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The Mediating Role of Collaborative Climate in the Relationship between Shared Instructional Leadership and School Effectiveness: A Structural Equation Modeling*

Okul Müdürlerinin Paylaşılan Öğretimsel Liderlik Davranışları ile Okul Etkiliği İlişkisinde İşbirlikçi İklimin Aracı Rolü: Bir Yapısal Eşitlik Modellemesi

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Abstract: This study investigated the mediator role of collaborative climate in the relationship between shared instructional leadership and perceived school effectiveness based on teachers' perceptions adopting a structural equation model. The research universe included 402 physical education teachers working in Batman (Türkiye) in the 2022-2023 academic year. Since the researchers aimed to reach all the teachers in the population (N=402), they did not employ a sampling method. The participants were 272 physical education teachers, with a response rate of 67.66%. Pearson correlation coefficients were calculated to reveal the associations among study variables. The findings revealed statistically significant, positive, and high-level correlations among variables. On the other hand, a structural equation model was used to test the hypotheses. The findings suggested that shared instructional leadership had a significant effect on collaborative climate and but not on perceived school effectiveness, and the effect of collaborative climate on perceived school effectiveness was also statistically significant. Lastly, collaborative climate mediated the relationship between shared instructional leadership and perceived school effectiveness. The findings were discussed based on the previous literature, and suggestions were brought for practitioners and researchers.

Keywords: Shared instructional leadership, School effectiveness, Collaborative climate, Structural equation modeling.

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Öz: Bu araştırma öğretmen algılarına göre paylaşılan öğretimsel liderlik ile okul etkililiği arasındaki ilişkide işbirlikçi iklimin aracı rolünü incelemektedir. Araştırmada yapısal eşitlik modellemesinden yararlanılmıştır. Araştırma evreni, 2022-2023 öğretim yılında Batman ilinde (Türkiye) görev yapan 402 beden eğitimi öğretmeninden oluşmaktadır. Araştırmacılar, evrendeki öğretmenlerin tamamına ulaşmayı amaçladıklarından (N=402) örnekleme yöntemi kullanılmamıştır. Araştırmada 272 beden eğitimi öğretmeni ölçme araçlarını yanıtlamış ve geri dönüş oranı %67.66 olarak hesaplanmıştır. Değişkenler arasındaki ilişkileri ortaya koymak için Pearson korelasyon katsayıları hesaplanmıştır. Değişkenler arasındaki ilişkilere ilişkin bulgular, değişkenler arasında istatistiksel olarak anlamlı, pozitif ve yüksek düzeyli ilişkilere işaret etmektedir. Öte yandan, araştırma hipotezlerini test etmek için yapısal eşitlik modeli kullanılmıştır. Elde edilen bulgular, paylaşılan öğretim liderliğinin işbirlikçi iklimi istatistiksel olarak anlamlı bir biçimde yordadığını, ancak algılanan okul etkililiği üzerinde anlamlı bir etkisinin olmadığını; işbirlikçi iklimin algılanan okul etkililiği üzerindeki etkisinin istatistiksel olarak anlamlı olduğunu ortaya koymuştur. Öte yandan, işbirlikçi iklimin paylaşılan öğretimsel liderlik ile algılanan okul etkililiği arasındaki ilişkide aracı bir role sahip olduğu saptanmıştır. Söz konusu bulgular, mevcut alanyazına dayalı olarak tartışılarak uygulayıcılar ve araştırmacılar için öneriler getirilmiştir.

Anahtar Kelimeler: Paylaşılan öğretimsel liderlik, Okul etkililiği, İşbirlikçi iklim, Yapısal eşitlik modellemesi.

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1. INTRODUCTION

In the 21st century, attempting to address the administrative needs of schools with traditional management approaches appears to be quite challenging (Turan & Bektaş, 2021). The literature suggests that the difficulty posed by this challenge has led to a significant increase in leadership studies and researchers delving into this field from the first half of the 20th century to the present day (Hallinger & Kovačević, 2021; Yukl, 2018). The fundamental reason for this lies in the growing recognition of the importance of leadership in the literature since the first half of the 20th century, resulting in an increased popularity of leadership among scholars (Hoy & Miskel, 2012; Oplatka, 2016).

Leadership is a concept that is particularly emphasized in contemporary times, especially within educational organizations, and the literature reflects a frequent exploration of different types of leadership (Gümüş et al., 2018). This emphasis on leadership is due to its significant role in the administration of schools, as evidenced in the literature (Bellibaş & Kılınç, 2022), and there is compelling evidence of an association between leadership and success in educational organizations (Robinson et al., 2008). In the present era, gaining acceptance from students and teachers is crucial for an effective leadership process in educational organizations (Bush, 2018). It is worth noting that this acceptance is not achieved through the leader suppressing stakeholders in educational institutions through negative means but through effective leadership skills (Yukl, 2018).

As previously mentioned, leadership is crucial for schools (Harris & Jones, 2023; Oplatka, 2016). In this context, the concept of instructional leadership emerges as peculiar to educational institutions, encompassing strategies and skills to guide educational institutions' administrative and instructional activities (Hallinger, 2005). Therefore, instructional leadership is believed to contribute to the effective and efficient school administration for the present and in alignment with future needs. It can be asserted that instructional leadership plays a crucial role in leading educational institutions in a manner that meets the requirements of both today and the future (Dilekçi & Limon, 2020).

Alongside instructional leadership, one of the leadership types that has gained attention in recent years is "*shared instructional leadership*" (Akyurek et al., 2024; Bellibaş et al., 2022; Dilekçi, 2021; Heffernan & Longmuir, 2019; Kandemir, 2022; Liu et al., 2022; Urick, 2016; Zhan et al., 2020; Zhan & Cao, 2023). The emergence of shared instructional leadership is explained by the inadequacy of traditional leadership paradigms and the necessity for rapid adaptation to changes in education, which make the problems schools face increasingly complex. Traditional leadership approaches prove insufficient in addressing these challenges. Therefore, adopting a shared approach in instructional leadership provides a significant opportunity for teachers, administrators, and other stakeholders in the school to come together, develop solutions, and implement them in response to these challenges. This approach aims to enable all stakeholders in the school to assume leadership roles, collaborate in improving learning processes, and address challenges collectively, which results in a swift adaptation to changes and a collective effort to enhance educational success (Bellibaş et al., 2022; Liu et al., 2022).

Previous literature investigates the association between leadership and school effectiveness (Abdurrezzak & Uğurlu, 2016; Cerit & Yıldırım, 2017; Mumtaz & Khan, 2024; Sezgin-Nartgün et al., 2020; Yumuşak & Korkmaz, 2021). School effectiveness is an applied discipline with direct implications for the well-being of national education systems and the lives of all individuals within educational institutions (Coe & Fitz-Gibbon, 1998). It also describes research focusing on internal or inter-school differences through appropriate models (Goldstein, 1997). Research on school effectiveness aims to identify school and classroom-level variables expected to influence education (Scheerens, 2000). Studies on school effectiveness highlight the significant role of schools in achieving high-level educational and instructional goals (Reynolds & Packer, 1992; Stringfield & Teddlie, 1991). Research conducted on effective schools underscores the leadership behaviors of school principals as a focal point (Işık & Gümüş, 2017).

Leaders inevitably conduct their work and leadership processes through interaction with the organization's members. The notion that leaders make a difference and significantly impact the

organization prompted researchers to conduct studies to delineate the foundation and nature of leadership (Demir, 2021; Hallinger, 2011). In this context, the concept of a collaborative climate is addressed in the research. A collaborative climate can be defined as a working environment in an organization or group based on collaboration and sharing, incorporating characteristics such as open communication, trust, respect, and convergence around a shared purpose (Thapa et al., 2013). A collaborative climate is crucial in learning environments, and creating a collaborative climate depends on various factors, including organizational culture, leadership approaches, and the employees' attitudes and behaviors. There is convincing evidence regarding the benefits of a collaborative climate in schools (Çolak & Altınkurt, 2017; Sezgin-Nartgün & Fakılı, 2020). These studies highlight that a collaborative climate significantly contributes to the interaction and mutual assistance among stakeholders in educational organizations.

Theoretical Framework

Shared Instructional Leadership

Shared instructional leadership is a component of the instructional leadership paradigm encompassing the collaborative administration and development of educational programs involving school principals and teachers. This leadership approach encourages school principals and teachers to collaboratively make decisions to enhance the quality of instruction by working together in both classroom and extracurricular activities. Shared instructional leadership empowers teachers with greater autonomy and responsibility for improving their instructional skills, enabling them to play a more influential role in the teaching process. The approach aims to enhance instructional quality by supporting teachers' personal and professional development (Zhan et al., 2020). Unlike traditional leadership, where school principals lead individually, and teachers are expected to align with predetermined goals, shared instructional leadership fosters collaboration between teachers and principals, actively involving them in decision-making processes. This approach supports teachers in better understanding the diverse needs of students in their learning process, improving students' learning experiences, and enhancing their achievements. Additionally, shared instructional leadership contributes to the development of school culture by promoting mutual respect for teachers' opinions and experiences, thereby increasing teacher motivation (Akyurek et al., 2024; Bellibaş et al., 2022; Dilekçi, 2021; Heffernan & Longmuir, 2019; Kandemir, 2022; Liu et al., 2022; Urick, 2016; Zhan & Cao, 2023).

