Journal of Theoretical Educational Sciences / Kuramsal Eğitimbilim Dergisi
Volume 19 Issue 1, January 2026, pp. 77-97
e-ISSN: 1308-1659 | DOI: http://doi.org/10.30831/akukeg.1689216

Relationships of Teacher' Perceived Disciplinary and Professional Development Barriers with Self-Efficacy and Teaching Practices

Öğretmenin Algıladığı Disiplinin ve Mesleki Gelişim Engellerinin Öz-Yeterlik ve Öğretim Uygulamaları ile İlişkileri

Alper USLUKAYA*

Received: 2 May 2025 **Research Article** **Accepted:** 15 October 2025

ABSTRACT: This study aims to examine the relationship between teacher' perceived disciplinary, professional development barriers, teacher self-efficacy, and teaching practices. The research utilizes data from 8.342 teachers obtained from the TALIS 2018 Turkey dataset. A structural equation model based on Bayesian parameter estimation was developed to analyze the relationships between the variables. The findings revealed that teacher' perceived disciplinary had no direct relationship with teaching practices. However, it was determined that this relationship is established indirectly through teacher self-efficacy. Furthermore, professional development barriers were found to moderate both the direct and indirect relationships (via teacher self-efficacy) between perceived classroom discipline problems and teaching practices. Indeed, it was determined that lower levels of professional development barriers strengthened these direct and indirect relationships. These results indicate that perceived classroom discipline problems can negatively impact teachers' self-efficacy, thereby indirectly harming teaching practices. Additionally, it is understood that these negative effects may be more pronounced in situations where professional development barriers are low. The study concludes by offering various recommendations for policymakers, educational practitioners, and researchers, based on the findings.

Keywords: Teacher' perceived disciplinary, teacher self-efficacy, teaching practices, professional development barriers.

ÖZ: Bu çalışma, öğretmenin algıladığı disiplin ile mesleki gelişim engellerinin, öğretmen öz-yeterliği ve öğretim uygulamaları arasındaki ilişkiyi incelemeyi amaçlamaktadır. Araştırmada, TALIS 2018 Türkiye veri setinden elde edilen 8.342 öğretmene ait veriler kullanılmıştır. Değişkenler arasındaki ilişkileri incelemek için Bayesci parametre kestirimine dayalı bir yapısal eşitlik modeli oluşturulmuştur. Bulgular, algılanan disiplinin öğretim uygulamaları ile doğrudan bir ilişkisi olmadığını göstermiştir. Ancak, bu ilişkinin öğretmen öz-yeterliği aracılığıyla dolaylı olarak kurulduğu tespit edilmiştir. Ayrıca, mesleki gelişim engellerinin, algılanan sınıf disiplin problemleri ile öğretim uygulamaları arasındaki hem doğrudan hem de dolaylı ilişkileri (öğretmen öz-yeterliği aracılığıyla) düzenleyebildiği görülmüştür. Nitekim düşük düzeydeki mesleki gelişim engellerinin, bu doğrudan ve dolaylı ilişkileri daha da güçlendirdiği belirlenmiştir. Bu sonuçlar, algılanan disiplin problemlerinin öğretmenlerin öz-yeterliğini olumsuz yönde etkileyerek öğretim uygulamaları üzerinde dolaylı bir zarara yol açabileceğine işaret etmektedir. Ayrıca, mesleki gelişim engellerinin düşük olduğu durumlarda, bu olumsuz etkilerin daha belirgin hale geldiği anlaşılmaktadır. Çalışma, elde edilen bulgular ışığında politika yapıcılara, eğitim uygulayıcılarına ve araştırmacılara yönelik çeşitli öneriler sunularak tamamlanmıştır.

Anahtar kelimeler: Öğretmenin algıladığı disiplin, öğretmen öz-yeterliği, öğretim uygulamaları, mesleki gelişim engelleri.

* Dr., Çankırı Karatekin University, Çankırı, Türkiye, auslukaya@gmail.com, https://orcid.org/0000-0003-1455-8438

Citation Information
Uslukaya, A. (2026). Relationships of teacher' perceived disciplinary and professional development barriers with self-efficacy and teaching practices. *Journal of Theoretical Educational Sciences [Kuramsal Eğitimbilim Dergisi], 19*(1), 77-97. http://doi.org/10.30831/akukeg.1689216

Education policymakers and researchers worldwide are seeking effective ways to improve education systems and enhance school performance (Darling-Hammond, 1997). One of the most promising strategies is strengthening teacher effectiveness (OECD, 2021). Research consistently highlights that teachers play a significant role in improving student learning outcomes, which largely depends on the quality of their teaching practices (Bryk et al., 2010; Darling-Hammond, 1997). However, the development of these practices is determined not only by teachers' individual efforts but also by the presence of supportive school conditions (Darling-Hammond, 2000; Parise & Spillane, 2010). Consequently, scholars have focused on understanding how teachers improve their teaching practices and the school-based factors that influence this process (Goddard et al., 2019; Luyten & Bazo, 2019). Nevertheless, studies on the factors that impede teaching practices have received limited empirical attention (Hattie, 2009), which can constrain efforts to develop effective interventions.

Teaching is an inherently stressful profession (Travers & Cooper, 1996), and this stress can profoundly affect both performance and work practices (Bakker & Demerouti, 2017). Early studies revealed that chronic stress leads to a loss of motivation and burnout, which ultimately negatively impacts teaching practices (Pines & Aronson, 1988). A primary source of this stress is classroom discipline problems (Pines, 2002). In Turkey, both administrators and teachers report that such problems significantly disrupt classroom processes and harm teaching practices (Toytok & Yıldırım, 2018; Tunç et al., 2015). Furthermore, classroom discipline problems are particularly pronounced in high schools, where adolescents often challenge authority and test boundaries (Erikson, 1968; Bear, 2014). International evidence also shows a negative relationship between classroom discipline problems and teacher performance and teaching practices (De Wet, 2010; Jenkins & Ueno, 2017; Kauppi & Pörhölä, 2012; Wilson et al., 2011). However, despite growing attention to classroom management and teacher well-being, the relationship between classroom discipline problems and teaching practices has received limited empirical attention in the Turkish context.

