics, it is presented the results of latent variables in Table 3. Means, standard deviation values and Pearson correlation of latent variables are reported in this part.

Table 3. The results of Latent Variables on Distributed Leadership

Distributed Leadership		Country						
		FIN	JPL	KOR	SING	SWED	TUR	USA
		f	*f*	*f*	*f*	*f*	*f*	*f*
Cluster 1	DLA	52*	0	0	0	0	82*	67*
	DLB	52*	0	0	0	0	82*	67*
	DLC	52*	0	0	0	0	82*	67*
Cluster 2	DLA	47*	23/27*	99*	44*	61/64*	92/95*	45/46*
	DLB	40/47*	19/27*	98/99*	34/44*	42/64*	91/95*	42/46*
	DLC	45/47*	14/27*	96/99*	41/44*	60/64*	89/95*	45/46*
Cluster 3	DLA	0	44*	39/40*	94*	83*	3**	38*
	DLB	0	36/44*	39/40*	49/94*	45/83*	3**	38*
	DLC	0	37/44*	33/40*	86/94*	75/83*	3**	38*
Cluster 4	DLA	47/48*	118/124*	2*	27/28*	9*	12*	41/43*
	DLB	43/48**	99/124**	2**	28**	9	8/12**	29/43**
	DLC	23/48**	109/124**	2**	28**	9**	8/12**	35/43**

Notes: DLA [Strongly agree + Agree* / Strongly disagree + Disagree**]: Staff with opportunities to participate in school decisions; DLB [Strongly agree + Agree* / Strongly disagree + Disagree**]: Parents have opportunities to participate in school decisions; DLC [Strongly agree + Agree* / Strongly disagree + Disagree**]: Students well opportunities to participate in school decisions.

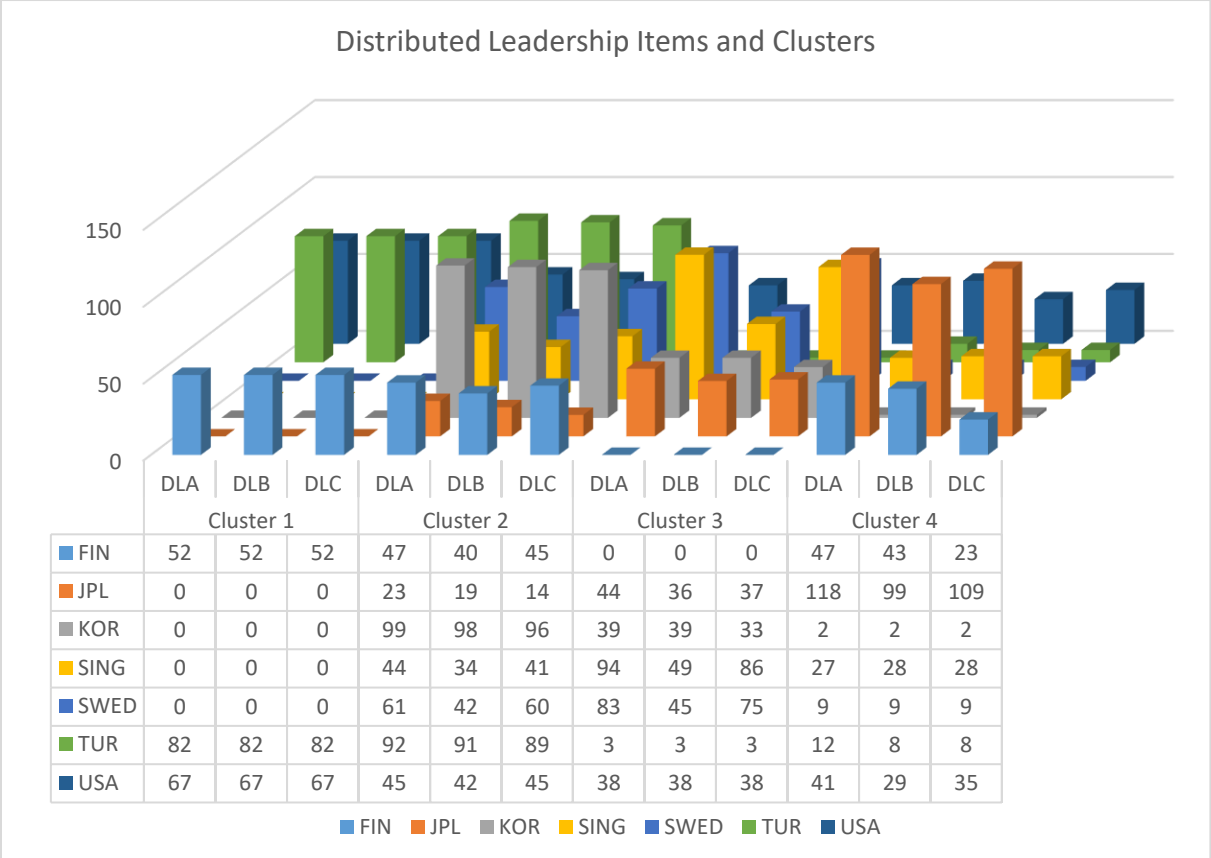


Figure 3. Distributed Leadership Items and Clusters

As is seen in Table 3 and Figure 3, biases in the sampled or completed questionnaires are not corrected for by weights and therefore we made comparisons among countries not with weights but with real values. The principals are grouped into clusters on the basis of their responses. Interestingly, we found out the distribution of distributed leadership in Cluster 1 and it consisted mostly of Turkish, American and Finnish principals, respectively. In other words, we implied that Turkish, American and Finnish school principals have similar aspects in this Cluster 1. In Clusters 2, Turkish, Korean, American and Swedish school principals have similar characteristics. Especially, Korean and Turkish school principals are come forward. In Cluster 3, we have the distribution of Swedish and Singaporean school principals is similar. Cluster 4 shows that the largest portion is belonging to Japanese principals.

Table 4. The results of Latent Variables on Instructional Leadership

Instructural Leadership		Country						
		FIN	JPL	KOR	SING	SWED	TUR	USA
		f	*f*	*f*	*f*	*f*	*f*	*f*
C1	INSA	28*	26*	29*	46*	30*	76*	55*
	INSB	28*	26*	29*	46*	30*	76*	55*
	INSC	28*	26*	29*	46*	30*	76*	55*
C2	INSA	10*	4*	24/26*	31/40*	19/23*	37/38*	22/25*
	INSB	9/10*	4*	26*	40*	23*	38*	24/25*
	INSC	10*	4*	26*	40*	22/23*	38*	25*
C3	INSA	8/15**	24/25**	33/34**	49/52**	34/46**	32/42**	27/37**
	INSB	9/15**	17/25*	24/34*	33/52*	29/46**	26/42*	25/37*
	INSC	13/15*	25*	32/34*	51/52*	43/46*	41/42*	37*
C4	INSA	54/94*	110/138**	45/56**	23/29**	42/58**	27/36**	24/42**
	INSB	62/94**	94/138**	47/56**	22/29**	48/58**	28/36**	35/42**
	INSC	94**	138**	56**	29**	58**	36**	42**

Notes: INSA [Never or rarely + Sometimes** / Very often + Often*]: Supporting co-operation among teachers to develop new teaching practices; INSB [Never or rarely + Sometimes** / Very often + Often*]: Ensuring teachers take responsibility for improving their teachers' skills; INSC [Never or rarely + Sometimes** / Very often + Often*]: Ensuring teachers feel responsible for their students learning outcomes.

