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The Mediating Role of Innovative School Characteristics in the Relationship Between School Culture and School Effectiveness

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ABSTRACT

In this study, which was conducted to examine the role of school innovation characteristics in the relationship between the dominant culture type characteristics in the school and the effectiveness of the school, the School Culture, School Effectiveness, and Innovative School Characteristics scales were collected from 386 teachers working in public schools in the province of Kütahya via an online form. The data obtained from the participants was evaluated using measurement models and mediation analyses in line with the hypotheses, as well as the validity and reliability analyses and the prerequisite evaluations of the analyses to be made. According to the results obtained, while the innovative features of the schools have a full mediating role in the relationship with school effectiveness between support culture and success culture, a partial mediation effect was observed in the task culture type. In the bureaucratic culture type, no mediation effect of the innovativeness feature was detected.

Keywords:

School effectiveness, innovative school characteristics, school culture

1. Introduction

The success of the students in academic, psychological, social, and all other areas of development and the realization of all educational goals depend on the effectiveness of the school. School effectiveness, which is the product of complex interactions that cannot be reduced to a single dimension, represents a collective structure that requires the participation of all stakeholders. For this reason, it is possible to see school effectiveness as a result shaped by the management approach, living, working, interaction and communication styles, and organizational values and beliefs of the entire school organization. It is possible to define effective schools as schools that can use educational resources in the most effective way for students' cognitive, social, psychological, and all other development areas, are determined to achieve educational goals, and achieve success in creating a functional learning environment. On the basis of an effective school understanding, there are school characteristics in which all students are encouraged to learn, high expectations are developed for students, and all stakeholders, especially teachers, can make a difference in learning processes (Balçı, 1988; Lezotte, 1992).

School effectiveness is one of the important concepts in the field of educational research and practice that aims to understand and improve the effectiveness of schools and their impact on student learning and development. The concept of school effectiveness is defined as the extent to which a school is successful in achieving its educational goals and objectives (Hoeben, 2022; Kauts & Sharma, 2017). Effective schools adopt instructional leadership with visionary and proactive administrators who care about goals such as setting goals, promoting a culture of development, and providing support to teachers.

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Considering the possible benefits and harms in terms of school effectiveness, the qualities of school culture that are jointly built and maintained by school stakeholders are extremely important. The characteristics of the culture built in schools, on the other hand, are defined as school culture types in the literature and determine the way school stakeholders perceive, make sense of, and affect what is happening around them; they become evident within the framework of a structure consisting of established values, acceptances, and expectations (Cameron and Quinn, 1999; Schein, 2004). school culture; behavior patterns at school; perceptions and attitudes towards the school (Deal & Peterson, 1999); professional development of staff and increasing the quality of students' learning experiences (Engels et al., 2008); subjective well-being levels of school stakeholders (Fullan, 2001); academic success (Leithwood & Louis, 2002).

In the related literature, four basic school culture types are mentioned in a classification that is frequently used to define possible school culture types: support culture, bureaucratic culture, success culture, and task culture (Terzi, 2005). Mutual relations, cooperation, and trust are at the forefront of the support culture (Sezgin, 2010). Individuals strive to fulfill their duties in the best way possible. Concrete support, honest and open communication, and prioritizing problem solving are core values. On the other hand, bureaucratic culture includes a more rational perspective and emphasizes rules-based organizations (Işık, 2017). In this culture, the desire for control is at the forefront, as is adherence to established rules and standards. In the culture of success, on the other hand, the focus is on fulfilling the tasks effectively (Sezgin, 2010). In this culture, emphasis is placed on the collective perspective to accomplish tasks and achieve goals, as opposed to rigid processes or procedures. Finally, task culture is defined as a project-oriented culture that states that organizational goals take precedence over individual goals (Çaçan et al., 2022). Employees have specific roles for which they are responsible, and there is an emphasis on the need for individuals with the necessary skills.

One of the most frequently repeated terms in the 21st century is the concept of innovation. In the context of education, the concept of innovation is defined as a process in which ideas, practices, methods, and technologies aiming at improvement and development in the learning, teaching, and education ecosystem are systematically addressed (Sofanudin & Rokhman, 2016; Guzman & Jaillier-Castrillon, 2021). In this direction, innovation in education empowers stakeholders in educational institutions to be open to change, embrace new opportunities, achieve positive outcomes, and address the development mindset for dynamic and inclusive learning environments. One of the sub-terms that emerged in the context of innovation in education was the concept of an innovative school. Innovative school concept: It emphasizes educational institutions that determine creative and forward-thinking approaches to learning, teaching, and organizational practices (Tubin, 2008). In this context, innovative schools have distinctive features and core values. First, in innovative schools, personalized learning experiences are included according to individual student needs, interests, and wishes (Korhonen et al., 2014). To this end, it attaches importance to flexible teaching models, project-based learning, and the integration of educational technologies that support personalization. In addition, importance is given to the skills emphasized in the 21st century, such as collaboration, idea sharing, creative problem solving, and risk-taking in innovative schools (Pearlman, 2010). Curiosity, critical thinking, and innovation are essential. These skills are given importance not only in the direction of the present but also in the development of skills for the future. In addition, continuous professional development and support of teachers in innovative schools is one of the highlights (Bissakar & Heath, 2005). In innovative schools, teachers are given the opportunity to use new teaching strategies and try out new technologies. In summary, innovative schools focus on innovation in teaching, learning, and organizational practices by adopting creative and forward-thinking approaches. These schools prioritize personalized learning, encourage collaboration and risk-taking, emphasize future-ready skills, and invest in teacher professional development. Innovative schools are of great importance to educators, administrators, and policymakers who aim to create dynamic and student-centered educational environments to prepare students for success in an ever-changing world.