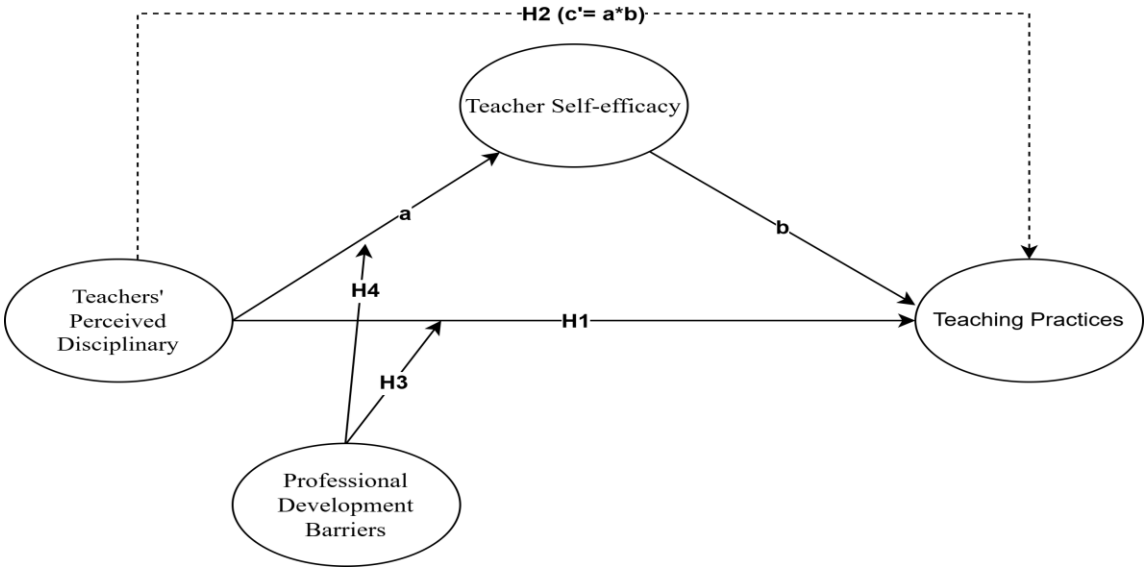
Classroom discipline problems and the stress they cause can also harm teaching practices by weakening teachers' self-efficacy, a core psychological factor (Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2007). Therefore, the current study posits that teacher self-efficacy may act as a mediating mechanism in this relationship. Although research shows that resources such as social support and autonomy enhance self-efficacy (Kim & Beehr, 2017; Özdemir et al., 2023), the factors that impede this process and their relationship with teaching practices in conjunction with low self-efficacy are still not well understood. On the other hand, professional development barriers in the Turkish education system, such as its centralized and hierarchical structure and limited opportunities for career advancement, can further complicate this process. Restrictive contexts are known to negatively affect employee motivation, beliefs, and practices (Andrews, 2007; Betoret & Artiga, 2010; Choi & Lee, 2018). Therefore, it is possible that high levels of perceived professional development barriers play a moderating role, strengthening the negative effect of perceived classroom discipline problems on self-efficacy and teaching practices. However, this moderating effect of professional development barriers has not yet been sufficiently examined in empirical studies.

In light of these gaps, this study aims to examine both the direct relationships of teacher’ perceived disciplinary problems with teaching practices and their indirect

relationships via teacher self-efficacy, as well as to investigate the moderating roles of professional development barriers in these relationships (Figure 1). To this end, the study utilizes data from Turkish high school teachers who participated in the 2018 Teaching and Learning International Survey (TALIS). The findings of the study will provide an in-depth understanding of the impact of classroom discipline problems on teaching practices, providing critical data for improving teaching quality. In particular, empirically testing the mediating role of teacher self-efficacy in this relationship can provide a theoretical basis for interventions to strengthen classroom management and pedagogical approaches. Furthermore, elucidating the holistic impact of classroom discipline problems and professional development barriers on teaching processes may help bridge gaps in the literature. Ultimately, the results could guide policymakers and educational leaders in designing effective strategies to boost teacher motivation, reinforce self-efficacy, and improve teaching practices.

Figure 1

Theoretical Framework



Theoretical Background and Hypotheses

Relationship Between Teacher' Perceived Disciplinary Problems and Teaching Practices

For years, policymakers and researchers have sought ways to create an effective education system. Within these debates, one of the most consensual issues is that improving teachers' teaching practices is the key to educational quality (Fischer et al., 2020). Teaching practices are multidimensional, encompassing three domains: clarity of instruction, cognitive activation, and classroom management (OECD, 2019a). Clarity of instruction refers to the transparency of content delivery; cognitive activation involves students' knowledge-construction processes; and classroom management denotes the effective organization of the learning environment. Therefore, teaching practices represent a complex pedagogical process that encompasses not only the effective transmission of theoretical knowledge but also the construction of knowledge by the

student and providing an effective educational experience. It holistically integrates teacher competencies, classroom interactions, and student learning processes (OECD, 2019a).

Jerrim et al. (2023) emphasized that the fundamental determinant of student achievement and effective education is teachers' teaching practices. Therefore, determining the factors that hinder teaching practices is very important for the effectiveness of teaching. Although many factors can negatively affect teaching practices, students' inappropriate behaviors are considered to be more influential than all other adverse factors (Lopes & Oliveira, 2022). These disruptions, such as noise-making and disturbing peers (OECD, 2019a), force teachers to divert time and energy from instruction to management, as they cannot be ignored without risk of escalation through social learning (Ding et al., 2010; Scherzinger & Wettstein, 2019). This directly harms teaching practices, whereas orderly classrooms are proven to facilitate more effective instruction (Can & Bakşi, 2014; Can & Ermeydan, 2017). Consequently, it is hypothesized that teacher' perceived disciplinary will be negatively associated with their teaching practices (Hypothesis 1).

The Mediating Role of Teacher Self-Efficacy

Rooted in Bandura's (1977) social cognitive theory, self-efficacy refers to an individual's belief in their ability to execute the courses of action required to handle prospective situations. Accordingly, teacher self-efficacy is a multidimensional construct encompassing three domains: classroom management, instructional strategies, and student engagement (OECD, 2019a; Tschannen-Moran & Woolfolk Hoy, 2001). Classroom management self-efficacy is a teacher's perceived competence in maintaining student attention and addressing disruptive behavior. Instructional self-efficacy involves the ability to organize lesson content, employ effective teaching methods, and foster student academic development (Tschannen-Moran & Woolfolk Hoy, 2001), reflecting broader beliefs about what can be achieved through education (Skaalvik & Skaalvik, 2007). Finally, student engagement self-efficacy pertains to the perceived competence in actively involving students, stimulating their interest, and sustaining their motivation in the learning process (Aloe et al., 2014).

In line with Social Cognitive Theory, self-efficacy is influenced by environmental conditions; supportive contexts tend to strengthen it, whereas stressful contexts may weaken it (Bandura, 1977). In the teaching context, frequent classroom discipline problems can erode teachers' confidence in managing classrooms, thereby diminishing their overall sense of self-efficacy (McLean et al., 2019; Vidić et al., 2021). Consistent with this view, teachers who regularly experience such problems often report lower confidence in classroom management and instructional effectiveness (Vidić et al., 2021; Kengatharan & Gnanarajan, 2023). Reduced self-efficacy, in turn, undermines teachers' resilience and instructional quality (Bandura, 1977; Özdemir et al., 2025), whereas higher self-efficacy is positively associated with teaching practices (Chen et al., 2020; Jerrim et al., 2025). Accordingly, this study proposes that teacher self-efficacy serves as a mediating mechanism through which teacher' perceived disciplinary indirectly related to teaching practices (Hypothesis 2).

The Moderator Roles of Professional Development Barriers

Factors that limit and complicate teachers' access to professional development opportunities are known as professional development barriers and are categorized by factors such as lack of time, high cost, scarcity of suitable opportunities, and work-family conflicts (OECD, 2019a). As the topic gained significant interest in the literature, it has been reported that teachers with access to professional development opportunities exhibit increased job satisfaction, enhanced self-efficacy, and implement effective teaching practices (Buczynski & Hansen, 2010; Martin et al., 2008; Mavi et al., 2025; Smet, 2021). Many educational scientists have emphasized that professional development opportunities are one of the most crucial tools for coping with the challenging aspects of teaching (e.g., Reese, 2010; Scales et al., 2011). However, it is noted that teachers facing professional development barriers find it considerably difficult to improve their professional skills (Craft, 2002), fully fulfill their duties and responsibilities (Goh & Wong, 2014), and consequently, enhance their positive impact on student outcomes (Seferoğlu, 2004).