In shared instructional leadership, the fundamental role of the school administrator is to continually emphasize that the main conditions for achieving goals are understanding, internalizing, adapting, and aligning with the goals (Urick, 2016). Marks & Printy (2003; cited in Dilekçi, 2021) defined shared *"instructional leadership as the synergistic power of leadership shared by individuals through the school organization"*, which is realized through collaboration between school principals and teachers in curriculum, instruction, and assessment, facilitating mutual interaction (Zhan et al., 2020). Thus, it can be argued that in schools where efforts are made to integrate leadership at every level, focusing on the quality of instruction and academic achievement, the quality of instruction and, consequently, students' academic success can be high (Kandemir, 2022). While research findings indicate similarities or differences between instructional leadership and learner-centered leadership, with the former focusing on student success, the latter is perceived to have a more transformative and inclusive understanding (Turan & Bektaş, 2021). In this scenario, school administrators may need to transfer leadership roles to teachers per the school's objectives (Liu et al., 2022; Zhan et al., 2020).

Shared instructional leadership is an extension of leadership focused on improving teaching and learning, where school principals and teachers collaborate in administrating and improving the curriculum (Dilekçi, 2021). Teachers' acceptance of instructional leadership behaviors can assist school

administrators in fulfilling their roles in shared instructional leadership (Zhan & Cao, 2023). Since schools are shared environments where different individuals coexist, stakeholders must collaborate (Kandemir, 2022). School administrators must create a positive teaching and learning environment within the school, prioritize student success, ensure curriculum integrity, and communicate effectively with the school community to manage the school's personnel, environment, and students in a way that enhances academic achievement (Özdemir & Sezgin, 2002). School principals can collaborate with teachers to improve teaching and learning (Urick, 2016). Administrators should guide and support teachers for the effectiveness and efficiency of schools (Dilekçi, 2021). School principals exhibiting shared instructional leadership behaviors encourage collaborative efforts with teachers to improve instructional quality, aiding teachers in better understanding their students' learning processes and adjusting their teaching strategies accordingly. Moreover, shared instructional leadership fosters a culture of collaboration among all teachers in the school, enabling the sharing of the school's vision and goals with teachers (Heffernan & Longmuir, 2019; Liu et al., 2022; Marks & Printy, 2003).

School Effectiveness

Research on school effectiveness has attracted considerable attention in recent years (Limon, 2023). Adopting and developing managerial strategies to increase efficiency with less cost in the 1980s led to a growing interest in the research domain known as school effectiveness. The seminal work that initially sparked interest in this topic was the study titled "*Fifteen Thousand Hours*" conducted by Rutter et al. (1979) (Barlett & Burton, 2007). *The First International Congress of School Effectiveness and Improvement*, held in London in January 1988, and the establishment of the *School Effectiveness and School Improvement Journal* in 1990 played crucial roles in the expansion of the field of school effectiveness (Coe & Fitz-Gibbon, 1998). School effectiveness refers to a research area that investigates the differences within or between schools through appropriate models (Goldstein, 1997) and addresses the question of *"How can schools be organized and operated to maximize the quality of curricula and instruction offered to young people?"* (Stringfield, 1994). School effectiveness research scrutinizes existing studies in terms of the associations between academic success and factors influencing it, identifies studies that have the potential to contribute to practical school effectiveness, and aims to provide recommendations to educational planners on how to benefit from the results of school effectiveness research (Scheerens, 2000).

Research on effective schools, which relates instructional activities and school processes to essential competencies as achievement criteria, offers insights into the effectiveness of schools (Stringfield & Teddlie, 1988; cited in Balcı, 2014). Within this context, effective schools must provide an appropriate physical environment and ensure the effective and efficient use of instructional materials and all school resources to achieve student success (Akan & Kılıç, 2019). Furthermore, in schools deemed effective, principals perceive learning activities as continuous and available to everyone (Işık & Gümüş, 2017) and communicate the school's vision to all employees, thereby sharing the organizational vision and ultimately ensuring institutional commitment/continuity (Turhan et al., 2017). Effective leaders lead based on commitment rather than power or fear (Karip & Köksal, 1996). There is a growing interest in school effectiveness research (Dalbudak & Özgenel, 2022; Dilekçi et al., 2023; Gökbulut & Turan, 2021; Limon, 2023; Sezgin-Nartgün et al., 2020).

Collaborative Climate in Schools

As social systems, schools are collective organizations due to their inherent structures (Hoy & Miskel, 2012). The stakeholders, such as the principal, teachers, guidance services, parents, etc., who are essential components of this structure, collaborate obligatorily/legally or voluntarily to boost students' learning and development (Saylık & Arastaman, 2022). Thus, we can conclude that the climate perceived by teachers, administrators, students, parents, and other personnel in each school may vary (Çolak & Altınkurt, 2017). Limon and Durnalı (2017) define a collaborative climate as *"an atmosphere that results from individuals' beliefs, values, and assumptions regarding knowledge sharing, expressed through effort and voluntary work."* On the other hand, Yılmaz and Altınkurt (2013) conceptualize collaborative climate as values influencing knowledge-sharing behavior and the willingness to share knowledge.

A critical factor in instructional quality is developing approaches and practices based on voluntary rather than obligatory collaboration (Saylık & Arastaman, 2022). In this context, the prevailing notion suggests that fostering a collaborative and solidarity-based atmosphere, focusing on the success and productivity of the group rather than individuality within the educational organization would be more effective (Diş & Ayık, 2015). Research indicates that teachers are more inclined towards sharing in an academic environment with a collaborative working atmosphere (Sezgin-Nartgün & Fakılı, 2020). Trust in interpersonal relationships within a school environment is expected to be fundamental for a collaborative climate (Saylık & Arastaman, 2022). In such a climate, destructive competition and selfishness are not observed (Çolak & Altınkurt, 2017).

There is abundant literature regarding the benefits of a collaborative climate in schools. Research suggests that a collaborative climate positively contributes to interaction and assistance among stakeholders, resulting in trust within the school. Thus, it facilitates collaboration and encourages stakeholders to assist each other. On the other hand, open communication in a collaborative climate contributes to preventing misunderstandings and mitigating potential conflicts. Additionally, a collaborative climate boosts the motivation. In such an environment, people in the school support each other and work together to achieve goals, which leads to higher engagement in educational activities and improved performance. Moreover, individuals in a collaborative climate can generate more creative and innovative solutions by combining different skills and talents. In a collaborative climate, employees show respect and provide support to each other, fostering happiness in the workplace (Çolak & Altınkurt, 2017; Fakılı, 2019; Limon & Durnalı, 2017; Saylık & Arastaman, 2022; Sezgin-Nartgün & Fakılı, 2020).

The associations between shared instructional leadership, school effectiveness, and collaborative school climate

The first hypothesis suggested that shared instructional leadership significantly predicted teachers' perceptions of school effectiveness. Previous literature indicated that principals' focus on instruction enhanced school effectiveness (Abdurrezzak & Uğurlu, 2016; Cerit & Yıldırım, 2017; Mumtaz & Khan, 2024; Yumuşak & Korkmaz, 2021). There is also convincing evidence in the literature regarding the association between various leadership types and school effectiveness (Akyurek et al., 2024; Alagöz et al., 2022; Atılkan, 2019; Sezgin-Nartgün et al., 2020; Yılmaz, 2021; Yumlu, 2020). Drawing on the previous literature, we suggested the following hypothesis:

H₁: Shared instructional leadership significantly predicts teachers' perceptions of school effectiveness.

The study's second hypothesis suggested that shared instructional leadership significantly predicted teachers' perceptions of collaborative climate. In other words, it was anticipated that the principals' adoption of a shared approach in instructional leadership would enhance school effectiveness and positively contribute to the collaborative climate. It is now well-established from various studies that there is a significant association between leadership and organizational climate (Ayık & Şayir, 2014; Bakkal & Radmard, 2020; Bilgi, 2020; Demir, 2019; Metin, 2020). Based on the previous literature, we suggested the following hypothesis:

H₂: Shared instructional leadership significantly predicts teachers' perceptions of a collaborative climate.

The third hypothesis suggested that collaborative climate significantly predicted teachers' perceptions of school effectiveness. In other words, it was anticipated that when teachers perceive a more positive collaborative climate, they perceive their schools as more effective, which is supported by the literature (Şenel & Buluç, 2016). Additionally, studies in the literature focus on the impact of the leadership styles exhibited by school principals on the school climate (Gültekin, 2012).