When the literature is examined, it is seen that there are studies on school culture, innovation, and school effectiveness. The results obtained in the study of Zhu (2015), which focuses on organizational culture and technology-supported innovation in the context of higher education, revealed that the characteristics of the institutional culture play an important role in teachers' perceptions of innovation and their willingness to adopt and implement technology-supported innovation. In addition, Selvaraja and Pihie (2015) focused on school culture and school innovation in their study. In the study of primary school teachers, it was revealed that schools exhibited a high level of clan culture, while innovativeness was at a moderate level. Riveras-Leon

et al. (2020) also examined organizational culture through the role of school administrators in innovative schools. The results obtained in the study emphasize that school administrators have an important role in promoting innovation. Among the leadership practices that are important in the context of providing an innovation culture, there are expressions such as being responsible for results, change management, applying for creative solutions, and collective effort. As a result, studies on school culture and innovation show that teachers prefer an innovative culture, that organizational culture plays an important role in teachers' perceptions of innovation and their willingness to adopt and implement technology-supported innovation, that school administrators have an important role in promoting innovation, and that leadership practices affect the innovation culture.

There are also studies on innovation and school effectiveness in the literature. For example, the study by Haelermans and Witte (2012) focused on the impact of innovation on school effectiveness in secondary schools in the Netherlands. Findings from the study revealed that there is a positive relationship between innovativeness and school effectiveness. While it was emphasized that innovations related to school profile, pedagogy, processes, and the education system significantly increased school effectiveness, it was stated that innovations focusing on the professional development of teachers did not have a significant impact on school effectiveness. Another study on innovation and school effectiveness has focused on school administrators' ability to manage change (Yürek & Cömert, 2021). The results revealed that there is a positive and weak relationship between school effectiveness and administrators' ability to manage change. In the study conducted by Gilad-Hai and Somech (2016), the relationship between innovation in schools and school effectiveness was examined in the context of experimental schools. The findings obtained at the end of the study revealed that the innovation implementation process contributes to organizational effectiveness. In the study, which included control and experimental groups, it was stated that schools in the experimental group showed higher levels of organizational innovativeness compared to the control group. As a result, while innovation and school effectiveness research emphasizes that innovation has a positive effect on school effectiveness, it also emphasizes the importance of school administrators' ability to manage change.

One of the subjects among the studies on school effectiveness has been the study examining the relationship between school effectiveness and school culture. For example, Şenel and Buluç (2016) focused on the relationship between school climate and school effectiveness in their study. In the study, it was revealed that there was a positive and moderately significant relationship between school climate and school effectiveness, and it was stated that school climate predicted school effectiveness. Similarly, in the study conducted by Korkmaz and Ada (2019), school climate and school effectiveness. A study indicates that the school climate is a significant and powerful predictor of school effectiveness. Studies on school culture and school effectiveness have also been carried out on a global scale. For example, in the study conducted by Duan et al. (2018), school culture and school effectiveness were discussed in the context of teachers' job satisfaction. In the study from China, it was stated that there was a positive relationship between school culture, school effectiveness, and teachers' professional satisfaction. Another study conducted in the context of school effectiveness and school culture was conducted by Ali et al. (2017) in the context of Pakistan. The results indicated that the current school culture level of schools in Pakistan is low, while there is a significant relationship between school culture and school effectiveness. It was also emphasized that a high level of school culture would be helpful for high school effectiveness. Ismail et al. (2022) carried out a similar study within the scope of public schools in the Maldives. In a study, it was stated that school culture and school effectiveness are high in the Maldives. It was also stated that school culture has a significant impact on school effectiveness. In summary, studies examining the relationship between school effectiveness and school culture reveal that factors such as school climate, school culture, and job satisfaction have positive and significant effects on school effectiveness and that high school culture is an important factor for high school effectiveness.

As seen in these previous studies, there are many separate studies on the relationship between school culture, school innovation characteristics, and school effectiveness. However, there is no study in the literature that addresses these three variables together. From this perspective, this study has the potential to fill a theoretical gap in the literature. Moreover, the aim of testing the three variables with a mediation model makes this study methodologically unique.

The aim of this research is to determine how organizational culture types play a role in school effectiveness through innovative school creation. The hypotheses tested for the purpose of the research are as follows:

H₁: Support culture positively affects school effectiveness through schools' innovativeness levels.

H₂: Success culture positively affects school effectiveness through schools' innovativeness levels.

H₃: Bureaucratic culture negatively affects school effectiveness through schools' innovativeness levels.

H₄: Task culture positively affects school effectiveness through schools' innovativeness levels.

2. Method

2.1. Model

In this study, which was designed as relational research, the aim is to examine the role of school innovation characteristics in the relationship between the dominant culture-type characteristics in the school and the effectiveness of the school. Structural equation modeling was used to determine the mediating role. Structural equation models combine the predictive structural relationship between the variables in the regression model and the latent factor structures in factor analysis in a single comprehensive analysis (Çokluk et al., 2010).

2.2. Participants

This research was conducted with teachers in public schools in Kütahya. This study, which is based on testing structural paths between variables, was carried out with 386 teachers. Table 1 presents information about the participants.

