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The relationship between principals' instructional leadership and teachers' positive instructional emotions: Self-efficacy as a mediator

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Abstract

This study investigates the mediating role of self-efficacy in the relationship between school principals' instructional leadership behaviors and teachers' positive instructional emotions (enjoyment, pride, and hope). The study sample consisted of 380 teachers (from primary to high school) working in Batman, Turkey, during the 2020-2021 academic year. A two-stage sampling procedure (criterion sampling, and convenient sampling) was employed. The data collection procedure was carried out online. To test the hypotheses, we employed structural equation modeling. The findings indicated statistically significant relationships between instructional leadership, teachers' self-efficacy, and positive instructional emotions. As for predictive relationships, instructional leadership significantly predicted teachers' self-efficacy and positive instructional emotions. On the other hand, self-efficacy predicted positive instructional emotions and mediated the relationship between instructional leadership and emotions. These findings provide evidence that school principals can help teachers experience positive emotions during instruction by nurturing their self-efficacy perceptions through instructional leadership behaviors.
Keywords: *Instructional leadership, self-efficacy, teachers' emotions*

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Introduction

Emotions are complicated and they play a key role in the effective and successful management of organizations. They are particularly important in schools since they are emotionally intensive organizations (Pekrun et al., 2018). However, teachers' emotions were neglected both theoretically and practically for a long time (Uitto et al., 2015) since it was thought that emotions were difficult to measure and irrational (Chen, 2020). This changed over time with an increase in the number of studies revealing the importance of emotions in organizational settings (Kiefer, 2002). In the early 1980s, there was a growing literature in psychology regarding emotions, but teachers' emotions did not attract attention until the mid-1990s (Chen, 2020). Later, research revealed that the emotions experienced by teachers play a crucial role in teaching and learning processes (Burić et al., 2018; Chen, 2019a; Pitkäniemi, 2017) which led to a wider acceptance of teachers' emotions (Chen et al., 2020). For example, in a review of 812 articles published between 1985-2019, it was shown that teacher emotions were influential on students, learning, teaching, and teachers themselves (Chen, 2020). Previous literature also suggested that there are associations between teachers' emotions and student motivation (Aldrup et al., 2017; Frenzel, 2014); student emotions (Chen, 2019b; 2020; Pitkäniemi, 2017; van Uden et al., 2014); classroom management (Hagenauer et al., 2015; Sutton et al., 2009); regulation of learning experiences (Hargreaves, 1998; Zembylas, 2011) and professional development of teachers (Bahia et al., 2013; Mansfield et al., 2012). Nevertheless, we still know little about teachers' emotions, and there is much to be explored about them (Chang & Taxer, 2020). In this sense, this study investigated the influence of leadership on teachers' emotions and the mechanisms playing a role in this association.

There is a growing body of research on instructional leadership (Gümüş et al., 2021; Ma & Marion, 2021) since it is peculiar to the school context (Karacabey et al., 2020) and directly aims to improve student learning (Hallinger et al., 2020). The object of instructional leadership is teachers (Qadach et al., 2020). For these reasons, school principals are expected to act as instructional leaders. However, in the *Teaching and Learning International Survey* (TALIS) conducted across OECD countries in 2018, it was stated that school principals could not engage in instructional leadership behaviors since they did not have enough time (OECD, 2019). Considering the association between leadership and positive instructional emotions (Beatty, 2011; Beatty & Brew, 2004; Bellibaş & Liu, 2017; Duyar et al., 2013), this constitutes a fundamental problem for effective teaching. As the importance of emotions become clearer, school principals are expected to understand teachers' emotions better and help them manage these emotions successfully (Ordu & Çobanoğlu, 2020). Otherwise, school principals who do not understand teachers' emotions and ignore their emotional needs will inevitably face challenges (Beatty & Brew, 2004).

Previous literature also revealed that instructional leadership is associated with teachers' self-efficacy (Bellibaş & Liu, 2017; Cansoy & Parlar, 2017; Çalık et al., 2012; Liu et al., 2021) and self-efficacy with teachers' emotions (Brigido et al., 2012; Burić & Macuka, 2018; Pitkäniemi, 2017; Skaalvik & Skaalvik, 2014), which sheds light on the potential role of self-efficacy in terms of the relationship between instructional leadership and teachers' emotions. However, there is a

gap in the literature to show those relationships. This study aims to extend the literature on teachers' emotions, investigating their association with instructional leadership and self-efficacy. Additionally, the findings in the literature indicate that understanding teachers' emotions help educational leaders reach the essence and spirit of education (Beatty, 2011). In this sense, the findings of the current study may have the potential to contribute to a better understanding of teachers' emotions and the variables influential on emotions.

