



| Research Article / Araştırma Makalesi |

Sustainable Leadership And Learning Organization Relationship in Schools: A Mixed Method Research

Okullarda sürdürülebilir liderlik ve öğrenen örgüt ilişkisi: Bir karma yöntem araştırması

Behiye DAĞDEVİREN ERTAŞ¹, Murat ÖZDEMİR²

Keywords

1. Sustainable Leadership
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Abstract

Purpose: The purpose of this research is to determine, according to the views of primary school teacher, the sustainable leadership behaviors of school principals and the relationship between sustainable leadership and the formation of schools as learning organizations.

Methodology: This study aimed to determine the relationship between the sustainable leadership behaviors of school principals and the formation of schools as learning organizations in public primary schools located in Yozgat, Turkey. A mixed-methods approach, was employed in the study, which utilized both quantitative and qualitative methods. The quantitative portion of the study utilized a "predictive correlational design," while the qualitative portion utilized a "phenomenological design" to examine the research question.

Findings: The research findings indicate that school principals exhibit high levels of sustainable leadership behavior based on the average scores given by teachers. In terms of dimensions, the highest average scores were obtained for deep learning. According to teachers opinions, the average scores for a learning organization were also found to be high. The highest average score in terms of dimensions was for team learning. A positive relationship was discovered between sustainable leadership and organizational learning. Qualitative results indicated that school principals who scored high in all dimensions of sustainable leadership provided more answers. Similarly, when examining qualitative results related to organizational learning, it was discovered that school principals who scored high in all dimensions of sustainable leadership also provided more answers.

Highlights: The literature on sustainable leadership in educational organizations is very limited. Therefore, sustainable leadership perceptions in educational organizations can be examined by considering different concepts together. The relationships between these concepts and their impact can also be examined. Based on the views of primary school teachers, this study suggests that sustainable leadership has an impact on the learning organization. New studies can be conducted on other samples to compare the results of this study, and to investigate the impact of sustainable leadership on educational organizations further.

Öz

Çalışmanın amacı: Bu araştırmanın amacı, sınıf öğretmenlerinin görüşlerine dayanarak okul müdürlerinin sürdürülebilir liderlik davranışları ile öğrenen örgüt arasındaki ilişkiyi belirlemektir.

Materyal ve Yöntem: Bu araştırma, Yozgat'taki kamu ilkokullarındaki okul müdürlerinin sürdürülebilir liderlik davranışları ile okulların öğrenen örgüt olmaları arasındaki ilişkiyi belirlemeyi amaçlamaktadır. Bu amaçla, çalışmada hem nicel hem de nitel yöntemlerin birlikte kullanıldığı "karma model" kullanılmıştır. Nicel bölümde, "yordayıcı ilişkisel desen" kullanılırken, nitel bölümde ise "olgu bilim deseni (fenomenoloji)" kullanılmıştır.

Bulgular: Araştırma sonuçlarına göre, okul müdürlerinin sürdürülebilir liderlik davranışları, öğretmen görüşlerine göre yüksektir. Boyutlar arasında en yüksek puan derin öğrenmeye yönelik olarak belirlenmiştir. Analizler, öğretmen görüşlerine göre öğrenen örgüte yönelik puan ortalamalarının yüksek olduğunu ortaya koymuştur. Takım halinde öğrenme boyutunda en yüksek puan saptanmıştır. Araştırma sonucunda sürdürülebilir liderlik ile öğrenen örgüt arasında pozitif bir ilişki olduğu bulunmuştur. Sürdürülebilir liderlik ile ilgili nitel bulgular, bütün boyutlarda yüksek sürdürülebilir liderlik puanı olan okul müdürlerinin verdiği yanıtların daha fazla olduğunu göstermektedir. Öğrenen örgüt ile ilgili nitel bulgular incelendiğinde bütün boyutlarda yüksek sürdürülebilir liderlik puanına sahip okul müdürlerinin verdiği yanıtların daha fazla olduğu tespit edilmiştir.

Önemli Vurgular: Literatürde, eğitim örgütlerinde sürdürülebilir liderlik ile ilgili yapılan çalışmalar oldukça sınırlıdır. Bu nedenle, farklı kavramların birlikte ele alındığı bir yaklaşımla sürdürülebilir liderlik algıları eğitim örgütleri bağlamında incelenebilir. Bu çalışmada, sınıf öğretmenlerinin görüşlerine dayalı olarak yürütülen araştırma sonucunda elde edilen bulgular, sürdürülebilir liderliğin öğrenen örgüt üzerinde etkili olduğunu göstermektedir. Bu sonuçlara dayanarak, ileride yapılacak yeni çalışmalar, farklı örneklemeler üzerinde elde edilen sonuçlarla karşılaştırılarak, sürdürülebilir liderliğin eğitim örgütleri için önemi ve etki gücü hakkında daha kapsamlı bilgiler sağlayabilir.

¹ Corresponded Author, Educational Sciences, Yozgat Bozok University, Yozgat, TÜRKİYE <https://orcid.org/0000-0003-2431-1914>

² Educational Sciences, Hacettepe University, Ankara, TÜRKİYE; <https://orcid.org/0000-0002-1166-6831>

INTRODUCTION

In today's world, schools are influenced by political, economic, political, sociological, and technological factors. These factors influence a school-related situation, such as the quality of instruction, student achievement, student learning, and teacher productivity. After school administrators evaluate these conditions, they can use the available resources to make schools effective and efficient organizations. For this reason, school administrators should leave the traditional management approach aside and adopt leadership. Sustainable, a concept that has entered the leadership literature in recent years, attracts the attention of researchers as a type of leadership that can balance moral, educational, political, managerial, and social needs.

Previous studies have focused on definitions of sustainable leadership (Davies, 2009; Hargreaves, 2009; Hargreaves & Fink, 2012); its principles (Hargreaves & Fink, 2003a); focus on the contributions of sustainable leadership to the organization (Armani et al., 2020) and organizational change (Carter et al., 2012). In addition, studies emphasize the importance of sustainable leadership for forming organizational culture (Morsing & Oswald, 2009) and effective strategic decisions in organizations (Peterlin et al., 2015). In addition, previous literature has shown that sustainable leadership is a critical predictor of organizational cynicism (Gaan, 2015). In addition, in the literature, sustainable leadership mediates the relationship between active participation in organizational decision-making and creative work behavior (Wang et al., 2021).

