

The Relationship Between School Culture and Learning Organization in Educational Institutions*

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ABSTRACT

The aim of this study is to determine the effects of organizational culture on the learning organization in secondary education institutions. The research was conducted between September and November of the 2023–2024 academic year. The study was conducted with the participation of 418 teachers and administrators working in public secondary education institutions in the province and districts of Karabük. The collected data was analyzed using quantitative research methods through the SPSS and AMOS statistical software packages. The reliability of the School Culture Scale and the Learning Organization Perception Scale was tested using Cronbach's alpha (α). It was determined that the scales provided both convergent and discriminant validity. When significant differences were found, the Tukey test was used to identify which groups differed. Confirmatory Factor Analyses (CFA) of the scales and path analyses for the hypotheses were conducted using Structural Equation Modeling (SEM). The obtained goodness-of-fit indices indicated that the model was supported by the research data. The results indicated that school culture varied by age and role within the school, while the perception of the learning organization differed according to age, role, educational background, and school type. It was found that a success-oriented culture positively influenced all dimensions of the learning organization, whereas a bureaucratic culture had a positive effect only on the dimension of personal mastery. Accordingly, it is recommended to promote management approaches that support a success-oriented culture and to balance bureaucratic culture with a more flexible structure that fosters organizational learning.

Keywords: School culture, learning organization, secondary education.

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Extended Summary

This study examines the effect of school culture on the learning organization, as well as whether school culture and learning organization differ according to demographic characteristics. Educational organizations are not only the first environments in which children are socialized but also structures that both influence and are influenced by society. In this context, schools are expected to establish a strong culture, facilitate the transmission of this culture to newcomers, and provide society with the diverse human capital it requires. A learning-oriented organizational culture holds strategic importance for learning organizations. For schools to renew themselves, remain competitive, and sustain longevity, they must generate, transfer, store, and utilize knowledge effectively. In doing so, it becomes possible to cultivate a workforce that will contribute to national development. The presence of a positive school culture enhances the learning of both staff and students. There are strong and positive relationships between the elements of school culture and levels of school performance (Fullan, 2001: 17; Lee & Louis, 2019: 12). This research is grounded in the assumption that organizational culture is associated with the extent to which an organization functions as a learning organization.

This study is quantitative research conducted with data collected from 418 administrators and teachers working in the province and districts of Karabük during the 2023–2024 academic year. Data were collected using the School Culture Scale and the Learning Organization Perception Scale, with permission obtained from the respective scale developers. The kurtosis and skewness values of the scale items, as well as their reliability, were tested using Cronbach's alpha coefficient. Confirmatory Factor Analysis (CFA) was performed to examine the factor structures of the scales, while Structural Equation Modeling (SEM) path analysis, t-tests, and ANOVA were conducted to test the research hypotheses. The results of the analysis are presented through tables and figures. Ethical approval required for data collection was obtained and is reported in the methodology section and at the end of the article.

The reliability of the scales, as well as convergent (CR) and discriminant validity (AVE), were examined. The Composite Reliability (CR) values were found to be greater than 0.70, and the Average Variance Extracted (AVE) values exceeded 0.50. The Cronbach's alpha coefficient was calculated as $\alpha = 0.880$ for the School Culture Scale and $\alpha = 0.971$ for the Learning Organization Perception Scale. The results of the analyses indicated that school culture differs significantly according to age and role within the school. Perceptions of the learning organization, on the other hand, vary according to age, role within the school, educational level, and type of school. The achievement culture dimension of the School Culture Scale positively affects all dimensions of the Learning Organization Perception Scale. The bureaucracy culture dimension of school culture positively influences only the personal mastery dimension of the learning organization perception. Furthermore, positive correlations were identified among all dimensions of the learning organization perception and among all dimensions of school culture, except for the bureaucracy culture dimension.

The finding that the achievement dimension of school culture positively influences all dimensions of the learning organization perception suggests that a success-oriented approach is adopted in schools. This result may also be interpreted as evidence that individual knowledge and skills are recognized and appreciated. The positive effect of bureaucratic culture on the personal mastery dimension can be interpreted as an indication that individuals working within a bureaucratic structure place greater emphasis on their personal development. In the face of bureaucratic constraints, individuals may seek to strengthen their positions within the organization through their competencies and expertise. Within this framework, it can be recommended that practices promoting an achievement-oriented culture be encouraged in schools, and that bureaucratic structures be restructured into more flexible and collaboration-oriented models.

1. Introduction

Educational organizations are powerful institutions both influenced by and capable of influencing social, economic and democratic developments. They facilitate change by educating individuals and preparing them for employment. As the first place where students experience socialization, schools play a crucial role in integrating individuals into society by transmitting various relationships, beliefs, assumptions, and both written/unwritten rules (Doğan, 2017: 259). In this context, schools are expected to establish a strong culture, transfer accumulated knowledge and values to newcomers, and serve as a guiding force in solving problems-ultimately aiming to cultivate well-educated individuals (Peker & Demirhan, 2022: 4).

The continued existence of organizations, their ability to adapt to innovations, and their capacity for self-renewal through new knowledge are achieved through learning organizations that possess a strong culture. As organic systems, learning organizations assume that learning is experienced and directed by every individual within the organization (Yeo, 2005: 371). Organizational culture elements are classified into two groups as visible and invisible components. Visible elements include physical aspects such as organizational stories, legends, myths, ceremonies, rituals, and monuments or stories of heroes. Invisible elements of organizational culture consist of the organization's perspective, behavioral patterns, and assumptions. Organizational culture also acts as a social glue by providing standards for what tasks employees should perform and how they should perform them, thus holding the organization together (Robbins & Judge, 2021: 523).

Educational institutions, which constitute a significant part of the education system, are fundamental structural elements that serve a purpose and existence in advancing society and shaping the future. In this context, schools are expected to build a strong culture, transfer accumulated knowledge from the past to new members, and raise well-educated individuals who can serve as guides in solving potential problems (Peker & Demirhan, 2022: 4). At the same time, schools ensure the survival and continuity of societies by transmitting culture and presenting the desired diversity of individuals to society.

In today's world, where knowledge is considered a significant source of power, acquiring, developing, transferring, and ultimately reproducing knowledge has become essential (Doğan & Yiğit, 2015: 319). As learning organizations, learning schools are those in which all members actively and collaboratively engage in experiencing innovation and initiating change. At the core of this effort lies not only acting with collaboration and team spirit but also embedding the organizational culture in a learning-centered foundation (Bilir & Arslan, 2016: 245). Schools with a strong culture are characterized by openness to learning, strong communication, intensive collaboration, and shared goals (Ayık & Şayir, 2015: 382).