Table 1. *Descriptive statistics of the study group*

		Frequency	Percentage (%)
Gender	Woman	190	49.2%
	Male	196	50.8%
School Level	Preschool-Primary School	141	36.5%
	Middle school	120	31.1%
	High school	125	32.4%
Seniority	1-10 years	150	38.9%
	11-20 years	161	41.7%
	21 years and above	75	19.4%
Number of teachers in the school	1-20 teachers	114	29.6%
	21-40 teachers	134	34.7%
	41 and above teachers	138	35.7%
Total		386	100.0

As seen in Table 1, 49.2% of the participants are female and 50.8% are male teachers. 141 of these teachers work in pre-school and primary school, 120 in secondary school, and 125 in high school. Considering the professional seniority of the teachers, it is seen that 38.9% of them have 1-10 years, 41.7% have 11-20 years, and 19.4% have 21 years and above. However, 114 of the participants work in a school with 1-20 teachers, 134 with 21-40 teachers, and 138 with 41 or more teachers.

2.3. Data Collection Tools

"School Culture Scale," developed by Terzi (2005) to reveal teachers' views on school cultures; "Innovative School Scale," developed by Aslan and Kesik (2016), was used to determine the innovativeness level of schools; and "Effective School Characteristics Scale," developed by Witmer (2005) and adapted into Turkish by Akçay-Güngör (2018), was used to determine the effectiveness levels of schools. The psychometric properties of the scales used in the study are presented below:

School Culture Scale: This scale, which was used to determine school culture types, consists of 29 items and four dimensions. During the development process of the scale used in the five-point Likert type, exploratory factor analysis (EFA) was carried out, and four basic cultural dimensions for school cultures were defined. As a result of EFA, the total variance explained by the four factors was calculated at 50.965%, and it was decided that the scale is a valid tool that can be used in research. Cronbach Alpha coefficients were calculated for the reliability of the scale dimensions; related values were found as .88 for "support culture," .82 for "success culture," .76 for

"bureaucratic culture," and .74 for "task culture" (Terzi, 2005). Within the scope of this study, confirmatory factor analysis was performed for the validity of the scale, and the relevant values were [$\chi^2/df = 2.86$ ($p > .05$); CFI = .96; RMSEA = 0.07]. However, the Cronbach Alpha coefficients calculated for the reliability of the tool were found to be .92 for the "support culture," .82 for the "success culture," .78 for the "bureaucratic culture," and .78 for the "task culture". When the calculated values are evaluated as a whole, it has been decided that the relevant scale is a valid and reliable tool that can be used in this research (Kline, 2011).

Innovative School Scale: The scale used to determine the innovativeness levels of schools is a five-point Likert-type scale consisting of 19 items and three sub-dimensions. As a result of the EFA performed for validity analysis during the development of the scale, it was seen that these three dimensions explained 62.70% of the variance in innovative school characteristics. It was determined that the structure was confirmed by DFA analysis. When the Cronbach Alpha coefficients calculated for the reliability of the tool are examined, it is seen that the relevant values are calculated as .91 for the "managerial support" dimension, .90 for the "innovative atmosphere" dimension, .79 for the "organizational barriers" dimension, and .85 for the whole scale (Aslan and Kesik, 2016). The CFA results performed to determine whether the innovative school scale is a valid tool in this study are as follows: [$\chi^2/df = 3.55$ ($p > .05$); CFI = .98; RMSEA = 0.08]. The Cronbach Alpha coefficients for the dimensions and the whole scale were calculated as .79 for the "managerial support" dimension, .90 for the "innovative atmosphere" dimension, .78 for the "organizational barriers" dimension, and .93 for the whole scale. Considering the values, it was decided that the relevant scale is a valid and reliable tool that can also be used in this study (Kline, 2011).

Effective School Characteristics Scale: The CFA results, which were made in the process of adapting the tool developed to determine school effectiveness into Turkish, showed that goodness of fit values [$\chi^2/df = 2.96$ ($p > .05$); RMSEA = 0.07] proved acceptable. The structural validity of the scale, which consists of 14 items and four dimensions, was accepted. The reliability coefficients of the dimensions were calculated as .90 for the "limited learning disability" dimension, .93 for the "flexible resources" dimension, .82 for the "focusing on basic skills" dimension, and .94 for the "monitoring student development" dimension. Based on these data, it was decided that the scale is a valid and reliable tool (Akçay-Güngör, 2018). The CFA results of this study were determined as follows: [$\chi^2/df = 3.03$ ($p > .05$); CFI = .99; RMSEA = 0.07]. The Cronbach Alpha coefficients calculated for the scale's reliability were .92 for the "limited learning disability" dimension, .94 for the "flexible resources" dimension, .68 for the "focusing on basic skills" dimension, .90 for the "student development monitoring" dimension, and .90 for the whole scale.

2.4. Data Collection and Analysis

This research was conducted with teachers working in public schools at the basic education, secondary, and high school levels in the province of Kütahya. Data were collected from 386 teachers via an online form, and the collection of data was based on volunteerism. The scales used in the research were filled out by the teachers in approximately 10-15 minutes. Before the analysis of the data, missing data and extreme value analyses were made; Kurtosis skewness coefficients were evaluated with scatter plots. It was determined that the kurtosis and skewness coefficients of the data obtained from the scales were in the range of -1 and +1, and it was seen that the distribution graphs also indicated a normal distribution. However, in order to test whether the scales are valid and reliable for this study, confirmatory factor analysis was performed for each scale, and Cronbach Alpha coefficients were calculated.