Turkish teachers may face various challenges that hinder their access to professional development activities (Seferoğlu, 2001). Given the centralized and hierarchical structure of the Turkish National Education System, professional development processes are largely determined by the Ministry of National Education (MoNE). In the Turkish context, professional development typically refers to in-service training determined and provided by the General Directorate of Teacher Training and Development within the MoNE. Although the MoNE has recently undertaken various initiatives to increase the diversity and quality of these trainings, the reliance solely on in-service training for professional development is criticized by practitioners and researchers. Furthermore, as these activities are not tailored to teachers' own professional needs, they also restrict teachers' access to suitable development opportunities (Bellibaş & Gümüş, 2016).

In addition, Turkish teachers have limited opportunities for career advancement. Career progression in the teaching profession in Turkey is generally determined based on seniority and central examination results. Consequently, teachers' active participation in professional development activities often does not translate into tangible rewards for career advancement, which can reduce their motivation for professional development. Moreover, factors such as increased workload, student-related problems, crowded classrooms, insufficient in-service training opportunities, and lack of adequate administrative support may further hinder teachers' participation in professional development (Seferoğlu, 2001). Such inhibiting contexts not only negatively affect professional development but also teachers' motivation (Andrews, 2007), lead to burnout thereby weakening their self-efficacy perceptions (Betoret & Artiga, 2010). and can adversely shape teaching practices (Choi & Lee, 2018). However, while the literature has largely emphasized describing professional development barriers and proposing models to overcome them, relatively little attention has been paid to how these barriers relate to teaching practices.

According to Hobfoll's (1998) Conservation of Resources (COR) Theory, in demanding work environments (e.g., those with disciplinary issues), individuals' access to resources can enhance their motivation and task performance. However, a lack of critical resources, such as professional development opportunities, can limit employees'

capacity to overcome these challenges and may negatively impact both their self-efficacy beliefs and work practices. Similarly, the Job Demands-Resources (JD-R) model argues that when employees face high job demands (such as managing classroom discipline problems), the negative effects of these demands can only be balanced with adequate resources (Bakker, 2022). Yet, in situations where resources are lacking, these demands are more likely to undermine employees' self-efficacy and adversely affect their work performance (Bakker & Demerouti, 2017).

In this context, professional development barriers may emerge as a significant moderating factor that determines the strength of the relationship between classroom discipline problems and teaching practices. Teachers facing high barriers to professional development, having more limited opportunities to renew their pedagogical skills and generate solutions to challenges (OECD, 2019a), may be more affected by classroom discipline problems. This situation can more rapidly weaken their sense of self-efficacy and lead to greater disruption in their teaching practices. Based on these theoretical perspectives, it is expected that the direct (Hypothesis 3) and indirect relationship (mediated by teacher self-efficacy) between teacher' perceived disciplinary and teachers' teaching practices will be moderated by professional development barriers (Hypothesis 4).

Method

Data Source

This study utilizes data from the Teaching and Learning International Survey (TALIS) 2018, published by the Organisation for Economic Co-operation and Development (OECD) in 2019. The TALIS project is a significant international initiative that provides comparative data on teachers' professional experiences, teaching practices, working conditions, and attitudes (OECD, 2019a). Although data were collected from teachers at the primary, lower secondary, and upper secondary levels, this study focuses exclusively on high school teachers. The primary rationale for this focus is that students at the high level undergo rapid transformations in physical, cognitive, and emotional domains - a critical developmental period (Schunk & Meece, 2006). During this stage, students must cope with dynamics such as identity exploration, peer pressure, and the need for autonomy (Erikson, 1968). Additionally, this period is characterized by an increase in risk-taking behaviors (Casey et al., 2008) and fluctuating attitudes toward authority figures (Eccles et al., 1993), which can contribute to more frequent classroom disciplinary issues (Toytok & Yıldırım, 2018; Tunç et al., 2015). Therefore, high school teachers' self-efficacy perceptions and teaching practices may be affected more at this level.

Sampling

This study employs data from the OECD's TALIS 2018, specifically from the ISCED 3 (high school) level in Turkey. The dataset consists of responses from 8,342 teachers across 456 schools. To obtain internationally comparable data, TALIS employs a two-stage stratified sampling method. In the first stage, schools are randomly selected, and in the second stage, a random sample of teachers is chosen from within these schools. An examination of the participants' demographic profile reveals that the sample

consists of 3,834 (46%) female and 4,508 (54%) male teachers. In terms of educational attainment, the vast majority of teachers (6,612 individuals, 79.3%) hold a bachelor's degree. Furthermore, 1,609 teachers (19.3%) hold a master's degree, 52 teachers (0.6%) hold a doctorate, and 44 teachers (0.5%) are associate degree graduates. Details regarding the scales used in the study and the latent variables measured are provided below.

Measures

The "Teachers' Perceived Disciplinary" theme (T3DISC) was used as the baseline variable. In this theme, teachers were asked to express their opinions about the student discipline problems they experienced in their classrooms. The measure consists of four items, and "When the class starts, I have to wait quite a long time for the students to quiet down (TT3G41A)" is one of the sample items. Responses were rated on a four-point Likert scale ranging from "strongly disagree (1)" to "strongly agree (4)."

The outcome variable in this study is the theme "Teaching Practices" (T3TPRA). This construct comprises three subdimensions that assess how teachers deliver instructional content (clarity of instruction – T3CLAIN), how they engage students in constructing knowledge (cognitive activation – T3COGAC), and how they manage classroom order and regulate the learning environment (classroom management – T3CLASM). Example items include: "I explain how new and old topics are related" (TT3G42D, clarity of instruction); "I ask students to decide on their own procedures for solving complex tasks" (TT3G42H, cognitive activation); and "I calm students who are disrupting the lesson" (TT3G42K, classroom management). Responses were measured on a four-point Likert scale ranging from "never or almost never (1)" to "always (4)."

The mediating variable in this study is "Teacher Self-Efficacy" (T3SELF). This construct consists of three subdimensions that assess teachers' self-efficacy in classroom management (T3SECLS), instructional practices (T3SEINS), and student engagement (T3SEENG). Example items include: "Control disruptive behavior in the classroom" (TT3G34D, classroom management); "Craft good questions for students" (TT3G34C, instructional practices); and "Help students value learning" (TT3G34B, student engagement). Responses were rated on a four-point Likert scale ranging from "not at all" (1) to "a lot (4)."

The moderating variable in this study is the subdimension "Barriers to Professional Development" (T3PDBAR), which falls under the broader theme of "Feedback and Development." This subdimension measures the factors that hinder teachers' professional development, restrict access to professional learning opportunities, and negatively affect their growth processes. The scale consists of five items, including sample statements such as: "There are no incentives for participating in professional development" (TT3G28A). Responses were rated on a four-point Likert scale ranging from "Strongly disagree (1)" to "Strongly agree (4)."