Secondary education institutions in Türkiye operate within a highly centralized educational system governed by the Ministry of National Education. Educational policies, curricula, administrative procedures, and quality standards are largely determined at the national level, while schools are expected to implement these policies within their local contexts. This centralized structure influences organizational processes, leadership practices, teacher collaboration, and decision-making mechanisms within schools. Consequently, school culture plays a crucial role in shaping how educational reforms are interpreted and implemented at the institutional level.

In recent years, rapid technological developments, increasing societal expectations, and ongoing educational reforms have heightened the need for schools to become more adaptive, collaborative, and learning-oriented organizations. As a result, concepts such as continuous learning, organizational development, knowledge sharing, and professional collaboration have gained increasing attention in educational research and practice. Within this context, learning organizations are viewed as institutions capable of responding effectively to change while fostering continuous improvement and innovation.

Examining the relationship between school culture and learning organizations is therefore particularly important in the Turkish education system, where organizational structures, leadership practices, and cultural dynamics may significantly influence schools' capacity for learning, development, and sustainable improvement.

Organizational culture and school culture, as a form of organizational culture within educational institutions, have been classified in various ways by different scholars. In this study, the classification developed by Terzi (2005: 424) — including support culture, task culture, achievement culture, and bureaucratic culture — has been adopted based on categorization in the Turkish context. The significance of this research lies in its integration of the concepts of school culture and learning organization within the framework of educational institutions. There are strong and positive relationships between school culture elements and school performance levels (Fullan, 2001: 17; Lee & Louis, 2019: 12). The study is designed with the assumption that organizational culture is closely related to an institution's capacity to become a learning organization. Unlike previous studies on school culture that have mostly focused on teacher performance, student achievement, and educational quality, this research aims to address the gap by exploring how school culture shapes learning processes, teaching methods, and continuous development. Furthermore, examining school culture from the perspective of learning organizations is expected to contribute to rethinking the construction of school culture and organizational structures.

2. Method

This study employed quantitative research design. Quantitative research refers to studies in which observations and measurements can be replicated. Before starting the research, the design of the study is established, and hypotheses are determined. It is based on objectifying the phenomena being investigated along with the surrounding processes and factors, transforming them into an observable structure (Ataseven, 2021: 544). In this type of research, predetermined hypotheses are tested. Quantitative research helps in deciding which hypotheses are accepted and which are rejected. In this context, if a study aims to test hypotheses, the quantitative research method would be appropriate (Padem et al., 2012: 58). Ethics committee approval was obtained for this study with the decision numbered 2023-06 of the Karabük University Social and Human Sciences Ethics Committee's meeting dated 26.09.2023 and numbered 6.

2.1. Hypotheses and Research Model

The main research questions of the study is “Do school employees perceptions of school culture and learning organization differ according to demographic characteristics?” and “Does school culture have an effect on the perception of the learning organization? In line with these questions, after reviewing the relevant literature, three main hypotheses and their associated sub-hypotheses were developed within the conceptual framework and findings, as presented below:

H₁: School culture differs according to demographic characteristics. H_{1.1}: School culture differs by age. H_{1.2}: School culture differs by gender. H_{1.3}: School culture differs by position at school. H_{1.4}: School culture differs by educational background. H_{1.5}: School culture differs by type of school.

H₂: Perceptions of the learning organization differ according to demographic characteristics. H_{2.1}: Perceptions of the learning organization differ by age. H_{2.2}: Perceptions of the learning organization differ by gender. H_{2.3}: Perceptions of the learning organization differ by position at school. H_{2.4}: Perceptions of the learning organization differ by educational background. H_{2.5}: Perceptions of the learning organization differ by type of school.

H₃: School culture has a statistically significant effect on the learning organization. H_{3.1}: Task culture has a statistically significant and positive effect on personal mastery. H_{3.2}: Task culture has a statistically significant and positive effect on mental models. H_{3.3}: Task culture has a statistically significant and positive effect on shared vision. H_{3.4}: Task culture has a statistically significant and positive effect on systems thinking. H_{3.5}: Task culture has a statistically significant and positive effect on team learning.

H_{3.6}: Support culture has a statistically significant and positive effect on personal mastery. H_{3.7}: Support culture has a statistically significant and positive effect on mental models. H_{3.8}: Support culture has a statistically significant and positive effect on shared vision. H_{3.9}: Support culture has a statistically significant and positive effect on systems thinking. H_{3.10}: Support culture has a statistically significant and positive effect on team learning.

H_{3.11}: Achievement culture has a statistically significant and positive effect on personal mastery. H_{3.12}: Achievement culture has a statistically significant and positive effect on mental models. H_{3.13}: Achievement culture has a statistically significant and positive effect on shared vision. H_{3.14}: Achievement culture has a statistically significant and positive effect on systems thinking. H_{3.15}: Achievement culture has a statistically significant and positive effect on team learning.

H_{3.16}: Bureaucratic culture has a statistically significant and positive effect on personal mastery. H_{3.17}: Bureaucratic culture has a statistically significant and positive effect on mental models. H_{3.18}: Bureaucratic culture has a statistically significant and positive effect on shared vision. H_{3.19}: Bureaucratic culture has a statistically significant and positive effect on systems thinking. H_{3.20}: Bureaucratic culture has a statistically significant and positive effect on team learning. The model related to the formulated hypotheses is presented in Figure 1.