Theoretical Framework

This section provides the theoretical background of instructional leadership, teacher self-efficacy, and teachers' emotions.

Instructional leadership

The concept of instructional leadership emerged from the effective school movement (Hallinger & Murphy, 1985). It is a type of leadership peculiar to the school, and its focal point is the teaching process (Karacabey et al., 2020). Instructional leadership can be the most influential leadership style on student learning (Robinson et al., 2008), and there are various definitions of the term in literature (Leithwood et al., 1999). However, in its broadest sense, it can be defined as *"school leadership aiming to improve the learning of all students"* (Hallinger et al., 2020). In the early years of instructional leadership literature, it was conceptualized as *defining school mission*, *managing curriculum*, and *creating a positive learning climate* (Hallinger & Murphy, 1985), and this has been considered the basis for this type of leadership research since then (Bellibaş et al., 2020b). Defining a school's mission can be conceptualized as establishing clear goals and linking these goals to each other (Hallinger et al., 1999). This dimension points to the school principal's role in determining the objectives for which the school's resources will be directed during the academic year (Hallinger, 2010). Managing the curriculum indicates that the school principal is primarily responsible for the execution of the curriculum and leads the teaching and learning process to create a successful school (Hallinger & Murphy, 1985). Promoting school climate refers to school principals' role to enhance the school climate by improving the learning environment, encouraging teachers, and saving time for teaching (Hallinger & Wang, 2015).

Based on these components regarding instructional leadership, empirical evidence on the effect of instructional leadership on various school processes, structures, and outcomes contributes to the popularity of instructional leadership in educational leadership research (Karacabey et al., 2020). We can see the reflections of instructional leadership on educational research conducted in the Turkish educational context (Dilekçi & Limon, 2020; Gümüş et al., 2021). Although instructional leadership is a relatively new phenomenon in the Turkish education system, studies on instructional leadership behaviors of Turkish school principals date back to the 1990s (Bellibaş, 2014). Recently, a significant emphasis has been placed on the leadership skills of school principals with the statement *"every school is as much a school as its principal"* in the *2023 Education Vision Document of the Ministry of National Education* (MoNE, 2018).

Teacher self-efficacy

The concept of self-efficacy was proposed by Bandura (1977). He used the term to express one's belief in his/her abilities in designing and implementing future actions and regarded it as an

important constituent of success in various fields. In this study, teacher self-efficacy was dealt with as a three-dimensional construct which is self-efficacy in classroom management, student engagement, and teaching strategies. Self-efficacy in classroom management refers to teachers' beliefs in setting class rules and managing the class successfully (Lazarides et al., 2020). Self-efficacy in student engagement refers to teachers' beliefs of being able to involve students of all levels in activities in class and to create a belief in students that they can do these activities (Cansoy et al., 2017). Self-efficacy in teaching strategies refers to teachers' beliefs that they have the knowledge and skills to use teaching strategies effectively and how to reflect these strategies to students' success (Çapa et al., 2005).

Teacher self-efficacy has a significant impact on both teachers and students (Stephanou & Oikonomou, 2018). Previous findings in the literature suggested that self-efficacy is strongly associated with such educational outcomes as teachers' enthusiasm, commitment to work, continuance commitment, and instructional behavior (Tschannen-Moran & Hoy, 2001). Furthermore, it is associated with teachers' job satisfaction (Skaalvik & Skaalvik, 2014; Sokmen & Kilic, 2019), emotions (Brigido et al., 2012; Burić et al., 2020), autonomy (Sokmen & Kilic, 2019), and professional commitment (Skaalvik & Skaalvik, 2014). On the other hand, teachers' self-efficacy can also be defined as teachers' belief in their ability to improve students' learning levels who have relatively lower motivation and learning difficulty (Tschannen-Moran & Hoy, 2001). In this sense, teacher self-efficacy plays an important role in student success (Bellibaş & Liu, 2017; Çalık et al., 2012; Stephanou & Oikonomou, 2018). Based on these, we can say that teachers' self-efficacy is of great importance in school effectiveness.