Data Analysis

Since the data used in the present study are based on teachers' self-reported measures, the dataset was assessed for the risk of common method bias. Harman's single-factor test was conducted, and it was found that a single factor accounted for less than 50% of the total variance (26.835%). Additionally, a Confirmatory Factor Analysis

(CFA) model in which all indicators were loaded onto a single factor was tested, and the model fit indices were found to be well outside the acceptable limits (CFI = .492; TLI = .458; RMSEA = .121; SRMR = .130). These findings indicate that common method bias does not pose a significant threat in the dataset and that the variance largely stems from the true perceptions of the variables rather than the measurement instrument itself (Podsakoff et al., 2012). To test the normality assumption, skewness and kurtosis coefficients were examined along with Q-Q plots. As the skewness and kurtosis values fell within the acceptable range of ±1.5, the assumption of univariate normality was met (Tabachnick & Fidell, 2013). Furthermore, the points in the Q-Q plots closely followed the 45-degree reference line, indicating that the assumption of multivariate normality was also satisfied (Ghasemi & Zahediasl, 2012).

The analyses proceeded with the calculation of descriptive statistics and Pearson correlation coefficients for the key variables. To evaluate the theoretical framework, the Mplus 8.11 software package was used. First, a general measurement model was tested, in which all indicators were linked to their corresponding latent constructs. Following this, a structural model based on the proposed hypotheses was tested to examine the structural relationships among variables. Given that the moderating and moderated mediation roles of professional development barriers required numerical integration in the structural model, the Bayesian parameter estimation method was employed. In analyses involving latent variables that require numerical integration, parameter estimation methods based on frequentist theory (e.g., ML, MLR, and FIML) often lead to convergence problems and fail to provide robust estimates (Asparouhov & Muthén, 2019). In contrast, the Bayesian estimator overcomes convergence issues in complex models requiring numerical integration, thereby yielding more robust results (Asparouhov & Muthén, 2014, 2019). This method also estimates the structural relationships between variables by providing credible intervals. If the lower and upper bounds of the credible intervals do not include zero, the estimates are considered statistically significant (Preacher & Hayes, 2008).

Results

Descriptive Statistics

Descriptive statistics and Pearson correlation coefficients for the key variables and their subdimensions analyzed in the study are presented in Table 1. The findings indicate that among the key variables, teacher self-efficacy (TSE) had the highest mean score (M = 3.26, SD = .50). In contrast, teachers' perceived disciplinary problems (CDP) had the lowest mean score (M = 2.01, SD = .68). Cronbach's alpha coefficients ranged from .82 to .92, indicating relatively high internal consistency for all variables. Pearson correlation coefficients also revealed that the analyzed variables were generally significantly correlated with one another. These findings suggest the necessity of further research into the structural relationships among the key constructs.

Table 1

Descriptive Statistics and Pearson Correlation Coefficients of Variables

Variables	M	*SD*	α	Kurtosis	Skewness	**1**	2	3	4	**5**	**6**	7	8	9	**10**
1. TP	2.85	0.46	0.82	0.54	0.25	1									
2. IC	2.38	0.64	0.81	0.18	0.58	.694**	1								
3. CA	3.29	0.52	0.79	0.34	-0.45	.739**	.397**	1							
4. CM	2.89	0.73	0.86	-0.53	-0.29	.729**	.233**	.225**	1						
5. TPD	2.01	0.68	0.87	0.01	0.53	0.02	-.200**	-.173**	.298**	1					
6. TSE	3.26	0.50	0.92	-0.09	-0.24	.470**	.465**	.407**	.187**	-.286**	1				
7. CMSE	3.30	0.55	0.84	-0.19	-0.42	.413**	.386**	.287**	.244**	-.227**	.885**	1			
8. ISE	3.22	0.54	0.82	-0.42	-0.21	.450**	.456**	.405**	.162**	-.231**	.892**	.683**	1		
9. SESE	3.23	0.58	0.84	-0.38	-0.39	.386**	.396**	.388**	.096**	-.299**	.902**	.691**	.711**	1	
10. PDB	2.23	0.55	0.75	0.22	-0.15	-.058**	-.122**	-.059**	.027**	.186**	-.155**	-.133**	-.142**	-.144**	1

Note. TP= teaching practices; IC= instruction clarity; CA= cognitive activation; CM= classroom management; TPD= teacher' perceived disciplinary; TSE= teacher self-efficacy; CMSE= classroom management self-efficacy; ISE= instruction self-efficacy; SESE= student engagement self-efficacy; PDB= professional development barriers. ** $p <. 01$

Model Tests

In this section, a general measurement model was initially tested, in which all indicators were linked to their corresponding latent constructs. Due to the high rate of missing data in the dataset, Little's MCAR test was conducted, and the results indicated that the data were not missing completely at random ($\chi^2(4880) = 5528.058$, $p < .001$). Missing values had been coded as "99," and to account for these missing data points during the estimation of the measurement model, the Full Information Maximum Likelihood (FIML) estimation method was employed. FIML is recommended for datasets with missing values, as it provides unbiased and reliable estimates by using all available information from the sample (Enders & Bandalos, 2001). The fit indices for the general measurement model estimated using FIML were as follows: $\chi^2 = 8636.442$; $df = 483$; $p < .001$; RMSEA = .048; CFI = 0.913; TLI = 0.910; SRMR = .063. Given that the CFI and TLI values exceeded .90 and the RMSEA and SRMR values were below .08, it can be concluded that the general measurement model demonstrated an acceptable level of fit to the data (Kline, 2005).

Following the general measurement model, the theoretical model developed based on the study hypotheses was tested using the Bayesian estimator. Parameters were estimated through Markov Chain Monte Carlo (MCMC) iterations within the Bayesian framework. Two independent chains of 10,000 iterations each were run and extended to ensure convergence. All model parameters were estimated using diffuse informative prior distributions, which are the default settings in Mplus. During the analysis, Bayesian convergence diagnostics were carefully monitored. Examination of the TECH8 output in Mplus indicated that the potential scale reduction (PSR) value dropped below 1.05 at approximately the 22,900th iteration (1.049). These results suggest that the model converged successfully and that there was consistent agreement between the chains (Zyphur & Oswald, 2013). After convergence was achieved, the baseline model testing only the first hypothesis was first estimated, followed by the full

theoretical model including all hypotheses. Comparisons of information criteria (AIC, BIC, and SABIC) showed decreases in favor of the final model (Table 2), indicating that it provided the best empirical fit to the data (Nylund et al., 2007).