H₃: *Teachers' perceptions of collaborative climate significantly predict their perceptions of school effectiveness.*

The fourth and final hypothesis of the research suggested that teachers' perceptions of collaborative climate mediated the relationship between shared instructional leadership and perceived school effectiveness. Leadership is an interactional process. In educational organizations, school principals also sustain their leadership processes through interactions with teachers (Demir, 2021; Hallinger, 2011). However, leadership is a complex process that cannot be represented by only a set of qualities or behaviors (Hoy & Miskel, 2012). Thus, investigating the mediating role of the collaborative climate on the relationship between shared instructional leadership and school effectiveness holds significance.

H₄: *Teachers' perceptions of collaborative climate mediate the relationship between shared instructional leadership and the perceived school effectiveness.*

2. METHOD

2.1. Research design

This quantitative study employed a correlational research design focusing on the relationships between shared instructional leadership, collaborative climate, and school effectiveness based on teacher perceptions. Correlational research designs investigate the associations between two or more variables (Marczyk et al., 2005). In this context, the study tested the mediating role of collaborative climate in the relationship between shared instructional leadership and perceived school effectiveness through structural equation modeling. The research model is illustrated in Figure 1.
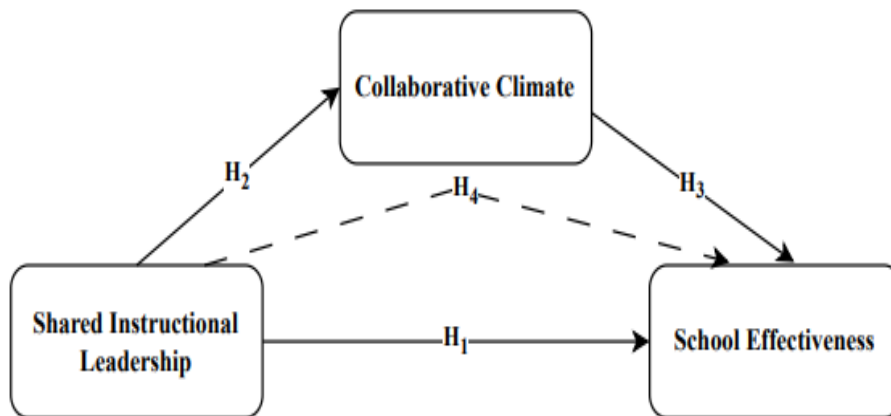

Figure 1. Research model

2.2. Population and sample

Since the researchers aimed to reach all the teachers in the population, a sampling method was not employed, which raised the issue of *"response rate."* It is calculated by dividing the number of participants by the number of individuals in the population (Fincham, 2008). In this sense, considering that there were 402 physical education teachers working in Batman province during the 2022-2023 academic year, the response rate was calculated as 272/402=67.66%, which is relatively high and sufficient (Nulty, 2008).

The demographic characteristics of the participants can be summarized as follows. Out of the teachers participating in the study, 100 were female (36.8%) and 172 were male (63.2%); 110 were aged between 20-30 years (40.4%), 109 were 31-40 years (40.1%), 52 were 41-50 years (19.1%), and 1 was 51 years and above (0.4%). As for experience, 124 participants had 0-5 years of experience (45.6%), 73 had 6-10 years (26.8%), 41 had 11-15 years (15.1%), 20 participants had 16-20 years (7.4%), and 14 participants had 21 years and above (5.1%). Of the participants, 221 had an undergraduate degree (81.3%), and 51 had a

graduate degree (18.7%). Lastly, 159 participants work in high schools (58.5%), and 113 work in middle schools (41.5%).

2.3. Data collection tools

Data was collected using three different instruments. Additionally, in the first section, participants were asked about their demographics. The following section provides information about the data collection tools.

2.3.1. Shared instructional leadership scale

The scale was developed by Zhan et al. (2020) and adapted into Turkish by Dilekçi (2021). The scale measures the level of shared instructional leadership exhibited by school principals based on teacher perceptions. The scale is unidimensional and consists of seven items. A sample item from the scale is as follows: *"The principal, teachers, and other staff work collaboratively to communicate an instructional vision."* Response options on the 6-point Likert scale are *"Strongly Disagree (1)," "Disagree (2)," "Somewhat Disagree (3)," "Somewhat Agree (4)," "Agree (5),"* and *"Strongly Agree (6)."* There are no reverse-coded items in the scale. Dilekçi (2021) revealed the scale's validity through exploratory and confirmatory factor analyses and reliability through Cronbach's Alpha internal consistency coefficient. The findings indicated that the scale was valid and reliable when adapted to Turkish.

The validity and reliability of the scale were also tested in this study. For the validity of the scale, confirmatory factor analysis was run, and the fit indices were as follows: *$\chi2/df$=2.40; GFI=0.97; AGFI=0.93; NFI=0.99; IFI=0.99; RFI=0.99; CFI=0.99; RMSEA=0.07; SRMR=0.00* indicating that the validity of the scale was ensured (Schermelleh-Engel et al., 2003). As for reliability, Cronbach's Alpha internal consistency coefficient was calculated, which was *α=.92* and satisfactory (Büyüköztürk, 2017).

2.3.2. Collaborative climate scale

The scale, developed by Sveiby and Simons (2002), measures the perception of a collaborative climate in organizations. The adaptation of the scale into Turkish was conducted by Limon and Durnalı (2017). The scale, consisting of four dimensions and seventeen items, includes the following dimensions: *"Collaborative organizational culture (5 items),"* *"Immediate supervisor (5 items),"* *"Employee attitude (5 items),"* and *"Workgroup support (2 items)."* A sample item from the scale is: *"Administrators in this school encourage knowledge sharing not only verbally but also through their actions."* Response options on the 5-point Likert scale are *"Strongly Disagree (1)," "Disagree (2)," "Undecided (3)," "Agree (4),"* and *"Strongly Agree (5)."* There are no reverse-coded items in the scale. Limon and Durnalı (2017) demonstrated the scale's validity through confirmatory factor analysis and reliability through Cronbach's Alpha internal consistency coefficient, which yielded satisfactory findings.

The validity and reliability of the scale were also tested in this study. A confirmatory factor analysis was run to validate the scale's factor structure, and the fit indices were calculated to evaluate the model fit. The findings confirmed the validity of the scale *($\chi2/df$=2.73; GFI=0.88; AGFI=0.84; NFI=0.96; IFI=0.98; RFI=0.95; CFI=0.98; RMSEA=0.08; SRMR=0.02)* (Schermelleh-Engel et al., 2003). As for the reliability, Cronbach's Alpha internal consistency coefficient was calculated, which was *α=.90* and indicated that the reliability criterion was satisfied (Büyüköztürk, 2017).

2.3.3. Perceived school effectiveness scale

The scale was developed by Mott (1972) and later revised by Miskel et al. (1979) for use in the context of educational organizations. The scale adaptation to Turkish was conducted by Yıldırım and Ada (2018). The unidimensional scale consists of eight items. A sample item from the scale is: *"When changes are made*

in this school, teachers quickly accept and adapt to them." Response options on the 6-point Likert scale are *"Strongly Disagree (1)," "Disagree (2)," "Undecided (3)," "Slightly Agree (4)," "Agree (5),"* and *"Completely Agree (6)."* Researchers revealed the scale's validity through exploratory and confirmatory factor analyses, and reliability was demonstrated through Cronbach's Alpha internal consistency coefficient. The findings indicated the validity and reliability of the scale.

The validity and reliability of the scale were also tested in this study. Confirmatory factor analysis was conducted for validity, and fit indices were calculated. The findings indicated that the factor structure of the scale was validated *($\chi2/df$=3.25; GFI=0.95; AGFI=0.90; NFI=0.99; IFI=0.99; RFI=0.98; CFI=0.99; RMSEA=0.09; SRMR=0.01)* (Schermelleh-Engel et al., 2003). On the other hand, Cronbach's Alpha internal consistency coefficient was α=.90, indicating that the reliability criterion was satisfied (Büyüköztürk, 2017).

2.4. Data collection and analysis procedures

The first step in data collection was to obtain permission from the researchers who developed or adapted the scales. Subsequently, approvals were obtained from the Batman University Ethics Committee with the reference numbers 04.01.2023 and 2023/01-05 and the Batman Provincial Directorate of National Education with the reference numbers 22.11.2022 and E-71214596-604.02-64000997. The data collection process took place between the 9th and 19th of January, 2023.

The data were analyzed on SPSS (25) and AMOS Graphics (24). Descriptive statistics, associations among variables, and reliability analyses were conducted on SPSS (25); confirmatory factor analyses and structural equation modeling were run on AMOS Graphics (24). Before data analysis, it was ensured that there were no missing data. Then, the assumption of normal distribution of the data was investigated. To this end, univariate skewness and kurtosis coefficients were calculated, and cut-off values of (+, - 1.96) were considered (Field, 2009). The findings presented in Table 1 indicated that the assumption of univariate normal distribution was satisfied for all the variables.