Studies on sustainable leadership in educational organizations have begun to be carried out, albeit limited (Lambert, 2012; Lee & Louis, 2019). Researchers focused on the relationship of sustainable leadership with lifelong learning in educational organizations (Taşçı & Titrek, 2019), its impact on social innovation (Iqbal & Piwowar-Sulej, 2022), and the methods of realizing reflective instructional practices (Ayers et al., 2020). In addition, its results on the contribution of sustainable leadership to school success (Goolamally & Ahmad, 2014), improving school capacity (Conway, 2015), school effectiveness (Nartgün et al., 2020), and positive student outcomes (Mohd Yaakob et al., 2020) are remarkable.

Although a significant amount of research has been conducted in educational organizations on sustainable leadership in recent years, most previous research has focused on sustainable leadership in university-level education (Leal Filho et al., 2020; Segovia-Pérez et al., 2019). Therefore, it is possible to say that research on sustainable leadership in primary school education is not sufficiently included in the literature. However, primary schools are seen as the most crucial education step in Turkey and the world. Researching sustainable leadership at this level will bring a new perspective to the literature. As a result, primary school principals' sustainable leadership may have unique factors that are not yet fully explored and need to be explored. In addition, although few studies focus on the relationship between school effectiveness and sustainable leadership (Nartgün et al., 2020), more research on sustainable leadership is needed. First, research on sustainable leadership and its various organizational effects **have** increased (Çayak, 2021). However, there is limited empirical research on the relationship between sustainable leadership and learning organization (Iqbal & Ahmad, 2021). Therefore, it can be said that there is a gap in the literature about how these two variables appear in schools.

This research was carried out on teachers, one of the most critical stakeholders of the education-teaching processes. Within the scope of the research, a relationship to be determined between the sustainable leadership behaviors of school principals and learning organizations will bring a new perspective to the literature. In addition, the sustainable leadership behaviors of school principals are considered necessary in our age to develop lifelong learning practices that ensure the continuity of society and the organization. Considering sustainable leadership practices in school policies and structuring schools as learning organizations can mobilize policymakers to ensure permanent and sustainable success. As practitioners, school principals can contribute to structuring schools as learning organizations by giving more importance to the sustainable leadership element. Suppose learning organizations are perceived as an output of sustainable leadership. In that case, school administrators may emphasize the importance of learning and more willingly realize their school's effort to become a learning organization. Therefore, school principals can ensure the permanence of student success and make their school a learning school as sustainable leader who develops and supports the strengths of the stakeholders in their schools and ensures the effective and efficient use of resources. In this direction, the current research aims to determine the sustainable leadership behaviors of school principals and the **relationships** between sustainable leadership and learning organization according to the views of primary school teachers. In this context, answers to the following questions were aimed.

1. Is sustainable leadership in primary schools a significant predictor of teachers' views on the learning organization?
2. What is the experience of school principals on sustainable leadership and learning organization?

Conceptual Framework

Sustainable Leadership

Due to the leader's influence on the organization and employee behavior, sustainable leadership has recently drawn the interest of organizational and management scientists. According to Hallinger and Suriyankietkaew (2018), the notion known as "Rhineland management" is the foundation of sustainable leadership. According to Shrivastava (1995), sustainable leadership is "an approach based on the idea that the organization is a natural part of the world." Social, physical, ethical, and business factors all support the premise that organizations produce value based on sustainable knowing, developing, and producing knowledge. This strategy highlights managers' varied values and behaviors, which emphasizes a long-term perspective of sustainable

leadership, balanced results, ethical behavior, and corporate social responsibility (Hallinger & Suriyankietkaew, 2018). When making present-day and long-term decisions for a company, sustainable leadership enhances the lives of all stakeholders (McCann & Holt, 2010). An atmosphere where the organization shares its vision and objective can be developed through the sustainable leadership approach. Through agreement, communication, and persuasion, the leader may foster a vision and encourage cooperation among the organization's members to achieve the goals of the organization. The foundation of sustainable leadership is the notion that the organization is an organic component of the environment. According to Shrivastava (1995), organizations can produce lasting value by generating knowledge that advances social, physical, ethical, and commercial causes. Hargreaves and Fink (2003) emphasize learning to live sustainably. Learning to live sustainably means learning to respect and protect the world that gives us life. In order to provide long-term benefits for economic and ecological life, it is necessary to coexist and live together without harming the natural environment by working with other people. Sustainable leadership increases diversity within an organization and enhances people's abilities, enabling individuals to adapt and succeed in increasingly complex work and other environments. This requires the leadership to build sustainable relationships with all stakeholders inside and outside the organization (Hargreaves, 2006).

Hargreaves and Fink (2003) introduced the idea of sustainable leadership to education for the first time. According to researchers, the educational environment in sustainable leadership is diverse, there is a common commitment to good ideas, and active engagement in effective practices where learning and development are shared. The characteristics of sustainable leadership in educational institutions were defined by Hargreaves and Fink as "depth, organizational survival, inclusiveness, justice, diversity, resourcefulness, and protection." After that, Davies (2009) presented a different sustainable leadership framework. According to Davies, effective leadership creates a culture of leadership founded on moral principles that promote the school's long-term growth and guarantee everyone access to achievement. The components of sustainable leadership, according to Davies' model, are "outcomes are not just outputs; balancing short- and long-term goals; processes are not plans; passion for making a difference; humility and will; strategic timing and strategic abandonment; capacity building and participation; they described it as "building sustainability." The six fundamental elements of Lambert's (2011) sustainable leadership model are "diversity and protection," "personnel capacity building," strategic distribution, and consolidation, as well as "creating long-term goals from short-term goals." A vision that reveals and develops the potential of each member of the business is one of the common characteristics of the models of sustainable leadership that have been put forth. Courage is also passion and resolve to take on a unifying and integrating function. In this context, individuals and schools continue to develop their abilities and cope with difficulties, even in complex situations with sustainable leadership practices. This creates the ability and capacity to succeed in new and challenging situations (Davies, 2007). Furthermore, sustainable leadership increases diversity within a school and enhances human ability, enabling individuals to adapt and succeed in increasingly complex work and other environments. This requires the leadership to build sustainable relationships with all stakeholders inside and outside the organization (Hargreaves, 2006).