Table 2

Model Fit Comparison Criteria

Models	AIC	BIC	SABIC
Baseline Model	588986.554	589649.428	589344.361
Final Model	539090.363	539932.777	539545.088
Difference (Δ)	49896.191	49716.651	49799.273

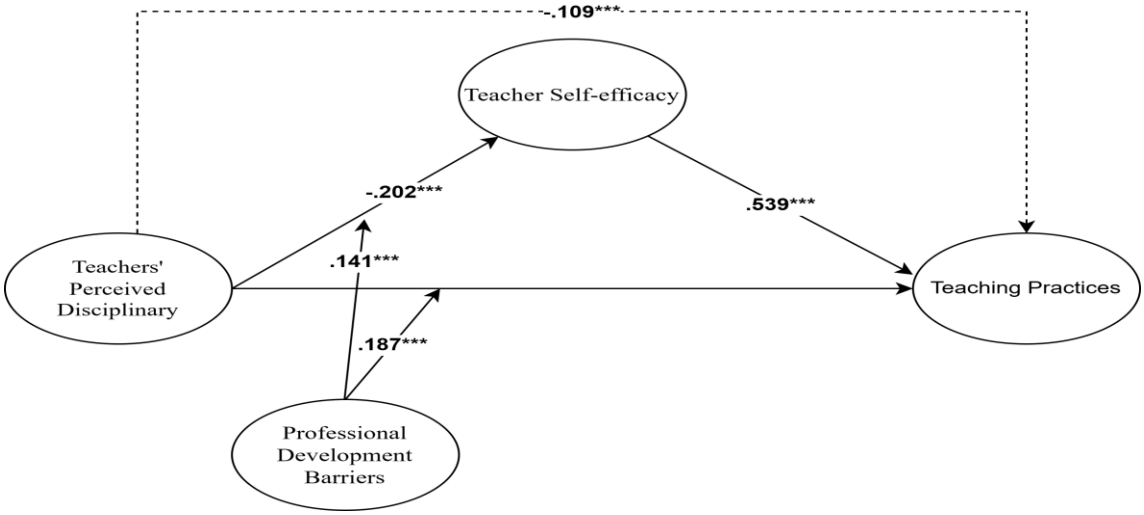
Abbreviations: AIC=Akaike Information Criterion; BIC= Bayesian Information Criterion; SABIC=Standardized Bayesian Information Criterion.

Structural Relationships Between Variables

This section presents the structural relationships among the variables. Figure 2 shows the path coefficients for direct, indirect, and moderating effects. The results indicate that the relationship between teacher' perceived disciplinary and teaching practices is nonsignificant (β = 0.003, 95% CrI [-0.013, 0.019]); therefore, Hypothesis 1 was not supported. On the other hand, it was determined that teacher' perceived disciplinary is negatively and significantly related to self-efficacy (β = -0.202, 95% CrI [-0.222, -0.181]), and self-efficacy is positively and significantly related to teaching practices (β = 0.539, 95% CrI [0.505, 0.575]). In parallel, the finding that teacher' perceived disciplinary have a significant indirect relationship with teaching practices through self-efficacy (β = -0.109, 95% CrI [-0.122, -0.096]) supports Hypothesis 2.

Figure 2

SEM Analysis Results

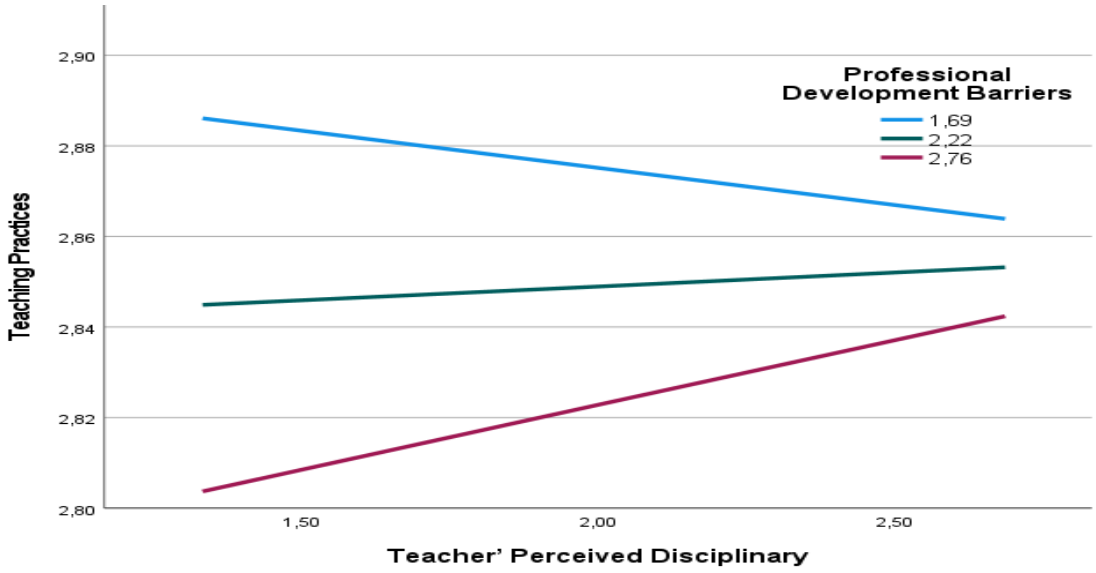


The interaction coefficient providing evidence for the moderating role of professional development barriers in the relationship between teacher' perceived disciplinary and teaching practices was also estimated as significant (β = 0.187, 95%

CrI [0.090, 0.292]); thus, Hypothesis 3 was confirmed. Additionally, to better analyze the moderating effect, the relationship between teacher' perceived disciplinary and teaching practices was examined at low, medium, and high levels of professional development barriers using a slope analysis (Figure 3). The slope analysis revealed that, at low levels of professional development barriers, the relationship between teachers' perceived disciplinary problems and their teaching practices was negative, whereas interestingly, at high levels of professional development barriers, this relationship turned positive. In this context, Hypothesis 3, which proposed the moderating role of professional development barriers, was supported.

Figure 3

Slope Graph of The Moderating Role of Professional Development Barriers



The final hypothesis proposed that the indirect relationship between teacher' perceived disciplinary and teaching practices, mediated by self-efficacy, would be moderated by professional development barriers. The results indicate that the moderated mediation index is significant (β = 0.141, 95% CrI [0.011, 0.279]), confirming Hypothesis 4. Table 3 illustrates the direction and strength of this indirect relationship across five levels of professional development barriers (mean and ±2 standard deviations). The findings show that at high levels of professional development barriers (+2SD), the indirect relationship between teachers' perceived disciplinary problems and their teaching practices through self-efficacy is negative and relatively strong (β = -0.083, 95% CrI [-0.109, -0.057]). Conversely, at low levels of professional development barriers (-2SD), this relationship becomes more negative and stronger (β = -0.135, 95% CrI [-0.163, -0.107]). Therefore, these results support Hypothesis 4.

Table 3

The Moderated Mediation Role of The Five Levels of Professional Development Barriers in The Relationship Between Teachers' Perceived Disciplinary and Teaching Practice

	β	PSD	95% LLCrI	95%ULCrI
+2 *SD*	-.083***	.013	-.109	-.057
+1 *SD*	-.096***	.008	-.113	-.079
Mean	-.109***	.006	-.122	-.096
-1 *SD*	-.122***	.009	-.140	-.104
-2 *SD*	-.135***	.014	-.163	-.107

Note. β= coefficients; PSD= posterior standard deviation; LLCrI= lower limit credible interval; ULCrI= upper limit credible interval. *** $p <$ .001

Discussion, Conclusion and Recommendations

This study examined the relationships among teacher' perceived disciplinary, professional development barriers, teacher self-efficacy, and teaching practices by using data from the 2018 TALIS high school teacher survey. The first hypothesis proposed that teacher' perceived disciplinary would be negatively associated with teaching practices. However, the findings revealed that this relationship was not statistically significant, which contradicts previous research results (Can & Bakşi, 2014; Can & Ermeydan, 2017). This unexpected finding can be interpreted within the context of the student-centered education approach adopted in Turkey following the 2005 curriculum reform (Acat & Dönmez, 2009). In the traditional teacher-centered paradigm, student behaviors were often perceived as discipline issues (Doyle, 1986; Emmer & Evertson, 2016), whereas in the student-centered approach, such behaviors are regarded as natural and manageable elements of the learning process (Cornelius-White, 2007; Freiberg & Lamb, 2009). Teacher education programs standardized and implemented by the Council of Higher Education and the MoNE (Akdemir, 2013) appear to have played an effective role in communicating this pedagogical shift to teachers. Consequently, teachers may have begun to perceive discipline problems as ordinary classroom phenomena rather than disruptions, which might explain the non-significant statistical association between classroom discipline problems and teaching practices.