Structural equation modeling was used to test the relationships established between school cultures, innovative schools, and effective school variables included in the research. Before this, the arithmetic mean and standard deviations of the related variables were calculated. Measurement models were evaluated to determine whether the prerequisites for structural equation modeling were met. It was decided whether there was a multicollinearity problem between the independent variables by calculating the tolerance, VIF, and Durbin-Watson coefficients. In this context, it has been observed that the Durbin-Watson coefficient is less than 2, the tolerance value is greater than 0.1, and the VIF value is less than 10. Although the relevant coefficients indicate that there is no multicollinearity problem (Cokluk, 2010), the correlation coefficient between success and support culture, which is one of the independent variables, was found to be higher than .80. For this reason, four different structural pathways were established and analyzed for all culture types.

Figure 1 shows models for tested pathways between culture types, innovative schools, and school effectiveness.

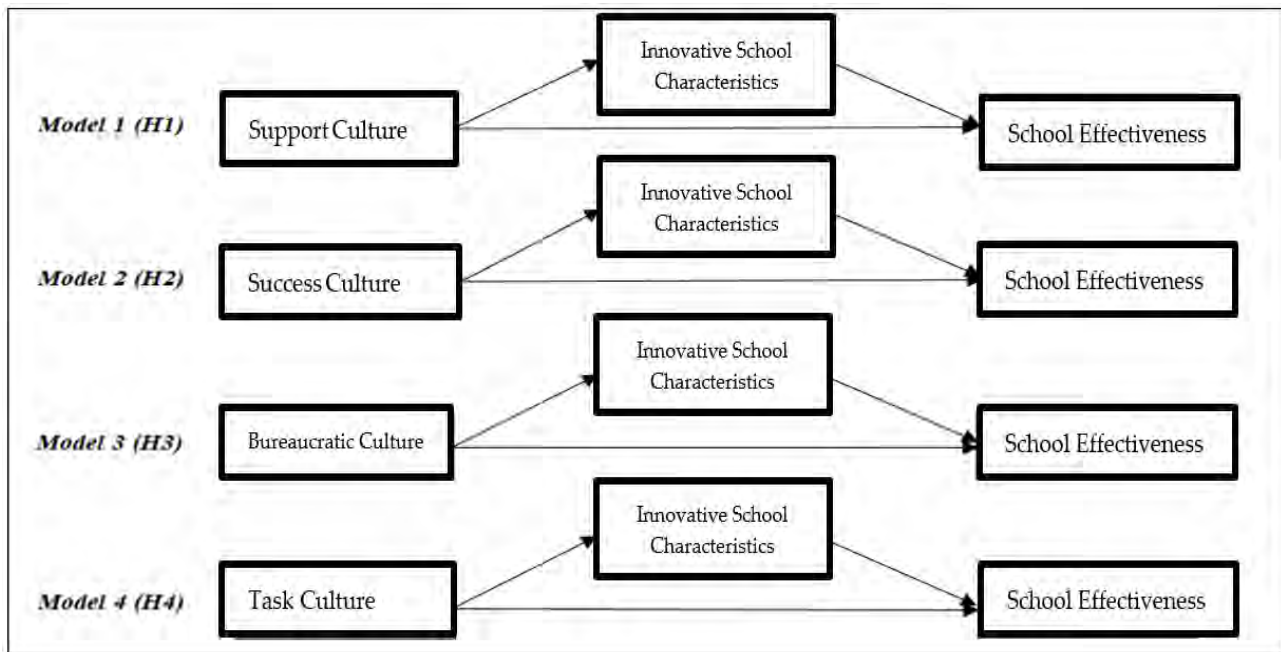


Figure 1. Models Established Between Organizational Cultures, Innovative School and School Effectiveness

As seen in the models in Figure 1, hypotheses have been established regarding the effects of organizational culture types on school effectiveness in innovative schools. Structural paths (hypotheses) established were tested with structural equation modeling, measurement models were created, and the goodness of fit values and path coefficients of the models were calculated. As a matter of fact, there are different methods for conducting mediation analysis in the literature. According to Şimşek (2007), one of these methods is to evaluate the measurement model, which includes all variables, and then to test the mediation model. In other words, the prerequisite for testing the mediation model is that all relationships between variables in the measurement model are statistically significant and that the model's goodness-of-fit values are appropriate. In this study, four different models were established, and the mediation effect of innovative school characteristics in the relationship between organizational cultures and school effectiveness was tested. Since the method expressed by Şimşek (2007) is used, first the measurement models were created, and then mediation analyses were performed for each model.

2.5. Ethical

In this study, all rules were complied with within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive". In addition, for this study, Uşak University Social Sciences Research and Publication Ethics Committee approval was obtained.

3. Results

Before testing the models created for the hypotheses in the study, the arithmetic mean and standard deviations of the variables were calculated and presented in Table 2.

As seen in Table 2, teachers' opinions show that the arithmetic averages for organizational culture types vary between 3.00 and 3.94, with the highest average belonging to "task culture" and the lowest average belonging to "bureaucratic culture". When the averages of innovative school characteristics were examined, it was seen that the highest average belonged to the "innovative atmosphere" dimension. It was determined that the arithmetic averages of the dimensions of the effective school characteristics ranged between 3.73 and 3.82.

Table 2. Arithmetic Mean and Standard Deviation Values of the Variables

School Culture Types	\bar{X}	sd
Support Culture	3.68	.83850
Success Culture	3.66	.76781
Bureaucratic Culture	3.00	.66223
Task Culture	3.94	.68178
Innovative School Total	3.42	.70046
Administrative Support	3.41	.73227
Innovative Atmosphere	3.50	.81186
Organizational Barriers	3.32	.72731
Effective School Total	3.75	.83514
Limited Learning Disability	3.73	.91633
Flexible Resources	3.75	1.0586
Focus On Core Skills	3.82	.90988
Monitoring Student Progress	3.77	1.0114

Measurement models, mediation analysis results, goodness-of-fit values, and path coefficients developed based on the research hypotheses are presented in Tables 3, 4, 5, and 6.