Researchers mostly examine sustainable leadership in higher education institutions when looking at the literature on sustainable leadership in education (Leal Filho et al., 2020; Segovia-Pérez et al., 2019). For instance, Dalati (2017) investigated the connection between enduring leadership and organizational trust in the setting of Syrian universities. In addition, Mohd Yaakob et al. (2020) determined the critical factors of sustainable leadership in their study in K12 schools and stated that student outcomes are the most important. In addition, Nieto (2007) contributed to the sustainable leadership literature by examining the contributions of sustainable leadership to students and society in depth.

Schools as Learning Organizations

The learning organization has attracted the attention of organizations and management scientists for a long time because of its impact on employee behavior. The concept of learning organization was first used by Senge (1990). According to Senge (1990), learning organizations are organizations in which employees encourage learning and restructure knowledge. These are "organizations that adapt to constantly changing working conditions and produce the information they need to meet the needs of stakeholders." The intellectual basis of the concept belongs to Argyris and Schön (1978). According to the theory, they emphasized the importance of "single-loop" and "double-loop" learning in increasing the learning capacity of organizations. While single-loop learning minimizes organizations' existing policies and procedures, double-loop learning allows radical changes to be made by inquiring about the organization itself. Based on this theory, according to Senge (2018), the learning organization is built on five basic disciplines. These; it is expressed by the author as "personal mastery" "mental models" "shared vision" "team learning" and the fifth discipline, "system thinking." In learning organizations, these disciplines develop about each other. Learning organizations are organizations where people aim to achieve the success they want, they constantly improve their skills, new and developing ideas are supported, common goals are released, learning methods are constantly learned (Bozkurt, 2003), and they are those that facilitate the learning of all their members and constantly transform themselves to achieve their strategic goals. Organizations (Pedler et al., 1989). Organizations must acquire and use new information to ensure their continuity in the competitive conditions required by the age and adapt to changes and developments. Therefore, organizations have to eliminate traditional organization formations, renew themselves by learning, and ensure their effectiveness to realize their goals (Bozkurt, 2003). The most effective way of coping with the innovations that the age of technology has brought and will bring is to try to achieve learning by determining the need for learning (Braham, 1998).

One of the other models associated with the learning organization is the Bui and Baruch (2010) systems approach. Researchers state that they developed a model for this approach based on Senge's five disciplines (Bui & Baruch, 2010). Another model,

Örtenblad (2004), argues that the learning organization consists of four dimensions: organizational learning, learning in the work environment, learning environment, and learning structure. All dimensions are interrelated. Four dimensions must come together to form a learning organization (Örtenblad, 2004). Another model is Watkins and Marsick's (2003) model. In the model, the necessity of seven conditions is expressed in creating a learning organization. These; include creating continuous learning opportunities, encouraging communication and asking questions, creating a desire for cooperation and learning as a team, systematizing learning and information sharing, delegation of authority to create a common vision, encouraging the organization to cooperate with its environment, the leader's learning from an individual level to an individual -to bring them to the team-organization level (Marsick & Watkins, 2003).

Senge et al. (2012) employed the idea of learning organization for the first time in the context of education. According to Senge et al. (2012), a learning school is one in which everyone associated with it—both internal and external stakeholders—constantly improves and broadens their awareness and skills while realizing their shared responsibility for the future of both themselves and their societies. Self-renewal, which has become essential for the success of a school, is strongly associated with the development of the learning capacity of the staff and their taking responsibility for each other's professional learning. Schools that foster learning capacity present the conditions and traits of learning schools as well as aid in understanding how schools learn (Southworth, 2000). In order to achieve self-renewal through continuous learning, promote learning at any time and in any setting, give improving human resources first priority, be acceptable to all members of the school community, and prevent the school from going into crisis. Teams of teachers work together to benefit children (DuFour, 2004). As a result, the school should be viewed as a professional learning community where instructors can collaborate and learn from one another. There is no such thing as a non-learner because everyone, from the servant who works in the learning school to the student, parent, instructor, and school principal, is a learner.

Researchers related to the definition of learning schools and their characteristics (David & Lazarus, 2002; Töremen, 2001; Senge et al., 2012), the characteristics of learning and non-learning schools (Illeris, 2007), barriers to learning schools (Çam-Tosun & Altunay, 2017) conducted researches. In addition, studies examining the roles of leader teachers in creating a learning organization (Taylor et al., 2011) and the perceptions of teachers and school principals regarding the learning school (Banoğlu & Peker, 2012; Metin & Bahat, 2019) draw attention. In addition, Korkmaz (2009) contributed to the leadership literature by examining school principals' leadership styles and learning school characteristics.

Sustainable Leadership and Learning Organization Relationship

Innovation is encouraged in schools with sustainable leaders. Schools are structured as organizations that learn fast and seek change. The arrow of change only moves forward (Hargreaves, 2007). Glickman (2002) highlights the need to exchange information with teachers, students, families, and support staff to understand student learning better and foster more incredible academic progress. Innovation is encouraged in schools with sustainable leaders. Schools are structured as organizations that learn fast and advocate change-seeking. The change arrow only moves forward. (Hargreaves, 2007). Thus, sustainable leadership may require schools to be structured as learning organizations.

In an organizational culture that values lifelong learning, acknowledges teachers as architects of the school culture, and promotes a supportive and collaborative culture, the best examples of leadership behaviors can be found (Silva et al., 2000). Organizational leaders create a shared mission, motivate staff, and foster a culture where everyone can support one another's lifelong learning. In this approach, the leader fosters intellectual growth among all members of the organization and guarantees its ongoing development (Buzan et al., 1999). As a result, improving the learning capacity of top schools contributes to our understanding of how students learn as well as our ability to communicate the requirements and traits of learning institutions (Southworth, 2000). To prepare a school culture that constantly renews itself via learning and encourages learning, the learning school does this.

METHOD

Model of the Research

This study tried to determine the relationship between the sustainable leadership behaviors of school principals in public primary schools in Yozgat and the schools being learning organizations, and the "mixed model" in which quantitative and qualitative methods were used together was used in the research. In mixed studies, quantitative and qualitative data collection techniques are applied simultaneously or one after the other. For example, in the quantitative part of the study, "predictive correlational design" and "phenomenology" was used in the qualitative part.