On the other hand, the study found that teacher' perceived disciplinary were negatively related to teacher self-efficacy, and that self-efficacy was positively related to teaching practices. These findings also provided evidence for a potential indirect relationship between classroom discipline problems and teaching practices through self-efficacy. Indeed, the indirect effect coefficient indicating the mediating role of self-efficacy was statistically significant. Previous research has shown that student behavioral problems can negatively affect teachers' well-being and self-efficacy (McLean et al., 2019; Vidić et al., 2021) and that teacher self-efficacy is one of the key psychological resources for effective teaching practices (Chen et al., 2020; Jerrim et al., 2025). The current study's findings not only support prior evidence but also offer a novel perspective by explaining the influence of classroom discipline problems on teaching practices through teacher self-efficacy. This suggests that classroom discipline

problems, even indirectly, pose a potential threat to the quality of teaching practices, underlining the importance of supporting teacher self-efficacy.

This noteworthy finding regarding self-efficacy is particularly significant in contexts such as Turkey, where the education system is highly hierarchical and centralized. In the Turkish education system, nearly all educational decisions are made by the MoNE (Gür & Çelik, 2009) with school principals serving as the primary implementers of these decisions and teachers functioning as the technicians who carry them out. This structure creates a context with very limited autonomy for both principals and teachers. Such restricted autonomy can undermine teacher self-efficacy in two main ways. First, it may limit leadership behaviors that foster self-efficacy, thereby acting as a threat (Ninković & Knežević Florić, 2018). Second, continuous external control and strict regulations can reinforce teachers' perceptions that their professional expertise is undervalued, eroding their confidence in their own abilities and thus weakening their sense of efficacy (Skaalvik & Skaalvik, 2014). Therefore, implementing reforms that promote teacher autonomy, enhance local decision-making authority, and empower school leaders to support teacher development is recommended. For example, strengthening school-based decision-making mechanisms and providing teachers with greater voice in curriculum adaptation and instructional methods may help create environments that nurture self-efficacy. Moreover, in-service training programs for school principals should emphasize leadership behaviors that promote teacher autonomy and seld-efficacy, such as supportive, transformational, and empowering leadership.

During adolescence, a developmental stage characterized by identity exploration, peer pressure, and a heightened need for autonomy (Erikson, 1968), students often display risk-taking behaviors (Casey et al., 2008) and fluctuating attitudes toward authority figures (Eccles et al., 1993). Therefore, certain behavioral challenges are inevitable at this stage. Attempting to completely eliminate these behaviors is unrealistic, and overly controlling approaches may lead to serious long-term problems for students. Instead, it is more appropriate to focus on helping teachers manage such behaviors effectively. Based on evidence that teachers with strong classroom management skills and high psychological resilience handle these behaviors more effectively (Tschannen-Moran & Hoy, 2001), it is recommended that policymakers organize professional development programs focusing on these areas. Furthermore, previous studies have shown that teachers who feel supported, safe, and granted a reasonable degree of autonomy are better able to manage students' undesirable behaviors and buffer their potential negative impacts (Bakker et al., 2007). Therefore, it is strongly recommended that school principals create trust-based school climates, provide supportive behaviors toward teachers, and allow for a certain degree of autonomy.

This study also revealed striking findings regarding the moderating role of professional development barriers. Specifically, the results showed that the non-significant direct relationship between teacher' perceived disciplinary and teaching practices became positive at high levels of professional development barriers, but negative at low levels. This indicates that for teachers who perceive high professional development barriers, classroom discipline problems may positively influence their teaching practices. Additionally, the negative indirect relationship between teacher'

perceived disciplinary and teaching practices through self-efficacy is stronger at low levels of professional development barriers compared to high levels. Consequently, professional development barriers emerged as a significant factor determining the strength of both the direct and indirect relationships between teacher' perceived disciplinary and teaching practices.

These remarkable findings contradict the propositions of the Conservation of Resources Theory (Hobfoll, 1998) and the Job Demands-Resources model (Bakker & Demerouti, 2017), which suggest that negative working conditions can interact to produce more negative outcomes. A possible reason for this is that teachers facing high levels of professional development barriers may interpret these barriers as a challenge and develop more proactive and systematic solution strategies against classroom discipline problems. In other words, these challenging conditions may have made teachers more resilient, preventing their teaching practices from being negatively affected. Therefore, the impact of resource constraints can vary depending on the meaning the individual assigns to this constraint and their coping mechanisms. Indeed, in their study conducted within the Turkish context, Uslukaya et al. (2022) determined that teachers continue to work voluntarily even under difficult conditions.

In light of these findings, it is of particular importance to enhance the psychological resilience and proactive behaviors of teachers working under challenging conditions to help them overcome these difficulties. As suggested by resource theories, providing employees with additional resources (e.g., autonomy, feedback, support, appreciation) can develop their resource reservoirs, enabling them to endure challenging conditions and become active job crafters (Bakker & Demerouti, 2017). Therefore, providing such additional resources specifically to teachers in Turkey could enhance their well-being, performance, and teaching practices. Additionally, barriers to professional development often correspond to structural problems. In some cases, it may not be feasible to completely isolate these elements from the system, even with large-scale systematic interventions (Cooley & Yovanoff, 1996). At this point, adopting school-based professional development models could be functional for professional growth, especially for novice teachers. For instance, workshop sessions or coaching programs tailored to the specific needs of teachers could be implemented. Such programs, developed according to the contextual needs of each school and facilitated by experienced teachers as peer coaches, could help teachers cope with daily challenges like classroom management, self-efficacy development, and adolescent psychology.

Limitations and Future Research

This study has several limitations that should be acknowledged and interpreted in connection with the findings. First, the data relied exclusively on teachers' self-report measures, which may have introduced social desirability (Krumpal, 2013). Given that variables such as teacher self-efficacy, perceptions of professional development barriers, and teaching practices are subjective in nature, self-report data might not fully capture teachers' true perceptions. Future research could incorporate multi-informant and mixed method approaches, such as classroom observations or student evaluations, to cross-validate self-reported perceptions. Secondly, the study is based on a cross-sectional design. However, cross-sectional studies can only capture concurrent relationships at a single, fixed point in time, and these relationships may not hold in the

future (Rindfleisch et al., 2008). Consequently, the design of the current study limits the ability to make causal inferences between classroom discipline problems, teacher self-efficacy, professional development barriers, and teaching practices. Although the present findings point to significant relationships, the temporal and causal directions of these relationships remain unclear. Future research could use longitudinal designs to track how fluctuations in classroom discipline problems influence changes in teacher self-efficacy and teaching practices over time.