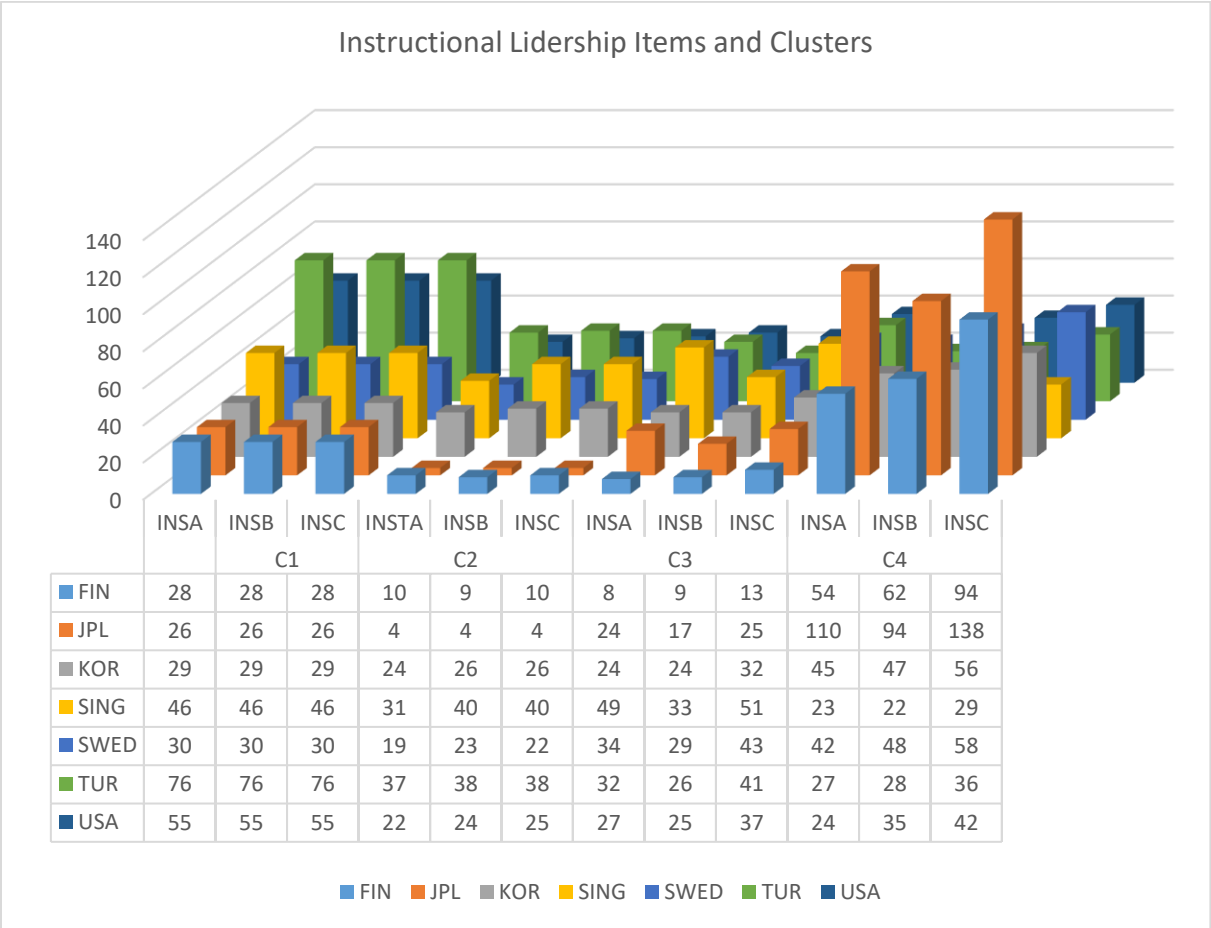


Figure 4. Instructional Leadership Items and Clusters

As is seen in Table 4 and Figure 4, the principals are grouped into clusters on the basis of their responses. Interestingly, we found out the distribution of instructional leadership in Cluster 1 and it consists mostly of Turkish, American school principals respectively. In other words, we implied that Turkish and American school principals have similar aspects in this Cluster 2. In Clusters 2, Turkish, Korean, American and Singaporean school principals have similar characteristics. Especially, Korean and Turkish school principals are come forward. In Cluster 3, the distribution of Singaporean, Swedish and Turkish school principals is similar. Cluster 4 shows that the largest portion is belonging to Japanese principals.

Table 5. The results of Latent Variables on Transactional Leadership

Transactional Leadership		Country						
		FIN	JPL	KOR	SING	SWED	TUR	USA
		f	*f*	*f*	*f*	*f*	*f*	*f*
C1	TSA	23/33**	0	73/82**	34/43**	6**	102/115**	40/47**
	TSB	33*	0	82*	43*	6*	114/115*	46/47*
	TSC	33*	0	79/82*	32/43*	6*	113/115*	44/47*
	TSD	28/33**	0	51/82**	35/43**	5/6**	87/115**	39/47**
	TSE	33**	0	75/82**	42/43**	6**	108/115**	41/47**
C2	TSA	0	0	9/11**	43/56**	105/121**	4/6**	8/10**

	TSB	0	0	10/11*	46/56*	81/121**	4/6**	7/10**
	TSC	0	0	7/11**	35/56**	79/121**	3/6	6/10**
	TSD	0	0	10/11**	42/56**	92/121**	4/6**	9/10**
	TSE	0	0	9/11**	47/56**	99/121**	4/6**	9/10**
	TSA	28/52*	9/11**	44/46**	51/64**	13/20**	56/61**	78/10**
	TSB	49/52**	9/11**	32/46*	47/64*	14/20**	48/61**	48/88**
C3	TSC	36/52*	10/11**	41/46**	63/64**	18/20**	33/61*	78/88**
	TSD	49/52**	9/11**	42/46**	60/64**	15/20**	55/61**	84/88**
	TSE	52**	11**	46**	64**	20**	61**	88**
	TSA	0	164/166*	1*	0	0	3*	4*
	TSB	0	150/166**	1**	0	0	3**	4**
C4	TSC	0	151/166**	1**	0	0	3**	4**
	TSD	0	159/166**	1**	0	0	3**	4**
	TSE	0	164/166**	1**	0	0	3**	4**

Notes: TSA [Strongly disagree + Disagree** / Strongly agree + Agree*]: I make the important decisions on my own; TSB [Never or rarely + Sometimes** / Very often + Often*]: I reviewed school administrative procedures and reports; TSC [Never or rarely + Sometimes** / Very often + Often*]: I resolved problems with the lesson timetable in this school; TSD [Never + Sometimes** / Most of times + Always*] [Never + Sometimes** / Most of times + Always*]: A change in a teachers work responsibilities; TSE [Never + Sometimes** / Most of times + Always*]: Material sanctions i.e. reduced annual increases in pay are imposed.