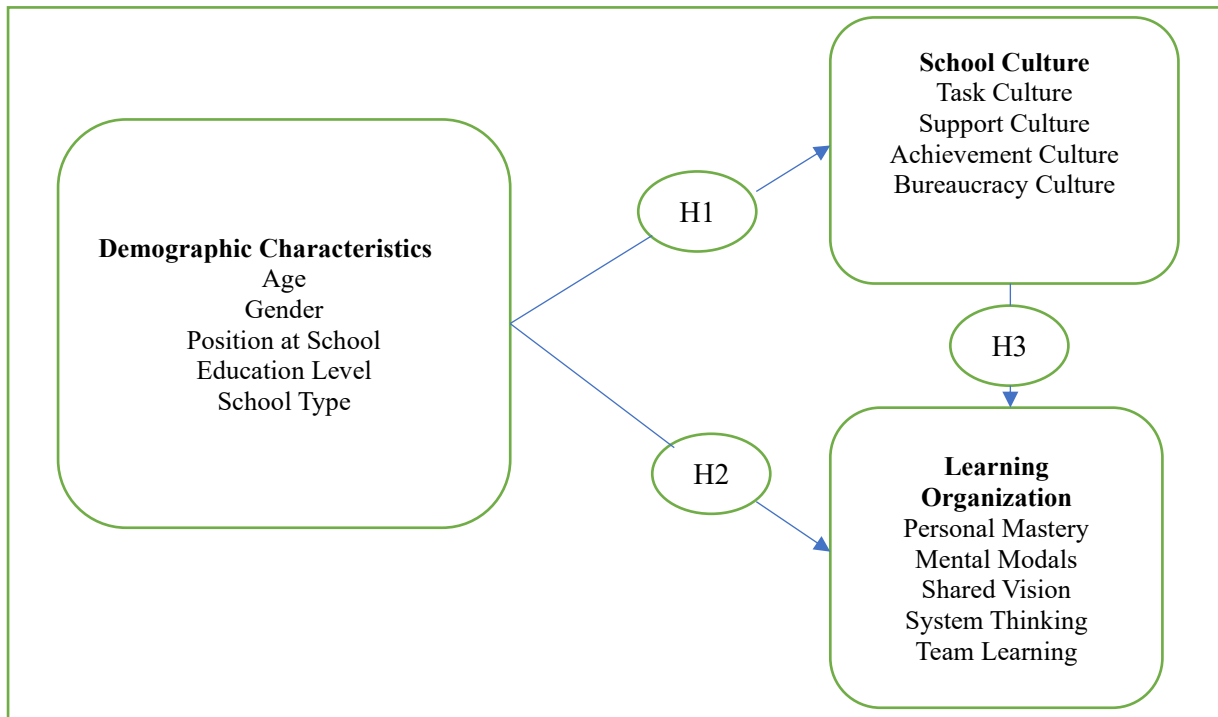


Figure 1: Research Model

2.2. Population and Sample

Secondary education institutions constitute the final stage of the 12-year compulsory education system and are responsible for preparing students for higher education, professional careers, and life. In this study, secondary schools were selected due to their mission of producing, utilizing, and transferring knowledge. In the province of Karabük and its districts, there are 1,336 teachers and administrators working in secondary education institutions. The sample size representing the population with a 95% confidence level was determined to be 307 (Tejada & Punzalan, 2012: 129). For participant selection, the convenience sampling method was employed, as it is a practical, fast, and cost-effective approach. The questionnaire was administered to 450 teachers and administrators working in secondary education institutions in Karabük and its districts, both online and face-to-face. The collected data were reviewed, and incomplete questionnaires were excluded from the analysis. A total of 418 questionnaire forms were deemed valid and included in the evaluation.

2.3. Data Collection Tools

In the study, the School Culture Scale developed by Terzi (2005) and the Learning Organization Perception Scale developed by Güçlü & Türkoğlu (2003) were used. Necessary permissions were obtained from the scale owners.

2.4. Data Analysis Method

The conformity of the scale items to normal distribution, as well as their skewness and kurtosis values, were tested along with reliability using the Cronbach Alpha (α) coefficient. Skewness and kurtosis values were found to be between +1,5 and -1.5. Confirmatory Factor Analysis (CFA) was conducted within the framework of Structural Equation Modeling (SEM) to test the validity of the factor structure of the scales used in the study. Convergent and discriminant validity of the scale items were also examined.

Since the data collected in the study were found to be normally distributed, Pearson's multiple correlation test was conducted among the dimensions. The hypotheses of the study were tested using Structural Equation Modeling (SEM) path analysis. Appropriate statistical methods such as t-test, ANOVA, and correlation analysis were used for the functional variables of the research. All data analyses were performed using SPSS 21.0 and AMOS software.

2.5. Scope and Limitations

This study is limited to the region of Karabük province and its districts, focusing on secondary education institutions as the school level, and the 2023-2024 academic year as the time frame. The research assumes that all schools possess cultural typologies to varying degrees. The data is restricted to responses from teachers, school principals, vice principals, and assistant principals. It is assumed that participants correctly understood and interpreted the survey items, and that those who responded online were inclined to share information in a virtual environment.

3. Findings

In this section of the study, the findings obtained through data analysis are presented. These include demographic findings, normality analysis results, descriptive statistical findings, confirmatory factor analysis results, reliability analysis findings, discriminant and convergent validity analysis, and structural equation modeling findings.

3.1. Demographic Distribution

In the study, a total of 450 participants working in secondary schools responded to the questionnaire; however, 32 questionnaires with unanswered items were excluded from the analysis. Among the 418

valid respondents, 54% were female and 46% were male; 80% were teachers and 20% were administrators. Participants under the age of 29 made up 9% of the sample, while those aged 30–39 accounted for 27%. Additionally, 40% of the participants were between 40 and 49 years old, and 24% were over the age of 50. Regarding educational background, 87% of the participants held a bachelor's degree, while 13% held a postgraduate degree. In terms of school type, 44% of the participating teachers and administrators worked at Anatolian High Schools, 43% at vocational high schools, and 13% at science high schools.

3.2. Normality Analysis

Normality tests were conducted for the School Culture Scale and the Learning Organization Perception Scale by examining skewness and kurtosis values. The skewness and kurtosis values for both scales were found to be within the range of -1.5 to +1.5. While values between -1 and +1 are considered excellent, values between -2 and +2 are also acceptable depending on the context (George & Mallery, 2010). Tabachnick & Fidell (2013: 73) indicate that values within the -1.5 to +1.5 range suggest a normal distribution. These findings indicate that the variables used in the study are normally distributed, which supports the use of parametric tests in the analyses.

3.3. Confirmatory Factor Analysis of the School Culture Scale

As part of the construct validity assessment, a Confirmatory Factor Analysis (CFA) was conducted on the School Culture Scale, which consists of four dimensions: task culture (6 items), support culture (8 items), achievement culture (6 items), and bureaucratic culture (9 items).

When the analysis results of the current study were examined, it was found that some items had factor loadings below the acceptable threshold of 0.50 (Gürbüz, 2021, p. 66). To achieve model fit, the following items with factor loadings below 0.50 were removed from the model: achievement 17 (-0.117), support 8 (0.100), achievement 19 (0.193), task 1 (0.368), task 6 (0.397), achievement 18 (0.421), bureaucracy 21 (0.448), and support 10 (0.483). The analysis was then repeated.

The results indicated that modification was necessary to improve model fit. Accordingly, covariances were assigned between the following item pairs: ach20-ach15, bur29-bur24, bur23-bur22, and sup13-sup7. After these adjustments, it was determined that the four-factor structure of the School Culture Scale was supported by a total of 21 items: 4 in task culture, 6 in support culture, 3 in achievement culture, and 8 in bureaucratic culture. The CFA findings related to the School Culture Scale are presented in Figure 2.