Table 3. Coefficients and Fit Indices for the Measurement Model and Mediation Analysis for the Support Culture Variable

Measurement Model(1)	Relationship Coefficients and Fit Indices	Model 1	Regression Weights and Fit Indices
SC ↔ ISC	0.93**	SC → ISC	0.93**
ISC ↔ ESC	0.90**	ISC → ESC	1.00**
SC ↔ ESC	0.83**	SC → ESC	-0.12
χ^2	1925,946	χ^2	1925,946
df	766	df	766
χ^2 / df	2,514	χ^2 / df	2,514
RMSEA	0.63	RMSEA	0.63
CFI	0.911	CFI	0.911
TLI	0.905	TLI	0.905
IFI	0.911	IFI	0.911
SRMR	0.056	SRMR	0.056

(SC: Support culture, ISC: Innovative school characteristics, ESC: Effective school characteristics) **:p<.01

When the measurement model in Table 3 is examined, it is seen that the correlation coefficients and adaptation indices between the Support Culture independent variable, innovative school characteristics used as mediating variables, and effective school characteristics variable are suitable for use in the mediation analysis of these variables. In Model 1, which was established to determine the mediation effect, it was concluded that innovative school features have a full mediating role between support culture and effective school features ($\beta_{DK \rightarrow EO}$: -0,12, p>.05). This result can be explained as the positive effect of the support culture prevailing in a school on school effectiveness, depending on the innovative characteristics of the school.

Table 4. Coefficients and Fit Indices Related to the Measurement Model and Mediation Analysis Established for the Success Culture Variable

Measurement Model(2)	Relationship Coefficients and Fit Indices	Model 2	Regression Weights and Fit Indexes
SuC ↔ ISC	0.91**	SuC → ISC	0.91**
ISC ↔ ESC	0.90**	ISC → ESC	0.91**
SuC ↔ ESC	0.82**	SuC → ESC	-0.01
χ^2	1708,420	χ^2	1708,420
df	689	df	689
χ^2 / df	2,480	χ^2 / df	2,480
RMSEA	0.062	RMSEA	0.062

CFI	0.913	CFI	0.913
TLI	0.907	TLI	0.907
IFI	0.914	IFI	0.914
SRMR	0.564	SRMR	0.564

(SuC: Success culture, ISC: Innovative school characteristics, ESC: Effective school characteristics) **:p<.01

Considering the correlation coefficients and goodness-of-fit values in the measurement model, in which the culture of success, one of the possible types of culture to be found in schools, is used as an independent variable, it is seen that there is no obstacle to conducting a mediation analysis (Table 4). In Model 2, which was designed to test the second hypothesis, it has been determined that the innovative school characteristics variable has a full mediator role between the success culture and effective school characteristics ($\beta_{BK \rightarrow EO} : -0.01, p>.05$). To put it more clearly, the level of a school's achievement culture contributes to school effectiveness by increasing the level of innovative school characteristics.

Table 5. Coefficients and Fit Indices for the Measurement Model and Mediation Analysis Established for the Bureaucratic Culture Variable

Measurement Model(3)	Relationship Coefficients and Fit Indices	Model 3	Regression Weights Fit Indexes
BC ↔ ISC	-0.05**	BC → ISC	-0.05
ISC ↔ ESC	0.90**	ISC → ESC	0.90**
BC ↔ ESC	0.05**	BC → ESC	0.10**
χ^2	1968,881	χ^2	1968,881
df	806	df	806
χ^2 / df	2,443	χ^2 / df	2,443
RMSEA	0.061	RMSEA	0.061
CFI	0.898	CFI	0.898
TLI	0.891	TLI	0.891
IFI	0.898	IFI	0.898
SRMR	0.080	SRMR	0.080

(BC: Bureaucratic culture, ISC: Innovative school characteristics, ESC: Effective school characteristics) **:p<.01

Table 5 shows the measurement and mediation models used to determine the mediating role of innovative school characteristics in the effect of bureaucratic culture on school effectiveness. Although the relationship between the variables is significant according to the measurement model results, according to the results of the mediation analysis, it is seen that innovative school features do not have a mediating role in the effect of bureaucratic culture on effective school features. In other words, the innovative features of the school have no role in the effect of bureaucratic culture on school effectiveness.

Table 6. Coefficients and Fit Indices for the Measurement Model and Mediation Analysis Established for the Task Culture Variable

Measurement Model(4)	Relationship Coefficients and Fit Indices	Model 4	Regression Weights Fit Indexes
TC ↔ ISC	0.66**	TC → ISC	0.66**
ISC ↔ ESC	0.90**	ISC → ESC	0.79**
TC ↔ ESC	0.68**	TC → ESC	0.16**
χ^2	1807,888	χ^2	1807,888
df	689	df	689
χ^2 / df	2,624	χ^2 / df	2,624
RMSEA	0.065	RMSEA	0.065
CFI	0.901	CFI	0.901
TLI	0.894	TLI	0.894
IFI	0.902	IFI	0.902
SRMR	0.066	SRMR	0.066

(TC: Task culture, ISC: Innovative school characteristics, ESC: Effective school characteristics) **:p<.01

In Table 6, there are measurement model and mediation analysis results showing the relationship between task culture, innovative school characteristics, and effective school characteristics. The correlation coefficients and fit indices between the variables of Mission Culture, innovative school characteristics, and effective school

characteristics show that the relationships between the variables in the measurement model are significant. In Model 4, which was designed to determine the mediation effect, it was concluded that innovative school characteristics have a partial mediation role between task culture and effective school characteristics ($\beta_{GK \rightarrow EO}$: 0.16, $p < .01$). In other words, it can be said that task culture has an impact on school effectiveness both directly and indirectly through innovative school characteristics.