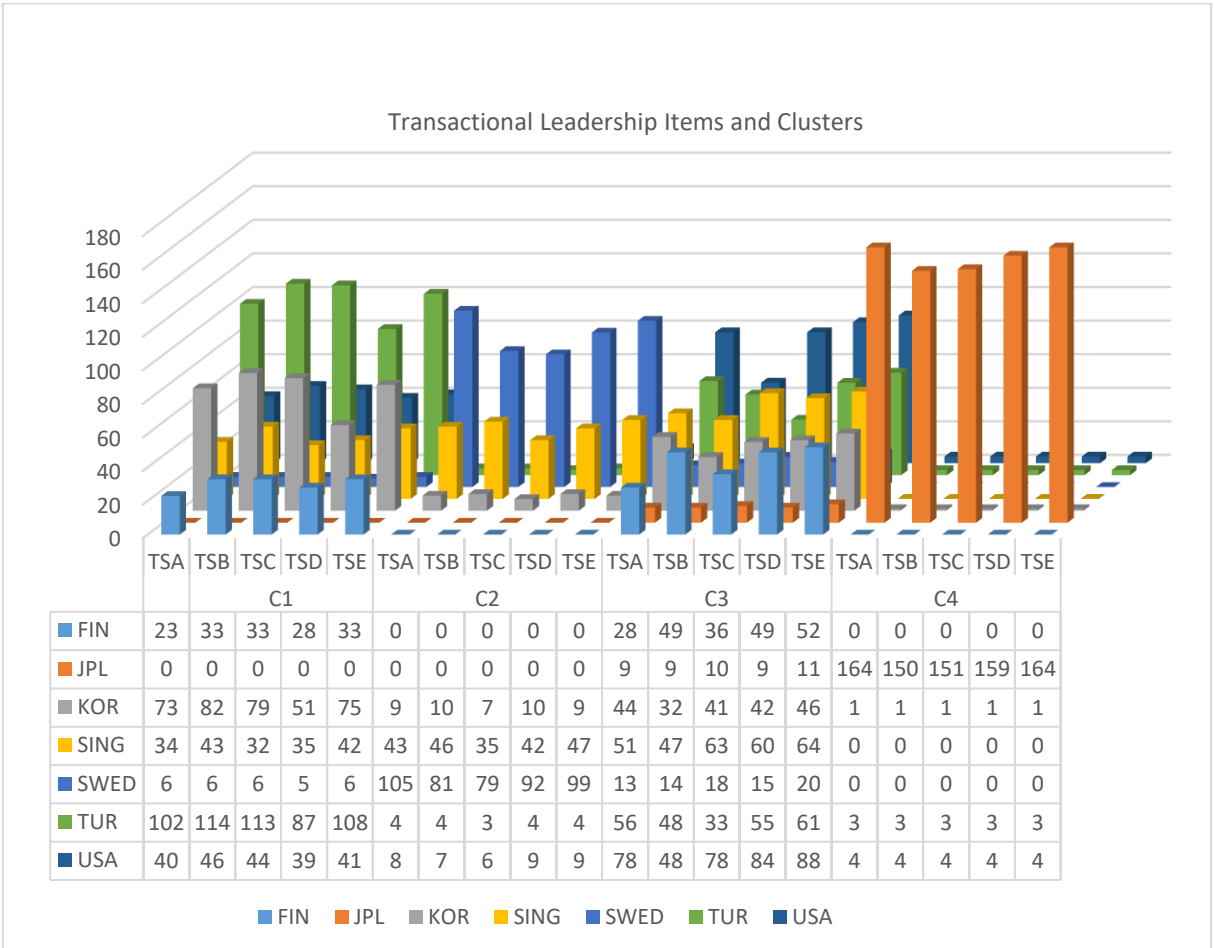


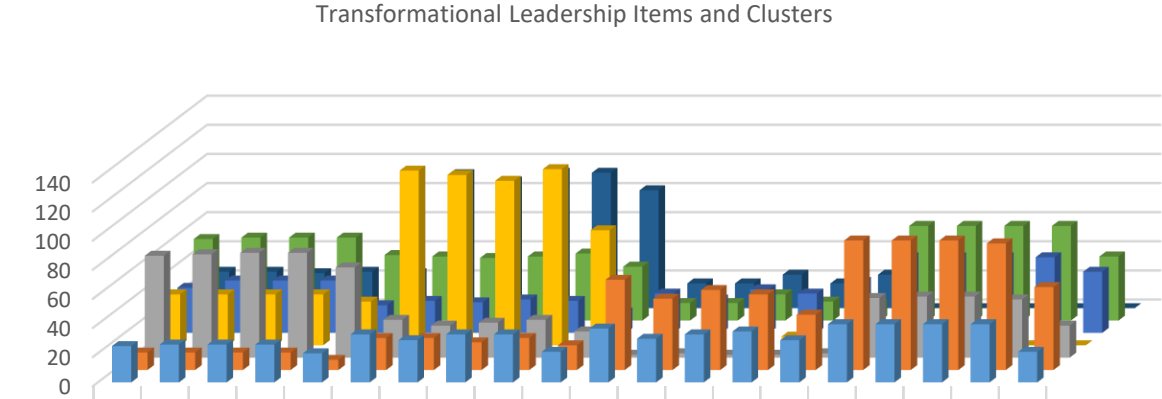
Figure 5. Transactional Leadership Items and Clusters

As is seen in Table 5 and Figure 5, the principals are grouped into clusters on the basis of their responses. Interestingly, in Cluster 1, the largest proportion is belonging to Turkish and Korean principals. In Clusters 2, Swedish and Singaporean school principals have the highest proportion, respectively. In Cluster 3, American school principals and in Cluster 4, Japanese principals have the largest portion.

Table 6. The results of Latent Variables on Transformational Leadership

Transformational Leadership		Country						
		FIN	JPL	KOR	SING	SWED	TUR	USA
		f	*f*	*f*	*f*	*f*	*f*	*f*
C1	TFA	25/26*	12*	70/72*	35*	31/36*	56/57*	25*
	TFB	26*	12*	71/72*	35*	36*	57*	25*
	TFC	26*	12*	72*	35*	36*	57*	24/25*
	TFD	26*	12*	72*	35*	36*	57*	25*
	TFE	20/26*	7/12*	62/72*	30/35*	19/36**	45/57*	24/25*
C2	TFA	33*	22*	26*	120/121*	22/23*	44/46*	92/94*
	TFB	29/33*	22*	22/26*	117/121*	21/23*	43/46*	87/94*
	TFC	33*	19/22*	24/26*	113/121*	23*	44/46*	93/94*
	TFD	33*	22*	26*	121*	22/23*	46*	93/94*
	TFE	21/33*	17/22*	18/26*	79/121*	14/23**	37/46*	81/94*
C3	TFA	37/48**	62/71*	2/3*	4/8	27/43**	12/10**	17/33**
	TFB	30/48*	49/71*	3**	5/8*	23/43*	12/10*	17/33*
	TFC	33/48*	55/71**	2/3**	6/8**	30/43*	18/22**	23/33**
	TFD	35/48*	52/71**	2/3*	6/8*	27/43*	13/22*	17/33*
	TFE	29/48**	38/71*	3**	5/8**	35/43**	11/22	23/33*
C4	TFA	40*	89*	41/42*	0	52*	65*	0
	TFB	40*	89*	42*	0	52*	65*	0
	TFC	40*	89*	42*	0	52*	65*	0
	TFD	40*	87/89*	40/42*	0	52*	65*	0
	TFE	21/40*	57/89*	22/42*	0	42/52**	44/65*	0

Notes: TFA [Strongly agree + Agree / *Strongly disagree + Disagree**]: School staff share common set of beliefs about teaching and learning; TFB [Strongly agree + Agree / *Strongly disagree + Disagree**]: School staff share common set of beliefs about teaching and learning; TFC [Strongly agree + Agree / *Strongly disagree + Disagree**]: This school readily accepts new ideas; TFD [Strongly agree + Agree / *Strongly disagree + Disagree**]: This school makes assistance available for development of new ideas; TFE [Quite a bit + A lot* / Not at all + To some extent**] : The school co-operates with the local community.



	TFA	TFB	TFC	TFD	TFE	TFA	TFB	TFC	TFD	TFE	TFA	TFB	TFC	TFD	TFE	TFA	TFB	TFC	TFD	TFE
	C1					C2					C3					C4				
FIN	25	26	26	26	20	33	29	33	33	21	37	30	33	35	29	40	40	40	40	21
JPL	12	12	12	12	7	22	22	19	22	17	62	49	55	52	38	89	89	89	87	57
KOR	70	71	72	72	62	26	22	24	26	18	2	3	2	2	3	41	42	42	40	22
SING	35	35	35	35	30	120	117	113	121	79	4	5	6	6	5	0	0	0	0	0
SWED	31	36	36	36	19	22	21	23	22	14	27	23	30	27	35	52	52	52	52	42
TUR	56	57	57	57	45	44	43	44	46	37	12	12	18	13	11	65	65	65	65	44
USA	25	25	24	25	24	92	87	93	93	81	17	17	23	17	23	0	0	0	0	0

Figure 6. Transformational Leadership Items and Clusters

As is seen in Table 6 and Figure 6, the principals are grouped into clusters on the basis of their responses. Interestingly, in Cluster 1, the largest proportion is belonging to Turkish and Korean principals, respectively. In Clusters 2, Singaporean school principals have the highest proportion. In Cluster 3, Japanese principals have the largest portion and in Cluster 4, Japanese and Turkish principals have the largest portion.