Research Sample and Study Group

In this section, while the population and sample information and demographic characteristics of the quantitative research are included, the information about the study group of the qualitative research is presented

Sample of Quantitative Research

The target population of the research is 1685 primary school teachers working in primary schools in Yozgat; The sample consists of 313 primary school teachers. Because it was impossible to reach the entire target population in the research, the applications

were carried out on the sample selected from the population. This sample size was determined based on the assumption (Erkuş, 2017) that 313 teachers could represent 1685 teachers with $\alpha = .05$ significance and a 5% margin of error. It was determined that 385 of the scales distributed and collected personally by the researcher were suitable for analysis, and the analyzes were carried out on these data. In addition, "outlier (extreme) case sampling" one of the purposive sampling methods, was used in the qualitative phase of the research. The outlier sampling technique is used when searching for case studies that differ from other case studies by their predominant features. Extreme or outlier situations reveal richer data for the researcher. Thus, it helps to examine the research problem in a more in-depth and multidimensional way (Özmantar, 2018; Yıldırım & Şimşek, 2016). Sustainable leadership scale average scores of the schools included in the research sample were listed, with ten school principals who got the highest score from the scale and ten school principals who got the lowest score from the scale; A total of 20 school principals were interviewed.

Table 1. Demographic Characteristics of the Teachers

Variable	N	Percentage (%)
Gender		
Female	164	42.6
Male	221	57.4
Age		
22-26 between	34	8.8
27-31 between	61	15.8
32-36 between	87	22.6
37-41 between	71	18.4
42-46 between	46	11.9
47 +	86	22.3
Experience		
1-5 years	65	16.9
6-10 years	82	21.3
11-15 years	67	17.4
16-20 years	64	16.6
21 and over	107	27.8
Year of Study at School		
1-5 years	239	62.1
6-10 years	76	19.7
11-15 years	44	11.4
16-20 years	11	2.9
21 and over	15	3.9
Number of Teachers in the School		
10 and less	65	16.9
between 11-20	139	36.1
between 21-30	61	15.8
30 and over	120	31.2
Total	385	100

As seen in Table 1, while the majority of the teachers who voluntarily participated in the research were male ($f=221$) and aged 32-36 ($f=87$), most of the teachers had more than 21 years of teaching experience ($f=107$). In addition, while most teachers have been working in their current schools for 1-5 years ($f=239$), there are 11-20 teachers ($f=139$) in their schools.

Working Group of the Qualitative Stage. In the qualitative phase of the research, "outlier (extreme) case sampling" one of the purposive sampling methods, was used. The outlier sampling technique is used when searching for case studies that differ from other case studies by their predominant features. Extreme or outlier situations reveal richer data for the researcher. Thus, it helps to examine the research problem in a more in-depth and multidimensional way (Özmantar, 2018; Yıldırım & Şimşek, 2016). Sustainable leadership scale average scores of the schools included in the research sample were listed, with ten school principals who got the highest score from the scale and ten school principals who got the lowest score from the scale; A total of 20 school

principals were interviewed. Table 3 presents the characteristics of the ten school principals who got the highest average from the sustainable leadership scale in the qualitative study group. All of the school principals who received high scores from the sustainable leadership scale interviewed in the study are male. The age of school principals varies between 42 and 61. Management experience ranges from 5 years to 32 years. According to the teachers' opinions, the average score they got from the SLS varies between 3.80 and 4.10.

Data Collection Tools

In the study, the Sustainable Leadership Scale in Schools (SLS), developed by Dağdeviren-Ertaş and Özdemir (2020), was utilized to examine the sustainability behaviors of school principals as perceived by teachers. Additionally, the "Learning Organizations Questionnaire" developed by Güçlü and Türkoğlu (2002) was employed to determine teachers' opinions regarding their schools being a learning organization. Finally, in the qualitative part of the research, the researchers developed a semi-structured interview guide to identify the activities carried out within the scope of sustainable leadership.

Sustainable Leadership Scale (ASLÖ). Firstly, SLS was used to evaluate school principals' sustainable leadership characteristics according to teachers' perceptions. OSLS includes four dimensions and 26 items. The dimensions of SLS are human resource development, strategic deployment, deep learning, and environmental-social responsibility. ASLS is a 5-point Likert-type scale ranging from strongly disagree (1) to agree (5) completely. The sample item is as follows; "It encourages teachers to work for the benefit of all people, not just for the benefit of their school." We performed CFA to test the construct validity of the SLS. The results showed that the four-factor structure ($\chi^2/sd = 2.16$, RMSEA=0.03, CFI=0.99, GFI=0.92, IFI=0.99) showed a perfect fit. The Cronbach alpha coefficient of this scale is 0.90.

Learning Organizations Questionnaire (LOQ). Developed by Güçlü and Türkoğlu (2002) for the first time, TCA was used to determine teachers' opinions about their schools being a learning organization. SCA consists of 42 items from 5 dimensions. The dimensions of SCA are personal mastery, mental models, shared vision, systems thinking, and team learning. SCA is a 5-point Likert-type scale ranging from never (1) to always (5). We performed CFA to test the construct validity of the TCA. The results showed a good fit for the four-factor structure ($\chi^2/sd = 2.04$, RMSEA=0.06, CFI=0.98, GFI=0.80, IFI=0.98). The Cronbach's alpha coefficient of this scale is 0.97

Procedures and Data Analysis

Processing and Analysis of Quantitative Data

Quantitative data for the research were collected by administering the SLS and LOQ to primary school teachers in primary schools across 14 districts of the Yozgat province.

The qualitative research data was collected from the school principals who work in the schools included in the research universe and whose sustainable leadership scores were evaluated by the teachers. The qualitative study group of the research consists of 10 school principals who got the highest score from the sustainable leadership scale scored by the teachers and ten school principals who got the lowest score from the sustainable leadership scale. The interviews were carried out by the researcher voluntarily, with the semi-structured interview form prepared by the researcher. All interviews were recorded (via the researcher's mobile phone with a voice recording feature) with the permission of each participant. While the most extended interview lasted 1 hour and 20 minutes, the shortest was 20 minutes. A total of 9 hours and 25 minutes of interviews were recorded. Written transcripts of each audio recording were taken and converted into text, and then the participants were read, and their consent was obtained. Interview transcripts were analyzed one by one.

Before starting the analysis of quantitative data in the research, data control needed to be carried out. Afterwards, outlier analysis of the data, normality, covariance (homogeneity), and linearity assumptions were examined. In order to determine which of the parametric or non-parametric (non-parametric) analysis methods of the data obtained in the research will be analyzed, the normal distribution characteristics were examined. The assumption of normality can be examined in different ways. In this study, the values of "skewness" and "kurtosis" were taken into account. The skewness and kurtosis values of ASLÖ and SCA are presented in Table 2.