Third, the sample was limited to teachers working in high schools in Turkey, which constrains the generalizability of the findings to other educational levels and cultural contexts. Importantly, Turkey's highly centralized education system (Gür & Çelik, 2009), which is characterized by top down decision making in teacher professional development, curriculum design, and school leadership, constitutes a distinctive institutional environment. This structural centralization may influence how teachers perceive autonomy, efficacy, and development opportunities. Therefore, international generalizations should be made with caution, as similar relationships might manifest differently in countries with more decentralized or autonomy oriented education systems. Finally, although the present study provides valuable insights into the mechanisms linking classroom discipline problems, teacher self efficacy, and teaching practices, future research should expand the conceptual scope by considering additional contextual or protective factors, such as school climate, social support, or leadership styles, that may buffer the negative effects of disciplinary challenges. Integrating such contextual moderators within longitudinal or intervention based frameworks would contribute to a more comprehensive understanding of how teachers sustain teaching quality under challenging conditions.

Acknowledgements

The authors would like to thank all participants.

Conflicts of Interest

The authors declare that they have no conflict of interest.

Author Bio:

Alper Uslukaya holds a PhD in Educational Administration. His research interests include educational psychology, organizational behavior, management processes, leadership, and effective schools. His research on positive and negative organizational behavior has been published.

References

Acat, B., & Dönmez, İ. (2009). To compare student centred education and teacher centred education in primary science and technology lesson in terms of learning environments. *Procedia-Social and Behavioral Sciences*, *1*(1), 1805-1809.

Akdemir, A. S. (2013). History and problems of teacher training programs in Türkiye. *Electronic Turkish Studies*, *8*(12), 15-28.

Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational Psychology Review*, *26*, 101–126.

Andrews, P. (2007). Barriers to innovation, *Leadership Excellence*, *24*(10), 19-31.

Asparouhov, T., & Muthén, B. (2014). Multiple-group factor analysis alignment. *Structural Equation Modeling: A Multidisciplinary Journal*, *21*(4), 495-508.

Asparouhov, T., & Muthén, B. (2019). Latent variable interactions using maximum-likelihood and Bayesian estimation for single-and two-level models. *Mplus Web Notes*, *23*, 1-46.

Bakker, A. B. (2022). The social psychology of work engagement: state of the field. *Career Development International*, *27*(1), 36-53.

Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273.

Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement particularly when job demands are high. *Journal of Educational Psychology*, *99*, 274–284.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191-215.

Bear, G. G. (2014). Preventive and classroom-based strategies. In *Handbook of classroom management* (pp. 15-39). Routledge.

Bellibas, M. S., & Gumus, E. (2016). Teachers' perceptions of the quantity and quality of professional development activities in Turkey. *Cogent education*, *3*(1), 1172950.

Betoret, F. D., & Artiga, A. G. (2010). Barriers perceived by teachers at work, coping strategies, self-efficacy and burnout. *The Spanish Journal of Psychology*, *13*(2), 637-654.

Bryk, A. S., Sebring, P. B., Allensworth, E., Luppescu, S., & Easton, J. Q. (2010). *Organizing schools for improvement: Lessons from Chicago*. University of Chicago Press

Buczynski, S., & Hansen, C. B. (2010). Impact of professional development on teacher practice: Uncovering connections. *Teaching and Teacher Education*, *26*(3), 599-607.

Can, E., & Baksi, O. (2014). Öğrencilerin sınıf içi tutum ve davranışlarının öğretmenlerin sınıf yönetimi başarısına etkisi. *Asian Journal of Instruction (E-AJI)*, *2*(1), 86-101.

Can, N., & Ermeydan, M. (2017). Disiplin sorunları ve sınıf yönetimine ilişkin öğretmen ve yönetici görüşleri. *Kahramanmaraş Sütçü İmam Üniversitesi Eğitim Dergisi*, *1*(1), 38-58.

Casey, B. J., Getz, S., & Galvan, A. (2008). The adolescent brain. *Developmental Review*, *28*(1), 62-77.

Chen, R. J. C., Lin, H. C., Hsueh, Y. L., & Hsieh, C. C. (2020). Which is more influential on teaching practice, classroom management efficacy or instruction efficacy? Evidence from TALIS 2018. *Asia Pacific Education Review*, *21*(4), 589-599.

Choi, E., & Lee, J. (2018). EFL teachers' self-efficacy and teaching practices. *ELT Journal*, *72*(2), 175-186.

Cooley, E., & Yovanoff, P. (1996). Supporting professionals-at-risk: Evaluating interventions to reduce burnout and improve retention of special educators. *Exceptional Children*, *62*(4), 336-355.

Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research*, *77*(1), 113-143.

Craft, A. (2002). *Continuing professional development: A practical guide for teachers and schools*. Routledge.

Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching*. National Commission on Teaching & America's Future.

Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education Policy Analysis Archives*, *8*(1), 1-44.

De Wet, C. (2010). Victims of educator-targeted bullying: A qualitative study. *South African Journal of Education, 30*, 189–201.

Ding, M., Li, Y., Li, X., & Kulm, G. (2010). Chinese teachers' attributions and coping strategies for student classroom misbehaviour. *Asia Pacific Journal of Education, 30*(3), 321–337.

Doyle, W. (1986). Classroom organization and management. In M. C. Wittrock (Ed.), *Handbook of research on teaching. A project of the American Educational Research Association* (pp. 392–431). Macmillan.

Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Iver D. M. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist, 48*(2), 90–101.

Emmer, E. T., & Evertson, C. M. (2016). *Classroom management for middle and high school teachers*. Pearson.

Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling, 8*(3), 430-457.

Erikson, E. H. (1968). *Identity: Youth and crisis*. Norton.

Fischer J., He J., Klieme E. (2020). The structure of teaching practices across countries: A combination of factor analysis and network analysis. *Studies in Educational Evaluation*, 65, 1–11.

Freiberg, H. J., & Lamb, S. M. (2009). Dimensions of person-centered classroom management. *Theory into Practice*, *48*(2), 99-105.

Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International Journal of Endocrinology and Metabolism*, *10*(2), 486.

Goddard, Y. L., Goddard, R. D., Bailes, L. P., & Nichols, R. (2019). From school leadership to differentiated instruction: A pathway to student learning in schools. *The Elementary School Journal*, *120*(2), 197-219.

Goh, P. S. C., & Wong, K. T. (2014). Beginning teachers' conceptions of competency: Implications to educational policy and teacher education in Malaysia. *Educational Research for Policy and Practice*, *13*, 65-79.

Gür, B. S., & Çelik, Z. (2009). *National Education System in Turkey: Structural problems and suggestions*. SETA.

Hattie, J. (2008). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.

Hobfoll , S. E. (1998). *Stress, culture, and community: The psychology and philosophy of stress*. Plenum Press .

Jenkins, A., & Ueno, A. (2017). Classroom disciplinary climate in secondary schools in England: What is the real picture?. *British Educational Research Journal*, *43*(1), 124-150.