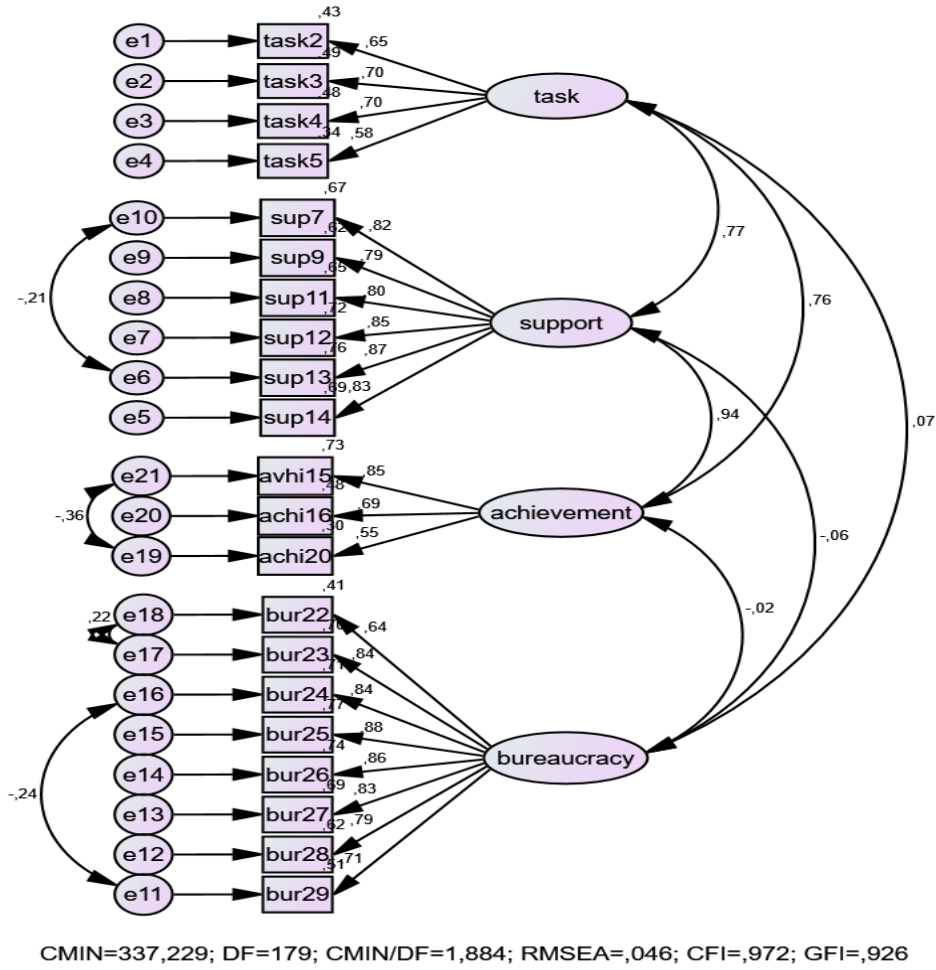


Figure 2: Confirmatory factor analysis of School Culture Scale

3.4. Confirmatory Factor Analysis of the Learning Organization Scale

As part of the construct validity assessment, Confirmatory Factor Analysis (CFA) was conducted on the Learning Organization Perception Scale, which consists of five dimensions: personal mastery (5 items), mental models (7 items), shared vision (10 items), systems thinking (9 items), and team learning (10 items).

As a result of the index review, the following items were found to have low factor loadings or covariance with variables under other factors: item 32 from the team learning dimension; items 20, 14, and 13 from the shared vision dimension; item 25 from the systems thinking dimension; and item 4 from the personal mastery dimension. Additionally, shared vision item 22, systems thinking items 31 and 24, and team learning items 37, 33, and 35 were identified as having covariance with variables under different factors. These items were thus removed from the analysis. It is considered appropriate to exclude items that tend to load on other factors or that produce measurements highly like other factors (Gürbüz, 2021: 77–78). To improve model fit indices, covariance was added between the following item pairs: pm2–pm1, st28–st26, sv16–sv15, sv18–sv15, mm8–mm6, tl40–tl39, mm12–mm7, and sv21–sv19. The analysis was then repeated.

As a result of the improvements made, the five-factor structure of the Learning Organization Scale was supported by a total of 29 items: 4 items for personal mastery, 7 for mental models, 6 for shared vision, 6 for systems thinking, and 6 for team learning. The Confirmatory Factor Analysis (CFA) findings related to the Learning Organization Scale are presented in Figure 3.