Teachers' emotions

Emotions were neglected in educational environments for a long time (Chen & Cheng, 2021). However, there is a growing body of literature regarding teachers' emotions thanks to the shift in the perceptions related to emotions (Chen, 2019a, 2019b; 2020; Uitto et al., 2015). In addition to scale development efforts (Burić et al., 2018; Chen, 2016; Frenzel et al., 2010; Gramipour et al., 2019), teacher emotions were associated with change (Zayim-Kutay, 2020), adaptive performance (Dilekçi, 2018), teacher self-efficacy (Burić et al., 2020), teacher identity (Nichols et al., 2017) and literature review (Chen, 2020; Fried et al., 2015; Šarić, 2015; Sutton & Wheatley, 2003; Uitto et al., 2015). These studies indicate that teachers' emotions gained a broader acceptance in organizational studies.

In literature, there is not a commonly accepted definition of teachers' emotions (Chen, 2020). However, Farouk (2012) stated that teacher emotions compromised the level of the individual teacher's dynamic mental state, emotion regulation skills, response to an external stimulus, and a synthesis approach. On the other hand, there is not a consistent categorization of emotions in previous literature. Some studies suggest a dichotomous classification of teachers' emotions into positive and negative, while others suggest a multi-dimensional approach (Burić et al., 2018; Chen, 2016; Dilekçi, 2018; Frenzel et al., 2010; Gramipour et al., 2019; Hong et al., 2016). To conclude, as literature regarding teachers' emotions expand, efforts to define and measure teachers' emotions more comprehensively increase (Chen, 2020). In this study, we dealt with positive instructional emotions such as *enjoyment* (Chen, 2016; Frenzel et al., 2010), *pride* (Burić et al., 2018; Hong et

al., 2016), and *hope* (Dilekçi, 2018; Gramipour et al., 2019). *Enjoyment* is one of the most intensively experienced emotions during instruction (Dilekçi & Sezgin-Nartgün, 2019; Uzuntiryaki-Kondakci et al., 2021). It refers to well-being and pleasure (Frenzel, 2014). *Pride* is the outcome of the successful execution of a particular task (Lewis, 2008). Experiencing pride enhances teachers' commitment and accomplishment (McLaughlin, 1992). *Hope* includes positive expectations about the future (Soylu, 2021). It is thought that it will be inevitable for teachers who are hopeful about teaching activities to be effective and successful.

The associations between instructional leadership, self-efficacy, and positive instructional emotions

The ultimate goal of leadership is to influence followers (Yukl, 2013). In this sense, school principals can enhance teachers' self-efficacy perceptions through instructional leadership since it has a supportive and participatory structure that prioritizes teachers' maximum participation in activities related to education and training (Murphy, 1990). Previous literature provides empirical evidence that instructional leadership and teachers' self-efficacy are associated (Bellibaş & Liu, 2017; Cansoy & Parlar, 2017; Çalık et al., 2012; Liu et al., 2021; Ma & Marion, 2021). As stated above, instructional leadership emerged from school effectiveness literature (Hallinger & Murphy, 1985; Murphy, 1990). Teachers' self-efficacy holds great importance in the process of restructuring and establishing effective schools (Çalık et al., 2012). In this context, schools need teachers with high self-efficacy to achieve effectiveness. School principals can foster teachers' self-efficacy beliefs through instructional leadership and thus contribute to the effectiveness of schools. Based on the previous literature, we suggested the following hypothesis.

H_1=Instructional leadership behaviors of school principals significantly predict teachers' self-efficacy perceptions.

Several studies in the literature reveal that leaders have a significant influence on the mood and emotions of followers (Humphrey et al., 2008); thus, there is an inseparable link between leadership and emotions (Beatty & Brew, 2004). Principals who prioritize teachers, acknowledge their emotions, listen to, and support them, can enhance teachers' job satisfaction (Duyar et al., 2013). And also, when they display supportive behavior towards teachers and behave in a relationship-oriented manner, they can help teachers experience positive emotions and get rid of negative ones (Berkovich & Eyal, 2018). Indeed, principals are at the center of emotional relationships in school (Crawford, 2009; cited in Ordu & Çobanoğlu, 2020). School principals can directly influence teachers by observing them in the classroom and providing feedback on teaching practices (Blase & Blase, 2000; Hallinger & Murphy, 1985). This shows that instructional leadership has a direct and significant effect on teachers' instructional qualities (Bellibaş et al., 2020a; Gümüş & Bellibaş, 2016). Considering that principals as instructional leaders provide teachers with various professional learning opportunities and necessary teaching resources, this influence is expected (Hallinger & Murphy, 1985). Thus, teachers may experience more positive emotions while teaching with the instructional support provided by principals.