Table 2. Skewness And Kurtosis Values Of SLS And LOQ

	N	Sd	Min	Max	Mean	Variance	Skewness	Kurtosis
Sustainable Leadership	385	.44	1	5	3.57	.20	1.09	1.93
Learning Organizations	385	.49	1	5	4.10	.24	-.601	.565

The values of skewness and kurtosis for each dimension of the SLQ and LOQ are between 3, as shown in Table 2. Therefore, if the skewness and kurtosis coefficients are below or equal to 3, the scores are considered to not deviate significantly from the normal distribution (Kline, 2011). In light of this, it was considered that employing parametric tests to analyze the research's data would not be harmful. Additionally, methods for multiple regression analysis were used to see if teachers' opinions of the learning

organization were significantly predicted by school administrators' sustainable leadership behaviors. It investigated whether the data produced a multicollinearity issue in order to apply the analysis. Regression analysis was carried out after it was established that there was no multicollinearity issue because the tolerance value of the data was above .20, the VIF value was under four, and the CI (Condition Index) value did not exceed 30 (Hair et al., 2010). The SPSS 22.0 program was used in this study to conduct analyses pertaining to sustainable leadership and learning organizations. Confirmatory factor analysis (CFA) was also carried out using the LISREL 8.7 program to make sure the scales' construct validity.

Qualitative data process and analysis. The transcripts of the interviews with the school principals interviewed according to the order of the sustainable leadership scale mean scores were analyzed using the "descriptive analysis" technique for sustainable leadership and learning organizations. In addition, the participants' views from the interview transcripts were presented with direct quotations. SM code is given for each school principal, and numbers from SM1 to SM20 are given.

The four elements of sustainable leadership, which were produced by the researchers and exposed as a theme, were determined in order to determine the activities performed within the scope of sustainable leadership. Each feature's corresponding data is listed under the appropriate theme. The "credibility" criterion was ensured through the preparation of the semi-structured interview form with the help of expert opinions, the research participants' voluntary participation, their signing of the voluntary participation form for this purpose, the face-to-face interviews, and the audio recordings with their permission. The deliberate sampling strategy was chosen to ensure that the data were transmitted by remaining true to their nature in order to meet the "transferability" criterion in the research. In order to provide the "consistency" criterion in the research, it was ensured that the researchers worked together continuously in the process, from the creation of the data collection tool to the data analysis, and tried to reach a consensus when necessary. The coding was done separately by the researchers. In order to provide the "confirmability" criterion, the codings for the themes were reviewed with the researchers, and the codes that were thought to be unrelated were re-evaluated. Later, the same data were analyzed by a faculty member. Then, the researchers came together, re-evaluated the coding, and reached a consensus when different opinions emerged. The same procedures were carried out for the five dimensions of the learning organization.

FINDINGS

This section examines the research findings under two separate headings: quantitative and qualitative.

Quantitative Findings

In this study, which focuses on the relationship between sustainable leadership and learning organization, first of all, the participant's views on the two variables and whether there is a statistically significant relationship between the sub-dimensions of SLS and LOQ were analyzed based on descriptive statistics. The results are in Table 1. Then, according to the opinions of primary school teachers working in official primary schools in Yozgat province and its districts, the relationship between sustainable leadership perceptions and learning organization is calculated with the Pearson correlation coefficient. The results are expressed in Table 3.

Table 3. The Relationship Between Learning Organization Sub-Dimensions and Sustainable Leadership

	\bar{X}	<i>Sd</i>	1	2	3	4	5	6	7	8	9
1. Human Resources Development	2.72	.74	1								
2. Strategic Distribution	3.86	.86	.288**	1							
3. Deep Learning	4.42	.59	.059	.141**	1						
4. Environmental Social Responsibility	3.26	.60	.499**	.370**	.152**	1					
5. Personal Mastery	3.95	.65	.293**	.373**	.168**	.286**	1				
6. Mental Models	4.07	.64	.270**	.464**	.185**	.239**	.661**	1			
7. Shared Vision	4.12	.63	.307**	.449**	.077	.312**	.583**	.735**	1		
8. Systems Thinking	3.95	.59	.307**	.415**	.091**	.277**	.605**	.669**	.745**	1	
9. Team Learning	4.31	.57	.207**	.092*	.056	.196**	.325**	.324**	.409**	.450**	1

* $p < .05$. ** $p < .01$

Table 3 displays the average sustainable leadership scores for school principals across all SLS criteria, which vary from 2.72 to 4.42. These findings show that teachers think principals of schools exercise highly effective sustainable leadership. The average

scores of learning organizations range from 3.95 to 4.31, as demonstrated in Table 3. These findings indicate that teachers view their institutions as learning environments. On the other hand, there is a statistically significant and positive association between the sub-dimensions of SLS and LOQ. The "strategic distribution" and "mental models" sub-dimensions of SLS and LOQ had the strongest association ($r = .46, p.01$). As a result, there is a slight but substantial correlation between participants' perceptions of social intelligence and their perceptions of the HRF. However, "deep learning" and "shared vision" had the lowest connection ($r = .07, p.01$) between the sub-dimensions of SLS and LOQ. As a result, there is a weak but substantial correlation between instructors' perspectives on deep learning and their ideas regarding the development of a common vision. The four SLS sub-dimensions were tested for their ability to predict LOQ using multiple regression analysis.

Table 4. Regression Analysis Results on the Prediction of Learning Organization Perception by Sustainable Leadership Dimensions

Dependent Variable = Learning Organization	<i>B</i>	Std. Hata	β	<i>t</i>	<i>p</i>
Human Resources Development	.131	.035	.194	3.772	.000*
Strategic Distribution	.213	.030	.344	7.129	.000*
Deep Learning	.051	.040	.057	1.261	.208
Environmental Social Responsibility	.080	.045	.094	1.771	.077

$R = .507; R^2 = .257; F = 32.887; p = .000$

Table 4 shows a moderate and significant relationship between sustainable leadership dimensions and learning organization ($R = .507; R^2 = .257; p < .05$). According to these findings, 26% of the learning organization can be explained by sustainable leadership dimensions. Based on the standardized regression coefficient (β), "human resource development" ($t = 3.772, p < .05$) and "strategic distribution" ($t = 7.129, p < .05$) dimensions of sustainable leadership are significant predictors of the learning organization. However, the "deep learning" ($t = 1.261, p > .05$) and "environmental social responsibility" ($t = 1.771, p > .05$) dimensions are not significant predictors of the learning organization. In other words, sustainable leadership does not significantly affect the learning organization through the dimensions of "deep learning" and "environmental social responsibility."