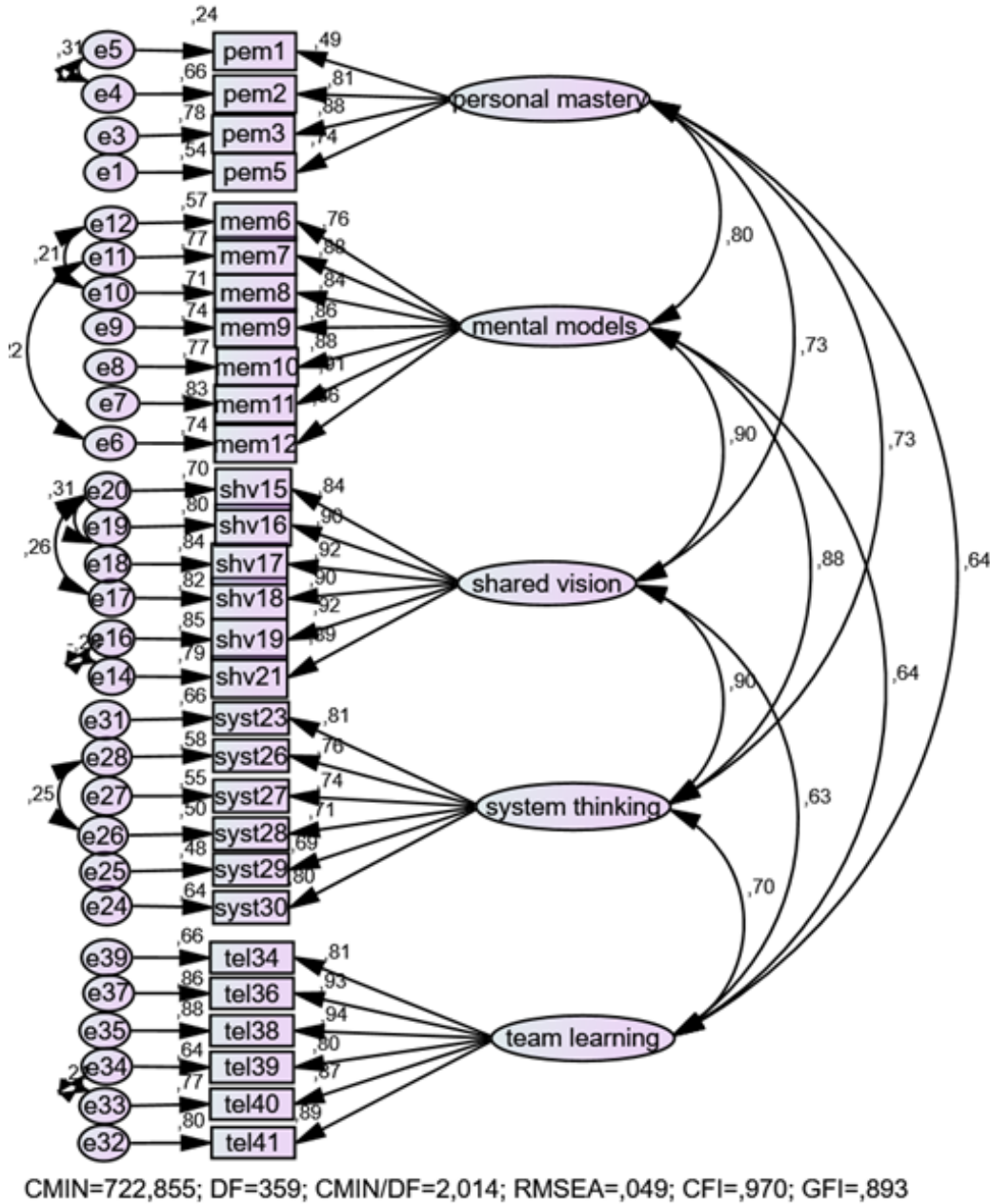


Figure 3: Confirmatory factor analysis of Learning Organization Perception Scale

3.5. Validity and Reliability Analysis Findings

The convergent and discriminant validity of the scales, whose structural validity was tested through confirmatory factor analysis, were examined. AVE (Average Variance Extracted) is calculated by dividing the sum of the squared standardized factor loadings by the number of items. CR (Composite Reliability) is calculated considering the standardized factor loadings and error variances. It is expected that the CR value is greater than 0.7, the AVE value is greater than 0.5, and the CR value is higher than the AVE value (Hair et al., 2014: 124; Fornell & Larcker, 2012: 45-46). AVE and CR values are presented in Table 1.

Table 1: *Cronbach Alpha, and CR values*

Scale	Number of Item	AVE	CR	α
School Culture	21	0.594	0.968	0.880
Task Culture	4	0.510	0.753	0.748
Support Culture	6	0.683	0.928	0.925
Achievement Culture	3	0.502	0.701	0.656
Bureaucracy Culture	8	0.642	0.934	0.932
Learning Organization	29	0.695	0.984	0.971
Personal Mastery	4	0.555	0.827	0.826
Mental Modals	7	0,733	0.950	0.950
Shared Vision	6	0.801	0,960	0.961
System Thinking	6	0.565	0.886	0.889
Team Learning	6	0.768	0.951	0.952

Table 1 shows that the AVE values for the variables are above 0.50, and the CR values are above 0.70. Therefore, it has been determined that the variables used in the study meet both discriminant and convergent validity. Looking at the Cronbach's Alpha values of the scales and their sub-dimensions in the table, it was concluded that the School Culture Scale, consisting of 21 items ($\alpha=0.880$), and the Learning Organization Perception Scale, consisting of 29 items ($\alpha=0.971$), along with their sub-dimensions, are reliable.

3.6. Correlation Analysis

Pearson multiple correlation analysis was conducted to examine the relationship between school culture and the learning organization. Positive and significant relationships were found at low, moderate, and high levels among these variables. The values related to the analysis are presented in Table 2.

Table 2: *Correlation Analysis Results for School Culture and Learning Organization*

		TASK	SUPP	ACHI	BUR	PEM	MEM	SHV	SYST	TEL
TASK	r	0.659^a								
SUPP	r	0.634**	0.826^a							
ACHI	r	0.587**	0.773**	0.708^a						
BUR	r	0.093	-0.039	0.027	0.801^a					
PEM	r	0.488**	0.499**	0.568**	0.151**	0.744^a				
MEM	r	0.558**	0.715**	0.699**	0.024	0.713**	0.856^a			
SHV	r	0.504**	0.607**	0.619**	0.002	0.659**	0.852**	0.894^a		
SYST	r	0.492**	0.648**	0.649**	0.051	0.618**	0.788**	0.815**	0.751^a	
TEL	r	0.317**	0.423**	0.499**	0.124*	0.649**	0.605**	0.605**	0.654**	0.876^a

Note: Task: Task Culture, Supp: Support Culture, Achi: Achievement Culture, Bur: Bureaucracy Culture, Pem: Personal Mastery, Mem: Mental Models, Shv: Shared Vision, Syst: System Thinking, Tel: Team Learning.

The diagonal values (a) are the square root values of the Average Variance Explained (AVE).

To ensure discriminant validity of the scales, the square root of the calculated AVE value for a variable must be greater than its correlations with other variables (Hair et al., 2014: 124; Fornell & Larcker, 2012: 45-46). Table 3 shows that this condition is met for both scales. Based on this, it can be stated that the scales used in the study possess discriminator validity.

3.7. Findings Related to Hypothesis Testing

The hypotheses H1, stating that school culture varies according to demographic characteristics, and H2, stating that the perception of the learning organization varies according to demographic characteristics, were analyzed using t-tests and ANOVA in SPSS. The hypothesis H3, which states that school culture has a statistically significant effect on the perception of the learning organization, was tested using

Structural Equation Modeling (SEM) in AMOS. The t-test and ANOVA results related to demographic characteristics are presented in Tables 3, 4, and 5.

Table 3: *Anova Test Results Related to the Variable Age*

	Groups	x	ss	F	p	Significant Difference	Hypotheses
School Culture	Under 29	3.54	.66	4.492	.021	Under 29 and 40-49	Accepted
	30-39 years	3.68	.56				
	40-49 years	3.81	.42				
	50 and above	3.82	.45				
Learning Organization	Under 29	3.74	.79	8.872	.000	Under 29 and 50 above	Accepted
	30-39 years	3.92	.79			Under 29 and 40-49	
	40-49 years	4.46	.65			Under 29 and 50 above	
	50 and above	4.19	.71			30-39 and 40-49	
						30-39 and 50 above	

As seen in Table 3, school culture and learning organization perception differ according to age. In the school culture scale, the differences are between employees under 29 and those aged 40-49, as well as between employees under 29 and those over 50. Regarding learning organization perception, differences exist between employees under 29 and those aged 40-49 and over 50, as well as between employees aged 30-39 and those aged 40-49, and between employees aged 30-39 and those over 50.

Table 4: *t-Test Results Related to Gender, School Position and Education Level Variables*

Variables	Groups	χ	S.S.	t	N	p	Hypotheses
School Culture	Female	3.72	.52	-1.212	334	0,22	Not accepted
	Male	3.78	.48		84		
Learning Organization	Female	4.05	.52	-1.614	334	0,10	Not accepted
	Male	4.17	.48		84		
School Culture	Teacher	3.74	.51	-0.556	334	0,026	Accepted
	Administrator	3.78	.44		84		
Learning Organization	Teacher	4.00	.71	-0.556	334	0,000	Accepted
	Administrator	4.54	.54		84		
School Culture	Undergraduate	3.76	.49	1.143	334	0,254	Not accepted
	Graduate	3.68	.57		84		
Learning Organization	Undergraduate	4.00	.71	2.027	334	0,043	Accepted
	Graduate	4.54	.88		84		

Table 4 shows that school culture and learning organization perception do not differ by gender, but they do differ according to the role in the school. In both scales, administrators' perceptions are found to be higher than those of teachers. While school culture does not vary by education level, learning organization perception does.