H_2=Instructional leadership behaviors of school principals significantly predict teachers' positive instructional emotions.

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Self-efficacy can enhance teachers' positive emotions (Bandura 1997). There is a vast amount of literature revealing the association between self-efficacy and emotions (Brigido et al., 2012; Burić & Macuka, 2018; Burić & Moè 2020; Burić et al., 2020; Pitkäniemi, 2017; Skaalvik & Skaalvik, 2014; Yin et al., 2017). For example, Borrachero et al. (2013) showed that teachers with a higher self-efficacy tend to experience positive emotions more, whereas teachers with a lower self-efficacy tend to experience negative emotions in the classroom. Similarly, Chen (2019c) found that instructional strategies and classroom management are positively associated with emotions such as joy and love, on the other hand, classroom management and student engagement are negatively associated with sadness, anger, and fear. Burić et al. (2020) suggested that teachers with a higher level of self-efficacy could interpret a situation in the classroom as less threatening because they can manage it, which may lead to positive emotions. Thus, we suggested the following hypothesis.

H_3=Teachers' self-efficacy perceptions significantly predict their positive instructional emotions.

As stated above, based on the literature, teachers' self-efficacy is an outcome of instructional leadership and the antecedent of emotions. Thus, we anticipated that it could mediate the relationship between leadership and emotions which resulted in the following hypothesis.

H_4=Teachers' self-efficacy perceptions mediate the relationship between school principals' instructional leadership behaviors and teachers' positive instructional emotions.

Methodology

Design

The present study employed a relational design focusing on the predictive relations between variables. Relational studies aim to reveal the performance of predictive variable(s) on criterion variable(s) (Mertens, 2010). To this end, this study adopted a structural equation model allowing to examine a series of relationships between endogenous and exogenous variables simultaneously (Ho, 2006).

Sample

The study sample consisted of 380 teachers working at different grade levels (*primary, secondary, and high school*) in Batman, Turkey. A multi-stage sampling procedure was followed to reach the participants in the study. *Firstly*, the researchers aimed to reach teachers working with their current principal for at least six months (criterion sampling). *In the second stage*, participants satisfying this criterion were employed through convenient sampling. Of the sample 181 were female (47.6%) and 199 were male (52.4%); 149 in primary school (39.2%), 126 in secondary school (33.2%) and 105 in high school (27.7%). Of the participants 95 had 0-5 years (25.0%), 75 had 6-10 years (19.7%), 64 had 11-15 years (16.8%), 65 had 16-20 years (17.1%) and 81 had 21 years or above (21.3%) experience as teachers. As for educational level, 327 teachers had an undergraduate (86.1%), and 53 had a graduate degree (13.9%). Finally, 344 were working in public

schools (90.5%) and only 36 were in private schools (9.5%). The demographics of the sample are presented in Table 1 below.

Table 1. *Demographics of sample*

	Grup	***n***	**%**
Gender	Female	181	47.6
	Male	199	51.4
School-level	Primary	149	39.2
	Secondary	126	33.2
	High school	105	27.7
Experience	0-5	95	25.0
	6-10	75	19.7
	11-15	64	16.8
	16-20	65	17.1
	21≥	81	21.3
Education	Undergraduate	327	86.1
	Graduate	53	13.9
School type	State	344	90.5
	Public	36	9.5
	Total	**380**	**100**

Data Collection Tools

The data were collected through three different scales, "*Principals' Instructional Management Rating Scale (PIMRS)*" (Bellibaş et al., 2016), "*Teacher Self-Efficacy Scale (TSES)*" (Çapa et al., 2005), and "*Teachers' Instructional Emotions Scale (TIES)*" (Dilekçi & Sezgin-Nartgün, 2019). Detailed information about the scales is presented below.