Jerrim J., Sims S., Oliver M. (2023). Teacher self-efficacy and pupil achievement: Much ado about nothing? International evidence from TIMSS. *Teachers and Teaching*, 29(2), 220–240.

Jerrim, J., Prieto-Latorre, C., Marcenaro-Gutierrez, O. D., & Shure, N. (2025). Teacher self-efficacy, ınstructional practice, and student outcomes: Evidence from the TALIS video study. *American Educational Research Journal*, *62*(2), 378-413.

Kauppi, T., & Pörhölä, M. (2012). Teachers bullied by students: Forms of bullying and perpetrator characteristics. *Violence and Victims*, *27*, 396-413.

Kengatharan, N., & Gnanarajan, A. H. (2023). Teacher self-efficacy and student misbehaviour: the moderating role of gender–classroom management. *International Journal of Educational Management*, *37*(2), 507-525.

Kim, M., & Beehr, T. A. (2017). Self-efficacy and psychological ownership mediate the effects of empowering leadership on both good and bad employee behaviors. *Journal of Leadership & Organizational Studies*, *24*(4), 466-478.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). Guilford Press.

Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: A literature review. *Quality & Quantity*, *47*(4), 2025–2047.

Lopes, J. A., & Oliveira, C. (2022). Teacher and school determinants of perceived classroom discipline: A multilevel analysis of TALIS 2013. *Learning Environments Research*, *25*(1), 41-58.

Luyten, H., & Bazo, M. (2019). Transformational leadership, professional learning communities, teacher learning and learner centred teaching practices; Evidence on

their interrelations in Mozambican primary education. *Studies in Educational Evaluation, 60*, 14-31.

Martin, J. J., Mccaughtry, N., Hodges-Kulinna, P., & Cothran, D. (2008). The influences of professional development on teachers' self-efficacy toward educational change. *Physical Education and Sport Pedagogy, 13*(2), 171-190.

Mavi, D., Tuti, G., & Ozdemir, M. (2025). How does teacher academic optimism affect teacher self-efficacy: Mediating role of teacher professional development and teacher subjective well-being?. *Psychology in the Schools*, *62*(4), 1013-1025.

McLean, D., Eklund, K., Kilgus, S. P., & Burns, M. K. (2019). Influence of teacher burnout and self-efficacy on teacher-related variance in social-emotional and behavioral screening scores. *School Psychology*, *34*(5), 503.

Ninković, S. R., & Knežević Florić, O. Č. (2018). Transformational school leadership and teacher self-efficacy as predictors of perceived collective teacher efficacy. *Educational Management Administration & Leadership*, *46*(1), 49-64.

Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(4), 535– 569. https://doi.org/10.1080/10705510701575396.

OECD. (2019a). *A teachers' guide to TALIS 2018*. Retrieved from https://www.oecd.org/education/talis/TALIS-Teachers-Guide-to-TALIS-2018-Vol-I_ENG.pdf

OECD (2019b). *TALIS 2018 technical report*. Retrieved from https://www.oecd.org/education/talis/TALIS_2018_Technical_Report.pdf

OECD. (2021). *Building the future of education: The OECD's education strategy*. France Organization for Economic Co-operation and Development Publishing. https://www.oecd.org/education/future-of-education-brochure.pdf

Özdemir, M., Kaymak, M. N., & Çetin, O. U. (2025). Unlocking teacher potential: The integrated influence of empowering leadership and authentic leadership on teacher self-efficacy and agency in Turkey. *Educational Management Administration & Leadership, 53*(5), 1083-1104.

Özdemir, S., Sezgin, F., Kılınç, A. Ç., & Polatcan, M. (2025). A cultural lens to school leadership effects on teacher instructional practices: The mediation of teacher collective efficacy and the moderation of uncertainty avoidance. *Educational Management Administration & Leadership*, *53*(3), 515-535.

Parise, L. M., & Spillane, J. P. (2010). Teacher learning and instructional change: How formal and on-the-job learning opportunities predict change in elementary school teachers' practice. *The Elementary School Journal, 110*(3), 323-346.

Pines, A. M., & Aronson, E. (1988). *Career burnout: Causes and cures*. Free Press.

Pines, A. M. (2002). Teacher burnout: A psychodynamic existential perspective. *Teachers and Teaching, 8*(2), 121–140.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*(1), 539-569.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891

Reese, S. (2010). Bringing effective professional development to educators. *Techniques: Connecting Education and Careers*, *85*(6), 38-43.

Rindfleisch, A., Malter, A.J., Ganesan, S. and Moorman, C. (2008). Cross-sectional versus longitudinal survey research: concepts, findings, and guidelines. *Journal of Marketing Research*, *45*(3), 261-279.

Scales, P., Pickering, J., Senior, L., Headley, K., Garner, P., & Boulton, H. (2011). *Continuing professional development in the lifelong learning sector*. McGraw-Hill Education (UK).

Scherzinger, M., & Wettstein, A. (2019). Classroom disruptions, the teacher–student relationship and classroom management from the perspective of teachers, students and external observers: A multimethod approach. *Learning Environments Research*, *22*, 101–116.

Schunk, D. H., & Meece, J. L. (2006). Self-efficacy development in adolescence. In F. Pajares, & T. C. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 71–96). Information Age Publishing.

Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology*, *57*, 152-171.

Seferoğlu, S. S. (2001). Sınıf öğretmenlerinin kendi mesleki gelişimleriyle ilgili görüşleri, beklentileri ve önerileri. *Milli Eğitim Dergisi*, 149, 12-18

Seferoğlu, S. S. (2004). Teacher competencies and professional development. *Journal of Education in Science and Intelligence*, *58*, 40-41.

Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, *99*, 611–625.

Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological Reports*, *114*(1), 68-77.

Smet, M. (2021). Professional development and teacher job satisfaction: Evidence from a multilevel model. *Mathematics*, *10*(1), 51.

Tabachnick, B., G., & Fidell, L. S. (2013). Using multivariate statistics (sixth ed.) Pearson.

Toytok, E. H., & Yıldırım, M. B. (2018). Meslek liselerinde disiplin sorunları ve nedenleri. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, *18*(3), 1759-1778.

Travers, C. J., & Cooper, C. L. (1996). *Teachers under pressure: Stress in the teaching profession*. Psychology Press.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17*, 783–805.

Tunç, B., Yıldız, S., & Doğan, A. (2015). Meslek liselerinde disiplin sorunları, nedenleri ve çözümü: Bir durum analizi. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 15*(2), 384-403.

Uslukaya, A., Demirtaş, Z., & Alanoğlu, M. (2022). Is presenteeism good or bad? A phenomenological study in schools. *Journal of Theoretical Educational Science, 15*(4), 758-787.

Vidić, T., Đuranović, M., & Klasnić, I. (2021). Student misbehaviour, teacher self-efficacy, burnout and job satisfaction: Evidence from Croatia. *Problems of Education in the 21st Century, 79*(4), 657.

Wilson, C. M., Douglas, K. S., & Lyon, D. R. (2011). Violence against teachers: Prevalence and consequences. *Journal of Interpersonal Violence, 26*, 2353–2371.

Zyphur, M. J., & Oswald, F. L. (2013). Bayesian probability and statistics in management research: A new horizon. *Journal of Management, 39*(1), 5-13.