Table 5: *Anova Test Results for School Type Variable*

Variables	Groups	x	ss	F	p	Significant Difference	Hypotheses
School Culture	Anatolian High School	3.69	.50	2.533	.081		Not Accepted
	Technical High School	3.80	.48				

Learning Organization	Science High School	3.79	.55	4.115	.017	Anatolian High School- Science High School	Accepted
	Anatolian High School	4.19	.68				
	Technical High School	4.09	.77				
	Science High School	3.87	.79				

Table 5 shows that school culture does not differ according to the type of school, but there is a difference in the perception of the learning organization. This difference exists between Anatolian High Schools and Science High Schools, with the highest perception observed among employees of Anatolian High Schools.

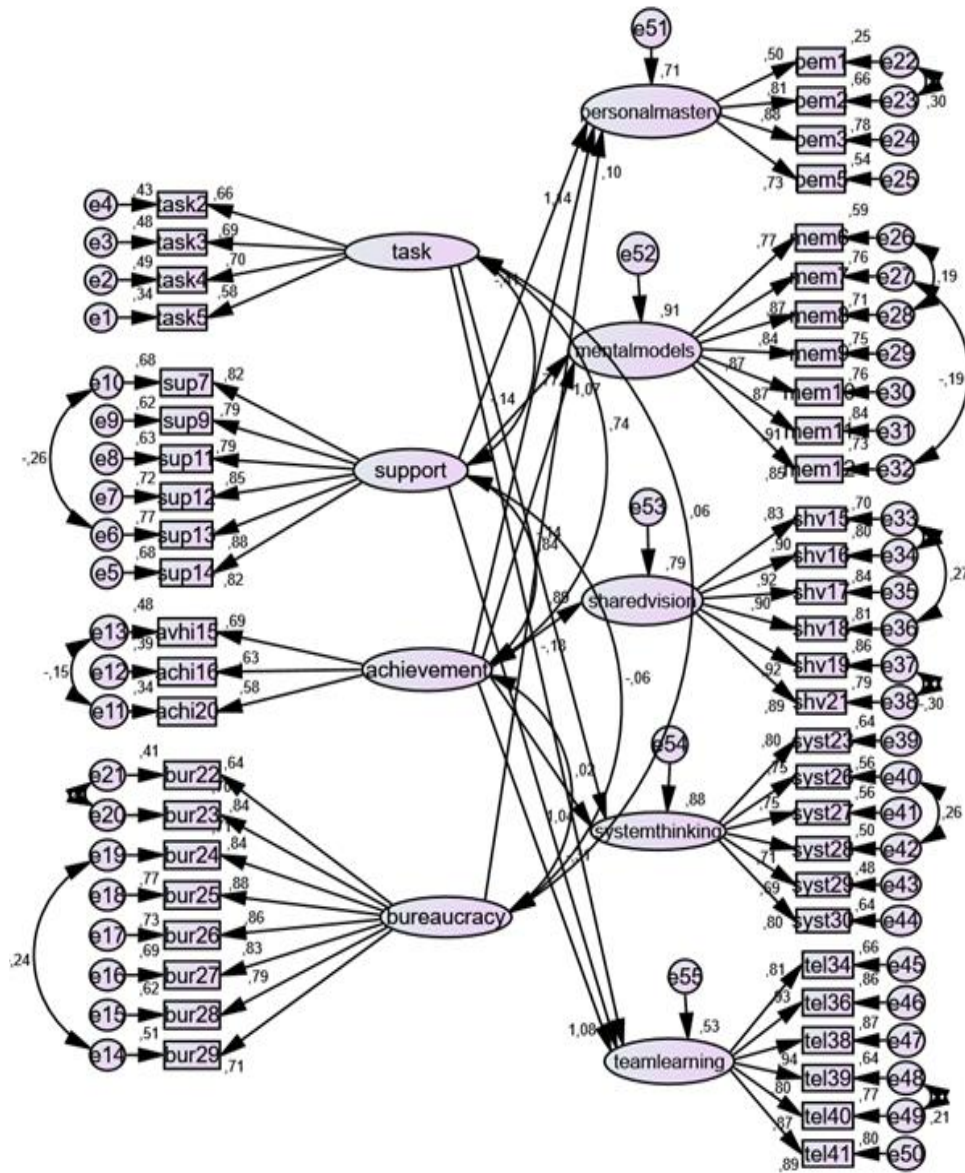


Figure 4: The Structural Equation Model Created Between the School Culture and Learning Organization Perception Scale

Figure 4's path analysis results show that the explained variance is 71% ($R^2=0.710$) for personal mastery, 91.2% ($R^2=0.912$) for mental models, 79.3% ($R^2=0.793$) for shared vision, 87.6% ($R^2=0.876$) for system thinking, and 52.7% ($R^2=0.527$) for team learning.

For testing Hypothesis H3 of the study, path diagrams were drawn between the sub-dimensions of school culture (task, support, achievement, bureaucracy culture) and the sub-dimensions of the learning organization (personal mastery, mental models, shared vision, systems thinking, team learning). The obtained model fit indices were found within acceptable ranges as follows: $\chi^2/df = 1.959$, RMSEA = 0.050, CFI = 0.941, GFI = 0.820. These results indicate that the model has a good fit. The hypotheses and their acceptance statuses are presented in Table 6.

Table 6: *Hypotheses Test Results*

Hypotheses				Result
H _{1.1}	School Culture	→	Age	Accepted
H _{1.2}	School Culture	→	Gender	Not Accepted
H _{1.3}	School Culture	→	Position at School	Accepted
H _{1.4}	School Culture	→	Education Level	Not Accepted
H _{1.5}	School Culture	→	School Type	Not Accepted
H _{2.1}	Learning Organization	→	Age	Accepted
H _{2.2}	Learning Organization	→	Gender	Not Accepted
H _{2.3}	Learning Organization	→	Position at School	Accepted
H _{2.4}	Learning Organization	→	Education Level	Accepted
H _{2.5}	Learning Organization	→	School Type	Accepted
H _{3.1}	Task Culture	→	Personal Mastery	Not Accepted
H _{3.2}	Task Culture	→	Mental Modals	Not Accepted
H _{3.3}	Task Culture	→	Shared Vision	Not Accepted
H _{3.4}	Task Culture	→	System Thinking	Not Accepted
H _{3.5}	Task Culture	→	Team Learning	Not Accepted
H _{3.6}	Support Culture	→	Personal Mastery	Not Accepted
H _{3.7}	Support Culture	→	Mental Modals	Not Accepted
H _{3.8}	Support Culture	→	Shared Vision	Not Accepted
H _{3.9}	Support Culture	→	System Thinking	Not Accepted
H _{3.10}	Support Culture	→	Team Learning	Not Accepted
H _{3.11}	Achievement Culture	→	Personal Mastery	Accepted
H _{3.12}	Achievement Culture	→	Mental Modals	Accepted
H _{3.13}	Achievement Culture	→	Shared Vision	Accepted
H _{3.14}	Achievement Culture	→	System Thinking	Accepted
H _{3.15}	Achievement Culture	→	Team Learning	Accepted
H _{3.16}	Bureaucracy Culture	→	Personal Mastery	Accepted
H _{3.17}	Bureaucracy Culture	→	Mental Modals	Not Accepted
H _{3.18}	Bureaucracy Culture	→	Shared Vision	Not Accepted
H _{3.19}	Bureaucracy Culture	→	System Thinking	Not Accepted
H _{3.20}	Bureaucracy Culture	→	Team Learning	Not Accepted