Table 1.
Skewness and Kurtosis Coefficients

Variables	N	Skewness		Kurtosis	
		Skewness	SE	Kurtosis	SE
SIL	272	1,24	,15	,15	,29
COC	272	-1,46	,15	,93	,29
SATC	272	-1,45	,15	,87	,29
TATC	272	-1,33	,15	,53	,29
WGC	272	-1,53	,15	1,22	,29
CC	272	-1,57	,15	1,28	,29
PSE	272	-1,35	,15	,58	,29

(SIL=Shared Instructional Leadership; COC: Collaborative Organizational Culture; SATC=Supervisor Attitude Towards Collaboration; TATC=Teacher Attitude Towards Collaboration; WGC=Workgroup Collaboration; CC=Collaborative Climate; PSE=Perceived School Effectiveness)

As Table 1 shows, skewness and kurtosis coefficients were within the cut-off values, which indicated the normal data distribution for all variables.

The associations among variables were investigated through Pearson correlation coefficients. The interpretation of the correlation coefficients was based on the following criteria: a correlation coefficient *(r)* of ≥.20 was considered *"very low,"* r=.21-.40 was considered *"low,"* r=.41-.69 was considered *"moderate,"* and r≥.70 *"high"* level of relationship (Singh, 2007). Predictive relationships between variables and mediation effect were revealed through structural equation modeling in which shared instructional

leadership, and collaborative climate predicted perceived school effectiveness. Thus, tolerance and VIF values were calculated to check for multicollinearity between the two variables. A VIF value of <10 and a tolerance value >.10 indicate the absence of multicollinearity (Çokluk et al., 2018; Field, 2009). The findings presented in Table 2 demonstrated no multicollinearity problem between the variables.

Table 2.
Findings on Multicollinearity

Variables	Beta	*t*	*p*	Tolerance	VIF
SIL	,16	3,40	,00	,32	3,14
CC	,76	16,24	,00		

Dependent variable= PSE

2.5. Ethical approval

In this study, all rules stated to be followed within the scope of the "*Higher Education Institutions Scientific Research and Publication Ethics Directive*" were followed. None of the actions specified under the title of "*Actions Violating Scientific Research and Publication Ethics*", which is the second part of the directive, have not been carried out.

Ethics committee approval information

Ethical committee: Batman University Ethics Committee

Data of ethical approval: 04.01.2023

Number of ethical approvals: 2023/01-05

3. FINDINGS

3.1. Findings on the association among variables

The findings regarding the associations among variables are presented in Table 3.

Table 3.
Associations among Variables

Variables		SIL	PSE	CC
SIL	Pearson Correlation	1,00	**,79****	**,83****
	Significance (p)	-	**,00**	**,00**
	N	272	272	272
PSE	Pearson Correlation		1,00	**,90****
	Significance (p)		-	**,00**
	N		272	272
CC	Pearson Correlation			1,00
	Significance (p)			-
	N			272

**Correlation is significant at p=,01.

As Table 3 shows, there were statistically significant associations between shared instructional leadership and perceived school effectiveness *(r=.79; p=.00)*; shared instructional leadership and collaborative climate

(r=.83; p=.00); and perceived school effectiveness and collaborative climate *(r=.90; p=.00)*. All these associations were positive and could be interpreted as *"high"* (Singh, 2007). Thus, as the level of shared instructional leadership in schools increases, collaborative climate and perceived school effectiveness also increase. Additionally, as the level of collaborative climate increases, perceived school effectiveness also increases.

3.2. Findings on structural equation modeling

The findings regarding the structural relationships between variables are presented in Table 4.

Table 4.

Structural Relationships between Variables

	Coefficients		Bootstrapping 5000 (95% CI)			
Variables	**Estimate**	**SE**	**Lower Bound**	**Upper Bound**	***p***	
Direct effects						
SIL→PSE (H$_1$)	.09	.07	-.04	.23	**.18**	Unconfirmed
SIL→CC (H$_2$)	.85	.04	.77	.91	**.00**	**Confirmed**
CC→PSE (H$_3$)	.84	.07	.70	.95	**.00**	**Confirmed**
Indirect effect						
SIL→CC→PSE (H$_4$)	.71	.06	.60	.84	**.00**	**Confirmed**

As shown in Table 4, the direct effect of shared instructional leadership on perceived school effectiveness was not statistically significant *(β=.09; p=.18)*. However, shared instructional leadership significantly predicted teachers' perception of collaborative climate *(β=.85; p=.00)*. On the other hand, collaborative climate was a significant predictor of perceived school effectiveness *(β=.84; p=.00)*. Lastly, collaborative climate mediated the relationship between shared instructional leadership and perceived school effectiveness *(β=.71; p=.00)*. Thus, it can be concluded that shared instructional leadership positively contributes to collaborative climate, which in turn enhances perceived school effectiveness. Figure 2 illustrates the structural equation model tested in the study.
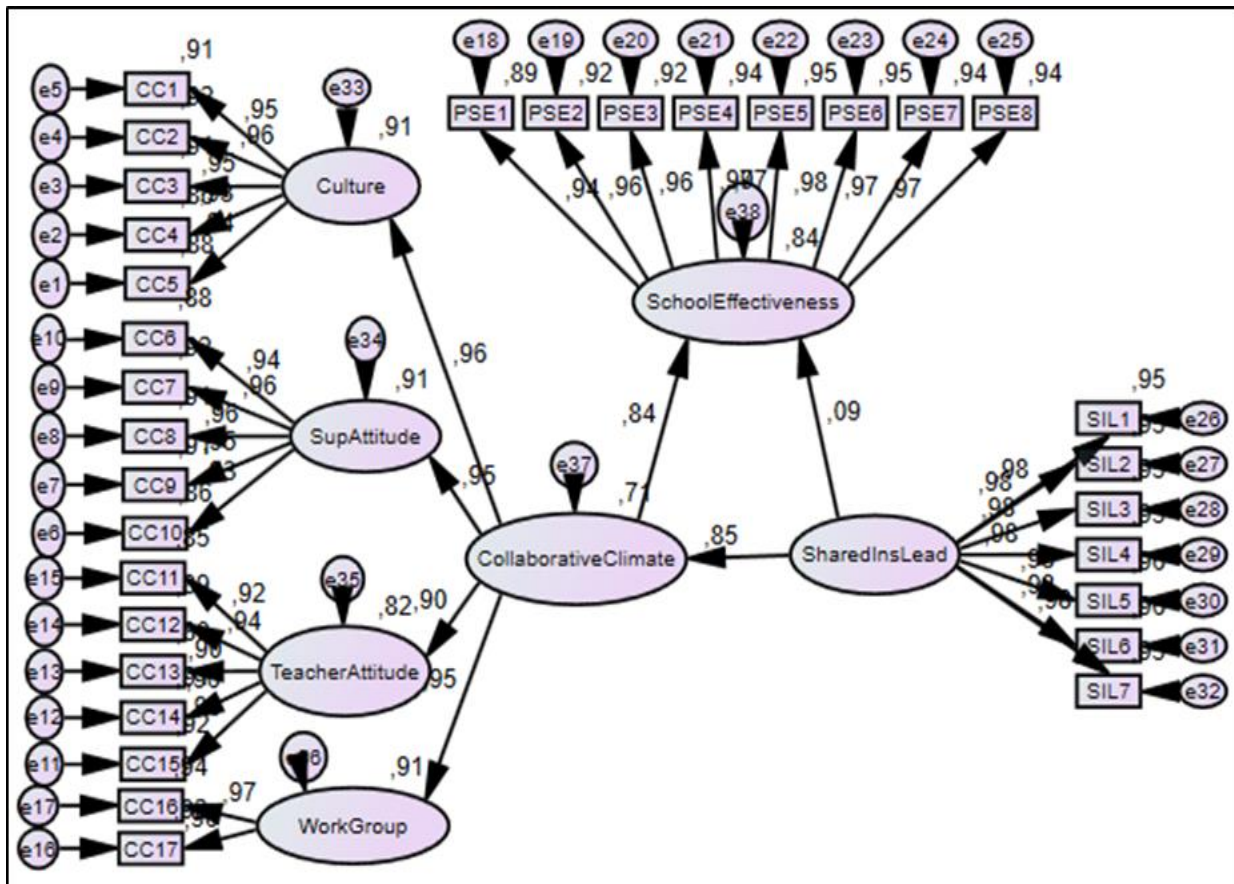
Figure 2. Structural equation model