Principals' instructional management rating scale (PIMRS)

To measure principals' instructional leadership behaviours, we employed the short form of the *Principals Instructional Management Rating Scale (PIMRS)* developed by Hallinger and Wang (2015) and adapted into Turkish by Bellibaş et al. (2016). The short form of the scale consists of 18 items loading on three dimensions: "*defining school mission (5 items)*", "*managing curriculum (3 items)*", and "*promoting school climate (10 items)*". The scale is designed for teachers to evaluate the frequency of school principals' instructional leadership behaviours. It is a 5-point Likert type scale, and responses range from "*(1) Never* to (*5) Almost always*". A sample item is as

follows "*Participates in extracurricular activities at school*". Although the validity and reliability of the scale were ensured several times in previous studies, we also evaluated its validity and reliability within the scope of the current study. Confirmatory factor analysis yielded the following goodness of fit indices *(Cmin=444.44; df=129; Cmin/df=3.45; p=.00; CFI=.95; TLI=.94; RMSEA=.08; SRMR=.04)*. Factor loadings of the items ranged from .72 to .87, which were satisfactory. On the other hand, Cronbach's Alpha internal consistency coefficient was .97 indicating high reliability.

Teacher self-efficacy scale (TSES)

We used the "*Teacher Self-Efficacy Scale (TSES)*" to reveal teachers' perceptions of self-efficacy. The scale was developed by Tschannen-Moran & Hoy (2001) and adapted to Turkish by Çapa et al. (2005). This study employed the 12-item short form of the scale by Çapa et al. (2009). The scale is three-dimensional: "*self-efficacy in classroom management (4 items)*", "*self-efficacy in student engagement (4 items)*" and "*self-efficacy in teaching strategies (4 items)*". It is a 9-point Likert type scale in which responses range from *"(1) Insufficient*" to "*(9) Very sufficient*". A sample item is as follows: *"To what extent are you successful at ensuring students believe that they are successful at school?"*. We conducted a confirmatory factor analysis to evaluate the validity and goodness of fit indices were as follows: *Cmin=141.343; df=50; Cmin/df=2.87; p=.00; CFI=.96; TLI=.95; RMSEA=.07; SRMR=.04*. Factor loadings of items ranged from .63 to .83, and Cronbach's Alpha internal consistency coefficient was .92. These findings indicated the validity and reliability of the scale within the scope of the current study.

Teachers' instructional emotions scale (TIES)

The teachers' instructional emotions scale was originally developed by Frenzel et al. (2010) and was called "*Achievement Emotions Questionnaire for Teachers (AEQ-Teacher)*". The first version of the scale measured three emotions which were *enjoyment*, *anger*, and *anxiety*. Later, *pride* was added by Hong et al. (2016) and "*hope"* and "*disappointment"* by Dilekçi & Sezgin-Nartgün (2019), which turned the scale into a measurement tool consisting of six subscales. This study exploited only positive emotions, namely *enjoyment*, *pride*, and *hope*. It is a self-reported 4-point Likert type scale whose response options range from "*(1) Strongly disagree* to *(4) Strongly agree*." There are four items on *enjoyment* and *pride* dimensions, whereas seven items on *hope* which makes 15 items measuring positive emotions in total. A sample item is as follows: "*I hope my teaching will be successful.*" We conducted a confirmatory factor analysis to check the validity and reliability of the scale. The findings indicated the validity of three-dimensional positive emotions scale (*Cmin=279.85; df=.86; Cmin/df=3.52; p=.00; CFI=.95; TLI=.94; RMSEA=.07; SRMR=.04*). Factor loadings ranged from .68 to .94. and Cronbach's Alpha coefficient was .91 showing internal consistency.

Data Collection and Analysis

Before data collection, the researchers received permission from Batman University Ethics Committee (dated 09.04.2021 and numbered 2021/01-23), and an online data collection procedure was employed via Google Forms in April 2021.

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The data were analyzed through SPSS (25) and AMOS (26). *First of all*, we checked the data for missing values, and none of them was detected. *Secondly*, we tested the univariate normality through kurtosis and skewness values which were beyond (+1.96; -1.96), indicating non-normally distributed data (Field, 2009). Thus, we detected outliers using box plots and discarded 11 of them. We re-calculated kurtosis and skewness values on data of 369 participants and they were as follows for instructional leadership (Kurtosis=-.16, SE=.25; Skewness=-.44; SE=.13); for teacher self-efficacy (Kurtosis=-.40, SE=.25; Skewness=.08; SE=.13) and for positive emotions (Kurtosis=-.91, SE=.25; Skewness=-.45; SE=.13). These findings suggested that the univariate normality assumption was satisfied for all three scales. Within descriptive statistics, we presented arithmetic means and their standard deviation values. Additionally, the relationships among variables were revealed through Pearson correlation coefficients.