The study's hypotheses H_{3.1} (the effect of task culture on personal mastery), H_{3.2} (on mental models), and H_{3.3} (on shared vision) were found to be not significant ($p > 0.05$). However, H_{3.4} (effect on systems thinking, $\beta = -0.145$, $p < 0.05$) and H_{3.5} (effect on team learning, $\beta = -0.180$, $p < 0.05$) showed significant negative effects. Therefore, these hypotheses were rejected.

The study's hypothesis H_{3.11} (the effect of success culture on personal mastery, $\beta = 1.143$, $p < 0.05$), H_{3.12} (on mental models, $\beta = 1.073$, $p < 0.05$), H_{3.13} (on shared vision), H_{3.14} (on systems thinking, $\beta = 1.037$, $p < 0.05$), and H_{3.15} (on team learning, $\beta = 1.077$, $p < 0.05$) were found to have positive and significant effects. Therefore, these hypotheses were accepted.

The study's hypothesis H_{3.16}, stating that bureaucratic culture has a positive and significant effect on personal mastery ($\beta = 1.143$, $p < 0.05$), was accepted. However, hypotheses H_{3.17} (mental models, $p > 0.05$), H_{3.18} (shared vision, $p > 0.05$), H_{3.19} (systems thinking, $p > 0.05$), and H_{3.20} (team learning, $p > 0.05$) were rejected due to the lack of significant effects.

4. Discussion, Conclusion and Recommendations

Regarding the study's hypotheses H1: School culture differs according to demographic characteristics, and H2: Perception of the learning organization differs according to demographic characteristics, the finding that school culture significantly differs by age ($p = 0.021$; $p < 0.05$) is consistent with the results of Işık (2017, p. 67), Ören (2005, p. 18), and Çoban et al. (2021, p. 1165), but contradicts the findings of Demirtaş et al. (2019, p. 19) and Bakan (2008, p. 15), who reported no age-based differences in school culture. The observed difference between participants under the age of 29 and those in other age groups, along with the trend of increasing mean scores with age, may be attributed to the fact that individuals with longer teaching experience are more likely to internalize and integrate with the organizational culture. The differentiation of school culture based on age may also be explained by the nature of culture as a phenomenon that is transmitted from individual to individual and across generations.

While the perception of the learning organization significantly differed by age ($p = 0.000$; $p < 0.05$), it is noteworthy that the highest mean scores were observed among participants aged 40–49, and the lowest among those under 29. This finding aligns with the results of Banoğlu and Peker (2012: 78), but contradicts those of Aydemir and Koşar (2019: 257), who found no significant age-related difference. An increase in age—and thus professional experience—appears to strengthen individuals' connection with and perception of the learning organization. It may also be interpreted that young teachers perceive the learning organization more strongly as a means of personal development and of demonstrating their growth to colleagues. On the other hand, employees under the age of 29 may still be in the process of adapting to and integrating with the organization, which could lower their perception of it as a learning organization. Therefore, hypotheses H_{1.1} and H_{2.1} were accepted.

School culture ($p=0.22$; $p>0.05$) and perception of the learning organization ($p=0.010$; $p>0.05$) do not differ according to gender. This result aligns with the findings of Kurt (2012: 158) and Çoban et al., (2021: 1165), who found no gender differences in school culture, as well as with studies by Aydemir and Koşar (2019, p.256), Bilir & Arslan (2016: 249), and Helvacı & Karadurmuş (2015: 56), which reported no gender differences in the perception of the learning organization. Therefore, hypotheses H_{1.2} and H_{2.2} were not accepted.

School culture ($p=0.026$; $p<0.05$) and perception of the learning organization ($p=0.000$; $p<0.05$) significantly differed in favor of favoring administrators based on the role variable within the school. This result supports the findings of Güleş & Çağlayandereli (2021: 191), but contradicts those of Tuna (2021: 213), who reported no significant difference between organizational culture types and having an administrative role, and Şahin (2010: 570), who found no significant difference between the perceptions of administrators and teachers regarding school culture. A possible explanation for this may be that administrators are engaged in all aspects of the school and the educational process, viewing the school as an integral part of the education system. In contrast, teachers may limit their responsibilities to their classrooms and subjects, believing that they are not accountable for the overall functioning of the school and expecting administrators to intervene when issues arise. This perception may explain why teachers' views of the learning organization are lower than those of administrators. Therefore, hypotheses H_{1.3} and H_{2.3} were accepted.

While school culture did not significantly differ according to educational background ($p=0.254$; $p>0.05$) the perception of the learning organization did show a significant difference ($p=0.043$; $p<0.05$). The perception of school culture was higher among participants with a bachelor's degree, whereas the perception of the learning organization was higher among those with a postgraduate degree. This finding contrasts with the results of Bilir and Arslan (2016: 249) and Aydemir and Koşar (2019: 259), who found no significant difference in perceptions of the learning organization based on educational background. The variation in research findings may reflect the evolving understanding of education and the

increasing value placed on postgraduate education. The higher perception of school culture among bachelor's degree holders may be due to postgraduate participants having higher expectations that they feel are not being met by administrators without postgraduate qualifications. According to Baltaş (2019: 11), today's administrators are often unable to meet the complex needs of the modern world. Additionally, their lack of professionalism and the time they spend dealing with crises may also contribute to their failure to meet these expectations. Therefore, hypothesis H_{1.4} was rejected, while hypothesis H_{2.4} was accepted.

There was no significant difference between school culture and the type of school variable ($p=0.081$; $p>0.05$), however, the perception of the learning organization differed significantly according to school type. The highest mean scores for the perception of the learning organization were observed among employees of Anatolian High Schools and Science High Schools. This difference may be attributed to the nature of vocational high schools, which prioritize meeting expectations related to vocational training rather than academic achievement. The findings of Bilir and Arslan (2016: 250) similarly indicate that perceptions of the learning organization vary depending on the type of school in which one works. Therefore, hypothesis H_{1.5} was rejected, while hypothesis H_{2.5} was accepted.