Qualitative Findings

Qualitative findings obtained from the research were thematized according to the scale dimensions of the SPLS. Within the scope of the research, the school principals who got the highest score ($n=10$) and the lowest score ($n=10$) from the SLS scale were interviewed. The data obtained as a result of the interviews were examined with the descriptive analysis technique, and the direct statements of the participants were included from time to time. In Table 5, qualitative findings on sustainable leadership are presented.

Table 5. Opinions of School Principals with High and Low Scores on Sustainable Leadership

Theme	Codes	Frequency of Those with Low SLS Scores	Scores Frequency of Those with High SLS Scores
Human Resources Development	Reading hours	6	7
	Book discussion		1
	(Scientific activities) Seminar-Symposium, TUBITAK Projects		4
	Directing to in-service training	1	4
	Promoting and supporting different methods		4
	Providing guidance services	1	2
	Inviting experts		3
	Listening to teachers at all times	1	4

Strategic Distribution	Participation in decision-making	8	9
	Evaluating the past	2	5
	Encouraging collaboration	7	8
	Openness to diverse ideas - creating a democratic environment	8	8
	Sharing experiences	2	4
	Trying to create a school culture	2	4
	Establishing strong communication	8	10
	Delegating authority	1	3
Being integrative	1	5	
Deep Learning	Physical environment arrangements	1	6
	Setting goals for success	1	6
	Meetings with successful school principals		5
	Providing materials	1	6
Environmental Social Responsibility	Excursions	6	6
	Collective events	5	5
	Breakfast-Lunch Organizations	4	9
	Taking environmental precautions		
	Not leaving employees alone on their special days	1	4
	supporting students with poor financial situation		

When the opinions obtained from the participants are examined, as shown in Table 5, it can be evaluated that activities such as "scientific activities" "directing to in-service training" "promoting and supporting different methods" "providing guidance services" "inviting experts" and "listening to teachers at all times" are the activities carried out by sustainable leaders in the dimension of *human resources development*. According to Table 5, conducting "reading hours" in the school is carried out by low and high sustainable leadership score ($f=7$) school principals. However, supporting teachers' development through discussion groups rather than reading hours can be evaluated as an activity sustainable leaders can undertake. The opinion of the school principal, who expressed his views and had the highest sustainable leadership average score about human resources development, is quite remarkable. His view on "book discussions" in this regard is noteworthy. In this regard, he stated the following opinion:

When we created a book reading group with volunteer teachers before the seminar period, we have been implementing this practice for two years. This year, we decided on the books we would read together by making a joint decision, aiming for engaging and enlightening choices. We selected three books a month before the seminar period, and I placed the order. One was Zweig's Chess, a world classic, the other was Animal Farm, and the last was Nurettin Topçu's Maarif Davası in Turkey. Everyone had read at least two of them within a month. We had extensive discussions on Animal Farm and Chess. Some did not read the books but still participated in the discussions. At least they listened. It was gratifying and satisfying. I love reading books, and discussing what we read and evaluating different perspectives was also very informative. We have also decided on the books we will discuss when school starts. We are reading Blindness, What is Man Living For, and In the Land of White Lilies during the holiday break to prepare our

minds for the upcoming semester. We had a seminar on films as well, but discussing books was much more enjoyable (SM1).

In-service training is very beneficial for administrators. However, of course, they are also beneficial according to the teachers' subject that is useful for us. When in-service training is opened, I immediately inform the teachers and direct them to apply. Even if it is unavailable now, I tell them their turn will come someday. It is nice because these training (SM10) ... Ayşe Hanım and Fatma Hanım think they are helpful for teachers if they have different applications in the classroom, communication with parents, or any achievement. If you have projects like this, let us share and implement them together (SM6).

According to the findings presented in Table 5, the statements of "participation decision-making" "openness to diverse ideas-creating a democratic environment" "encouraging collaboration" and "establishing strong communication" were expressed by both high and low sustainability score principals in the *strategic distribution* theme. Therefore, these statements may not be seen as distinguishing features for sustainability leadership. However, based on the findings, the opinions reported by school principals with high leadership scores, such as "evaluating the past" "Sharing experiences" "trying to create a school culture" "delegating authority" and "acting in an integrative manner" could be considered as distinguishing characteristics of sustainability leaders. One participant expressed their view on this issue as follows:

At the beginning of each semester, we have meetings with our colleagues to evaluate the previous year and discuss what we can do in the upcoming semester. Based on the decisions we made in the first meeting of the previous year, we talked about what we could accomplish and whether we took any measures to address any issues that arose. We discuss any shortcomings and document them through decisions. At the beginning of the next semester, we revisit these decisions and remind ourselves that we made them in a previous meeting and review them again (SM2).

As can be seen from Table 5, the behaviors related to "physical environment arrangements" "goal setting for success" "meetings with successful school principals" and "providing materials" are more frequently expressed by the managers who received high scores in the *deep learning* theme. Participants' views on this issue are as follows:

School principals often come together with each other. We either meet at the Ministry of Education meetings or bump into each other because we are friends. We talk about anything related to education. A successful school principal's school is always a topic of discussion. I ask them without hesitation or embarrassment, 'How did you achieve this?' If a teacher is successful, I even visit their school and meet with them. I take notes on what I hear and share it with my teacher friends at my school (SM5).

Recently, I visited the M.A.E. Primary School and saw that a lady was painting on the walls. I liked it. When I came back to my school, I looked at our walls and thought about teaching concepts and values through such paintings. I asked my vice principals and teacher friends about it, and they said it would be nice. So, I called the principal of that school and got the lady's number. I asked her if she could also do it for us. It is necessary to evaluate good practices of other schools and share ideas for success (SM7).

We identify the shortcomings and then talk to someone for resources accordingly. Sometimes we do it with the support of the Ministry of Education, and sometimes we ask for help from a supporter (SM3).

In Table 5, "excursions", and "collective events" in the theme of *environmental and social responsibility* are the behaviors expressed by both high and school principals with low scores. Behaviors that are expressed more by principals with higher scores, such as "taking environmental precautions" "not leaving employees alone on their special days" and "supporting students with poor financial situations" are considered behaviors of sustainable leaders.