4. CONCLUSION, DISCUSSION, and RECOMMENDATIONS

Based on teachers' perceptions, this study investigated the structural relationships among shared instructional leadership, collaborative climate, and school effectiveness. Hypotheses were formulated based on the previous literature and tested through a structural equation model. *The first hypothesis suggested that shared instructional leadership significantly predicted teachers' perceptions of school effectiveness*. The findings not confirmed this hypothesis. Because, the impact of shared instructional leadership on perceived school effectiveness was not statistically significant. However, there is a positive, statistically significant, and *"high"* level relationship between the two variables (*shared instructional leadership and school effectiveness*), which was consistent with the literature (Akyurek et al., 2024). The study by Cerit and Yıldırım (2017) revealed that effective leadership of principals significantly predicted the school's effectiveness. A meta-analysis by Yumuşak and Korkmaz (2021) also showed a positive and high-level relationship between leadership and school effectiveness. Mumtaz & Khan (2024) the findings reveal a strong, significant correlation between instructional leadership and school effectiveness. Abdurrezzak and Uğurlu (2016) found a moderately positive relationship between principals' leadership and effective schools. Moreover, there is convincing evidence in the literature regarding the relationship between different types of leadership and school effectiveness (Alagöz et al., 2022; Atılkan, 2019; Sezgin-Nartgün et al., 2020; Yılmaz, 2021; Yumlu, 2020). These leadership types include distributive leadership (Atılkan, 2019), agile leadership (Yılmaz, 2021), sustainable leadership (Sezgin-Nartgün et al., 2020), shared leadership (Alagöz et al., 2022), and technological leadership (Yumlu, 2020). Studies addressing the

relationships between leadership styles and school effectiveness are also in the literature (Ermeydan & Can, 2020; Özkan, 2014).

The second hypothesis suggested that shared instructional leadership significantly predicted teachers' perceptions of collaborative climate, which was confirmed by the findings. It indicated that the association between the variables was positive, statistically significant, and *"high."* Thus, it can be concluded that when principals are more engaged in instructional activities, teachers will have more positive perceptions of the collaborative climate. This finding is consistent with the previous literature. For example, Ayık and Şayir (2014) revealed that organizational climate is positively and moderately associated with instructional leadership. Another study by Bakkal and Radmard (2020) demonstrated a high-level relationship between educational leadership and school climate. Furthermore, studies in the literature explore the relationship between leadership styles and organizational climate (Bilgi, 2020; Demir, 2019; Metin, 2020).

The third hypothesis suggested that teachers' perceptions of collaborative climate significantly predicted school effectiveness, which was confirmed by the findings. Additionally, the correlation coefficient indicated a positive, statistically significant, and *"high"* level relationship between these two variables. Thus, as the level of collaborative climate in schools increases, the perceived school effectiveness also increases. In other words, an enhanced collaborative climate positively influences the perceived school effectiveness. Previous literature also revealed a statistically significant association between school climate and effectiveness (Şenel & Buluç, 2016). Additionally, studies in the literature explore the relationship between leadership styles and school climate (Gültekin, 2012).

As it is known, leaders execute their leadership processes through interactions with the organization's members. The notion that educational leaders make a difference and significantly influence the organization prompted researchers to conduct studies to delineate the foundations and nature of leadership (Demir, 2021; Hallinger, 2011). Thus, contemporary researchers conducting leadership studies emphasize that leadership practices are so complex that they cannot be represented solely by a set of characteristics or behaviors (Hoy & Miskel, 2012). In this regard, the fourth and final hypothesis of the study suggested that teachers' perceptions of collaborative climate mediated the relationship between shared instructional leadership and perceived school effectiveness. The findings confirmed this hypothesis. Thus, it can be concluded that shared instructional leadership positively contributes to a collaborative climate, enhancing perceived school effectiveness, which holds significance for educational organizations.

The results of the current study have both theoretical and practical implications. First, the findings imply that principals should devote more time to shared instructional leadership to nourish teachers' perceptions of collaborative climate and school effectiveness. The data collection tools used to measure shared instructional leadership and perceived school effectiveness are unidimensional. Thus, further research can adopt multidimensional data collection tools to test similar models. The current study also tested a simple mediation model with three variables, so further research can test more complex models, including some other organizational variables or demographics. Lastly, the research sample consists of only physical education teachers, and similar research can be conducted with teachers working in different subject areas.

Reference

Abdurrezzak, S., & Uğurlu, C. T. (2016). Okul liderliği davranış ve uygulamalarının okulların etkililiği üzerindeki etkisinin öğretmen algılarına göre incelenmesi. *Cumhuriyet Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi*, *40*(1), 215-242.

Akan, D., & Kılıç, M. (2019). Öğretmenlerin örgütsel bağlılık düzeyleri ile okul etkililiği arasındaki ilişkinin incelenmesi. *Ekev Akademi Dergisi*, *23*(80), 123-136. https://doi.org/10.17753/Ekev1266

Akyurek, M. I., Ozdogru, M., & Sarier, Y. (2024). The impact of shared instructional leadership and social capital on school effectiveness. *Journal of School Leadership*, 1-25. https://doi.org/10.1177/10526846241230950

Alagöz, T., Aydoğan, A., Durmaz, S., & Alagöz, A. (2022). Paylaşılan liderliğin okul etkililiği üzerindeki etkisi. *International Journal of Active Learning*, *7*(1), 84-99. https://doi.org/ijal.1110702

Atılkan, N. (2019). *Okul müdürünün dağıtımcı liderlik davranışları ile okulların etkililiği arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Karabük Üniversitesi, Lisansüstü Eğitim Enstitüsü, Karabük.

Ayık, A., & Şayir, G. (2014). Okul müdürlerinin öğretimsel liderlik davranışları ile örgüt iklimi arasındaki ilişki. *Elektronik Sosyal Bilimler Dergisi*, *13*(49), 253-279. https://doi.org/10.17755/esosder.39460

Bakkal, M., & Radmard, S. (2020). Okul müdürlerinin eğitimsel liderlik standartlarını karşılama düzeyleri ile öğretmenlerin okul iklimi algıları ve motivasyonları arasındaki ilişki. *İstanbul Aydın Üniversitesi Eğitim Fakültesi Dergisi*, *5*(2), 163-195.

Balcı, A. (2014). *Etkili okul: okul geliştirme kuram, uygulama ve araştırma*. Ankara: Pegem Akademi Yayıncılık.

Barlett, B., & Burton, D. (2007). *Introduction to education studies*. SAGE.

Bellibaş, M. Ş., & Kılınç, A. Ç. (2022). Sürdürülebilir okul gelişimi ve liderlik. İçinde (Edt.: K. Özcan), *Sürdürülebilir Kalkınma ve Eğitim* (ss. 235-261). Ankara: Anı Yayıncılık.

Bellibaş, M. Ş., Polatcan, M., & Akyürek, M. İ. (2022). Principal leadership typologies and their relationship with teacher self-efficacy and commitment: A latent profile mediation analysis. *Educational Management Administration & Leadership*, 1-22. https://doi.org/10.1177/17411432221139932

Bilgi, R. (2020). *Ortaokul yöneticilerinin liderlik stilleri ile örgüt iklimi arasındaki ilişkinin öğretmen algılarına göre incelenmesi* (Yayımlanmamış yüksek lisans tezi). Dicle Üniversitesi, Eğitim Bilimleri Enstitüsü, Diyarbakır.

Bush, T. (2018). *Eğitim liderliği ve yönetimi kuramları* (Çev. Ed.: R. Sarpkaya). Ankara: Pegem Akademi Yayıncılık.

Büyüköztürk, Ş. (2017). *Sosyal bilimler için veri analizi el kitabı*. Ankara: Pegem Akademi Yayıncılık.

Cerit, Y., & Yıldırım, B. (2017). İlkokul müdürlerinin etkili liderlik davranışları ile okul etkililiği arasındaki ilişki. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, *6*(3), 902-914. https://doi.org/10.14686/buefad.312405

Coe, R., & Fitz-Gibbon, C. T. (1998) School Effectiveness Research: criticisms and recommendations, *Oxford Review of Education, 24*:4, 421-438. https://doi.org/10.1080/0305498980240401

Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2018). *Sosyal bilimler için çok değişkenli istatistik SPSS ve Lisrel uygulamaları*. Ankara: Pegem Akademi.

Çolak, İ., & Altınkurt, Y. (2017). Okul iklimi ile öğretmenlerin özerklik davranışları arasındaki ilişki. *Kuram ve Uygulamada Egitim Yönetimi Dergisi*, *23*(1), 33-71. https://doi.org/10.14527/kuey.2017.002

Dalbudak, K., & Özgenel, M. (2022). Okul etkililiği, okul imajı, öğretmenlerin performansı ve öğrencilerin akademik başarıları arasındaki ilişkiler örüntüsü. *Çağdaş Yönetim Bilimleri Dergisi*, *9*(1), 1-15.

Demir, D. H. (2019). *Okul müdürleri liderlik stillerinin örgüt iklimi ve öğretmenlerin kolektif yeterlik algısı üzerindeki etkisi* (Yayımlanmamış yüksek lisans tezi). Maltepe Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.