4. Discussion and Conclusion

The first of the findings obtained as a result of mediation analysis is the indirect effect of support culture on school effectiveness characteristics through innovativeness. It is a very important factor in providing the support that the stakeholders in the organization need at many points, such as developing their competencies and providing motivation. Support culture, by its nature, aims to achieve an organizational climate that prioritizes cooperation, mutual commitment, and healthy relationships (Pheysey, 1993). It will naturally be easier for individuals to keep up with changing conditions, to be ready for change and innovation, and to lead in schools where a culture that aims to support all stakeholders individually and emotionally rather than directly prioritizing organizational goals is developed. This type of support provided by the cultural characteristics of the organization will make it easier for individuals to contribute to organizational effectiveness by improving their innovativeness. When the literature is examined, it is emphasized that one of the main ways of ensuring that an organization achieves its goals, that is, high attachment characteristics, should have the qualities that will support innovation in the existing organizational culture (Yiğit, 2014). For example, Hoppey and Mcleskey (2010) emphasized in their study that the first role of school leaders in order to create effective inclusive schools is to support teachers so that they can carry out their education processes effectively. It has been stated that a school leader can support teachers in the following ways: “nurturing and caring for staff, buffering the organization from external pressures associated with high-stakes accountability, providing high-quality professional development, and ensuring that teachers have opportunities to assume leadership roles in the school”. Indeed, Khun et al. (2022) stated that effective schools can only be possible with a balanced school atmosphere and a supportive school climate. In this regard, Yıldırım (2015) stated that in order to establish social environments for effective schools, the relationship and communication between teachers should be sincere, trustworthy, and collaborative. Tunçel (2008), on the other hand, emphasized that it is important for teachers to be constantly supported in order to ensure their interests and personal and professional development for school effectiveness, and emphasized that all teachers should be supported in a social context in order to be able to work collaboratively. In this context, Balcı (2014) states that school leaders have important duties and emphasizes the importance of school leaders who lead change and transformation and support teachers in creating effective schools. As can be seen, supportive and innovative features play a major role in creating effective schools. For this reason, it is possible to say that leaders who want to make their schools effective organizations should create a collaborative and solid school culture that supports teachers in every way and should have an understanding that supports innovations.

One of the important outputs of the research is the finding about the indirect effect of success culture on school effectiveness by developing innovative school characteristics. A success culture is based on using flexible strategies to achieve organizational goals without rigid procedures for employees. The use of flexible and diverse strategies requires a high level of innovativeness. In this context, it is inevitable that the success culture will have a positive effect on the school effectiveness characteristics, which define the level of achieving the goals of the school in the most general sense, by encouraging high innovativeness in schools. In the literature, one of the most important features of effective schools is that it has been found that there is a cultural atmosphere in which positive beliefs are developed towards the competencies and differentiated methods of the stakeholders that will lead to success, together with high achievement expectations for the school stakeholders regarding the most basic goals of the school (Agassi, 2005; Ismail et al., 2022). In addition, one of the basic conditions of being an effective school is to clearly determine the educational goals of the school (Edmonds, 1979), to adopt and understand these goals by all stakeholders (Lezotte, 1992), and to reach these goals with a collective consciousness. In this context, it is possible to say that the culture of success is of great importance to the effectiveness of the school, as it supports innovation by providing flexibility and different perspectives on the one hand and focusing on goals on the other.

It has been determined that the innovativeness of the school does not have a mediating role in the interaction between the bureaucratic culture and the effectiveness of the school. Similarly, in the study conducted by

Ferencova et al. (2019), the findings revealed that the dominant culture in schools tends to give priority to rational goals and internal processes rather than encouraging innovation, although it is not embraced by teachers. In bureaucracy-oriented cultures, the main goal is to maintain a healthy workflow, division of labor, and hierarchy by adhering to predetermined strategies and methods. In such a cultural atmosphere, it is expected that innovative features do not have a direct or indirect effect on the school's capacity for effectiveness. However, it is remarkable that bureaucratic culture has a low-level but positive and significant role in school effectiveness. This may be due to the centralized structure of the Turkish National Education System. Moreover, it is known that, due to the centralized structure of the Turkish National Education System, it is a legal obligation to carry out some works and processes in schools in formal ways. This necessity can be cited as a reason for the bureaucratic school culture to play a small role in school effectiveness. However, it should not be forgotten that bureaucratic culture restricts innovative school features and reduces the potential of school effectiveness.

One of the remarkable findings of the research is that it shows that the innovative features of schools have a partial mediating role between the culture of the task and the effectiveness of the school. In the focus of the task culture, it is essential to put individual goals into the background as much as possible and to employ all kinds of expertise and competencies that will serve organizational goals regardless of seniority, status, and hierarchy. The way to contribute to the effectiveness of the organization requires taking the initiative and using all kinds of skills at every stage of the operation (Harrison, 1972; Handy, 1981). Considering these characteristics of task culture, the most important task that will serve organizational effectiveness for many organizational stakeholders in today's conditions, where innovation has become one of the most important qualities of business life, is to have innovative features and to use these features.