... We organize excursions with our teachers and students. We made a trip to Çanakkale with our teachers. Not all of our teachers folded. Some had children. However, we traveled very well with those who had time and did not have a job and experienced a national spirit consciousness together. And we got together better (SM1)

We organize a bazaar every year. These bazaars bring a small income to our school. Parents are more connected to the school with such an application. They also

know each other among themselves. In this way, the ice melts between the teacher and the parents (SM5).

If an employee is getting married in our school, we have a social committee immediately; they get their gold and gifts. We will immediately receive our gift for the one whose son gets married and has a child. We are organizing a farewell to our outgoing teacher. For this, while collecting money for tea every month, we get an extra 5 TL and save that money. We use it when necessary. No one has objected to this situation so far (SM5)

We put a waste battery box in our school. Students bring waste batteries here and throw them away. They come first and show us. As the administration, we give them prizes such as candy and chocolate. This encourages them a lot. They exaggerate and ask the neighbors, too (SM10)

As can be seen from the qualitative findings, the answers of the school principals with a low sustainable leadership score and a high sustainable leadership score were thematized under the dimensions of sustainable leadership. When the findings are examined, the answers given by the school principals with high sustainable leadership scores for all dimensions are higher. Based on this finding, school principals working in Yozgat province carry out more activities than those with high sustainable leadership scores.

In this part of the research, the opinions of school principals about the learning organization are given. The dimensions in the LOQ questionnaire were handled as a theme, and the data obtained from the participants' opinions were analyzed and coded with the descriptive analysis technique. The findings obtained from the analysis of the collected data are given in Table 6.

Table 6. School Principals' Views On Learning Organization

Theme	Codes	Frequency of Principals with Low SLS Scores	Frequency of Principals with High SLS Scores
Personal Mastery	Holding meetings	2	3
	Taking individual needs and desires into account	1	
	Arranging the program of teachers who want to pursue a master's degree		1
	Utilizing expertise	1	1
	Promoting education opportunities		1
	Discussing different methods and techniques		1
	Setting up a library		1
Mental Models	Critical evaluation		3
	Immediate intervention to problems		3
	Always being open to innovations and change, and discussing every idea		5
	Discussions on values		1
Shared Vision	Taking teachers' opinions into consideration in planning		4
	Exchange of ideas	2	4
	Active participation of all teachers in every process		6
	Making decisions together	3	5
Systems Thinking	Setting goals for success		4
	Producing long-term solutions instead of temporary ones		2
	Using communication channels constantly and effectively		6
	Creating active learning environments		3

Team Learning	Forming teams	1	5
	Book discussion group		1
	Social activities	3	10
	Organizing reading hours	3	3
	School-parent-family cooperation	3	5

When the qualitative data obtained from the participants was examined in Table 6, the behaviors of the principals who scored high on the sustainable leadership scale in the theme of "personal mastery" included "holding meetings" "arranging the program of teachers who want to pursue a master's degree" "promoting training opportunities" "discussing different methods and techniques" and "setting up a library." One of the participants expressed their opinion as follows:

He met with the teachers almost every 15 days and said, "What did we do new? What innovations brought us? Let's continue?" We talk about questions like If there are different methods that teachers use in the classroom, we talk about them and discuss whether they provide success or not. Then, we make decisions as a result of brainstorming with the teachers. "How do we achieve lasting success? Whose methods work best?" we argue (SM8).

As can be seen in Table 6, in the findings obtained from the qualitative data obtained from the participants, the expressions related to the *mental models* theme "always open to innovations and change and discussing every idea" "critical evaluation" "immediate intervention to problems" and "discussions on values" is a behavior shown by principals with high scores on the sustainable leadership scale. One of the participants commented as follows:

If it is for the benefit of both the student and the teacher, I try to put new and different ideas into practice to the extent permitted by the legislation. Contrasting opinions are also crucial for me, and I ask thoroughly why, maybe the first time, another idea makes sense, but other words may make sense (SM4).

As can be seen from Table 6, "exchange of ideas" in expressions related to the theme of *shared vision* in the qualitative data obtained from the participants is a behavior displayed by both the principals with high scores from the sustainable leadership scale and the principals with low average scores. However, "active participation of all teachers in every process" and "taking teachers opinions into consideration in planning" are behaviors only shown by principals who have received high scores from the sustainable leadership scale. Participant opinions are as follows:

I strive to gather everyone's opinions for all kinds of situations that may arise in the school, whether it's related to education, work, physical space, or student discipline issues (SM2)
As I mentioned before, we have formed a book discussion group. Everyone is invited to this group, and I always consider different ideas without discrimination (SM1).

As seen in Table 6, in the qualitative data obtained from the participants, the behavior of "using communication channels constantly and effectively" is shown by the principals who scored high on the sustainable leadership scale in the *systems thinking* theme. Indeed, the opinions of the participants are as follows.

I always keep my door open to teachers, students, and parents. I am always ready to listen to their problems, no matter what they may be. They can call me on my cell phone anytime regarding school or student-related issues (SM9).
Every teacher is very valuable to us. Their words and opinions are taken into consideration. I also let them know that I am ready to listen to them even if they have a personal problem. If they want to talk about it, I listen and try to find a solution. If they don't want to talk about it, I say something to boost their morale and motivation (SM8).

As it can be seen from Table 6, "forming teams" and "social activities" in expressions related to the theme of *team learning* in the qualitative data obtained from the participants are the behaviors of the principals who received high scores from the sustainable leadership scale. As a matter of fact, the participants commented as follows:

Every class in the school has a group. These groups work in cooperation with each other, and they cooperate with other groups (SM5).

We did a project last year. Our project team worked very well there. As I said, they were very surprised if such an institution existed in Yozgat (SM9).

As can be seen from the qualitative findings on learning organizations, the responses of school principals with low and high sustainable leadership scores were thematized under the dimensions of the LOQ. When the findings are examined, the answers given by the school principals with high sustainable leadership scores for all dimensions are higher. Based on this finding, it can be said that the opinions of school principals with higher SLS scores about the learning organization have higher frequencies.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In the quantitative part of this research, the relationship between school principals' sustainable leadership and learning organization was examined based on the opinions of 385 teachers. In the qualitative part, interviews were conducted with 20 school principals. In the research, first of all, an answer was sought to the question of how the school principals' sustainable leadership of participating teachers was. As a result of the analysis, it was observed that the school principals' sustainable leadership scores were higher than the teachers' opinions. In terms of dimensions, it was determined that the average score for deep learning was the highest. According to Hargreaves and Fink (2003), profound teaching and learning, essential in education and lasting a lifetime, continue the natural processes. Supporting and sustaining teaching and learning issues that promote deep learning and lifelong learning is the foundation of sustainable education. Therefore, the answers given by the participants to the deep learning dimension can be considered a critical situation for sustainable leadership.