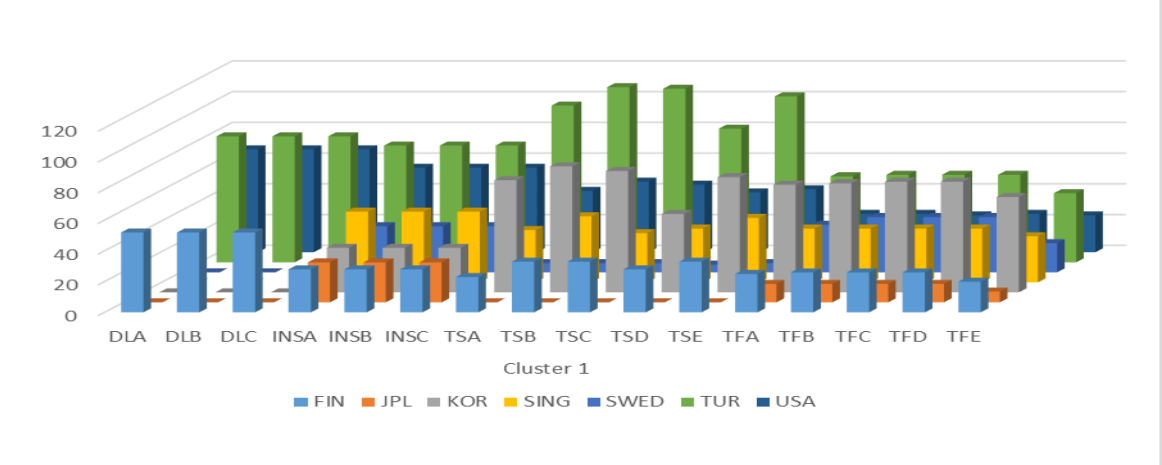


Figure 7. Leadership Items in Cluster 1

We have a holistic approach about the distribution of the leadership styles in seven countries in Cluster 1. Turkish and American school principals mainly have similar aspects to exhibit distributed leadership,

instructional leadership. Additionally, Korean and Turkish school principals exhibit transformational and transactional leadership behaviors in a similar way.

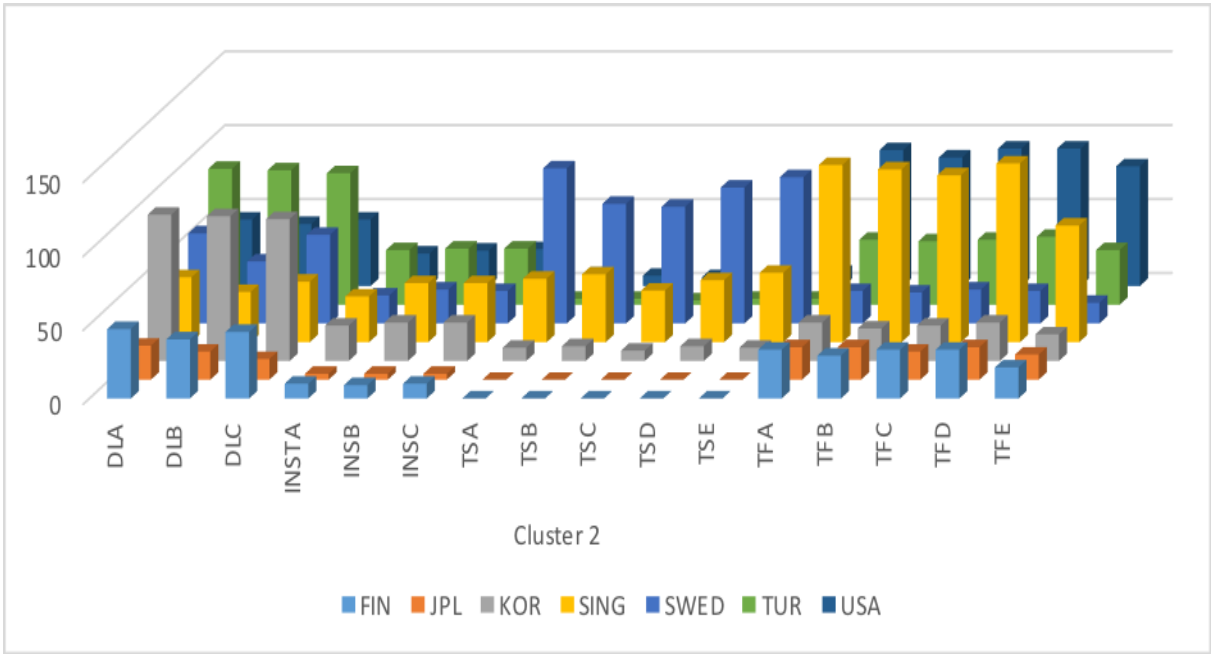


Figure 8. Leadership Items in Cluster 2

In Cluster 2, Turkish and Korean school principals have similar approach on distributed leadership, but exhibiting instructional leadership behaviors, Singaporean and Turkish school principals come forward. The other school principals are Finnish, Korean and American school principals follow them. As we examined transactional leadership attitudes of school principals, we can see that Swedish and Korean school principals have similar opinions. In transformational leadership, Singaporean and American school principals stand out.

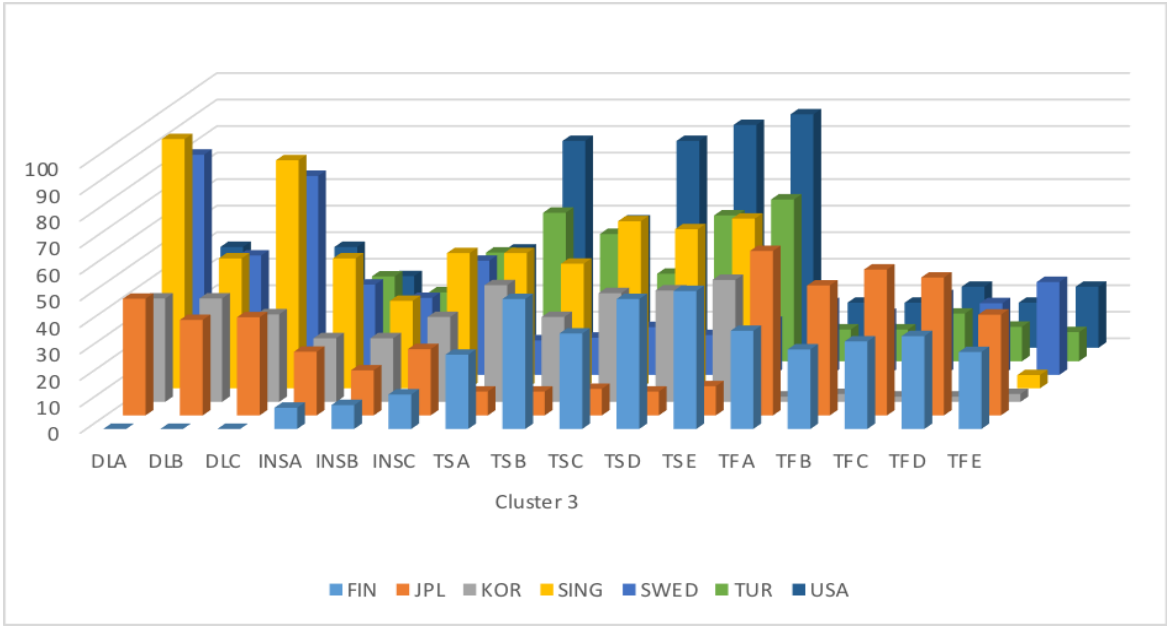


Figure 9. Leadership Items in Cluster 3

In Cluster 3, Swedish and Singaporean school principals show distributed leadership behaviors at the similar range. Exhibiting instructional leadership behaviors is very close among Singaporean, Swedish, Finnish, Turkish and American school principals. In transactional leadership behaviors, American, Turkish, Singaporean, Finnish and Korean school principals have similar characteristics. Showing transformational leadership behaviors is at the similar rate among Japanese, Swedish, Finnish, American school principals.