5. Recommendations

Considering the results and discussions within the scope of the research, in an environment where continuous change and innovation have become an inevitable and undeniable part of our lives, it is seen that the established culture in schools is extremely important in terms of the effectiveness of the school. Considering that the phenomenon of school culture is a living artifact that is created and maintained jointly by the stakeholders, in order for the school to successfully fulfill its educational, instructional, and social functions, it is necessary to include elements that can bring innovative features to the school and stakeholders in the construction of school culture. Building a bureaucratic and hierarchical culture will reduce the school's capacity for proactive action as well as its effectiveness. In order for teachers, students, administrators, and all other stakeholders in schools to fulfill their duties with maximum devotion and efficiency, a supportive, success-oriented culture that will open the door to innovative thoughts and actions and that prioritizes a high sense of task should be built. In the research, the bureaucratic culture did not have a significant effect on the innovative school. In this context, it can be suggested to implement policies to make bureaucratic procedures at school more flexible. Moreover, in the school, more flexible structures can be presented to the teachers in the subjects where initiative can be taken, and it can be suggested that they be freed from over-formalized rules as much as possible. This research was carried out with quantitative techniques, and it was concluded that support and success cultures affect school effectiveness both indirectly and directly with the mediating effect of innovative school characteristics. For this reason, studies can be carried out on how to improve the success culture, support culture, and innovative school characteristics that can affect school effectiveness in practice. In this context, contributions to the field can be made by conducting qualitative studies with teachers.

6. References

- Agassi, J. (2005). World class schools: International perspectives on school effectiveness. *The Journal of Educational Thought*, 39(2), 217.
- Akçay Güngör, A. (2018). *Etkili okul özelliklerinin dönüşümsel liderlik ve öğretmen bağlılığıyla ilişkisi* [Doctoral dissertation]. Ege Üniversitesi, İzmir.
- Ali, N., Sharma, S., & Zaman, A. (2017). School culture and school effectiveness: Secondary schools in Pakistan. *MOJEM: Malaysian Online Journal of Educational Management*, 4(4), 50-65.
- Aslan, H. & Kesik, F. (2016). Yenilikçi okul ölçeğinin geliştirilmesi. Geçerlik ve güvenirlik çalışması. *Kuram ve Uygulamada Eğitim Yönetimi*, 22(4), 463-482.

- Balçı, A. (1988). Etkili okul. *Eğitim ve Bilim*, 12(70), 21-30.
- Balçı, A. (2014). *Etkili okul: Okul geliştirme kuram uygulama ve araştırma* (Yedinci baskı). Pegem.
- Bissaker, K., & Heath, J. (2005). Teachers' learning in an innovative school. *International Education Journal*, 5(5), 178-185.
- Cameron, K. S., & Quinn, R. E. (1999) *Diagnosing and changing organizational culture: Based on the competing values framework*. Addison Wesley.
- Çaçan, M., Barut, Y., Eken, İ., Gösteriş, H. & Tunç, C. (2022). Okul kültürünün öğretmenlerin örgütsel bağlılık düzeyleri üzerindeki etkisinin incelenmesi. *Dicle Akademi Dergisi*, 1(3), 41-52.
- Çokluk, Ö., Şekercioğlu, G. & Büyüköztürk, Ş. (2010). *Sosyal bilimler için çok değişkenli istatistik*. Pegem.
- Çokluk, Ö. (2010). Lojistik regresyon analizi: Kavram ve uygulama. *Kuram ve Uygulamada Eğitim Bilimleri*, 10(3), 1357-1407.
- Deal, T. E., & Peterson, K. D. (1999). Shaping school culture: The heart of leadership. *Adolescence*, 34(136), 802.
- Duan, X., Du, X., & Yu, K. (2018). School culture and school effectiveness: The mediating effect of teachers' job satisfaction. *International Journal of Learning, Teaching and Educational Research*, 17(5), 15-25.
- Edmonds, R. (1979). Effective school for the urban poor. *Educational Leadership*, 15-24.
- Engels, N., Hotton, G., Devos, G., Bouckenooghe, D., & Aelterman, A. (2008). Principals in schools with a positive school culture. *Educational studies*, 34(3), 159-174.
- Ferencová, J., Valentína, Š., & Petříková, A. (2019). School culture in Slovakia from perspective of innovations of educational processes. In D. K. Bataev (Ed.), *Social and Cultural Transformations in the Context of Modern Globalism, vol 58. European Proceedings of Social and Behavioural Sciences* (pp. 701-709). Future Academy. <https://doi.org/10.15405/epsbs.2019.03.02.79>
- Fullan, M. (2001). *Leading in a culture of change*. Jossey-Bass.
- Gilad-Hai, S., & Somech, A. (2016). "The day after": The organizational consequences of innovation implementation in experimental schools. *Journal of Educational Administration*, 54(1), 19-40.
- Guzman, C. U., & Jaillier-Castrillon, E. (2021). Educational innovation as one of the drivers of human evolution. *Cypriot Journal of Educational Sciences*, 16(5), 2651-2675.
- Haelermans, C., & De Witte, K. (2012). The role of innovations in secondary school performance—Evidence from a conditional efficiency model. *European Journal of Operational Research*, 223(2), 541-549.
- Handy, C. B. (1981). *Understanding organization* (second edition). Hazell Watson Ltd.
- Harrison R. (1972). Understanding your organization's character. *Harvard Business Review* 50(3), 119–128.
- Hoeben, W. T. J. (2022). Educational innovation or school effectiveness: A dilemma? In *School effectiveness and school improvement* (pp. 157-166). Routledge.
- Hoppey, D., & McLeskey, J. (2013). A case study of principal leadership in an effective inclusive school. *The Journal of Special Education*, 46(4), 245–256. <https://doi.org/10.1177/0022466910390507>.
- Ismail, M., Khatibi, A., & Azam, S. F. (2022). Impact of school culture on school effectiveness in government schools in Maldives. *Participatory Educational Research*, 9(2), 261-279.
- Işık, H. (2017). Ortaokullarda okul kültürünün incelenmesi. *İstanbul Aydın Üniversitesi Dergisi*, 9(3), 61-71.
- Kauts, A., & Sharma, G. (2017). Leadership effectiveness and teacher's job satisfaction in relation to school effectiveness at secondary stage. *MIER Journal of Educational Studies Trends and Practices*, 1-13.
- Khun-Inkeeree, H., Yusof, M. R., Maruf, I. R., Mat, T. R. T., & Sofian, F. N. R. M. (2022) Enhancing school effectiveness by implementing identified and intrinsic motivation among primary school teachers. *Front. Educ.* 7: 852378. [DOI: 10.3389/educ.2022.852378](https://doi.org/10.3389/educ.2022.852378).
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. The Guilford Press.