Demir, K. (2021). Eğitim yönetimi kuram ve uygulama. İçinde (Edt.: K. Yılmaz ve K. Demir) *Eğitimde Liderlik*, (ss. 139-168). Ankara: Pegem Akademi Yayıncılık.

Dilekçi, Ü. (2021). Paylaşılan öğretimsel liderlik: Ölçek uyarlama çalışması. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 22(3), 2484-2508. https://dx.doi.org/10.17679/inuefd.1016019

Dilekçi, Ü., & Limon, İ. (2020). Okul müdürlerinin öğretimsel liderlik davranışları ile öğretmenlerin mesleki adanmışlıkları arasındaki ilişkide öznel iyi oluşun aracı rolü. *Kuram ve Uygulamada Eğitim Yönetimi*, 26(4), 743-798. https://doi.org/10.14527/kuey.2020.017

Dilekçi, Ü., Limon, İ., & Kaya, A. (2023). The relationship between teacher demoralization in educational policy context and school effectiveness. *Bolu Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 23(1), 213-228. https://dx.doi.org/ 10.17240/aibuefd.2023..-1182443

Diş, O., & Ayık, A. (2016). Okul yöneticilerinin kullandıkları güç kaynakları ile örgüt iklimi arasındaki ilişki. *Akademik Bakış Dergisi*, 58, 499-518.

Ermeydan, M., & Can, N. (2020). Okul yöneticilerin liderlik stilleriyle etkili okul arasındaki ilişki. *Gaziantep Üniversitesi Eğitim Bilimleri Dergisi*, 4(2), 94-121.

Fakılı, A. (2019). *Mesleki profesyonellik ve işbirlikçi iklime yönelik öğretmen algıları Ankara ili Keçiören ilçesi* (Yayımlanmamış yüksek lisans tezi). Bolu Abant İzzet Baysal Üniversitesi, Eğitim Bilimleri Enstitüsü, Bolu.

Field, A. (2009). *Discovering statistics using SPSS*. Los Angeles: Sage Publications.

Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the journal. *American Journal of Pharmaceutical Education*, 72(2), 1-3. https://doi.org/10.5688/aj720243

Goldstein, H. (1997). Methods in school effectiveness research. *School Effectiveness and School Improvement*, 8(4), 369-395. https://doi.org/10.1080/0924345970080401

Gökbulut, B., & Turan, S. (2021). Exploring the link between principals visionary leadership and school effectiveness. *International Journal of Education Technology and Scientific Researches*, 6(14), 589-623. http://dx.doi.org/10.35826/ijetsar.320

Gültekin, C. (2012). *Okul yöneticilerinin liderlik stillerinin okul iklimi üzerine etkisi: İstanbul ili Anadolu yakası örneği* (Yayımlanmamış yüksek lisans tezi). Maltepe Üniversitesi, Sosyal Bilimleri Enstitüsü, İstanbul.

Gümüş, S., Bellibaş, M. Ş., Esen, M., & Gümüş, E. (2018) A systematic review of studies on leadership models in educational research from 1980 to 2014. *Educational Management, Administration & Leadership, 46*(1) 25-48. https://doi.org/10.1177/1741143216659296

Hallinger, P. (2005). Instructional leadership and the school principal: A passing fancy that refuses to fade away. *Leadership and Policy in Schools*, 4(3), 221-239. https://doi.org/10.1080/15700760500244793

Hallinger, P. (2011). A review of three decades of doctoral studies using the principal instructional managementrating scale: A lens on methodological progress in educational leadership. *Educational Administration Quarterly*, 47(2), 271-306. https://doi.org/10.1177/0013161X10383412

Hallinger, P., & Kovačević, J. (2021). Science mapping the knowledge base in educational leadership and management: A longitudinal bibliometric analysis, 1960 to 2018. *Educational Management Administration & Leadership*, 49(1), 5-30. https://doi.org/10.1177/1741143219859002

Harris, A., & Jones, M. (2023). The importance of school leadership? What we know, *School Leadership & Management*, 43(5), 449-453. https://doi.org/10.1080/13632434.2023.2287806

Heffernan, A., & Longmuir, F. (2019). 'A school full of instructional experts': Shared instructional leadership in rural schools. *Leading and Managing*, 25(2), 1-13.

Hoy, W. K., & Miskel, C. G. (2012). *Eğitim yönetimi: Teori, araştırma ve uygulama* (Çev. Ed.: S. Turan). Ankara: Nobel Yayıncılık.

Işık, A. N., & Gümüş, E. (2017). Yönetici öz yeterliliği ve okul etkililiği arasındaki ilişkinin incelenmesi. *Kastamonu Eğitim Dergisi*, 25(1), 419-434. https://doi.org/10.24106/kefdergi.309192

Kandemir, A. (2022). Teacher perceptions of shared ınstructional leadership and ınnovative schools. *I-manager's Journal on Educational Psychology*, *16*(l), 48-57. https://doi.org/10.26634/jpsy.16.1.18908

Karip, E., & Köksal, K. (1996). Etkili eğitim sistemlerinin geliştirilmesi. *Kuram ve Uygulamada Eğitim Yönetimi*, *2*(2), 245-257.

Limon, İ. (2023). Okul etkililiği araştırmalarına yönelik bibliyometrik bir analiz. *Kocaeli Üniversitesi Eğitim Dergisi*, *6*(2), 522-542. http://doi.org/10.33400/kuje.1317097

Limon, İ., & Durnalı, M. (2017). İşbirlikçi iklim ölçeğinin türkçeye uyarlanması: geçerlik ve güvenirlik çalışması. *Sakarya University Journal of Education*, *7*(2), 282-294. https://doi.org/10.19126/suje.335818

Liu, Y., Li, L., & Huang, C. (2022). To what extent is shared instructional leadership related to teacher self-efficacy and student academic performance in China? *School Effectiveness and School Improvement: An International Journal of Research, Policy, and Practice*, *33*(3), 381-402. https://doi.org/10.1080/09243453.2022.2029746

Marczyk, G., DeMatteo, D., & Festinger, D. (2005). *Essentials of research design and methodology*. New Jersey: John Wiley & Sons.

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

Metin, G. (2020). *Kadın okul yöneticilerinin liderlik stilleri ile okul iklimi arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). Karamanoğlu Mehmet Bey Üniversitesi, Sosyal Bilimler Enstitüsü, Karaman.

Miskel, C., Fevurly, R., & Stewart, J. (1979). Organizational structures and processes, perceived school effectiveness, loyalty, and job satisfaction. *Educational Administration Quarterly*, *15*(3), 97-118. https://doi.org/10.1177/0013131X7901500308

Mott, P. (1972). *The characteristics of effective organizations*. New York: Harper and Row.

Mumtaz., Ali, N., & Khan, R. (2024). Instructional leadership and school effectiveness: A correlational study at secondary level ınstitutions in the context of district Bannu. *Qlantic Journal of Social Sciences and Humanities*, *5*(1), 176-183. https://doi.org/10.55737/qjssh.679125316

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & Evaluation in Higher Education*, *33*(3), 301-314. https://doi.org/10.1080/02602930701293231

Oplatka, I. (2016). *Eğitim yönetiminin mirası* (Çev.: S. Turan, F. Bektaş & M. Yalçın). Ankara: Pegem Akademi Yayıncılık.

Özdemir, S., & Sezgin, F. (2002). Etkili okullar ve öğretim liderliği. *Kırgızistan Manas Sosyal Bilimler Dergisi*, *2*(3), 266-282.

Özkan, Y. (2014). *Okul yöneticilerinin liderlik stilleri ile okulların etkililik düzeyleri arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Mevlana Üniversitesi, Sosyal Bilimler Enstitüsü, Konya.

Reynolds, D., & Packer, A. (1992). School effectiveness and school improvement in the 1990's. In D. Reynolds & P. Cuttance (Eds.), *School Effectiveness: Research, Policy, and Practice* (pp. 171-188). London: Cassell.

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

Rutter, M., Maughan, B., Mortimore, P., & Oulston, J. (1979). *Fifteen thousand hours: Secondary schools and their effects on children*. Open Books.

Saylık, N., & Arastaman, G. (2022). Okul işbirliği ölçeğinin geliştirilmesi geçerlik ve güvenirlik çalışması. *Van Yüzüncü Yıl University Journal of Education*, *19*(2), 462-483. https://doi.org/10.33711/yyuefd.1079626

Scheerens, J. (2000). *Improving school effectiveness* (Fundamentals of Educational Planning No. 68). Paris: UNESCO/International Institute for Educational Planning.

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, *8*(2), 23-74.

Sezgin-Nartgün, Ş., & Fakılı, A. (2020). Teacher perceptions of occupational professionalism and collaborative climate. *Political Economy and Management of Education*, *1*(1), 26-40.