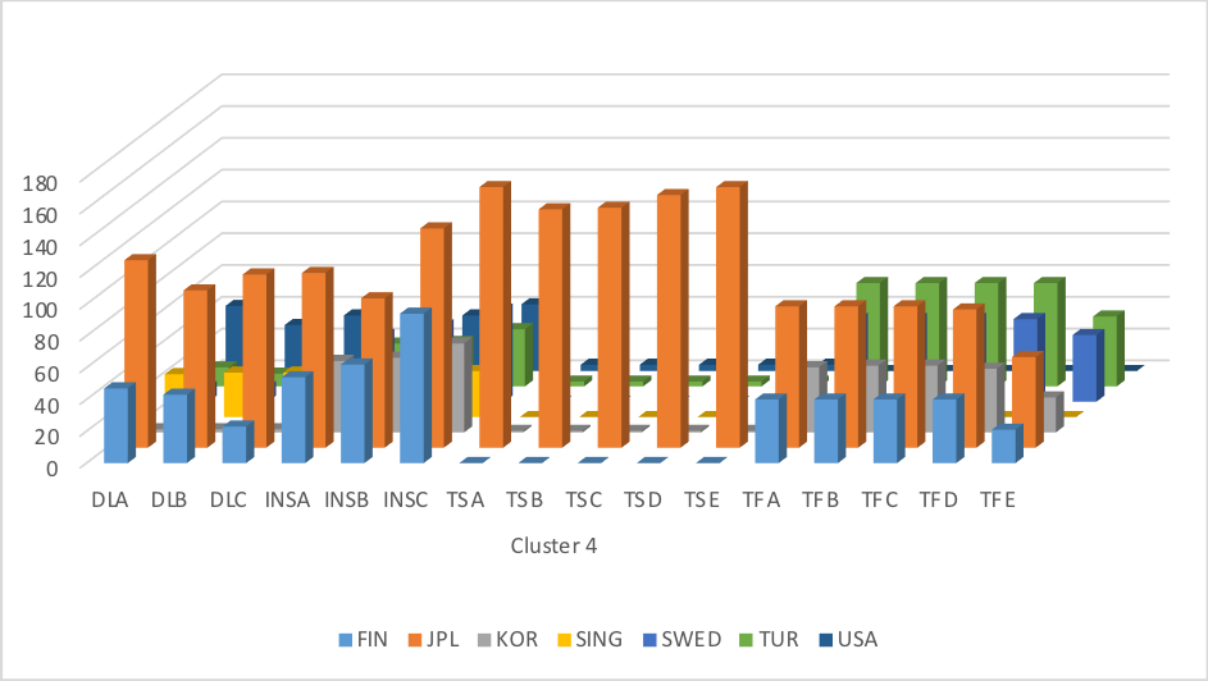


Figure 10. Leadership Items in Cluster 4

In Cluster 4, Japanese school principals come forward in all leadership styles. In transformational leadership behaviors, Swedish school principals follow them. In this cluster, school principals' disagreement opinions are appeared except for transformational leadership styles. In other clusters, school principals mainly give their opinions as "agreement" and "strongly agreement". Cluster findings from a holistic perspective according to countries and leadership styles are included in Table 7.

Table 7. Cluster Findings from a Holistic Perspective

Leadership Stills	CLUSTER 1	CLUSTER 2	CLUSTER 3	CLUSTER 4
DL	TR	TR	SING	JPL
	USA	KOR	SWED	
	FIN	SWED / USA		
INS	TR	TR	SING	JPL
	USA	USA	USA / FIN / TR	
TS	TR	SWED	**USA****	JPL
	KOR		SING / FIN	
TF	TR	USA	**JPL****	JPL
	KOR	SING	USA	TR

CONCLUSION and DISCUSSION

Last three decades, the organizational behavior concerning leadership styles has focused on debates touching whether the generalizability of leadership and its constructs change across nations and specifically cultures (Avolio, Walumbwa, & Weber, 2009). Leadership embodies both universal and local cultural characteristics. Countries differ from each other in terms of political, economic and geographical features. Leadership traits become more effective considering these differences and cultural nuances. Leadership will not be successful without understanding the basic cultural backgrounds and intercultural relationships and developing a multicultural mindset (Veletić & Olsen, 2021). The aim of this study is to examine leadership approaches in different cultures comparatively and to reveal similar features.

We have a holistic approach about the distribution of the leadership styles in seven countries. According to the findings of the study, Turkish and American school principals mainly have similar aspects to exhibit distributed leadership, instructional leadership in Cluster 1. One of the reasons for exhibit similar attitudes on distributor and instructional leadership behaviors of Turkish and American principals is that academicians and policy makers in Turkish education sector generally received trainings in the United States and they tried to adapt leadership practices to Turkey (Ercan & Sığrı, 2015; Şişman & Turan, 2002). Moreover, Turkish education administrators mainly had knowledge by reading the references from the American literature in the field of leadership. Şahin (2011) also claimed that although American school principals involved in the teaching and learning processes and they are more positive in terms of teachers' professional development and sharing vision and objectives than Turkish principals, mainly both the principals in these countries need feedback to improve their instructional leadership skills. Additionally, Korean and Turkish school principals exhibit transformational and transactional leadership behaviors in a similar way. The similar behavior of Turkish and Korean school administrators in transformational and interactive leadership behaviors can be explained by the close interest of Turkish education policy makers in the Korean education system (Fındık & Kavak, 2017). In recent years, Korea has made great strides in education and has excelled in international exams such as PISA and TIMSS. Moreover, Aycan et al. (2000) indicated that Turkish and Korean organizational and social life mainly based on paternalism. As paternalism, organizational structure of these two countries based on hierarchical organization and centralization. This situation emerged that though difference in individualistic character, both Turkey and Korea are considered as low individualism, high collectivistic countries (Çakar & Haeeun, 2015).

As compared to Cluster 1, in Cluster 2, mainly we see that in transformational leadership, Singaporean and American school principals stand out. Singaporean school principals exhibit transformational leadership approach in the phases of school change process (Ng et al., 2015a, b). In the past years, they focus on vision development and setting schools goals because of the influence of the globalization. Additionally, they try to transform technological capacity of their students and teachers for the sake of global changes in the world (OECD, 2011). As Singaporean school principals, American ones show great effort to build technological

capacity of their students. The USA have a key role in globalization and it influence Singapore that is a small country easily (Gehrke & Claes, 2017). Dimmock (2011) stated that Singaporean educational system has been influenced from Anglo-American perspectives for more than half a century. Therefore, their educational settings and transformational efforts in education policy were mainly transformed by western culture. In Cluster 2, Turkish school principals are appeared in the front like in Cluster 1. That is the reason why it is, Turkey is a bridge country in terms of historical and cultural perspectives between Eastern and Western cultures (Dündar, 2019). In a globalization of the world Turkish school principals are influenced both Eastern and Western cultures.