Before testing the research hypotheses, the measurement model, which included all observed variables and mutual relationships between three latent variables, was evaluated. To evaluate the model fit x^2/df, *p*, *CFI*, *TLI*, *RMSEA*, and *SRMR* were considered (Hair et al., 2014). Tolerance and VIF values were examined to test whether there was a multicollinearity problem between instructional leadership and self-efficacy as variables predicting positive emotions. The findings showed that Tolerance=.915; and VIF=1.093 indicating that there was no multicollinearity problem (Mertler & Vannatta, 2005). As for multivariate normality, we checked multivariate kurtosis and its critical ratio, which were 465.37 and 68.73, respectively. This finding showed that the data did not have a multivariate normal distribution (Byrne, 2016). Thus, we preferred bootstrapping to test the mediation.

Findings

In this section, we present findings regarding descriptive statistics, measurement model, and structural equation model. Descriptive statistics are presented in Table 2.

Table 2. *Descriptive statistics and correlations*

		Descriptives				Correlations		
Variable	***n***	**Minimum**	**Maximum**	**Mean**	**SD**	**(1)**	**(2)**	**(3)**
(1) IL	369	1.28	5.00	3.61	.82	1	.29**	.36**
(2) SE	369	5.00	9.00	7.23	.86		1	.52**
(3) PIE	369	2.33	4.00	3.54	.39			1

**p<.001; (Note: IL=Instructional leadership; SE=Self-efficacy; PIE= Positive instructional emotions)

Table 2 shows teachers' perceptions of principals' instructional leadership ($\bar{x}$=3.61; SD=.82); teacher self-efficacy ($\bar{x}$=7.23; SD=.86), and positive instructional emotions ($\bar{x}$=3.54; SD=.39) are relatively high. On the other hand, there are low and medium-level, positive, statistically significant relationships among variables. The relationship between instructional leadership and teacher self-efficacy is (*r=.29; p=.00*) and positive instructional emotions (*r=.36; p=.00*); self-efficacy and positive instructional emotions (*r=.52; p=.00*).

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Findings on the measurement model

Before testing the structural model, we evaluated the measurement model, including all observed variables. Goodness of fit indices emerged as *Cmin=2411.04; df=933; Cmin/df=2.58; p=.00; CFI=.87; TLI=.87; RMSEA=.07; SRMR=.06*. The findings indicated the validity of the measurement model (Hair et al., 2014).

Findings on structural equation model

Ensuring the validity of the measurement model, in the next step, the research hypotheses were tested (See Figure 1).