Sezgin-Nartgün, Ş., Limon, İ., & Dilekçi, Ü. (2020). The relationship between sustainable leadership and perceived school effectiveness: the mediating role of work effort. *Bartın University Journal of Faculty of Education*, *9*(1), 141-154. https://doi.org/10.14686/buefad.653014

Singh, K. (2007). *Quantitative social research methods*. New Delhi: Sage Publications. https://doi.org/10.4135/9789351507741

Stringfield, S. (1994). The analysis of large data bases in school effectiveness research, İçinde D. Reynolds, B. Creemers, P. Nesselrodt, E. Schaffer, S. Stringfield ve C. Teddlie (ed.), *Advances in School Effectiveness Research and Practice*. Oxford: Pergamon Press. https://doi.org/10.1016/B978-0-08-042392-0.50008-5

Stringfield, S., & Teddlie, C. (1991). School, classroom, and student level indicators of rural school effectiveness. *Journal of Research in Rural Education*, *7*(3), 15-28.

Sveiby, K. E., & Simons, R. (2002). Collaborative climate and effectiveness of knowledge work–an empirical study. *Journal of Knowledge Management*, *6*(5), 420-433. https://doi.org/10.1108/13673270210450388

Şenel, T., & Buluç, B. (2016). İlkokullarda okul iklimi ile okul etkililiği arasındaki ilişki. *TÜBAV Bilim Dergisi*, *9*(4), 1-12.

Thapa, A., Cohen, J., Gufey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, *83*, 357-385. https://doi.org/10.3102/0034654313483907

Turan, S., & Bektaş, F. (2021). Eğitim yönetimi. İçinde (Edt.: S. Turan), *Liderlik* (ss. 347-389). Elazığ: Asos Yayınları.

Turhan, M., Şener, G., & Gündüzalp, S. (2017). Türkiye'de okul etkililiği araştırmalarına genel bir bakış. *Turkish Journal of Educational Studies*, *4*(2), 103-151.

Urick, A. (2016). Examining US principal perception of multiple leadership styles used to practice shared instructional leadership. *Journal of Educational Administration*, *54*(2), 152-172. https://doi.org/10.1108/JEA-07-2014-0088

Yıldırım, İ., & Ada, Ş. (2018). Algılanan okul etkililiği ölçeği'nin (SE-Index) Türkçeye uyarlanması. *Milli Eğitim*, *47*(219) 19-32.

Yılmaz, F. Ç. (2021). *Okul müdürlerinin çevik liderlik özellikleri ile okul etkililiği arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). İstanbul Sabahattin Zaim Üniversitesi, Lisansüstü Eğitim Enstitüsü, İstanbul.

Yılmaz, K., & Altınkurt, Y. (2013). Örgütsel iklim ölçeğinin Türkçeye uyarlanması: Geçerlik ve güvenirlik çalışması. *Trakya Üniversitesi Eğitim Fakültesi Dergisi*, *3*(1), 1-11.

Yukl, G. (2018). *Örgütlerde liderlik* (Çev. Ed.: Ş. Çetin & R. Baltacı). Ankara: Nobel Yayıncılık.

Yumlu, E. (2020). *Okul yöneticilerinin sahip oldukları teknolojik liderlik yeterlilikleri ile okul etkililiği arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). İstanbul Sabahattin Zaim Üniversitesi, Lisansüstü Eğitim Enstitüsü, İstanbul.

Yumuşak, H., & Korkmaz, M. (2021). Liderlik ve okul etkililiği düzeyleri arasındaki ilişki: bir meta analiz çalışması. *Erciyes Journal of Education*, *5*(2), 121-148. https://doi.org/10.32433/eje.980997

Zhan, X., & Cao, M. (2023). Contextual imperatives for effective shared instructional leadership: a fuzzy-set qualitative comparative analysis. *Journal of Educational Administration*, *61*(2), 144-161. https://doi.org/10.1108/JEA-07-2022-0109

Zhan, X., Anthony, A. B., Goddard, R., & Beard, K. S. (2020). Development, factor structure, and reliability of the Shared Instructional Leadership Scale in public secondary schools. *Educational Management Administration & Leadership*. https://doi.org/10.1177/1741143220963103

GENİŞLETİLMİŞ ÖZET

1. GİRİŞ

İçerisinde bulunduğumuz 21. yüzyılda okulların yönetim ihtiyaçlarını geleneksel yönetim yaklaşımlarıyla karşılamaya çalışmak oldukça güç görünmektedir (Turan ve Bektaş, 2021). İlgili alanyazın incelendiğinde söz konusu güçlük neticesinde liderlik temalı çalışmaların ve alana yönelen araştırmacıların sayısında 20. yüzyılın ilk yarısından günümüze kadar dikkate değer artış meydana geldiği göze çarpmaktadır (Hallinger ve Kovačević, 2021; Yukl, 2018). Bunun temel nedeni olarak da yukarıda zikredilen 20. yüzyılın ilk yarısından itibaren liderlik konusunun öneminin alanyazında daha fazla fark edilmesi ve buna bağlı olarak da liderliğin yazarlar arasında popülerliğinin artması olduğu söylenebilir (Hoy ve Miskel, 2012; Oplatka, 2016).

Liderliğin günümüzde özellikle eğitim örgütlerinde üzerinde önemle durulan bir kavram olduğu ve alanyazında liderliğin farklı türlerinin araştırmalara sıkça konu edinildiğini görmek mümkündür (Gümüş ve diğerleri, 2018). Çünkü liderlik, okulların yönetimi ile ilgili alanyazında üzerinde dikkatle durulan konulardan biri olup (Bellibaş ve Kılınç, 2022) liderlik ile eğitim örgütlerindeki başarı arasında bir ilişki olduğuna dair güçlü kanıtlar bulunmaktadır (Robinson ve diğerleri, 2008). Bilhassa günümüzde eğitim örgütlerindeki etkili bir liderlik süreci için öğrenci ve öğretmenlerden kabul görmenin fazlasıyla önem arz ettiği söylenebilir (Bush, 2018). Elbette söz konusu kabul görme, eğitim kurumunda lider kişinin paydaşlarını olumsuz yollarla baskılaması ile değil; etkili liderlik becerileriyle gerçekleşmektedir (Yukl, 2018).

Yukarıda da ifade edilmeye çalışıldığı üzere liderlik, eğitim ve öğretim faaliyetlerinin yürütüldüğü okullar için de öncül bir kavramdır (Harris ve Jones, 2023; Oplatka, 2016). Bu bağlamda karşımıza eğitim kurumlarına özgü olan, eğitim kurumlarının yönetimini ve öğretim faaliyetlerini yönlendirmek için kullanılan bir dizi strateji ve beceriyi içeren öğretimsel liderlik çıkmaktadır (Hallinger, 2005). Öğretimsel liderliğin eğitim kurumlarının sadece bugünün değil, aynı zamanda geleceğin ihtiyaçlarına da uygun olacak şekilde yönetilmesini sağlamasına katkı sunduğu düşünülmekte olup eğitim kurumlarının etkili ve verimli biçimde yönetimi için öğretimsel liderliğin anahtar role sahip bir liderlik türü olduğu söylenilebilmektedir (Dilekçi ve Limon, 2020). Öğretimsel liderlikle beraber son yıllarda ilgi çeken liderlik türlerinden biri de paylaşılan öğretimsel liderliktir (Akyurek ve diğerleri, 2024; Bellibaş ve diğerleri, 2022; Dilekçi, 2021; Heffernan ve Longmuir, 2019; Kandemir, 2022; Liu ve diğerleri, 2022; Urick, 2016; Zhan ve diğerleri, 2020; Zhan ve Cao, 2023). Paylaşılan öğretimsel liderlik kavramının ortaya çıkışının, geleneksel liderlik anlayışlarının yetersiz kalması ve eğitimdeki değişim süreçlerine hızlı bir şekilde uyum sağlamalarının gerekliliğiyle açıklanmaktadır. Eğitimdeki hızlı değişimlerin bir sonucu olarak, okulların karşı karşıya kaldığı sorunlar giderek karmaşık hale gelmektedir. Bireysel liderlik anlayışı, bu sorunları ele almada yetersiz kalmaktadır. Bu nedenle, öğretimsel liderlikte paylaşılan bir yaklaşımın benimsenmesi; öğretmenlerin, okul müdürlerinin ve okulun diğer paydaşlarının bir araya gelerek bu sorunlara karşı çözümler geliştirmeleri ve uygulamaları açısından önemli bir fırsat sağlamaktadır. Bu yaklaşımın amacı, okuldaki tüm çalışanların liderlik rollerini üstlenerek, öğrenme süreçlerinin iyileştirilmesi için işbirliği yapmalarını sağlamaktır. Bu şekilde, eğitimdeki değişimlere hızlı bir şekilde uyum sağlanabilir ve okuldaki tüm paydaşlar eğitimdeki başarıyı arttırmak için birlikte çalışabilirler (Bellibaş ve diğerleri, 2022; Liu ve diğerleri, 2022). Bu bağlamda araştırmada okul müdürlerinin paylaşılan öğretimsel liderlik davranışları, okul etkililiği ve işbirlikçi iklim arasındaki ilişkilere dayanarak aşağıdaki hipotezler öne sürülmüştür:

H₁: Okul müdürlerinin paylaşılan öğretimsel liderlik davranışları öğretmenlerin okul etkililiğine ilişkin algılarını anlamlı bir biçimde yordamaktadır.