Cluster 3 indicates that Swedish and Singaporean school principals exhibit distributed leadership behaviors at the similar range. Additionally, in transactional leadership a vast majority of American school principals marked "strongly disagree" and "disagree". Singaporean school principals considered relationship building in their schools and they pay attention for staff and students. In other words, effective principals usually have a good balance between long-term vision and pragmatism and managing their schools with a sharing authority initiation of structure and consideration. This is not surprising as in Sweden, school principals take decisions related to teacher by debating with teachers and share their authorities with teachers voluntarily (Nordhaug (2014). In recent years, Swedish school systems based on accountability and effectiveness (Ärlestig & Johansson, 2011; Hansen et al., 2008; Moos et al., 2004). Hence, Swedish school principals create a collaborative atmosphere where they manage their schools with other school actors (Møller, 2011). In America, where the competitive environment is the most intense, school administrators have to change and transform their organizations and employees. Therefore, American school principals should exhibit transformational leadership (Jung, 2001).

In Cluster 4, Japanese school principals come forward in all leadership styles because Japanese management culture is unique and different from other countries. Deming express that Japan is the country where the approach of Total Quality Management (TQM) is applied in management perfectly. Hence, Japanese school principals are appeared in the front with their unique management styles (Tikici et al., 2006). Recent studies indicated that school principals in Japan differ from the school leaders in western countries in terms of stronger team approach to leadership characteristic. As school leadership in Japan emerged from Japanese culture values, team honor, employing a team approach to leadership (Chen, Cheng, & Sato, 2017; Misumi, & Peterson, 1985). However, Fukushige and Spicer's study (2007) displayed that Japanese cultural values gradually observed such as from male chauvinism to gender equality, from collectivism to individualism, from seniority to meritocracy which influenced Japanese leadership styles.

Veletić and Olsen (2021) claimed that different leadership practices did not reflect countries with their geographical, linguistic, or political proximity but the results of their study gave the evidence about leadership practices in the view of contextual, societal, and cultural values. Our study found out that the countries such as Turkey, Singapore and the US have heterogeneity leadership practices although countries like Japan and

Sweden and Finland have homogeneity leadership practices. That is the reason why these countries have different types of leadership practices. In this research, it has been revealed that although Anglo-American leadership approaches dominate the education systems of many countries, Japanese leadership culture differs significantly from western culture in terms of structure and behavior. It can be said that social and cultural codes related to collectivism, meritocracy, and paternalistic behavior specific to Japanese culture are still effective in this dissimilarity. While there is evidence to suggest that these characteristics of traditional Japanese culture surrounding leadership have tended to erode to some degree in favor of American leadership approaches in recent years, we have reached also evidence that they continue to partially influence both the Japanese education policies and practices and the leadership styles of school administrators. It has also been found out that Turkish school principals' leadership behaviors followed the traces of Western and Eastern cultures.

RECOMMENDATIONS

The basic limitation of this study is that all data were taken from TALIS 2018 and it is a quantitative study. We used the cluster analysis therefore we interpreted the variables according to cluster groups rather than cause and effect evaluation.

The mentioned countries should redesign their trainings on school leadership to increase the effectiveness of their schools. During these redesigning, they should be aware of their cultural codes. We recommend that policy makers put some extra criteria on leadership styles for school principals in the process of selection and assignment. School principals should have detailed information on leadership styles and try to perform these leadership styles at their schools. This study in which clusters the similarities and differences of leadership styles of related countries need to be supported by qualitative and quantitative research focusing on individual perspective and more specific social and cultural codes, rather than the average of leadership styles of countries.

ETHICAL TEXT

In this article, we followed the journal writing rules, publication principles, research, and publication ethics rules, journal ethics rules. Responsibility for any violations that may arise regarding the article belongs to the author(s). Ethical approval was not sought for the present study because data set has been taken from TALIS 2018 survey. Ethics committee permission is not applicable because this article does not contain any studies with human or animal subjects. The responsibility belongs to the authors for any violations that may arise regarding the article. This study is presented orally in the 5th International Congress of Eurasian Social Sciences [ICOEES 2021] on 21st -24th May 2021.

Author(s) Contribution Rate: Assistant Prof. Ramazan Atasoy's contribution rate to the article is 50%; the contribution rate of Assistant Prof. Ömür Çoban is 50%. All authors undertook the writing of the research from beginning to end.

REFERENCES

Ärlestig, H., & Johansson, O. (2011). Research on principals in Sweden. In O. Johansson (Ed.), *Rektor – en Forskningsöversikt 2000-2010.* Vetenskapsråd.

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future direction. *The Annual Review of Psychology*, *60*, 421–449. http://dx.doi.org/10.1146/annurev.psych.60.110707.163621

Aycan, Z., Kanungo, R., Mendonca, M., Yu, K., Deller, J., Stahl, G., & Kurshid, A. (2000). Impact of culture on human resource management practices: A 10-country comparison. *Applied psychology*, *49*(1), 192-221. https://doi.org/10.1111/1464-0597.00010

Atasoy, R. (2020). The relationship between school principals' leadership styles, school culture and organizational change. *International Journal of Progressive Education, 16*(5), 256-274. https://doi.org/10.29329/ijpe.2020.277.16

Bass, B. M. (1995). Comment: Transformational leadership: Looking at other possible antecedents and consequences. *Journal of Management Inquiry, 4*(3), 293-297. https://doi.org/10.1177/105649269543010

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership and organizational culture. *Public Administration Quarterly*, 112-121.

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207. https://doi.org/10.1037/0021-9010.88.2.207

Bass, B. M., & Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *The Leadership Quarterly, 10*(2), 181-217. https://doi.org/10.1016/S1048-9843(99)00016-8

Barber, M., & Mourshed, M. (2007). *How the world's best-performing schools systems come out on top*. McKinsey & Company.

Becker, J. M., Ringle, C. M., Sarstedt, M., & Volckner, F. (2015). How collinearity affects mixture regression results. *Marketing Letters, 26*(4), 643–659. https://doi.org/10.1007/s11002-014-9299-9

Bellibaş, M. Ş. (2015). Principals' and teachers' perceptions of efforts by principals to improve teaching and learning in Turkish middle schools. *Educational Sciences: Theory & Practice, 15*(6). https://doi.org/10.12738/estp.2016.1.0009

Bellibas, M. S., & Liu, Y. (2018). The effects of principals' perceived instructional and distributed leadership practices on their perceptions of school climate. *International Journal of Leadership in Education, 21*(2), 226-244. https://doi.org/10.1080/13603124.2016.1147608

Blasé, J., & Blasé, J. (2000). Effective instructional leadership: Teachers' perspectives on how principals promote teaching and learning in schools. *Journal of Educational Administration, 38*(2), 130-141. https://doi.org/10.1108/09578230010320082

Brauckmann, S., & Pashiardis, P. (2011). A validation study of the leadership styles of a holistic leadership theoretical framework. *International Journal of Educational Management, 25*(1), 11–32. https://doi.org/10.1108/09513541111100099

Bryk, A. S., Sebring, P. B., Allensworth, E., Luppescu, S., & Easton, J. Q. (2010). *Organizing schools for improvement: Lessons from Chicago*. University of Chicago Press.

Buchanan, D. A. & Huczynski, A. A. (2017). *Organizational behaviour* (9th ed.). Pearson.

Burnes, B. (2004). *Managing change: A strategic approach to organisational dynamics*. Pearson Education.

Bolden, B. (2007). *Teaching composing in the classroom: What teachers know*. ProQuest.

Bossert, S. T., Dwyer, D. C., Rowan, B., & Lee, G. V. (1982). The instructional management role of the principal. *Educational Administration Quarterly, 18*(3), 34-64. https://doi.org/10.1177/0013161X82018003004

Burns, J.M. (1978) *Leadership*. Harper & Row.

Cemaloğlu, N. (2013). Liderlik. In S. Özdemir (Ed.), *Eğitim yönetiminde kuram ve uygulama*, (132-183). Pegem.

Cemaloğlu, N., & Çoban, Ö. (2019). Okul yöneticilerinin liderlik stilleri ile psikolojik iyi olma durumları arasındaki ilişki. *Milli Eğitim Dergisi, 48*(221), 73-90.