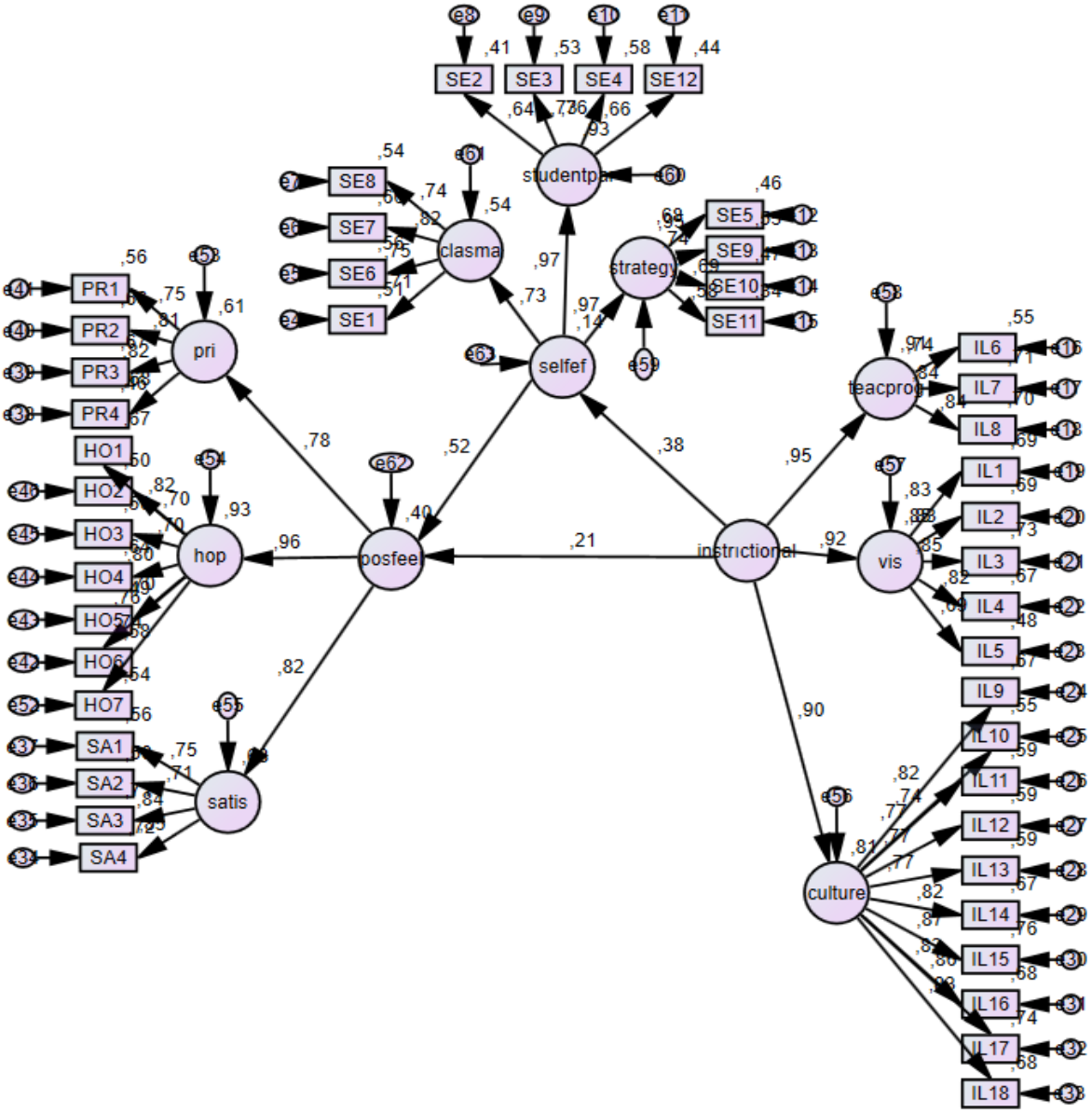

Figure 1. Structural model

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We calculated the standardized direct and indirect effects, which are presented in Table 3 below.

Table 3. *Standardized direct and indirect effects*

				Bootstrap 5000 times 95% CI			
Structural Paths	**β**	**SE**	**t**	**LB**	**UB**	**p**	**Total effect**
IL→SE (H_1)	.38	.07	5.77	.26	.49	**.00**	-
IL→PIE (H_2)	.21	.02	3.76	.10	.33	**.00**	-
SE→PIE (H_3)	.52	.03	6.61	.41	.62	**.00**	-
IL→SE→PIE (H_4)	.20	.04	-	.13	.28	**.00**	**.41**

As Table 3 shows, principals' instructional leadership significantly predicted teachers' self-efficacy (β=.38; p=.00) and teachers' positive instructional emotions (β=.21; p=.00); and self-efficacy significantly predicted positive instructional emotions (β=.52; p=.00). On the other hand, the indirect effect of instructional leadership on positive instructional emotions through self-efficacy (β=.20; p=.00) was statistically significant. The findings indicated a "*complementary mediation*" since both the direct and indirect effects were significant and in the same direction, which means that the mediator was consistent with the anticipated theoretical model (Zhao et al., 2010).

Discussion

The present study investigated the structural relationships among principals' instructional leadership behaviors, teachers' self-efficacy, and positive instructional emotions. Based on the previous literature, we suggested hypotheses and tested them through a structural model. Research on the association between instructional leadership and teachers' self-efficacy is abundant. However, there is a gap in the literature linking them to teachers' emotions. In this sense, the findings of the current study provide considerable implications in understanding teachers' emotions closely associated with better learning outcomes for students.

The first hypothesis suggested that instructional leadership significantly predicted teachers' self-efficacy perceptions and it was confirmed by the findings. Thus, when principals engage in instructional leadership (*defining school mission, managing instructional program, and enhancing a positive climate*), teachers perceive a higher level of self-efficacy. This finding is consistent with previous literature (Bellibaş & Liu, 2017; Çalık et al., 2012; Duyar et al., 2013; Liu & Hallinger, 2018). Instructional leadership practices, mainly focusing on improving teaching, help teachers feel more confident about their teaching (Liu et al., 2021).