- Korhonen, T., Lavonen, J., Kukkonen, M., Sormunen, K., & Juuti, K. (2014). The innovative school as an environment for the design of educational innovations. In *Finnish innovations and technologies in schools* (pp. 97-113).
- Korkmaz, M., & Ada, K. (2019). Ortaokullarda okul iklimi ile okul etkililiği arasındaki ilişkinin incelenmesi. Kural, E. Babaoğlu, Çiçek, & A. Çilek (Ed), *Eğitim araştırmaları* içinde (pp. 38-54). EYUDER.
- Leithwood, K. & Louis, K. S. (2002). *Organizational learning in schools*. Swets and Zeitlinger.
- Lezotte, L.W. (1992), Principal insights from effective schools. *Education Digest*, 58(3), 14-17.
- Pearlman, B. (2010). Designing new learning environments to support 21st century skills. In J. Bellanca & R. Brandt (Eds.), *21st century skills: Rethinking how students learn* (pp. 116-147). Solution Tree Press.
- Pheysey D.C. (1993). *Organizational cultures: Types and transformations*. Routledge.
- Riveras-León, J. C., & Tomàs-Folch, M. (2020). The organizational culture of innovative schools: The role of the principal. *Journal of Educational Sciences*, 21, 21-37.
- Schein, E. H. (2004). *Organizational culture and leadership* (3rd edn.), Jossey-Bass.
- Selvaraja, K., & Pihie, Z. L. (2015). The relationship between school culture and school innovativeness among national type Tamil Primary Schools, SJK (T) S in Kuala Langat District, Selangor. *International Journal of Humanities Social Sciences and Education*, 2(1), 126-137.
- Sezgin, F. (2010). Öğretmenlerin örgütsel bağlılığının bir yordayıcısı olarak okul kültürü. *Eğitim ve Bilim*, 35(156).
- Sofanudin, A., & Rokhman, F. (2016). Quality-oriented management of educational innovation at Madrasah Ibtidaiyah. *Journal of Education and Practice*, 7(27), 176-180.
- Şenel, T., & Buluç, B. (2016). İlkokullarda okul iklimi ile okul etkililiği arasındaki ilişki. *TÜBAV Bilim Dergisi*, 9(4), 1-12.
- Şimşek, Ö. F. (2007). *Yapısal eşitlik modellemesine giriş: Temel ilkeler ve Lisrel uygulamaları*. Ekinoks Yayınları.
- Terzi, A. R. (2005). İlköğretim okullarında örgüt kültürü. *Kuram ve Uygulamada Eğitim Yönetimi*, 43, 423-442.
- Tubin, D. (2008). Establishment of a new school and an innovative school: Lessons from two Israeli case studies. *International Journal of Educational Management*, 22(7), 651-663.
- Tunçel, M. (2008). *Genel liseler ve anadolu liselerinin etkili okul olma özelliklerinin karşılaştırılması* (Ankara ili Örneği) [Unpublished master thesis]. Gazi University, Ankara.
- Witmer, L.W. (2005). *Relationships among transformational leadership, family background, teachers' commitment to change, effective schools' characteristics, and student achievement in california public comprehensive high schools: a structural equation model* [Doktoral dissertation]. Azusa Pasific Üniversitesi, California.
- Yıldırım, İ. (2015). Okul yöneticilerinin kişilik ve denetim odağı özelliklerinin öğretmenlerin iş doyumu ve okul etkililiği açısından incelenmesi [Doctoral dissertation]. Atatürk Üniversitesi, Erzurum.
- Yiğit, S. (2014). Kültür, örgüt kültürü ve inovasyon ilişkisi bağlamında "İnovasyon kültürü". *Karamanoğlu Mehmetbey Üniversitesi Sosyal ve Ekonomik Araştırmalar Dergisi*, 2, 1-7. DOI: 10.18493/kmusekad.26789
- Yürek, U. & Cömert, M. (2021). Okul yöneticilerinin değişimi yönetme yeterlikleri ile algılanan okul etkililiği ne düzeydedir? *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 25(4), 1762-1781.
- Zhu, C. (2015). Organisational culture and technology-enhanced innovation in higher education. *Technology, Pedagogy and Education*, 24(1), 65-79.