Chen, Y. G., Cheng, J. N., & Sato, M. (2017). Effects of school principals' leadership behaviors: A comparison between Taiwan and Japan. *Educational Sciences: Theory and Practice, 17*(1), 145-173. https://doi.org/10.12738/estp.2017.1.0018

Crow, G. M. (2006). Complexity and the beginning principal in the United States: perspectives on socialization. *Journal of Educational Administration, 44*(4), 310–325. https://doi.org/10.1108/09578230610674930

Çakar, U., & Haeeun, K. İ. M. (2015). Paternalistic leadership in Korean small and medium scale enterprises: applicability of a Turkish Paternalism scale. *İş ve İnsan Dergisi, 2*(2), 77-90. https://doi.org/10.18394/iid.79374

Çoban, Ö., & Atasoy, R. (2020). Relationship between distributed leadership, teacher collaboration and organizational innovativeness. *International Journal of Evaluation and Research in Education, 9*(4), 903-911.

Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? *European Journal of Teacher Education, 40*(3), 291-309. https://doi.org/10.1080/02619768.2017.1315399

Dolnicar, S., Grün, B., Leisch, F., & Schmidt, F. (2014). Required sample sizes for data-driven market segmentation analyses in tourism. *Journal of Travel Research, 53*(3), 296–306. https://doi.org/10.1177/0047287513496475

Dimmock, C. (2011). Formulating a research agenda in school leadership and organisational change for school improvement in Singapore. *School Leadership & Management*, *31*(4), 321-338. https://doi.org/10.1177/0047287513496475

Durnalı, M. & Filiz, B (2019). Delaware okul iklimi ölçeği öğrenci versiyonunun Türk kültürüne uyarlanması: Geçerlik ve güvenirlik çalışması. *Kastamonu Eğitim Dergisi, 27* (6), 2651-2661. https://doi.org/10.24106/kefdergi.3513

Durnalı, M. (2019). Ortaokul öğretmenlerinin görüşlerine göre okul müdürlerinin sergilediği teknolojik liderlik davranış düzeyi. *Kuramsal Eğitimbilim Dergisi, 12*(2), 401-430. https//doi.org/10.30831/akukeg.449484

Dündar, A. M. (2019). From cultural diversity to cultural affinity: Turkey as a mediator between East and West. *Doğu Asya Araştırmaları Dergisi, 2*(1), 58-64.

Edwards, A. W., & Cavalli-Sforza, L. L. (1965). A method for cluster analysis. *Biometrics, 362-37*5.

Elmore, R. F. (2000). *Building a new structure for school leadership*. Albert Shanker Institute.

Engestrom, Y. (1999). Innovative learning in work teams: Analyzing cycles of knowledge creation in practice. In Y. Engestrom (Ed.), *Perspectives on Activity Theory*, 377-404.

Engestrom, Y. (2000). Activity theory as a framework for analyzing and redesigning work. *Ergonomics, 43*(7), 960-974. https://doi.org/10.1080/001401300409143

Ercan, Ü., & Sığrı, Ü. (2015). Kültürel değerlerin liderlik özelliklerine etkisi: Türk ve Amerikalı yöneticiler üzerine bir araştırma*. Amme İdaresi Dergisi, 48*(3), 95-126.

Fındık, L. Y., & Kavak, Y. (2017). PISA 2012 sonuçlarına göre yönetici liderliği ve okul özerkliğinin öğrenci başarısına etkisi [PISA 2012 Results: The effects of principal leadership and school autonomy on students' performance]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 32*(4), 939-959. https://doi.org/10.16986/HUJE.2016019330

Flessa, J. (2009). Educational micropolitics and distributed leadership. *Peabody Journal of Education, 84*(3), 331-349. https://doi.org/10.1080/01619560902973522

Freeman, C., O'Malley, K., & Eveleigh, F. (2014). *Australian teachers and the learning environment: An analysis of teacher response to TALIS 2013: Final Report*. Melbourne: ACER, 204.

Fukushige, A., & Spicer, D. P. (2007). Leadership preferences in Japan: An exploratory study. *Leadership & Organization Development Journal 28* (6), 508-530. https://doi.org/10.1108/01437730710780967

Geijsel, F., Sleegers, P., Stoel, R., & Krüger, M. (2009). The effect of teacher psychological, school organizational and leadership factors on teachers' professional learning in Dutch schools. *The Elementary School Journal, 109*(4), 406-427. https://doi.org/10.1086/593940

Gehrke, B., & Claes, M. (2017). Leadership and global understanding. In S. D. Joan Marques (Ed.), *Leadership today practices for personal and professional performance* (pp. 371-386). Springer International.

Goddard, R. D., LoGerfo, L., & Hoy, W. K. (2004). High school accountability: The role of perceived collective efficacy. *Educational Policy, 18*(3), 403-425. https://doi.org/10.1177/0895904804265066

Goddard, R., Goddard, Y., Sook Kim, E., & Miller, R. (2015). A theoretical and empirical analysis of the roles of instructional leadership, teacher collaboration, and collective efficacy beliefs in support of student learning. *American Journal of Education, 121*(4), 501-530. https://doi.org/10.1086/681925

Goodwin, A. L. (2021). Teaching standards, globalisation, and conceptions of teacher professionalism. *European Journal of Teacher Education, 44*(1), 5-19.

Gronn, P. (1986). Politics, power and management of schools. In E. Hoyle (Ed.), The World yearbook of education. *The Management of Schools*, (pp. 44-54).

Gronn, P. (1999). Substituting for leadership: The neglected role of the leadership couple. *The Leadership Quarterly, 10*(1), 41-62. https://doi.org/10.1016/S1048-9843(99)80008-3

Gronn, P. (2000). Distributed properties: A new architecture for leadership. *Educational Management & Administration, 28*(3), 317-338. https://doi.org/10.1177/0263211X000283006

Gronn, P. (2002). Distributed leadership as a unit of analysis. *Leadership Quarterly, 13*(4), 423–451. https://doi.org/10.1016/S1048-9843(02)00120-0

Gronn, P. (2003). *The new work of educational leaders: Changing leadership practice in an era of school reform*. Sage.

Gumus, E., & Bellibas, M. S. (2016). The effects of professional development activities on principals' perceived instructional leadership practices: multi-country data analysis using TALIS 2013. *Educational Studies, 42*(3), 287-301. https://doi.org/10.1080/03055698.2016.1172958

Gumus, S., Bulut, O., & M. S. Bellibas, M.S. (2013). The relationship between principal leadership and teacher collaboration in Turkish primary schools: A multilevel analysis. *Education Research and Perspectives, 40*(1), 1-29. https://search.informit.org/doi/10.3316/aeipt.203879

Hallinger, P. (2003). Leading educational change: Reflections on the practice of instructional and transformational leadership. *Cambridge Journal of Education, 33*(3), 329-352. https://doi.org/10.1080/0305764032000122005

Hallinger, P. (2014). Reviewing reviews of research in educational leadership: An empirical assessment. *Educational Administration Quarterly, 50*(4), 539-576. https://doi.org/10.1177/0013161X13506594

Hallinger, P., & Heck, R. H. (1996). Reassessing the principal's role in school effectiveness: A review of empirical research, 1980-1995. *Educational Administration Quarterly, 32*(1), 5-44. https://doi.org/10.1177/0013161X96032001002

Hallinger, P., & Murphy, J. (1985). Assessing the instructional management behavior of principals. *The Elementary School Journal, 86*(2), 217-247. https://doi.org/10.1086/461445

Hansen, B. Jóhannsson, Ó. H., & Lárusdóttir, S. H. (2008). Breytingar á hlutverki skólastjóra í grunnskólum: Kröfur, mótsagnir og togstreita. [Changes in the role of principals in compulsory schools in Iceland: Constraints, paradoxes and tensions]. *Uppeldi og menntun, 17*(2), 87–104.