The second hypothesis suggested that instructional leadership significantly predicted teachers' positive instructional emotions (*enjoyment, pride,* and *hope*), and the findings confirmed the hypothesis. Based on this finding, we can say that when principals act as instructional leaders,

teachers are more likely to experience positive instructional emotions. Previous literature showed that the leadership style and a supportive and communicative school climate affected teacher emotions (Berkovich & Eyal, 2018; Chen, 2020). In addition to this, the literature suggests a positive association of principals' instructional leadership with teachers' subjective well-being (Dilekçi & Limon, 2020). Considering the influence of emotions experienced by teachers on teaching and learning outcomes (Burić et al., 2018; Pitkäniemi, 2017), this study provides considerable insights into the leadership practices that principals should adopt.

The third hypothesis suggested that teachers' self-efficacy perceptions predicted positive emotions. The findings indicated that self-efficacy was a significant predictor of positive emotions. When teachers perceive a higher level of self-efficacy, they tend to experience positive emotions more. The finding is consistent with previous literature (Borrachero et al., 2013; Burić & Macuka, 2018; Burić & Moè 2020; Buric et al., 2020; Chen, 2019c; Frenzel et al., 2016; Pitkäniemi, 2017; Warren & Dowden, 2012). They showed that a higher level of self-efficacy is associated with positive emotions (Borrachero et al., 2013), whereas a lower level of self-efficacy is associated with negative emotions (Frenzel et al., 2016; Warren & Dowden, 2012).

Lastly, we anticipated that teachers' self-efficacy could mediate the relationship between principals' instructional leadership and teachers' positive instructional emotions. The findings demonstrated that instructional leadership had an indirect effect on teacher emotions through self-efficacy. This suggests that instructional leadership enhances teachers' self-efficacy, which in turn leads to positive emotions.

Conclusion

In conclusion, the findings suggest that teachers consider their principals as instructional leaders, they have a relatively high self-efficacy and experience positive instructional emotions. This study provides empirical evidence on the associations between principals' instructional leadership, teachers' self-efficacy, and teachers' positive instructional emotions. It concludes that instructional leadership has the potential for fostering positive teacher emotions both directly and indirectly through self-efficacy. In other words, it can be said that instructional leadership's effect on positive instructional emotions is dependent on teachers' self-efficacy beliefs. The findings also suggest that a higher level of self-efficacy leads to more positive instructional emotions. Additionally, instructional leadership has an influence on teachers' self-efficacy beliefs.

Suggestions

The findings of the present study have important implications for both theory and practice. First of all, it provides crucial clues in terms of the type of leadership that should be adopted to nurture positive instructional emotions and self-efficacy perception in teachers and reveals the need for school principals to devote more time to instructional leadership practices. In other words, school principals should be more active in defining the school's mission and spend more time managing the curriculum. They should also give priority to promoting a positive school climate. To achieve these, policymakers should give more autonomy to principals in terms of curriculum,

particularly in countries where there is a highly centralized educational system. School principals should also demonstrate their trust in teachers and avoid actions that can have detrimental effects on teachers' self-efficacy.

On the other hand, the findings indicate that instructional leadership has direct and indirect effects on positive instructional emotions. In this sense, although self-efficacy as a mediator is consistent with the theoretical framework of the current study, we have an incomplete model in which further mediators can be considered. On the other hand, the model in this study can be tested in different cultural contexts to test its cultural sensitivity.

Limitations

The current study has some limitations. *First*, this study employed a cross-sectional design which does not provide evidence for causality. *Secondly*, the positive emotions included only three emotions (*enjoyment, pride*, and *hope*). Thus, further research incorporates more positive emotions to the scale and extends its scope. *Thirdly*, the data were collected in Batman, Turkey, which means that the findings are valid within Turkish culture. Cross-cultural validation of the model might provide important implications in terms of cultural comparison. Another limitation is that we conducted an online data collection procedure through convenient sampling. However, the demographics of our sample show consistency with those of the overall population. *Lastly*, the data were collected from a single source, teachers. This may lead to common method variance. Further studies may employ multiple sources such as teachers and principals.

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