As a result of the analysis, it was observed that the average score for the learning organization was high according to the teachers' opinions. In terms of dimensions, the highest score is team learning. The literature review found that the dimension of team learning is high in learning organization scales (Savaş, 2013; Thompson et al., 2004). The high score may be because team learning includes the learning organization process and the ability to achieve more significant and permanent results than individual results.

As a result of the research, a positive relationship was discovered between sustainable leadership and the learner relationship. In the literature review, studies focusing on the relationships between schools being learning organizations and sustainable leadership have found a positive relationship between sustainable leadership and learning organization (Iqbal & Ahmad, 2021). In addition, the study of Akan and Sezer (2014) found a positive and significant relationship between transformational leadership and the level of learning organization in schools. The study by Bilir (2014) found that structural leadership, human resources leadership, political leadership, and symbolic leadership were related to teachers' perceptions of their institutions. Oluremi (2008) found a significant relationship between the principal's leadership style and the school's learning culture and stated that the principal should have a transformative leadership style. On the other hand, it has been determined that deep learning of sustainable leadership does not affect the learning organization. In addition, it has been determined that school principals' environmental-social responsibility behaviors do not affect school learning organizations.

In the results obtained from the qualitative data within the scope of the research, in the theme of the development of human resources of school principals who exhibit sustainable leadership behavior, school principals support teachers' participation in scientific activities, direct them to scientific activities, direct them to in-service training, support different method and -technical applications, provide guidance services, provide specialists to their schools. It was determined that they invited the teachers and listened to the teachers at all times. According to Hoy (2003), teachers are more successful in a safe environment. In Altinkurt's (2007) study, human resources development practices in schools were found to be generally successful by teachers. According to the research findings of Short et al. (1999), teachers feel more empowered in schools of school administrators with a high aptitude for the human resources framework. Therefore, human resource development practices in schools are practices that contribute to the professional development of teachers.

As a result of the research, it was determined that school principals who exhibit sustainable leadership behavior evaluate the past in the theme of strategic distribution, share their own experiences with teachers, try to create a school culture, distribute their authority, and exhibit integrative behavior. On the other hand, it has been determined that school principals who exhibit or do not exhibit sustainable leadership behavior participates in the decision, be open to different opinions, create a democratic environment, encourage working in cooperation, and establish strong communication in their schools. According to Ferdig and Ludema (2005), leaders should make plans for the future within the organization they lead to understand the rapidly changing economic, social, and political environments and create the right strategies.

As another result of the research, school principals who exhibit sustainable leadership behavior care about deep learning in their schools, and in this context, they care about the physical environment arrangements of the schools; they set goals to ensure success and make it permanent, they exchange ideas with the principals of successful schools, and they find different ways to meet the material needs of their schools. Experiments were determined. According to Hargreaves and Fink (2003), student learning is the basis of all learning. Therefore, everyone's learning in schools is geared towards supporting student learning. According to Borko (2004), leaders should allow teachers to build trust, create an environment for critical communication, and

show respect for each other. Glasser (1999) states that while a leader manager keeps expectations high, encouraging his stakeholders and frequently reminding them of this expectation is a sign of success.

According to the results obtained from the research, school principals who exhibit sustainable leadership behavior are sensitive to the environment and social responsibility activities; In this context, it has been determined that they take measures to protect the environment, support their employees outside of school, and seek different ways to help students with weak economic conditions. It has been determined that school principals who exhibit and do not exhibit sustainable leadership behavior do some collective activities at school. Gummerson (2015) stated that it is crucial for those who are committed to sustainable leadership to base their work on a moral purpose. Therefore, sustainable leaders are environmentally committed and sensitive to the environment. According to Jahanshahi and Brem (2017), cooperative behaviors provide a positive atmosphere among organizational members, which is seen as sustainable leadership behavior. Bilateral relations with all stakeholders and how this affects organizational effectiveness and goal achievement are vital for organizations (Gerard, McMillan & D'Annunzio-Green, 2017). Sustainable leadership advocates stakeholder participation, emphasizes the social element of the relationship, and does not focus solely on results (Hargreaves & Fink, 2006).

Limitations and Future Research

This research was carried out with the opinions of primary school teachers working in Yozgat province and its districts, and it can be suggested that the same study be carried out in other provinces. The quantitative part of this study was conducted as a cross-sectional survey, and it may be indicated that researchers conduct longitudinal studies in the future. The quantitative data collection for this research was carried out only with teachers working at the public primary school level. According to the opinions of teachers working in private schools or other public schools, research can be conducted to examine the sustainable leadership behaviors of school principals. Very few studies on sustainable leadership exist in the literature on educational organizations. For this reason, perceptions of sustainable leadership in educational organizations can be examined by considering different concepts together. The relationships between the concepts in question as well as the impact power of these concepts, can be examined. Based on the opinions of primary school teachers, this study can compare current research results with new studies to be conducted on other samples, based on the conclusion that sustainable leadership affects the learning organization. In addition, analyses were made at a single level in this study, and since this study is leadership research, it can be suggested to be done at school and teacher levels and at a multi-level. The findings of this study will help to understand the relationship between sustainable leadership and learning organization.

Implications of the Research

This study was conducted based on the views of teachers and school principals, who are among the most critical stakeholders in educational management processes. The current research findings have revealed the relationship between sustainable leadership and a learning organization. The findings presented in this study can guide policymakers to consider sustainable leadership practices in school policies and structure schools as learning organizations to achieve sustainable and lasting success. In order to provide students with a better quality education environment, policymakers at the education ministry level should take steps to promote the concept of a learning organization and sustainable leadership practices. Additionally, the study has shown that as practitioners, school principals can contribute to forming their schools as learning organizations by placing greater emphasis on the element of sustainable leadership. Suppose learning organizations are perceived as an outcome of sustainable leadership. In that case, school administrators may be more willing to strive for their schools to become learning organizations by emphasizing the importance of learning.

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I/We hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

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