According to the analysis results related to the third hypothesis and its sub-hypotheses, task culture negatively affects the dimensions of systems thinking and team learning. There is no significant relationship between task culture and the dimensions of personal mastery, mental models, and shared vision. This can be explained by the result-oriented nature of task culture. Since the entire focus is on skills and completing the task in the best way, employees may be driven to act individually. Evaluations related to tasks tend to reward individual effort. In other words, management is focused on high productivity (Bamidele, 2022: 6). Participants may be acting individually, avoiding team participation, and evaluating events separately rather than seeing them as a system. This finding contradicts research results that show school culture predicts the learning organization and those that find shared vision and team learning positively influenced by school culture (Kendir et al., 2019: 899; Otieno et al., 2016: 85).

The other sub-hypothesis focuses on the effect of support culture on the learning organization. Support culture has a negative impact on personal mastery, mental models, and team learning. This result differs from Ayık & Şayir's (2015: 388) finding that school culture positively affects the systems thinking and team learning dimensions of the learning organization. Akdemir & Çukacı (2005: 1191) also found that a supportive organizational culture positively influences the elements of a learning organization within the organization. Although this negative finding regarding support culture is surprising, it suggests that individuals who are supported may be less motivated to put effort into their own development. The protective nature of support may limit individual expertise and creativity. No significant relationship was found between support culture and shared vision or systems thinking.

The sub-hypotheses related to achievement culture revealed that it has a positive and significant effect on all dimensions of the learning organization. Individuals who aim for success tend to engage in activities that enhance their own competencies. Achievement culture requires the integration of organizational goals with individual objectives. In this way, employees not only achieve their personal goals but also contribute to the realization of the organization's vision. The success dimension of organizational culture influences both the organization's learning capacity and the manner in which learning takes place (Ayden & Düşükcan, 2002: 132). This finding is significant as it serves as evidence that personal knowledge and skills are acknowledged and appreciated.

Regarding the sub-hypotheses about bureaucratic culture, it was found that bureaucratic culture has a positive effect on personal mastery. This suggests that in a school where bureaucratic culture is dominant, members who feel bureaucratic pressure tend to invest more in their individual development. Bureaucratic culture is characterized by a strong sense of hierarchical relationships. Members who want

to be stronger against bureaucracy may seek to strengthen their position within the organization through their individual skills and expertise. Bureaucracy is strictly rule-bound. Broadly, it is seen as an organizational structure arranged according to hierarchy; narrowly, it refers to the civil servant class and its administration (Çiftçi & Şen, 2024: 1057). In learning organizations, discovering orientations that reduce bureaucracy can lead to more flexible behaviors and positive change, which are relatively newer managerial insights (Jamali et al., 2006: 347).

Within the scope of the hypotheses, the correlation relationships between the sub-dimensions of the variables were examined without formal testing, revealing that the highest perception was in the task culture, while the lowest was in the bureaucratic culture. According to this finding, it can be said that high schools have a task-oriented culture where the task is prioritized. These results align with the findings of Balçık & Ordu (2019: 105), Çağan et al., (2022: 46), Işık (2017: 69), and Peker & Demirhan (2022: 10), which also show the highest average in the task culture dimension and the lowest average in the bureaucratic culture dimension. Terzi's (2005: 433) finding that the most perceived culture is task culture supports the results of this study. The low perception of bureaucratic culture may be due to the changing management approach, suggesting that schools are managed less by bureaucratic methods. Despite the centralized structure of the Ministry of National Education system, teachers do not perceive school management as oppressive. Positive correlations were detected among the dimensions other than bureaucratic culture. The positive correlation between support culture and achievement culture suggests that participants perceive organizational support as a prerequisite for success.

Among the dimensions of the learning organization, the highest perceptions are in mental models and shared vision, while the lowest are in personal mastery and team learning. These results are supported by Bilir & Arslan (2016: 252), Aydemir & Koşar (2019: 261), Güleş & Çağlayandereli (2012: 195), and Ayık & Şayir (2015: 388), but they contradict Ertürk's (2022: 176) study. The correlation analysis among the learning organization dimensions shows positive and significant relationships between the dimensions. The positive and strong correlation between personal mastery and mental models indicates that teachers with high levels of competence who utilize various ways of accessing knowledge have interconnected patterns of thinking and perspectives. In other words, teachers who expand their areas of personal expertise through the production and use of knowledge can be seen as a result of diversity in mental models.

Based on the findings of the study, the following recommendations can be made:

Efforts should be intensified in schools to promote a culture of achievement; teachers' individual efforts should be recognized, and a management approach that rewards success and supports professional development should be adopted. On the other hand, the positive effect of bureaucratic culture on personal mastery indicates that a structured and rule-based school environment can support individual growth. In this context, implementing a more flexible and collaborative bureaucratic model can be recommended. Innovative approaches can be developed to reduce the restrictive impact of bureaucratic culture on team learning and mental models.

Contrary to expectations, the negative impact of support culture on the learning organization may warrant an in-depth investigation into how the support mechanism is perceived and its relation to the perception of pressure. Additionally, the findings could be reinforced through studies conducted in different sectors and with diverse samples.

In an era marked by great uncertainty, school leaders can be encouraged to engage in studies related to organizational culture to build a school environment that strengthens organizational capacity for adaptation, resilience, and innovation, and promote holistic development. The effects on existing cultures on learning processes can be analyzed to develop cultural transformation strategies. In schools,

both organizational and individual goals are important. Therefore, it is recommended that school objectives be reviewed and realigned to support, rather than conflict with, personal educational goals.

School administrators may be encouraged to prioritize practices that promote collaboration, foster participatory decision-making processes, and strengthen organizational learning. Furthermore, increasing supportive mechanisms aimed at enhancing school culture and encouraging teachers' participation in professional learning communities may be beneficial during the development and implementation of educational policies.

This research, conducted in public secondary education institutions in Karabük province and its districts, can be carried out in cities from different regions of Türkiye, at various school levels, and in private educational institutions. Qualitative or mixed-method studies that explore the dynamism of school culture in depth may contribute significantly to the theoretical framework.

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Makale Bilgi Formu

Yazarın Katkıları	Makaleye her iki yazar da eşit katkı sağlamıştır.
Çıkar Çatışması Bildirimi	Yazarlar tarafından potansiyel çıkar çatışması bildirilmemiştir.
Destek/Destekleyen Kuruluşlar	Bu araştırma için herhangi bir kamu kuruluşundan, özel veya kar amacı gütmeyen sektörlerden hibe alınmamıştır.
Etik Onay ve Katılımcı Rızası	Bu çalışmanın etik kurul izni 26.09.2026 tarih ve 277387-6 sayılı izin ile Karabük Üniversitesi Sosyal ve Beşerî Bilimler Bilimsel Araştırma ve Yayın Etiği Kurulundan alınmıştır.