H₂: Okul müdürlerinin paylaşılan öğretimsel liderlik davranışları öğretmenlerin işbirlikçi iklime ilişkin algılarını anlamlı bir biçimde yordamaktadır.

The Mediating Role of Collaborative Climate in the Relationship between Shared Instructional Leadership and School Effectiveness: A Structural Equation Modeling

(Okul Müdürlerinin Paylaşılan Öğretimsel Liderlik Davranışları ile Okul Etkililiği İlişkisinde İşbirlikçi İklimin Aracı Rolü: Bir Yapısal Eşitlik Modellemesi)

H₃: Öğretmenlerin işbirlikçi iklime ilişkin algıları onların okul etkililiğine ilişkin algılarını anlamlı bir biçimde yordamaktadır.

H₄: Öğretmenlerin işbirlikçi iklime ilişkin algıları okul müdürlerinin paylaşılan öğretimsel liderlik davranışları ile öğretmenlerin okul etkililiğine ilişkin algıları arasında aracı rolü bulunmaktadır.

2. YÖNTEM

Mevcut araştırma öğretmen algılarına göre okullarda paylaşılan öğretimsel liderlik, okullarda işbirlikçi iklim ve okul etkililiği arasındaki ilişkilere odaklanan nicel desende kurgulanmış ilişkisel bir araştırmadır (Marczyk ve diğerleri, 2005). Bu bağlamda, araştırmada okul müdürlerinin paylaşılan öğretimsel liderlik davranışları ile algılanan okul etkililiği arasındaki ilişkide işbirlikçi iklimin aracı rolü yapısal eşitlik modellemesi ile test edilmiştir.

Araştırmada evrenin tamamına ulaşılması hedeflendiğinden örneklem alma yoluna gidilmemiştir. 2022-2023 eğitim ve öğretim yılında Batman ili (Türkiye) genelinde görev yapan 402 beden eğitimi öğretmeninden 272'si araştırmaya katılmıştır.

Araştırma kapsamında veriler *Paylaşılan Öğretimsel Liderlik Ölçeği, İşbirlikçi İklim Ölçeği* ve *Algılanan Okul Etkililiği Ölçeği* olmak üzere üç farklı ölçme aracı ile toplanmıştır. *Paylaşılan Öğretimsel Liderlik Ölçeği* Zhan ve diğerleri (2020) tarafından geliştirilmiş, Dilekçi (2021) tarafından Türkçe'ye uyarlanmıştır. Tek boyutlu olan ölçekte yedi madde yer almaktadır. 6'lı Likert tarzındaki ölçekte cevap seçenekleri *"Kesinlikle katılmıyorum (1)"* ile *"Kesinlikle katılıyorum (6)"* aralığındadır. *İşbirlikçi İklim Ölçeği* Sveiby ve Simons (2002) tarafından geliştirilmiş, Limon ve Durnalı (2017) tarafından Türkçe'ye uyarlanmıştır. Dört boyut on yedi maddeden oluşan ölçeğin boyutları şu şekildedir: *"İşbirlikçi örgüt kültürü (5 madde)", "İşbirliğine yönelik yönetici tutumu (5 madde)", "İşbirliğine yönelik öğretmen tutumu (5 madde), "Zümre içi iş birliği (2 madde)"*. 5'li Likert tipindeki ölçekte cevap seçenekleri *"Kesinlikle katılmıyorum (1)"* ile *"Kesinlikle katılıyorum (5)"* aralığındadır. *Algılanan Okul Etkililiği Ölçeği* ise Mott (1972) tarafından geliştirilmiş; daha sonra Miskel ve arkadaşları (1979) tarafından eğitim örgütleri bağlamında kullanılmak amacıyla revize edilmiştir. Ölçeğin Türkçe'ye uyarlaması ise Yıldırım ve Ada (2018) tarafından yapılmıştır. Tek boyutlu ölçekte sekiz madde yer almaktadır. 6'lı Likert tarzındaki ölçekte cevap seçenekleri *"Kesinlikle katılmıyorum (1)"* ile *"Tamamen katılıyorum (6)"* aralığındadır. Araştırmada ayrıca katılımcıların demografik bilgilerini belirlemek amacıyla katılımcılara demografik bilgilerini ortaya koyacak sorular yöneltilmiştir.

Veri analizinde SPSS (25) ve AMOS Graphics (24) olmak üzere iki farklı programdan yararlanılmıştır. Betimsel istatistikler, değişkenler arası karşılıklı ilişkiler ve güvenirlik analizleri SPSS (25) programı ile veri toplama araçlarının geçerliliği (DFA), ölçüm modelinin test edilmesi ve yapısal eşitlik analizleri ise AMOS Graphics (24) programı aracılığı ile yürütülmüştür. Veriler analiz edilmeden önce, veri setinde kayıp veri olup olmadığı kontrol edilmiş ve kayıp veriye rastlanmamıştır. Verinin normal dağılım varsayımını karşılayıp karşılamadığı kontrol edilmiştir. Bu amaçla tek değişkenli çarpıklık-basıklık değerleri hesaplanmış ve +, - 1,96 aralığındaki değerlerin normal dağılım varsayımını karşıladığı değerlendirilmiştir (Field, 2009). Değişkenler arası karşılıklı ilişkiler Pearson korelasyon katsayısı hesaplanarak ortaya konmuştur. Değişkenler arası ilişkinin *r≥,20* olması çok düşük; *r=,21-,40* aralığında olması düşük; *r=,41-,69* aralığında olması orta ve *r≥,70* olması ise yüksek düzeyde ilişki olarak yorumlanmıştır (Singh, 2007). Değişkenler arası yordayıcı ilişkiler ve aracılık analizi yapısal eşitlik modellemesi ile ortaya konmuştur. Söz konusu analizde paylaşılan öğretimsel liderlik ve işbirlikçi iklim algısı algılanan okul etkililiğini yordayan değişkenler olduğu için iki değişken arasında çoklu bağlantı sorunu olup olmadığı kontrol etmek amacıyla tolerance ve VIF değerleri hesaplanmıştır. VIF değerinin <10; tolerance değerinin ise >,10 bağımsız yordayıcı değişkenler arası çoklu bağlantı sorunu olmadığını göstermektedir (Çokluk ve diğerleri, 2018; Field, 2009).

3. BULGULAR VE SONUÇ

Bu araştırma öğretmen algılarına göre paylaşılan öğretimsel liderlik ile okul etkililiği arasındaki ilişkide işbirlikçi iklimin aracı rolünü incelemektedir. Değişkenler arasındaki ilişkilere ilişkin bulgular, değişkenler arasında istatistiksel olarak anlamlı, pozitif ve yüksek düzeyli ilişkilere işaret etmektedir. Öte yandan, araştırma hipotezlerini test etmek için yapısal eşitlik modeli kullanılmıştır. Elde edilen bulgular, paylaşılan öğretim liderliğinin işbirlikçi iklimi istatistiksel olarak anlamlı bir biçimde yordadığını, ancak algılanan okul etkililiği üzerinde anlamlı bir etkisinin olmadığını; işbirlikçi iklimin algılanan okul etkililiği üzerindeki etkisinin istatistiksel olarak anlamlı olduğunu ortaya koymuştur. Öte yandan, işbirlikçi iklimin paylaşılan öğretimsel liderlik ile algılanan okul etkililiği arasındaki ilişkide aracı bir role sahip olduğu saptanmıştır. Bu araştırmanın sonuçlarının teorik ve uygulama bağlamında bazı içerimler barındırdığı düşünülmektedir. Araştırma sonuçları öğretmenlerin işbirlikçi iklim ve okul etkililiği algılarını besleme noktasında benimsenmesi gereken liderlik türü bağlamında ipuçları sunmakta ve okul müdürlerinin paylaşılan öğretimsel liderliğe daha fazla zaman ayırmasının gerekliliğini ortaya koymaktadır.

ARAŞTIRMANIN ETİK İZNİ

Bu çalışmada "Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi" kapsamında uyulması gerektiği belirtilen tüm kurallara uyulmuştur. Yönergenin ikinci bölümü olan "Bilimsel Araştırma ve Yayın Etiğine Aykırı Eylemler" başlığı altında belirtilen eylemlerden hiçbiri gerçekleştirilmemiştir.

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