Heck, R. H., & Hallinger, P. (2009). Assessing the contribution of distributed leadership to school improvement and growth in math achievement. *American Educational Research Journal, 46*(3), 659-689. https://doi.org/10.3102/0002831209340042

Heck, R. H., & Hallinger, P. (2010). Collaborative leadership effects on school improvement: Integrating unidirectional-and reciprocal-effects models. *The Elementary School Journal, 111*(2), 226-252. https://doi.org/10.1086/656299

Heck, R. H., & Moriyama, K. (2010). Examining relationships among elementary schools' contexts, leadership, instructional practices, and added-year outcomes: A regression discontinuity approach. *School Effectiveness and School Improvement, 21*(4), 377–408. https://doi.org/10.1080/09243453.2010.500097

Jung, D. I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal, 13*(2), 185-195. https://doi.org/10.1207/S15326934CRJ1302_6

Karip, E. (1998). Dönüşümcü liderlik. *Kuram ve Uygulamada Eğitim Yönetimi Dergisi, 4*(4), 443-465.

Ko, J., Hallinger, P., & Walker, A. (2012). Exploring school improvement in Hong Kong secondary schools. *Peabody Journal of Education, 87*(2), 216-234. https://doi.org/10.1080/0161956X.2012.664474

Kotler, P., & Keller, K. L. (2015). *Marketing management* (15th ed.). Prentice Hall.

Leithwood, K. A., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement, 17*(2), 201-227. https://doi.org/10.1080/09243450600565829

Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership & Management, 28*(1), 27–42. https://doi.org/10.1080/13632430701800060,

Leithwood, K., Sun, J., & Schumacker, R. (2020). How school leadership influences student learning: A test of "The four paths model". *Educational Administration Quarterly, 56*(4), 570-599. https://doi.org/10.1177/0013161X19878772

Limon, İ. & Durnalı, M. (2017). İşbirlikçi İklim İşbirlikçi İklim İşbirlikçi İklim Ölçeği'nin Türkçe'ye uyarlanması: Geçerlik ve güvenirlik çalışması. *Sakarya University Journal of Education, 7*(2), 282-294. https://doi.org/10.19126/suje.335818

Liu, Y., Bellibas, M. S., & Printy, S. (2018). How school context and educator characteristics predict distributed leadership: A hierarchical structural equation model with 2013 TALIS data. *Educational Management Administration & Leadership, 46*(3), 401-423. https://doi.org/10.1177/1741143216665839

Liu, S., & Hallinger, P. (2018). Principal instructional leadership, teacher self-efficacy, and teacher professional learning in China: testing a mediated-effects model. *Educational Administration Quarterly, 54*(4), 501-528. https://doi.org/10.1177/0013161X18769048

Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational Administration Quarterly, 39*(3), 370-397. https://doi.org/10.1177/0013161X03253412

Misumi, J., & Peterson, M.F. (1985). The performance-maintenance theory of leadership: Review of a Japanese research program. *Administrative Science Quarterly, 30* (2), 198-223.

Møller, J. (2011). Research on Principals in Norway. In: O. Johansson (ed.) *Rektor – en Forskningsöversikt 2000 – 2010*. Vetenskapsråd.

Moos, L., Møller, J., & Johansson, O. (2004). A Scandinavian perspective on educational leadership. *Educational Forum, 68*(3), 200–210. http://dx.doi.org/10.1080/00131720408984632

Ng, F. S. D., Nguyen, T. D., Wong, K. B. & Choy, K. W. (2015a). A review of Singapore principals' leadership qualities, styles, and roles. *Journal of Educational Administration, 53* (4), 512–533. https://doi.org/10.1108/JEA-08-2013-0085

Ng, F. S. D., Nguyen, T. D., Wong, K. B., & Choy, K. W. (2015b). Instructional leadership practices in Singapore. *School Leadership and Management, 35*(4), 388–407. https://doi.org/10.1080/13632434.2015.1010501

Nordhaug, O. A. (2014). *PISA 2012 og jakten på den effektive rektoren – En analyse av ledelseskonstrukter og deres sammenheng med elevenes resultater i Norge og Sverige.* [PISA 2012 and the quest for the effective headmaster – An analysis of leadership constructs and their relationship to student performances in Norway and Sweden]. [Unpublished Master thesis]. University of Oslo.

OECD. (2011). Singapore: Rapid improvement followed by strong performance. In OECD (Ed.), *Lessons from PISA for the United States* (pp. 159–176). OECD Publishing.

OECD. (2018). *TALIS 2018 technical report*. Retrieved from www.oecd.org/publications/ talis-2018-results-volume-i-1d0bc92a-en.htm on 12.03.2020

Ozdemir, N. (2019). Principal leadership and students' achievement: Mediated pathways of professional community and teachers' instructional practices. *KEDI Journal of Educational Policy, 16*(1).

Özdemir, N., & Yalçın, M. T. (2019). Ortaöğretim öğrencilerinin akademik başarısı ile okul ve öğrenci düzeyi değişkenler arasındaki ilişkilerin incelenmesi: İki düzeyli yol analizi. *Eğitim ve Bilim, 44*(200), 93-116. http://dx.doi.org/10.15390/EB.2019.8056

Papi, M., & Teimouri, Y. (2014). Language learner motivational types: A cluster analysis study. *Language Learning, 64*(3), 493–525. http://dx.doi.org/10.1111/lang.12065

Robinson, V. M. J., Lloyd, C., & Rowe, K. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly, 44*(5), 635-674. https://doi.org/10.1177/0013161X08321509

Qiu, W., & Joe, H. (2009). Cluster generation: random cluster generation (with specified degree of separation). *R package version, 1*(7), 75275-0122.

Sarstedt M., & Mooi E. (2019). Cluster analysis. In *A concise guide to market research*. Springer Texts in Business and Economics. Springer.

Spillane, J. P. (2005). Distributed leadership. *The Educational Forum*, 69, 143-150. https://doi.org/10.1080/00131720508984678

Supovitz, J., Sirinides, P., & May, H. (2010). How principals and peers influence teaching and learning. *Educational Administration Quarterly, 46*(1), 31-56. https://doi.org/10.1177/1094670509353043

Sun, J., & Leithwood, K. A. (2012). Transformational school leadership effects on student achievement. *Leadership and Policy in Schools, 11*(4), 418-451. https://doi.org/10.1080/15700763.2012.681001

Şahin, S. (2011). Instructional leadership in Turkey and the United States: Teachers' perspectives. *Problems of Education in the 21st Century, 34*, 122-137.

Şişman, M., & Turan, S. (2002). Dünyada eğitim ve yöneticilerinin yetiştirilmesine ilişkin başlıca yönelimler ve Türkiye için çıkarılabilecek bazı sonuçlar. *Türk Eğitim Bilimleri Dergisi, 2*(1), 13-26.

Tikici, M., Derin, A., Aksoy, A., & Derin, N. (2006). Toplam kalite yönetiminin radikal unsurlarından birisi olarak yalın yönetim. *Elektronik Sosyal Bilimler Dergisi, 5*(15), 20-33.

Veletić, J., & Olsen R.V. (2021): Exploring school leadership profiles across the world: A cluster analysis approach to TALIS 2018. *International Journal of Leadership in Education*, 1-18. https://doi.org/10.1080/13603124.2021.1953612

Walker, A. D., & Dimmock, C. (2002). *School leadership and administration: Adopting a cultural perspective*. Routledge.

Yalçın, M. T., & Ereş, F. (2021). Investigation of the relationship between high schools' instructional capacity and academic achievement. *i.e.: Inquiry in Education, 13*(1), Article 12, 1-27.

Yenipınar, Ş. Yıldırım, K., & Tabak, H. (2020). Determining the leadership potential of school administrators based on data triangulation. *i.e.: inquiry in education 12*(2), Article 7.

Watson, J. (2005). *Keeping pace with k-12 online learning: A review of state-level policy and practice*. Learning Point Associates/North Central Regional Educational Laboratory (NCREL).